BTEC
Biomass Thermal Energy Council

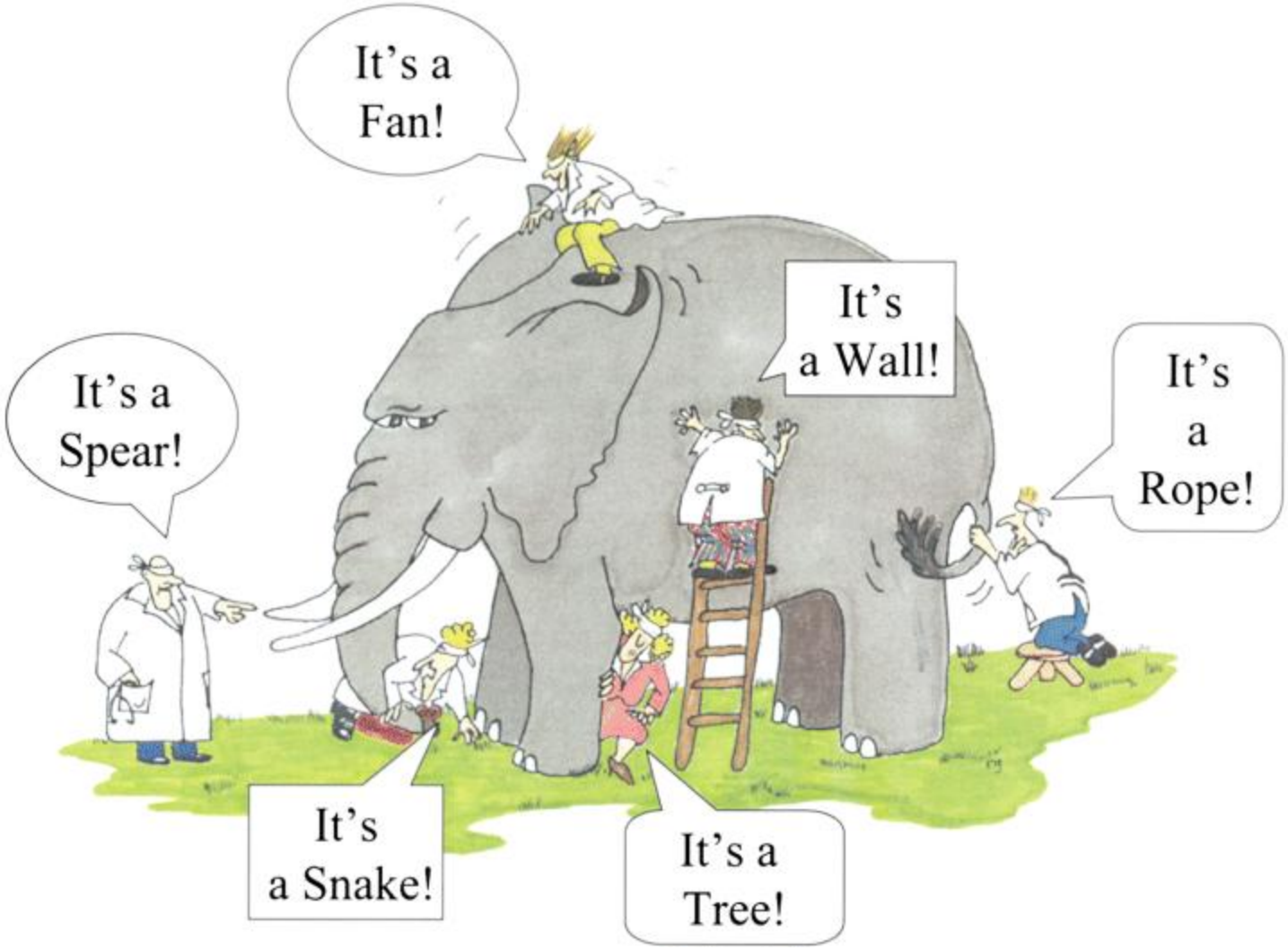
The Importance of Education and Advocacy

Advancing Biomass Thermal in the Midwest

April 26, 2013

Heating the Midwest with Renewable Biomass

Joseph Seymour, Executive Director
Biomass Thermal Energy Council (BTEC)


It's a Fan!
It's a Wall!
It's a Rope!
It's a Spear!
It's a Snake!
It's a Tree!

