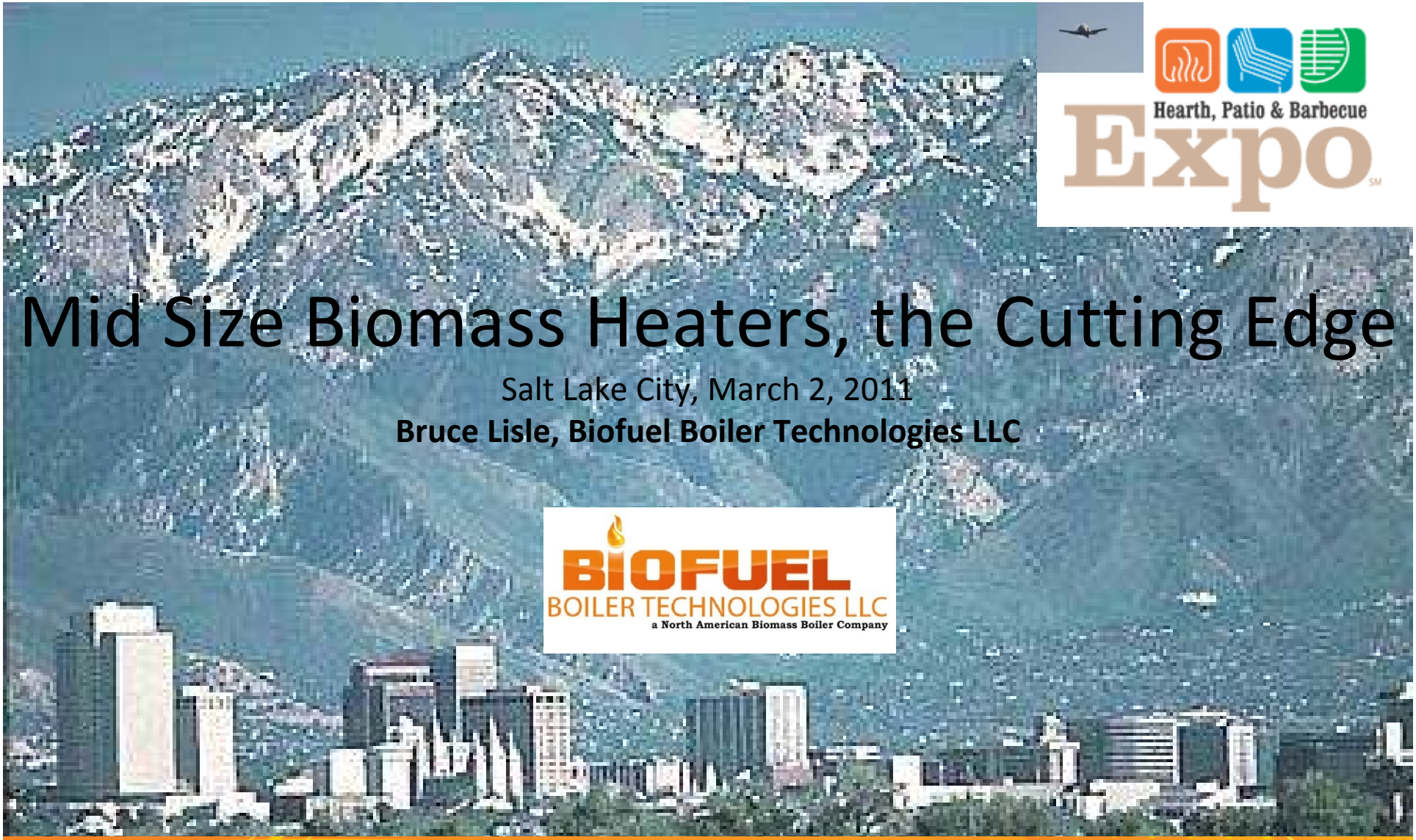

Hearth, Patio & Barbecue Expo℠

Mid Size Biomass Heaters, the Cutting Edge

Salt Lake City, March 2, 2011

Bruce Lisle, Biofuel Boiler Technologies LLC

BIOFUEL BOILER TECHNOLOGIES LLC
a North American Biomass Boiler Company

Biomass

2011 Biomass Central Heating Symposium:
New Opportunities In Heating Homes And Businesses

BIOMASS CENTRAL HEATING

~ the myth revealed ~

After over twenty years in the renewable energy business, all of it biomass, the technology for using biomass as a **"mainstream"** thermal energy is here. Actually it has been here for a while, but it has been portrayed in the marketplace as some myth defying technology available only to the chosen few daring enough to cross formidable barriers. While the distribution system of the equipment necessary for a biomass heating system is not as developed as fossil fuel systems, the equipment and knowledge base for a successful installation is readily available.

PELLET FUEL=> MAINSTREAM??????

What Makes Up A Biomass Energy System?

There are five major parts of any biomass or fossil fuel energy system or heat plant.

