



2009 WISCONSIN

Renewable Energy Summit

Renewables, Sustainability, Energy Efficiency,
Social Responsibility, and Green Energy Practices

Sustainable Practices

Session 16-1

DATE:

WEDNESDAY, MARCH 25, 2009

Breakout Session 16-1:

Time:

1:30pm - 3:15pm

Presenters:

**A Methodology for a Modified Triple Bottom Line Perspective:
A Comparative Analysis of Alternative Fuels**

Megan Pease

The decision making process for businesses in the transportation sector who are embracing concepts of sustainability is often problematic. Frequently, traditional decision making processes lead to actions with unintended consequences. How can transportation sector businesses generate the best long-term decisions regarding fuel choices? Most current models consider CO₂ emissions or only current costs, avoiding the difficult task of incorporating conflicting outcomes, non-equivalent choices and addressing multiple constraints. My presentation will focus on a major shipping company as a case study about the decision making process from a modified 3BL point of view. Seven alternative fuels were investigated (BD20, LNG, CNG, DME, FT Diesel CH₂, LH₂) and compared to the existing system. Two matrices, one addressing the environmental aspect, one addressing the stakeholder aspect, were used to develop scenarios associated with potential fuel choices.

Fusion Free Ground Loop Using PEXa

William Bieganek, REHAU Construction LLC

Introduction of the latest IGSHPA approved ground source heat exchange pipe (PEXa) and only IGSHPA approved Mechanical Fittings (EVER-LOC).

1. Review and comparison of PEXa and HDPE technical characteristics.
2. Review and comparison of mechanical fittings and tools used for the EVER-LOC system versus traditional fusion.
3. Demonstration and hands on use of EVER-LOC tools.
4. Demonstration of interior manifolds that replace underground reverse return headers
5. All product samples on hand including: interior adjustable brass manifolds with full flow control adjustment for each loop, flow gauges, temperature gauges, and shut-off valves. Probes/U-Bends single and dual, Pipe Spacers, Weights and accessories.

**See presenter
biographies
next page**



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Presenter Biographies:

Megan Pease

Currently I am a Ph.D. candidate in the University of Wisconsin Gaylord Nelson Institute for Environmental Studies. I'm interested in the sustainability of transportation systems and using an inter-disciplinary approach for solving complex problems. In 2008 I presented at the International Society for Systems Science. I will be presenting at the EPA's BeWISE (Women In Science and Engineering) conference in early March of 2009.

Bill Bieganek

Bill Bieganek is a Renewable Energy Account Representative for REHAU Construction, LLC located in the Twin Cities. Bill has been involved in energy efficiency and renewable energy as a private business owner since 2005. Bill was a key contributor of the energy and resource efficiency solutions for the first LEED Restaurant in Minnesota. Bill joined REHAU in March of 2007 to manage the introduction of their RAUGEO Ground Source Heat Exchange system to North America. Bill is an IGSHPA certified Installer. Since 2005 Bill has presented Green Building and Energy Efficiency sessions for: The Minnesota Lodging and Restaurant Association, Minnesota Resort and Campground Association, Republican National Convention Going Green Seminar, and provided Geothermal 101 training seminars for the Chicago Area Plumbers and Pipe Fitters local 597.