BTEC's Purpose and Origin

The Biomass Thermal Energy Council (BTEC) is the industry trade association dedicated to advancing the use of biomass for heat and other thermal energy applications.

Why was BTEC established?

1. To **advocate for and promote** the biomass thermal industry in the national energy policy debate
2. To **reach out** to and **educate** the public and decision makers on the benefits and advantages of using biomass for heat and CHP
3. To develop biomass energy **research and analysis** that enables sound investment and policy decisions

BTEC's Membership*

* As 2012

ACT Bioenergy
AFS Energy Systems
Alliance for Green Heat
Alternative Energy Solutions International, Inc.
American Agriculture Movement
American Biomass
American Boiler Manufacturers Association
American Wood Fibers
APEX
Bear Mountain Forest Products
Ben Larson
BioBusiness Alliance of Minnesota
Biomass Briquette Systems
Biomass Combustion Systems
Biomass Commodities Corporation
Biomass Energy Laboratory
Biomass Energy Resource Center
Biomass Energy Works
Biomass Engineering & Equipment
Bionera Resources Inc.
Biowood Energy
Caluwe Inc.
Cambride Environmental Technologies
Carbonomics
Chip Energy
Clean Power Development
ClearStak
Compte-Fournier Inc
Confluence Energy
Control Labs
Corinth Wood Pellet
Cousineau Forest Products
Dejno's
Ebner Vyncke
Enviva LP
Ernst Biomass
Evoworld
Forest Energy Corporation
Fram Renewables
FutureMetrics
Green-Power
Innovative Natural Resource Solutions
International Renewable Energy Technology Institute
Jackson Lumber Harvester Co
Jesse E. Lyman Pellets
Kilwa Biomass
Klondike Energy Group
Lignetics of Virginia
Maine Energy Systems
Maine Pellet Fuels Association
Marth
Messersmith Manufacturing, Inc.
Minnesota Valley Alfalfa Producers
Missouri Corn Growers Association
National Network of Forest Practitioners
New England Forestry Foundation
New England Wood Pellet
New Horizon
Northeast Mill Services
Ochoco Lumber
PA Pellets
Pellergy LLC
Pelletco
Pennsylvania Biomass Energy Association
Plum Creek
Pratt & Whitney Power Systems - Turboden
Proe Power Systems
Prosperity Ag & Energy Resources
Rainforest Alliance
Ray Albrecht
Recast Energy
Reciprocal Energy Company
Renewable Energy Resources
Repreve Renewables
Resource Professionals Group
Richmond Energy Associates, LLC
Rotochopper
Sandri Companies
Seattle Steam Company
Sewall Company
Skanden Energy
State University of New York - ESF
Tarm Biomass
The Jordan Institute
Trane - Ingersoll Rand
Twin Ports Testing
University of Minnesota Duluth
University of Minnesota Morris
Vapor Locomotive Company
Vecoplan
Vermeer
Vermont Sustainable Jobs Fund
Vermont Wood Pellet
Viessmann
Weis Environmental
Western Ag Enterprises
Westervelt Renewable Energy
Wilson Engineering Services
Wisconsin Energy Conservation Corporation
Woodmaster
Zilkha Biomass Energy

"A goal without a plan is just a wish"

Meaning, what are our barriers to success, and how are we working (or could work) towards overcoming them?

Governmental Recognition and Parity

- Barriers
  - Most states and the fed. gov't promote renewables in tax and RPS provisions, but exclude biomass thermal
  - Lack of technological understanding
- Solutions
  - Promote residential & commercial parity (HEAT Act of 2013), modify gov't frameworks and programs
  - Engage leaders in tours, share appropriate educational materials

Technical and Regulatory Acceptance

- Barriers
  - State air quality regs not reflective of modern systems
  - Low industry cohesion on bulk delivery, storage
  - Few “go to” technical sources for engineers, specifiers
  - Lack of clarity on performance standards, trust in performance
- Solutions
  - Share new technological developments with state leaders
  - Develop best practices, recommendations, and begin process towards standardization
  - New resource collection on BTEC site >>
  - Ongoing work towards consensus efficiency measure