•Fuel Storage and Reclaim
•Burner
•Heat Exchanger
•Emissions Handling
•Heat Distribution System.

FUEL	STORAGE	PREPARATION	RECLAIM	HEAT EXCHANGER	Emission Handling	Heat Distribution
Pellets	Silo	None	Flex Auger (2-3" PVC Pipe)	Boiler or Furnace	Generally None	Hot Water Steam Or Air
Chips	Bin/Shed	Screening	Augers/ Conveyors	Same	Usually Cyclonic Larger Units ESP	Same
#2 Oil	Tank	None	Pipe	Same	None	Same
Gas	None	None	Pipe	Same	None	Same
Propane	Tank	None	Pipe	Same	None	Same

LARGER CHIP SYSTEMS

Geremia Greenhouses, Wallingford, CT --- Two 5,800,000 btu/hr 30# Hot Water Units

Wessels Farms, Greenhouse,
Middletown, NY
10,000,000 btu/hr 30# Hot Water

FUEL:

Wood Chips

Horse Manure

Scrap Pallets

Proctor Academy, Andover, New Hampshire – 10,000,000 btu/hr, 300psi Steam Unit

Summit Hardwoods, Millersburg, Ohio, Lumber Drying Kiln -- 2,077,000 btu/hr, 150# Steam

The Danville School, Danville, Vermont 2,077,000 btu/hr 30# Hot Water

Windview Farms,
Port Treverton,
PA Turkey Grower
2,077,000 btu/hr
30# Hot Water

FUEL: Turkey Manure/Bedding

Logistics

100 miles @ $3/mile / 361 =
$0.83 per MMBTU per 100 miles

100 miles @ $3/mile / 228 =
$1.32 per MMBTU per 100 miles

BIOFUEL
BOILER TECHNOLOGIES LLC
a North American Biomass Boiler Company

WOOD PELLET FUEL IS CHEAP!!!!!!

Bulk Wood Pellet Fuel is 40% of the cost of $3.00 Fuel Oil

Bulk Wood Pellet Fuel is 39% of the cost of $2.00 Propane

Based on $140/ton Bulk Wood Pellet Fuel

FUEL OIL Cost Per Gallon	Equivalent Cost Per Ton of Pellets	PROPANE Cost Per Gallon	Equivalent Cost Per Ton of Pellets
$ 2.00	$ 236.31	$ 1.50	$ 269.74
$ 2.25	$ 265.85	$ 1.75	$ 314.69
$ 2.50	$ 295.39	$ 2.00	$ 359.65
$ 2.75	$ 324.93	$ 2.25	$ 404.61
$ 3.00	$ 354.47	$ 2.50	$ 449.56
$ 3.25	$ 384.01	$ 2.75	$ 494.52
$ 3.50	$ 413.54	$ 3.00	$ 539.47
$ 3.75	$ 443.08	$ 3.25	$ 584.43
$ 4.00	$ 472.62	$ 3.50	$ 629.39

Biomass Boilers & Furnaces
Have Never Been Easier To Install & Operate

MADE IN AMERICA

Biofuel Boiler Technologies LLC
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Mifflintown • Pennsylvania 17059
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www.thebiomassboiler.com

BULK

DISTRIBUTION

BULK STORAGE

HEAT EXCHANGE

POTENTIAL USERS:

