

# Midwest Biomass Thermal Energy: Opportunities and Challenges Ahead

2014 Heating the Midwest with Renewable Biomass

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## Challenges

- Limited markets (not enough customers)
- Very difficult marketing

Fine Print for later viewing:

- EPA New Source Performance Standards NSPS
- EPA Biogenic Carbon Dioxide Ruling
- New Housing Stock
- Infusions and Exfusions © of public incentives
- Industry fatigue
- Sparse populations outside of natural gas service areas
- Growth of natural gas infrastructure
- Transportation
- Difficult Fuel from a service perspective
- Other energy technologies
- Very few standards
- Not enough success to attract big money
- Fuel resource limitations
- Anti-combustion lobby
- Pellet mill capacity
- Thermal is rarely a focus of energy policy
- Most of our infrastructure is hidden from view
- High initial cost of equipment
- Large and heavy equipment compared to alternatives
- Biomass allies are also biomass competition (thermal vs. power, solid vs. liquid or gas)

## Midwest Biomass Thermal Pools of Opportunity

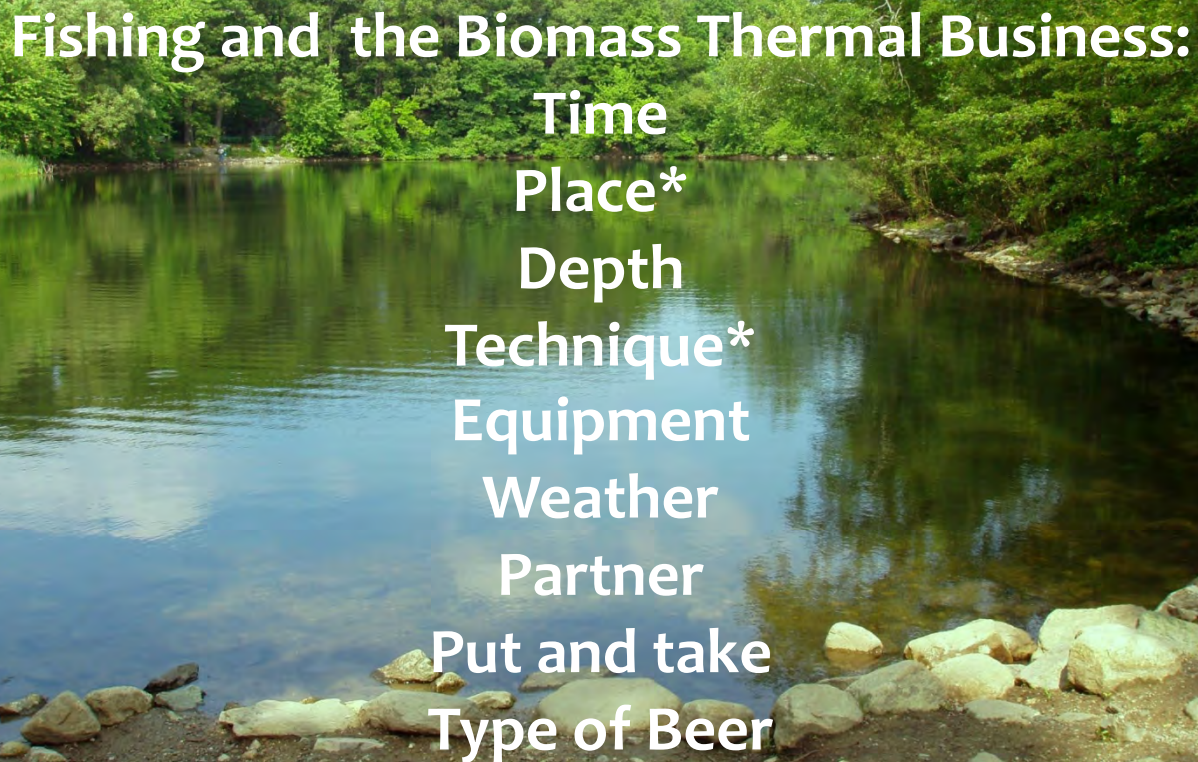
- **48,288,342 people to tell our story to, 99% of whom have not heard it before**
- **An industry market research and marketing effort**

Fine print for later viewing:

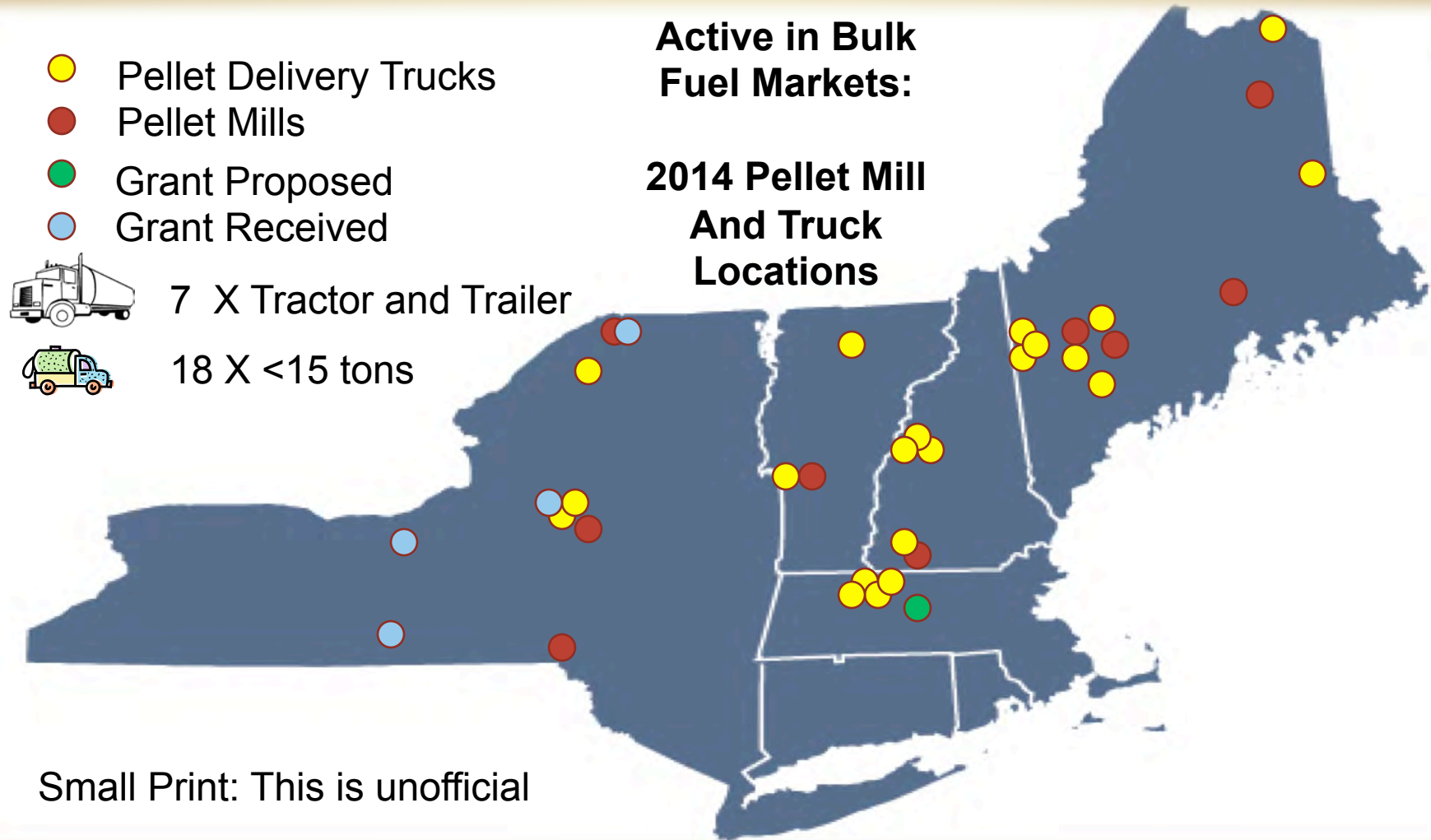
- Commercial installations
- Schools
- Biomass refining and combustion equipment for agricultural residuals
- Strategically located pellet mills
- Dry wood chips
- Industry check off program
- Work with partners with rural development goals- USFS, US Endowment for Forestry, and Northern Forest Center examples.
- Standards work
- EPA NSPS can help clean up residential markets
- Commercial biomass boiler efficiency standard
- Energy Star type program for biomass thermal
- Broad use of thermal RECs
- State rebates
- Community Scale district and CHP systems
- Vertically integrated business models for pellet delivery and appliance sale
- Trained service and installation professionals
- Educating insurance companies
- Educating financiers