Vision for **BTEC** Commercial-Size Boiler Efficiency Standard

Background

- Survey development
- Dissemination of survey among architects and engineers
- Evaluation
- Survey publication

Preparation

- Development of materials and stakeholder meetings
- Meeting with standards organization
- Initial stakeholder session
- Development of Library with information on biomass thermal systems
- Development of stakeholder document

Standard Writing

- Convening of contractor TRAC and procurement of project consultant(s)
- Determining and approaching the appropriate standards organization
- Development of project scope
- Publicizing scope and holding scoping meetings
- Developing the draft test procedure, validation laboratory testing, and scolicity public feedback

Adoption/Publication

- Submit efficiency test procedure to selected standards body
- Track approval of standard in selected standards body
- Information Dissemination - public promotion of results

Financial Support:

The U.S. Forest Service, West Penn Power Sustainable Energy Fund, the U.S. Endowment for Forestry and Communities, and the New York State Energy Research and Development Agency (NYSERDA) have, are in the process of, or have pending awards to contribute between $50,000 to $140,000 each to this multi-year effort.

BTEC's Request:

To make this project a success, the industry needs to provide financial support and leverage these commitments. In BTEC's current projections $25,000 is needed in direct financial support from industry in 2013, which will allow the project to continue until 2015.

BTEC is requesting your company's support of $1,000 or more. Your contribution will be matched by a ratio of more than 10:1 and will help pay for preparation, meeting supplies, professional facilitators, and follow-up work.

Sponsorship Supports:

1. The development and publication of a Request for Information

2. The execution of a multi-day workshop in Washington, D.C. with manufacturers, Federal Agencies and a Standards Body

3. The drafting of the standard

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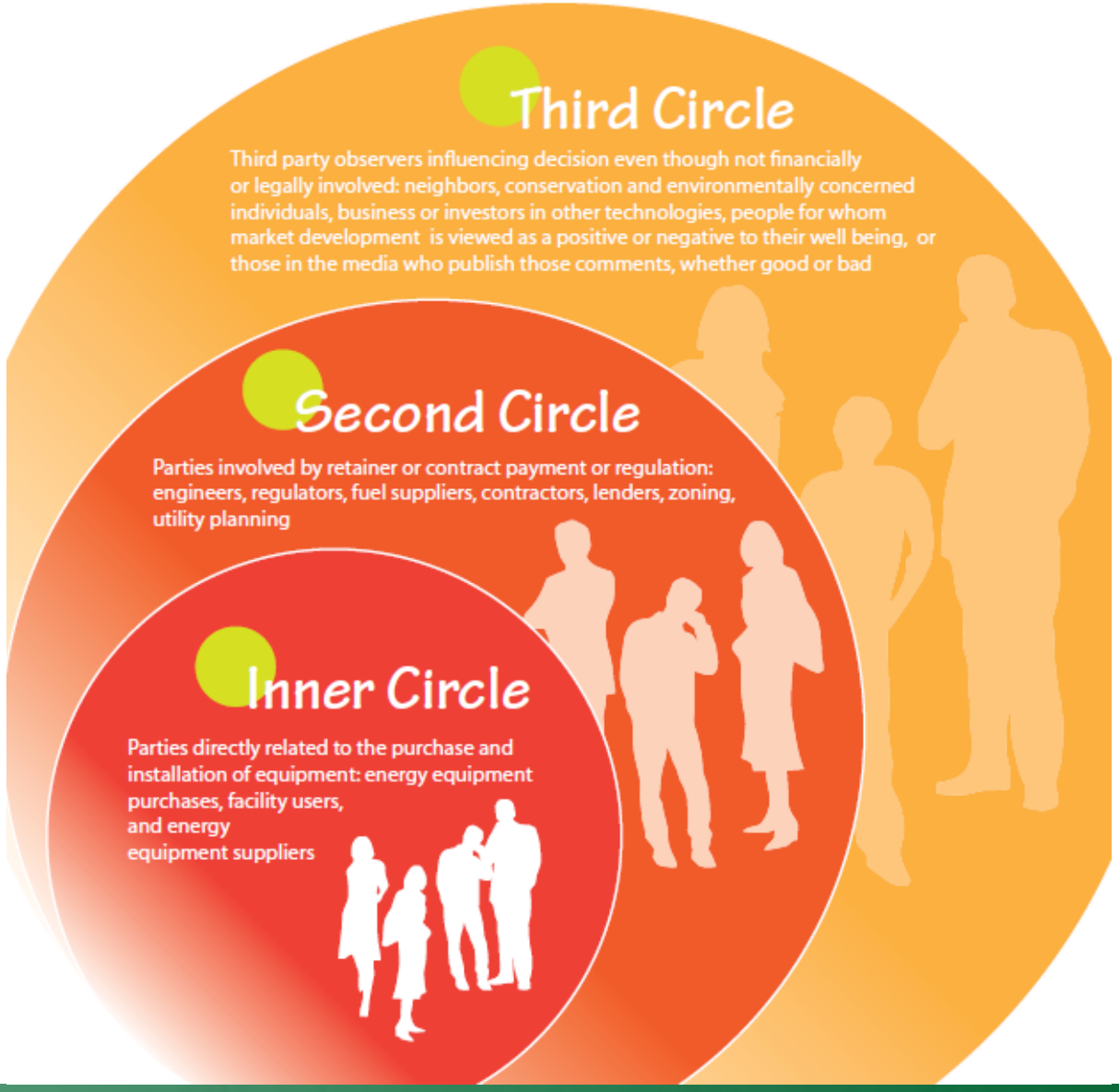
Consumer Education and Outreach

