



PELLET FUELS INSTITUTE

PFI Pellet Fuel Standards: A Look Back and the View Forward

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PFI Annual Conference 2016

Grove Park Inn, Asheville, NC



History of PFI's Standards Program

- Standards originally adopted in 1995
- Redevelopment started in 2005
- Updated standards were released in 2008
- Comprehensive Standards program launch in 2011
- Several revisions since - most recently 2015



PFI's Standards Program - Purpose

- Provide the certified fuel referenced in EPA's NSPS for certifying pellet burning appliances
- Provide the certified fuel required to be used by consumers in all certified pellet burning appliances
- Increase the consistency and quality of pelletized fuel throughout the industry



Historical Quality Issues with Pelletized Fuels

- Quality claims on the bag do not necessarily reflect what is in the bag
- Variable performance even within the same grade
- Inappropriate materials are showing up in pellets
- There is nowhere to report non-compliant product or unethical practices



PFI's Program Documents

<http://www.pelletheat.org/pfi-standards>

- PFI Standard Specifications for Residential/Commercial Densified Fuel
- PFI North American Certification System for Residential/Commercial Densified Fuel
- PFI Residential/Commercial Densified Fuel QA/QC Handbook
- Accreditation Body Residential/Commercial Densified Fuel Enforcement Regulations



PFI QA/QC Handbook - Includes

- Responsibilities
- Training
- Documentation
- Records
- Management of Change
- Raw Material Control
- Equipment & Operating processes
- QA/QC Testing
- Third Party Inspection & Monitoring
- Inspection Criteria
- Re-inspection Criteria
- Non Conformance
- Storage/Handling/Delivery
- Labeling




PFI's Responsibilities

- Issue / Maintain / Promote the standards
- Pursues technical research to improve upon the standards
- Contracts and monitors the accreditation body
- Maintains a website registration of all compliant parties
- Pursues any misuse of the certification mark



PFI's Certification Mark

- Displayed on front lower third of the bag
- Additives may not exceed 2% by weight (type must be stated)
- Material class must be stated
- Higher heating valued stated as-received and must reflect a minimum BTU guarantee – verified by audit
- Manufacturers may provide other guarantees as long as their claims are demonstrated through audit (e.g. Ash Content As-Received: <0.50%)



PFI Densified Fuel Grade: Premium
Mill Registration #

Grade Requirements:

Bulk Density:	40–48 lbs/ft ³
Diameter:	.230–.285 in/5.84–7.25 mm
Durability:	≥96.5
Fines:	≤0.50%
Ash Content (as received):	≤1%
Length:	≤1% >1.5 in.
Moisture:	≤8.0%
Chlorides:	≤300 ppm

Manufacturers Guaranteed Analysis:

Type of Material:	
Additives:	
Minimum Higher Heating Value (as received):	
Other Manufacturers Guarantees:	

Approved Auditing
Agency Logo
Displayed Here

© For more information, please visit the PFI website at www.pelletheat.org.



Key Benefits of Standards Program

- Fuel manufacturers follow prescribed quality management practices assuring greater consistency between similarly labeled products
- Certification Mark clearly identifies certified fuel
- Provides three grades but allows manufacturers to provide additional guarantees if their quality reliably exceeds grade standards



Premium, Standard & Utility Grades

Fuel Property	Residential/Commercial Densified Fuel Standards		
	See notes 1-6		
	PFI Premium	PFI Standard	PFI Utility
Normative Information - Mandatory			
Bulk Density, lb./cubic foot	40.0 - 48.0	38.0 - 48.0	38.0 - 48.0
Diameter, inches	0.230 - 0.285	0.230 - 0.285	0.230 - 0.285
Diameter, mm	5.84 - 7.25	5.84 - 7.25	5.84 - 7.25
Pellet Durability Index	≥ 96.5	≥ 95.0	≥ 95.0
Fines, % (at the mill gate)	≤ 0.50	≤ 1.0	≤ 1.0
Inorganic Ash, %	≤ 1.0	≤ 2.0	≤ 6.0
Length, % greater than 1.50 inches	≤ 1.0	≤ 1.0	≤ 1.0
Moisture, %	≤ 8.0	≤ 10.0	≤ 10.0
Chloride, ppm	≤ 300	≤ 300	≤ 300
Heating Value	N/A	N/A	N/A
Informative Only - Not Mandatory			
Ash Fusion	N/A	N/A	N/A