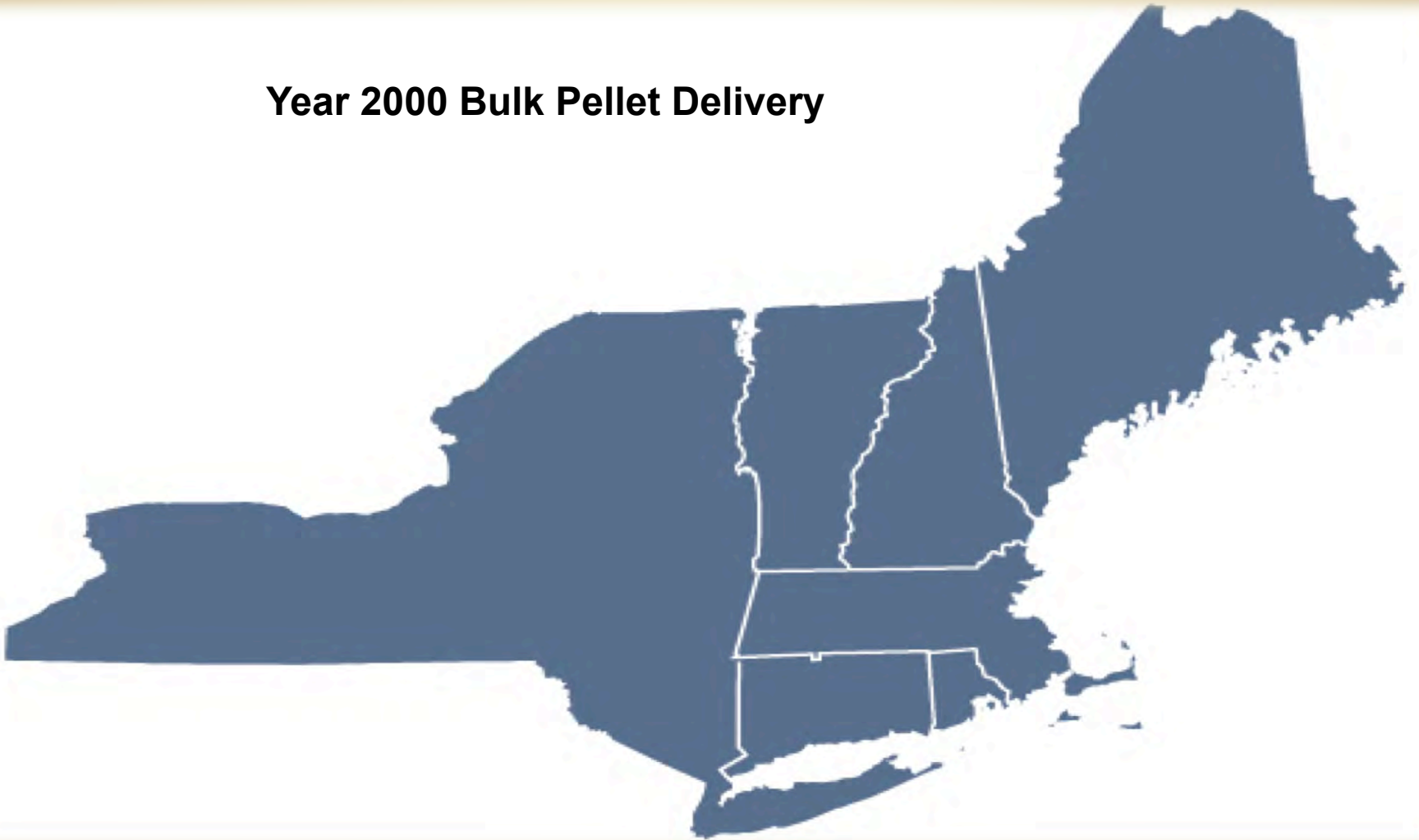
## Defining and Expanding the Pool



Fishing and the Biomass Thermal Business:  
Time  
Place\*  
Depth  
Technique\*  
Equipment  
Weather  
Partner  
Put and take  
Type of Beer



## Year 2000 Bulk Pellet Delivery



## Place Metrics

	New England	Wisconsin	Austria
Square Miles	66,507	56,145	32,000
Population	14,444,865	5,686,986	8,139,299
Population per Square Mile	217	101	254
Forest Cover % of Total Area	76%	45.2%	35%
Total Forested Area Square Miles	50,673	25,378	11,200
Avg. Heating Degree Days*	7185	7627	6126
*	Concord, NH	Madison	Linz