- Barriers
  - Low price (or stable) cost of fossil fuels
  - Unrealistic system payback expectations
  - Lack of integration with potentially support EE/Enviro groups
  - Incomplete community buy-in
- Solutions
  - Focus and message on high cost fuels
  - Share range of case studies, invite the finance community into the discussion
  - Promote shared events, common themes (i.e. MA Thermal Alliance)
  - “Map” for engaging the “right” parties


Third Circle
Third party observers influencing decision even though not financially or legally involved: neighbors, conservation and environmentally concerned individuals, business or investors in other technologies, people for whom market development is viewed as a positive or negative to their well being, or those in the media who publish those comments, whether good or bad
Second Circle
Parties involved by retainer or contract payment or regulation: engineers, regulators, fuel suppliers, contractors, lenders, zoning, utility planning
Inner Circle
Parties directly related to the purchase and installation of equipment: energy equipment purchases, facility users, and energy equipment suppliers

Education and Outreach

- Barriers
  - Biomass thermal systems are hidden
  - Seen as one-offs, niche products
  - Lack of visible champions

- Solutions
  - Biomass Green Heat Registered Site Program
  - Ongoing efforts to build national biomass energy databases (e.g. wood2energy.org)
  - Champions are being “crowned”

What a Difference a Vision Makes

- **VT -** Change out program for pellet burning appliances via Efficiency Vermont
- **NY -** Form an interagency task force to evaluate a state path towards more biomass thermal.
- **ME -** Greater attention by public officials to publicize clean wood burning heating systems.
- **NH -** Authorize thermal REC's in the RPS
- **MA -** Higher efficiency reqs for RPS, thermal in the RPS, and biomass thermal incentive programs
- **PA -** Dedicated funding from existing state energy bond programs for biomass thermal/CHP institutional scale projects





Questions for the Midwest

- What challenges are unique to the region?
- How could Midwestern policy promote biomass thermal?
- What's near term achievable? What's long term?
- What groups could HTM, BTEC engage?
- How do you see yourself or your organization getting involved?

Thank You!

Joseph.seymour@biomassthermal.org
202-596-3974

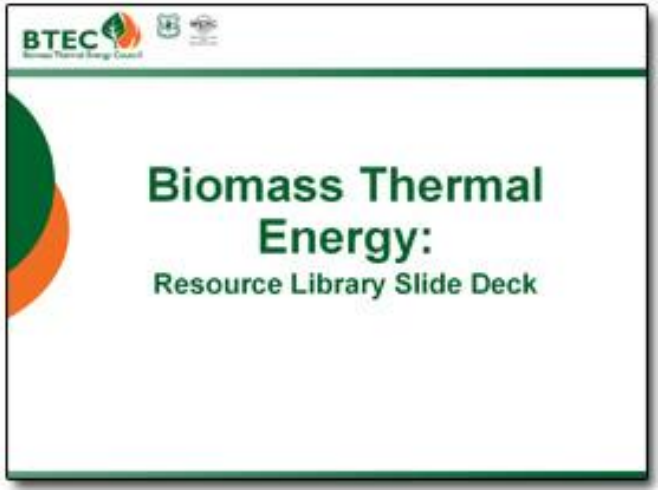
Additional BTEC Resources

- Publicly available resources on the BTEC website include:
  - Presentations
  - Virtual Facility Tours
  - Case Studies
  - Factsheets
  - Webinars
  - Interviews
  - Reports
  - Resource Library

