



*E*nergy & Efficiency

Background: The energy sector as a whole includes mainstream sources of energy – fossil fuels, hydropower, nuclear, etc. – as well as new and alternative renewable sources such as wind, solar, geothermal, biomass conversion, and other experimental technologies. Employment associated with the energy sector includes extraction, processing and delivery of fossil fuels, research and manufacturing of energy producing equipment, sales, installation, support, and maintenance of various energy systems.

The high cost of energy both in residential and commercial applications justifies significant expenditures on energy efficiency, also included as a part of the energy sector. The American Council for an Energy-Efficient Economy (ACEEE) estimates potential savings of \$1.2 trillion by 2020 from investment in energy efficiency, and effort that could create 1.3 to 1.9 million jobs in the US¹ Energy efficiency comprises jobs and technology including mass transit, building materials and design, lighting, appliances, electric vehicles and batteries, and water management as well as a range of design, analysis, and other professional services.

Energy investment and production in Region 3 range from very large scale companies – locally Consumers Energy, Presque Isle Electric and Gas Cooperative – to individuals and families

¹ <http://www.renewableenergyworld.com/rea/news/article/2014/01/new-solar-job-statistics-released-but-other-renewables-are-growing-too>

assembling their own solar panels, hot water processors, and windmills. Employment in the industry likewise includes a broad range, from traditional industry positions in engineering and maintenance, to small entrepreneurs and retailers supplying a do-it-yourself market.

In general, the renewable energy sector offers opportunities for significant growth. The Environment Study Institute report of June 2013 estimated approximately 1,000,000 jobs nationally in clean energy², and forecast significant jobs growth for the near and long term in every component of the renewable energy sector.

In Region 3, renewable energy has provided some important new growth opportunities in recent years. In 2014, Alpena Biorefinery began shipping ethanol produced from byproduct of DPI, an adjacent panel processing facility, which itself uses local wood industry byproducts. Electric generation plants use wood biomass for fuel in Hillman, Grayling, and Lincoln. Wind power facilities operate in Mackinaw City and the thumb area (not quite all in Region 3, but close enough to note). New landfill gas generation facilities are in development in Montmorency County.

Statistics for small-scale electric generation are not readily available, but solar panels, solar hot water systems, electric cars, and other such devices appear throughout the area. The Amish community in Mio makes significant use of off-the-grid electric generation. Michigan continues to offer tax credits and net-metering opportunities that should provide the basis for increased sales, installation, and service as the efficiency of distributed power generation systems continues to improve, and the cost continues to decline.

Strategy: Move toward sustainability by seizing green opportunities in Northeast Michigan.

1. Develop a Renewable Energy Goal for Northeast MI

- a. Conduct an Inventory of the region to determine baseline data for evaluative measures on existing overall mainstream and renewable energy use per county and region for residential, commercial and industrial sectors; , production facilities, both mainstream and renewable energy facilities, amount, customers both local (in region) and non-local (outside of region).
- b. Based on current and future projected demands, establish regional renewable energy goal.
- c. Develop a Regional Renewable Energy Plan that will spark use by all sectors of Renewable Energy Alternatives resulting in driving up the demand and opportunities for new business development.

2. Expand renewable energy opportunities in the region.

² <http://www.eesi.org/papers/view/fact-sheet-jobs-in-renewable-energy-and-energy-efficiency?/fact-sheet-jobs-renewable-energy-and-energy-efficiency-11-jun-2013#2>

- a. Work with Partners to hold a minimum of 1 per year vocational and entrepreneurial training programs for the renewable energy industry.
- b. Meet with colleges to adopt appropriate and cost effective renewable energy solutions in Year One.
- c. Educate regulators about best practices for new technologies.
- d. Inventory and develop recommendations for local governments throughout region of all local rules and regulations that may impact new energy businesses to determine if they are up to date.
- e. Implement new methods of funding for new energy businesses (i.e. crowd funding).

3. Increase energy efficiency and the use of renewable energy.

- a. Develop alternative energy facilities (i.e. bio-energy and waste gasification systems).
- b. Expand residential and commercial energy efficiency programs.
- c. Install energy efficient devices in public buildings.
- d. Promote LEED certified buildings.