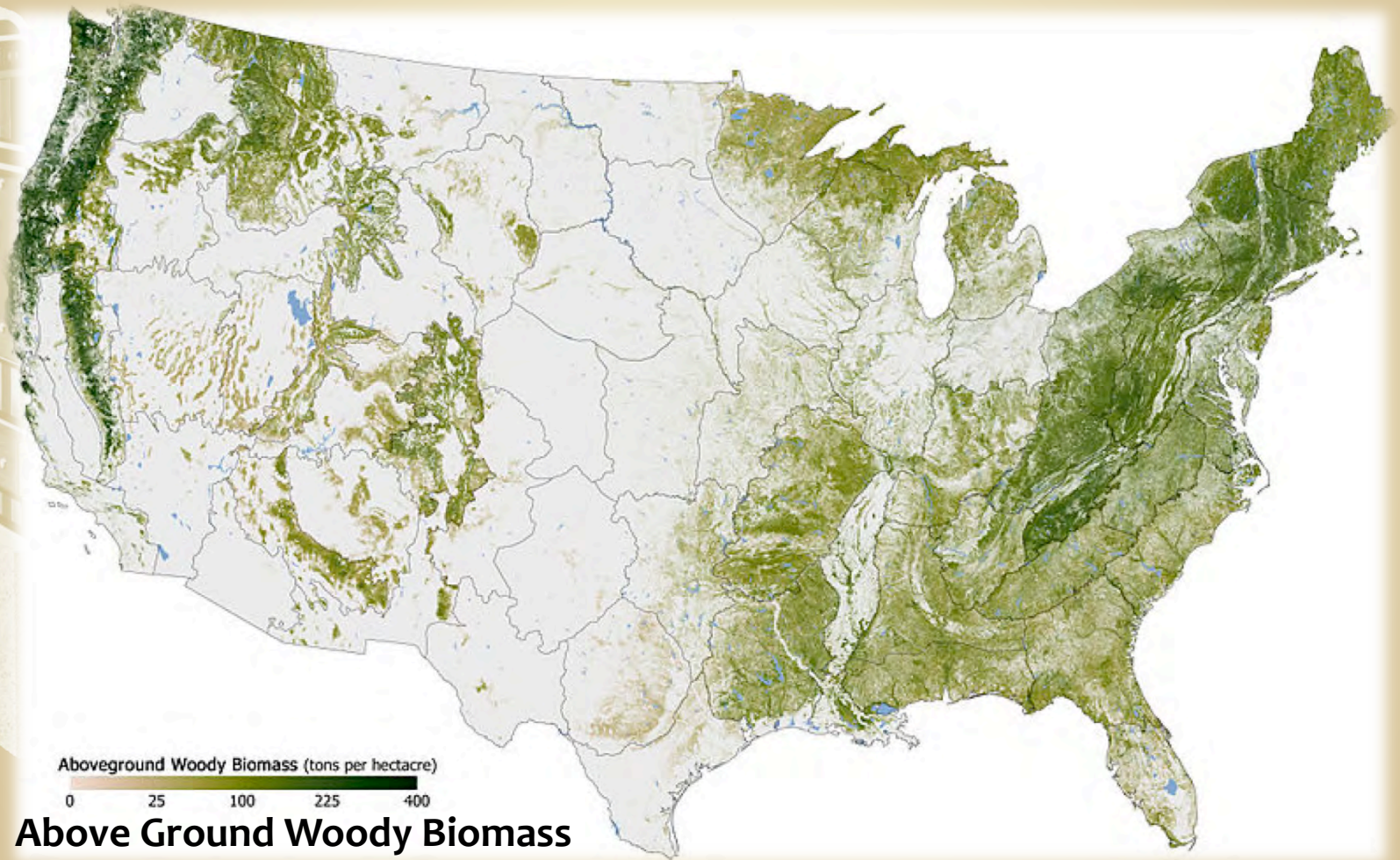
**Automatic wood pellet boilers introduced in Austria in 1996**