Commercial Buildings
-Office
-Warehouse
-Manufacturing

Multi-Unit Facilities
-Apartments
-Duplexes +
-Retail
---Strip Malls

Institutional
-Municipal Buildings
-Schools
-Medical Facilities

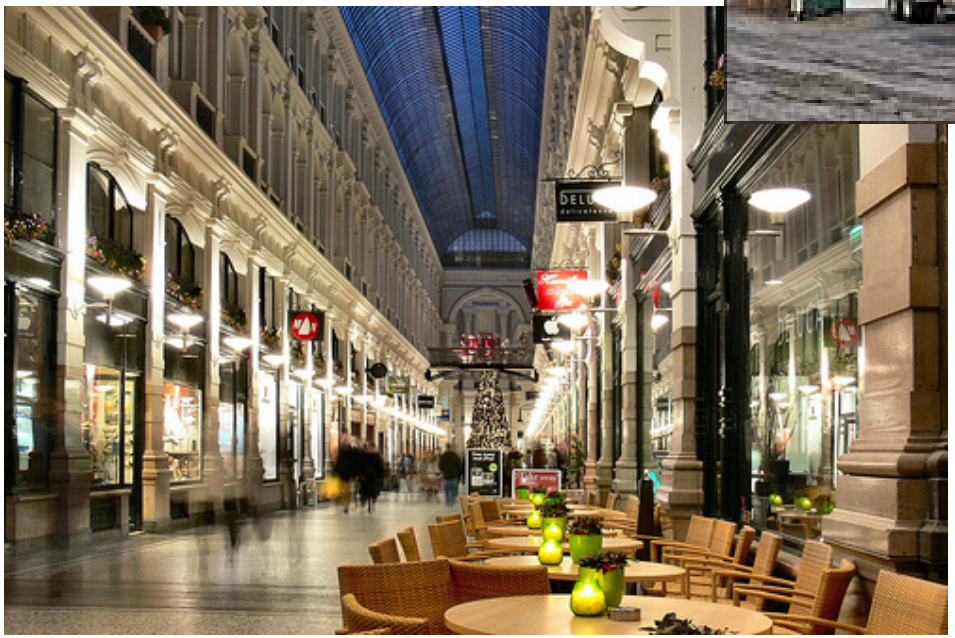
Revenue Potential For Property Owners

Energy in Hot Water can be measured just like an electric or gas meter

Temperature Differential between water in and out times flow = BTU's

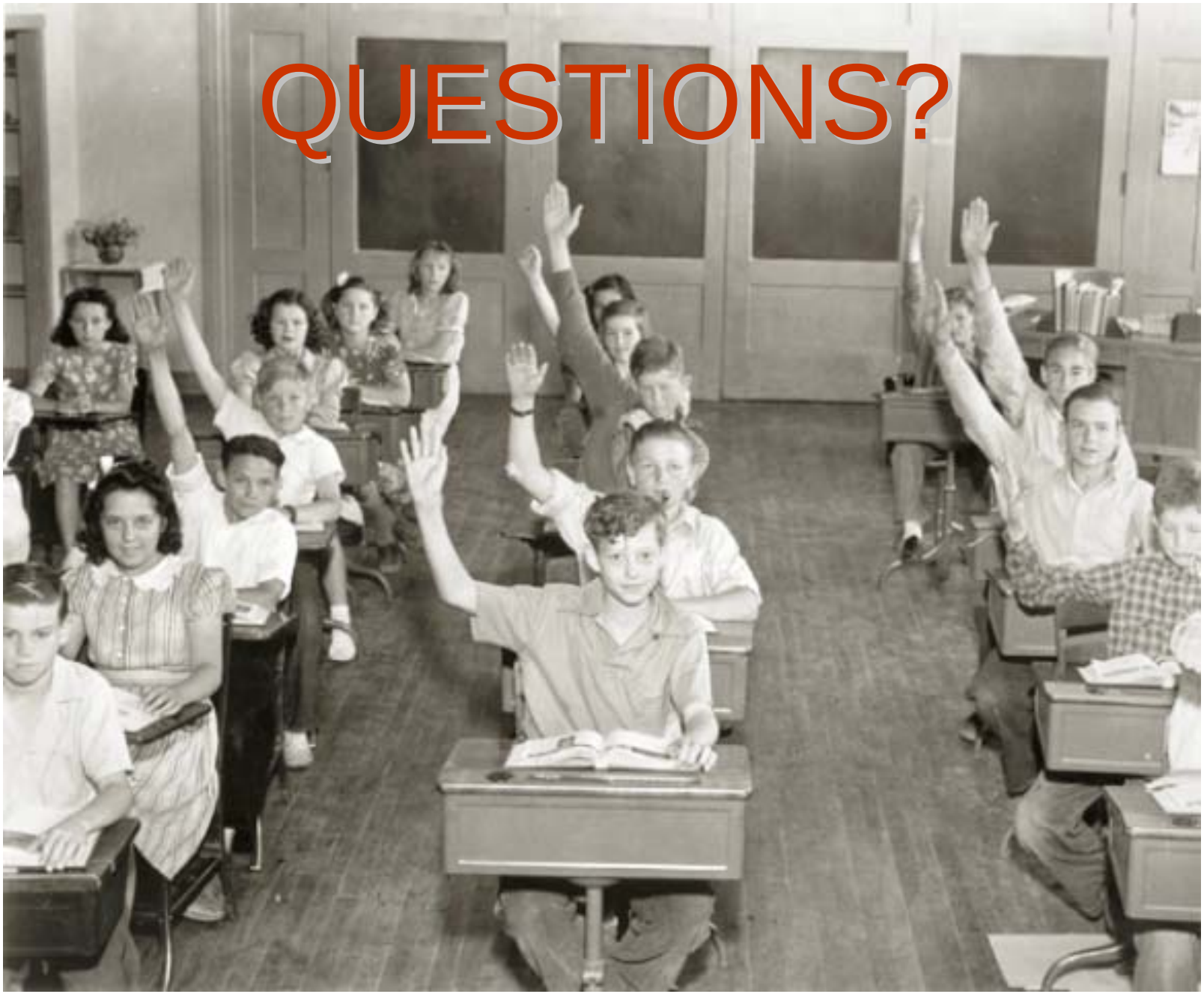
Devices On Market

Retail/Multi-Unit Retail/Commercial/Garages-Shops/Hangars



Multi-Unit Residential

Warehouses/Mixed Use


QUESTIONS?