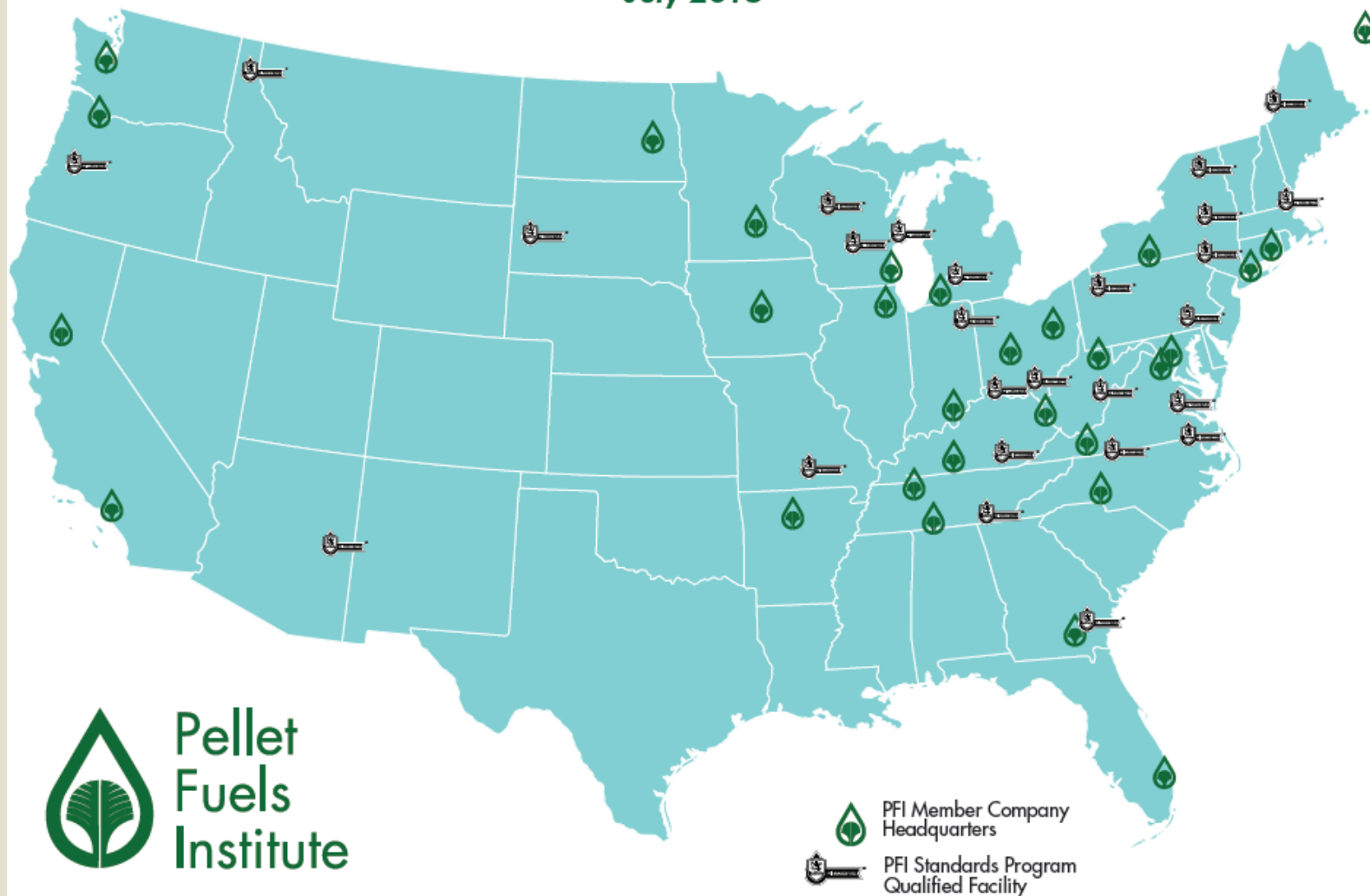
Manufactures Benefit of Standards Program

- Provides structure and standardized test methods
- Third party verification through an accredited auditing structure
- Provides a registration system for all compliant entities
- Reduced quality complaints



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PFI Members and Standards Program Qualified Facilities July 2016



Pellet
Fuels
Institute



PFI Member Company
Headquarters

PFI Standards Program
Qualified Facility



PFI Qualified Producers Stats

- 26 Qualified Facilities
- 15 Fuel Manufacturers
- 2.67 Million Tons of Production Capacity
- Coverage from Coast to Coast



How Can Retailers Get Involved???

- Learn how to recognize fuel that is certified
 - Verify that PFI's Certification Mark is on the bag
 - Verify that the producer is registered with PFI's Standards Program
 - <http://pelletheat.org/pfi-standards/what-are-the-pfi-standards/>
- If you see non-certified producers using the mark or other marks deceptively similar please report them to PFI immediately



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Questions?

Pellet Fuels Institute

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