



## The Next Generation of Heating Technology

Egenolf Alternative Energy Inc.  
[www.biomassenergies.net](http://www.biomassenergies.net)

# Skanden

Local, renewable energy made easy.

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# Imagine the Next Generation of Heating Technology

“Skanden Energy continues to demonstrate a remarkable commitment to this project... they are a reliable team and an excellent company to work with.”

Quenten Clark

*Superintendent of Maine School  
Administrative District 58*

## It's Here Today

- Environmentally friendly
- Ultra-low emissions
- Over 90% efficient
- Easy maintenance
- Proven reliability
- Lower and more stable fuel costs

## Skanden Multifuel Heating System

A Skanden Multifuel Heating System is environmentally friendly, over 90% efficient and easy to use. It cleans itself automatically, and can be controlled via the internet. Instead of buying fossil fuels, it combusts locally produced inexpensive biomass of up to 50% moisture. Converting to a Skanden Multifuel Heating System will cut your heating bills and earn you carbon credits. You will also be able to buy your fuel locally, which creates jobs in your community, generates tax revenue and stimulates the local economy.

## Scandinavian Technology- World leaders in Biomass

Our MultiFuel Heating Systems are based on Danish technology developed by Reka, the



## MultiFuel (340,000- 20,000,000 BTUs)

*Minis available in 34,000-300,000 Btus*

world leader in biomass heating. Reka's biomass gasification heating system, first introduced in 1979, led Scandinavia to convert to over 30% biomass heating. Since 1979, Reka has continued perfecting their combustion and fuel feeding technology. They hold dozens of patents in the field. In 2009, Reka obtained all necessary approvals for the U.S. market, including the ASME stamp. Skanden has exclusive U.S. rights for Reka equipment.

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## Fuels



Pellets



Switch Grass



Wood Chips



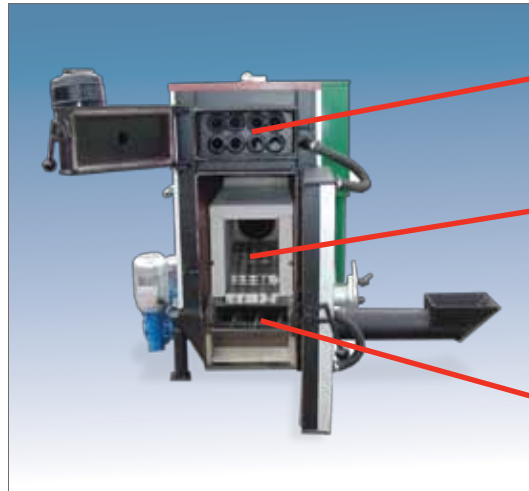
Agricultural Waste

## Advanced Technology Increases Efficiency, Lowers Emissions and Eases Maintenance

All aspects of combustion are precisely controlled to maximize efficiency, minimize emissions and ease maintenance. Everything from oxygen level, to exhaust, is regulated to maintain combustion at 2000°. This ensures that all energy is utilized and not released up the stack in the form of harmful emissions. Biomass fuel is fed in through the front, ensuring uniform combustion, and gasified on a large moving step grate, minimizing the formation of slag, glass, and clinkers. Ashes are automatically removed and deposited in a large ash container adjacent to the boiler. Our unique 4-pass design forces hot gasses past heat exchange tubes four times, three of which are convection passes, maximizing heat transfer and efficiency. Boiler tubes are continually cleaned pneumatically (compressed air). A thorough cleaning is still recommended every summer, but our large doors make cleaning a snap.

## Biomass Heating- An Investment in Your Community

An investment in a Skanden Heating System is an investment in your community. Skanden trains local contractors, building their expertise so they can distrib-



*Boiler tubes are cleaned pneumatically*

*Moving step grate breaks up difficult fuels and prevent the formation of ash, slag and lava*

*Automatic ash removal system deposits the ash in an adjacent ash container (not shown)*

### MultiFuel Mini (68,000 BTUs)

ute and install our equipment. Money spent on biomass fuel remains in the community, creating local jobs (for truckers, chipping operators, property owners and others involved with fuel supply), generating tax revenue, and stimulating the local economy.

## Fuel Costs

Fuel Type	Price/Unit	BTU/Unit	\$/Mill BTUs
Electricity	\$0.12/kw	3,412	\$35.17
Propane	\$2-4/gal	91,333	\$21.90-\$43.80
#2 Oil	\$2-4/gal	138,690	\$14.42-\$28.84
Natural Gas	\$1.25/therm	100,000	\$12.50
Wood Pellet	\$175/ton	16,500,000	\$10.61
Wood Chip	\$40/ton	9,300,000	\$4.64
Waste	Free	Varies	Free

# Customized Total Solutions

A Skanden Heating System is not just the most advanced boiler available. It is a total customized solution, comprised of fuel storage and feeding mechanisms, biomass boilers, exhaust system filtration and chimneys.



*Hydraulically unloaded Storage Systems for wood chips*

## Fuel Feeding and Storage

Skanden offers different types of storage bins and feeding mechanisms, to accommodate pellets, wood chips, switch grasses, waste products, and other biomass. We offer a hydraulic live floor fuel discharge systems for wood chips. We have equipment that reliably cuts grasses and straw and feeds it into augers. Our pellet silos can be custom painted to match adjacent architecture.



*Grass Cutter and Feeding System for cutting and feeding switch grasses, miscanthus, straw, and similar into boilers.*



*Pellet Silo*