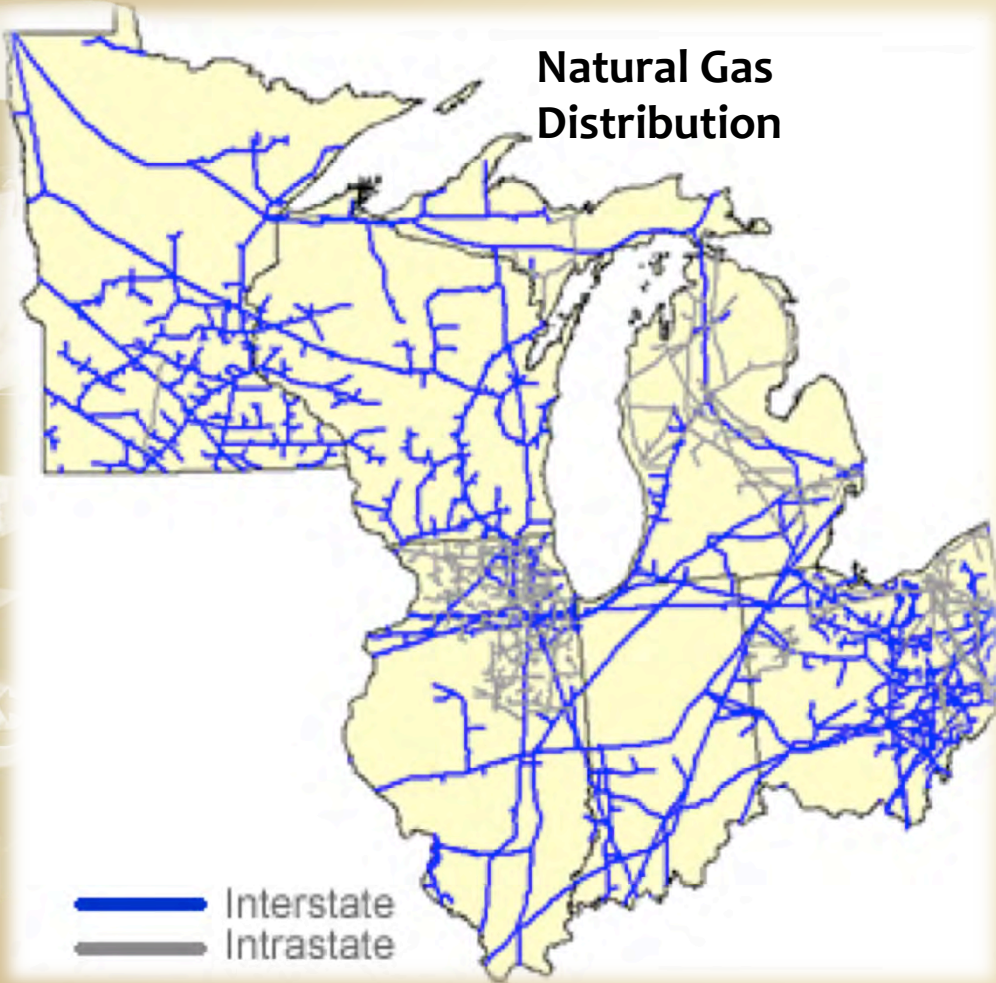
## Upper Midwest Forest Savannah Transition







### Natural Gas Distribution




**Technique: How do we make people bite on biomass thermal?**

What is biomass thermal?  
What is a boiler?  
What is biomass?  
You burn trees, forests?  
Is wood burning smoky?  
I've got a buddy with a pellet stove  
I've heard there is more work  
Why is biomass better than solar or wind?  
What about heat pumps?  
Why is the equipment so expensive?  
What is the payback?  
Is that one of those outdoor wood burners?  
What is central heating?

What is our lure?





From the Wall Street Journal 2/14/14:  
**“Winter Seen Taking a Toll On Growth”**

***“The overall economy remains plagued by financially constrained households and skittish businesses, two persistent features of an economic recovery that’s approaching the end of its fifth year.”***

**And later from the same article:**

***“One factor that could further crimp retail sales is higher heating bills due to the cold. Sterne Agee’s Ms. Piegza estimates households, on average, will spend an additional \$600.00 to \$1,000 in energy bills this winter compared to last.”***

Pot calling the kettle black! →



Need to find a better way to define ourselves, build trust, make connections with consumers

What do we call what we do?

How do we tell the story? What is our universal brand?

- 1)Local Energy
- 2)Fuel Savings
- 3)Environment
- 4)All of the above- a better way to heat

Les Otten: “Common and Ordinary”

**Who here is a marketing expert?**



## The irony of the Upper Austria marketing example:

- Christiana Egger, missionary
- Invitations to biomass school
- Statistics
- Reports
- Six Upper Austrian companies at NEBX, Portland, ME
- Biggest biomass thermal expo and conference- Wels, Austria

## Let's put our efforts behind making our pool bigger:

- 1) Not for profit industry website designed to educate the public about what we do
- 2) Market research effort
- 3) Mass market television and web advertising\*

\*Housed at BTEC

\*Fuel Agnostic

\*Allow for customization for various markets



**FISH ON!**