Western Michigan University
Renewable Energy History and Focus

Climate Action Plan Workshop
November 6, 2015
Fetzer Center

Peter Strazdas, AVP
Facilities Management
Wood Hall – Photovoltaic Array

Energy Analysis

• PV Array Production ~ 13,104 kWh
• Annual Cost Avoidance ~ $1,572
• Greenhouse Gas Emissions Offset ~ 19,845 Lbs (232 Trees)
• Long Term Research of Different PV Technologies
Miller Auditorium – Photovoltaic Array

Energy Analysis

• PV Array Production ~ 58,944 kWh
• Annual Cost Avoidance ~ $7,073
• Greenhouse Gas Emissions Offset ~ 90,405 Lbs (1,042 Trees)
WMU named one of five best U.S. campuses for electric cars

by Cheryl Roland
October 6, 2014 | WMU News

KALAMAZOO—For students who have an electric car and are going to college, there are few better places in the United States than Western Michigan University.

That's the message of an international transportation news source that recently ranked WMU as one of the nation's most "Electric Vehicle friendly" colleges. WMU placed fourth on the list released in September of Transport Evolved, a news site based in Great Britain that bases its rankings on data from ChargePoint, a nationwide network that tracks the availability of EV charging stations.

Transport Evolved reported that according to ChargePoint, the number of electric car charging stations located at U.S. universities and colleges has risen by an impressive 35 percent in the past 12 months, up to 1,134 charging stations this year compared with just 838 last year.

And what began as a trend focused in California, now only includes two of that state's campuses on the list of schools with the most opportunities for students, faculty and staff to charge their vehicles. The top five schools and the number of charging stations they support are:

- University of California-Davis, 38
- Towson University, 36
- Santa Clara University, 25
- Western Michigan University, 22
- Massachusetts Institute of Technology, 21.

"Although MIT might be a foregone conclusion given its area of expertise, the University of Western Michigan (sic) also has a good reputation for electric vehicle support, as well as its well-known electrical engineering department and relative proximity to the Lansing, Mich., plant where the famed GM EV1 was made," reported Transport Evolved. "Fifteen of the 22 charging stations on the WMU campus are powered by a 50 kilowatt photovoltaic solar panel array, meaning staff and students can get a truly zero emissions charge while they work or study."

The complete Transport Evolved posting can be found at bit.ly/1o0q4SN.
Sangren Hall – Photovoltaic Array

Energy Analysis

- Sangren Hall Electricity Consumption ~ 1,677,540 kWh
- PV Array Production ~ 251,130 kWh
- Annual Cost Avoidance ~ $30,136
- Percent of Electricity Offset ~ 15%
- Greenhouse Gas Emissions Offset ~ 390,626 Lbs (4,500 Trees)
System Specs

- 32 Ton Design Cooling Capacity
- 307,000 BTU Design Heating Capacity
- 18 Wellheads
- Building Consumption 40% Lower Than Baseline
- Annual Cost Avoidance $13,636
East Hall – Geothermal

System Specs
• 130 Ton Design Cooling Capacity
• 2 Million BTU Design Heating Capacity
• 56 Wellheads
• Projected Building Consumption 50% Lower Than Baseline
• Projected Annual Cost Avoidance $62,517
FUTURE HOME OF SOLAR GARDENS
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WESTERN MICHIGAN UNIVERSITY
Consumers Energy
Count on Us

Google earth
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Western Michigan University
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[Image of solar panels and university campus]