Presentation

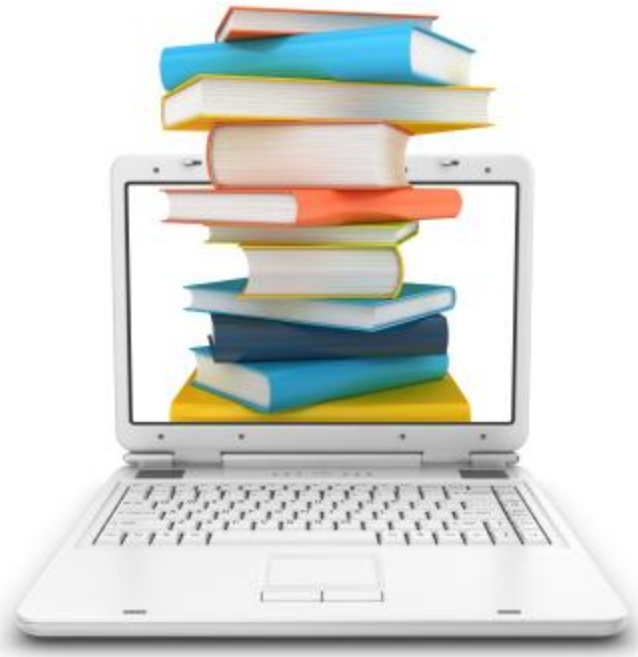
(biomassthermal.org/resource/presentations.asp)

- Biomass Thermal Energy Resource Library
  - The library contains 105 slides with detailed information on the biomass thermal energy market.
  - Distillation of the most-vital webinars



Resource Library
(biomassthermal.org/library/)

- Produced in 2012-2013 through support from the USFS Wood Education and Resource Center
  - Designed to aid energy system specifiers
  - Searchable by topic
  - Broad range of technical content
  - 110 documents and growing
  - Developed with support from John Karakash of Resource Professionals Group



Factsheets (biomassthermal.org/resource/factsheets.asp)

- 5 Overall, produced in 2011, revised in 2013
  - Why use biomass for heating?
  - Biomass Thermal Market Overview
  - Residential Heating
  - Large Scale Heating with Biomass
  - Economic Impact of Biomass Thermal Energy on Rural Communities

Podcasts (biomassthermal.org/resource/interviews.asp)

- 10 overall
  - The Austrian Example on Biomass Energy
  - Where Private Lands meet Biomass Energy Markets
  - Healthy Forests and Heating Homes – Sustainability of Biomass Energy
  - Growing the Role of Agriculture in the Biomass Thermal Energy Supply Chain
  - Successful Steps in Biomass Project Finance and Development
  - All in the (Thermal) Family: Biomass Energy and the Family Forest Landowner
  - Promoting Forest Health Through Public Private Partnerships
  - Real World Examples - CHP Profile - University of Missouri-Columbia
  - Public Perceptions of Biomass Heating
  - The Future of Biomass Conversion

Webinars
(biomassthermal.org/resource/webinars.asp)

- 15 Produced throughout 2010 to 2012. More added monthly
  - Biomass Heating and CHP
  - Residential Use of Biomass
  - Legislation and Regulation
  - Air Quality / Emissions
  - Large-Scale Biomass and CHP
  - Successful Biomass Markets: Europe
  - Project Development and Finance
  - Future of Residential Wood & Pellet Heat in America
  - Public Perceptions of Biomass Thermal Energy
  - Agricultural and Woody Biomass
  - Regional Developments - The Northeast
  - Regional Developments - Western Region
  - Regional Developments - Midwestern Region
  - Agricultural and Woody Biomass
  - Biomass Thermal Market Outlook: 2012-2015