

WEBINAR PANELISTS

Hosted by:

CUG POWER
COAL USERS' GROUP



MODERATOR:

ANDY COFAS

*CUG Board Member and Plant Manager
Rawhide Energy Center
Platte River Power Authority*



PRESENTER:

ROD HATT

*Owner
Coal Combustion, Inc.*

Practicalities of Coal Blending

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Thank you for attending!

Measuring Coal

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Engineering

1.5 meter desk

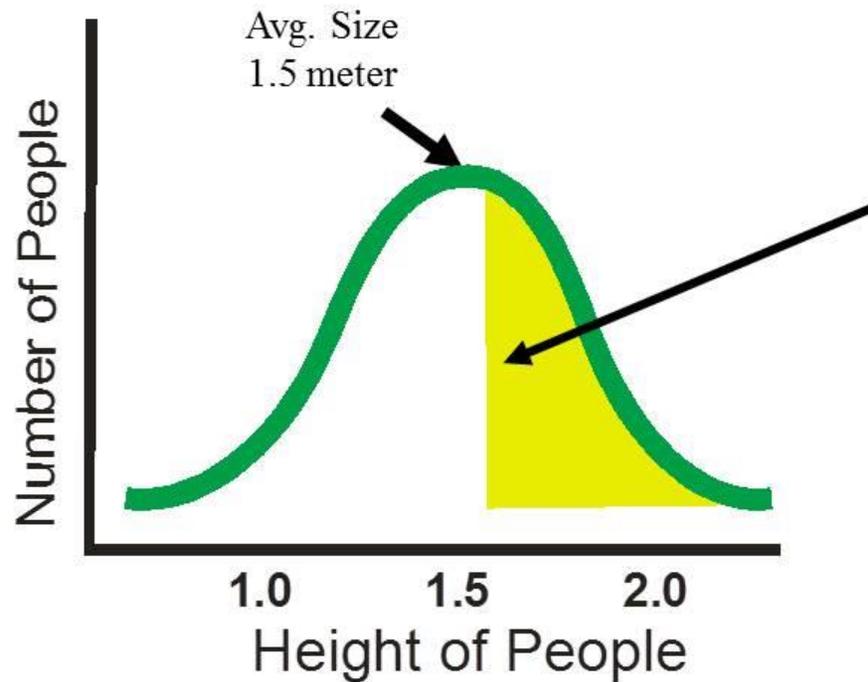


1.55 meter door

Fits through every time



Coal Quality

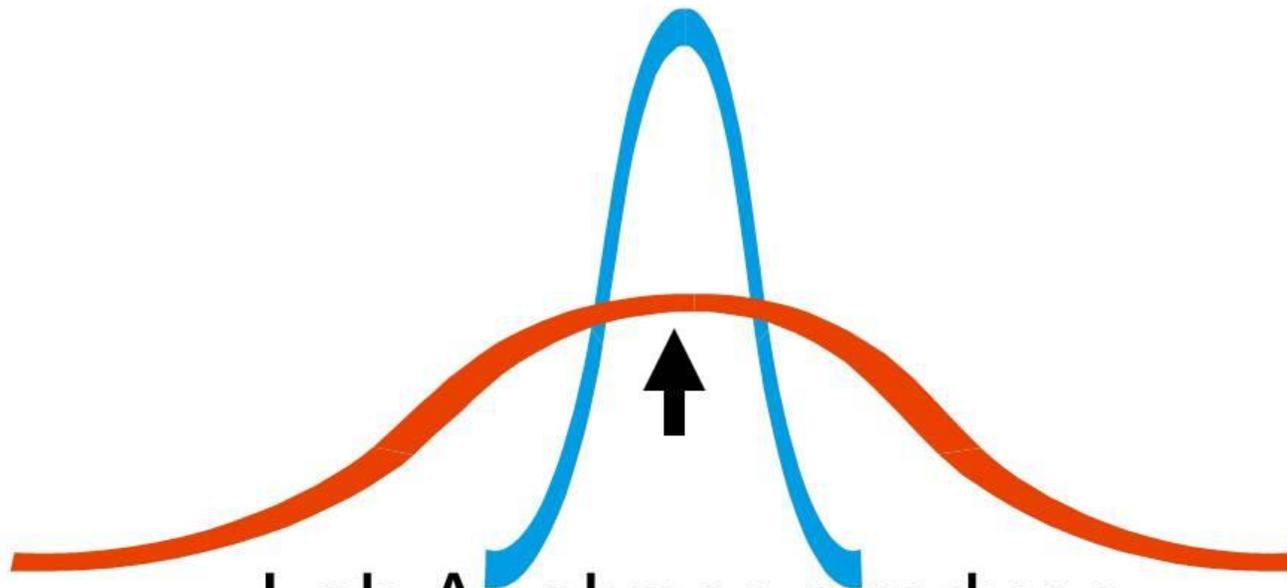


1.55 Meter
Door

**Only 1/2 of the people
fit through**



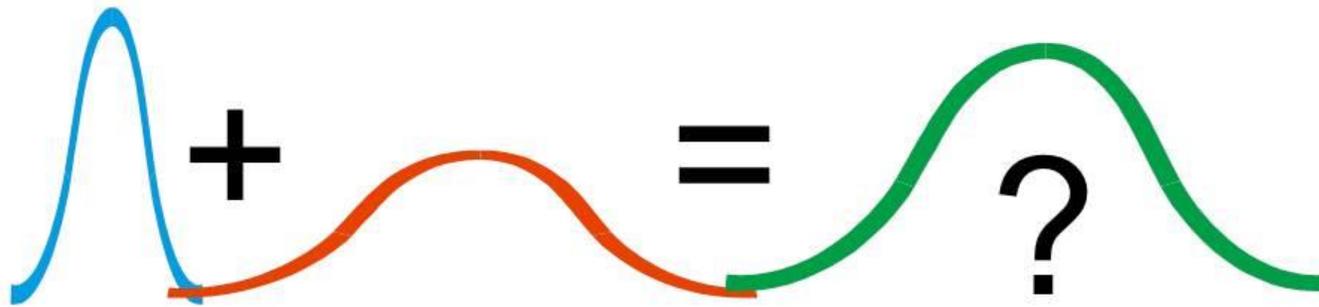
Small and Large Variability



Lab Analyses produce
Exact Same Data



Blending Variability



1. Economics

**Cost of Blending
Plant Performance**

2. Fuel Quality

Is it consistent

Economics

Paper Blending Looks Good

Fuel Quality

Plant reacts to swings

How to Blend Coal

Hard to do!

Mixing verse Blending

Plant Limit

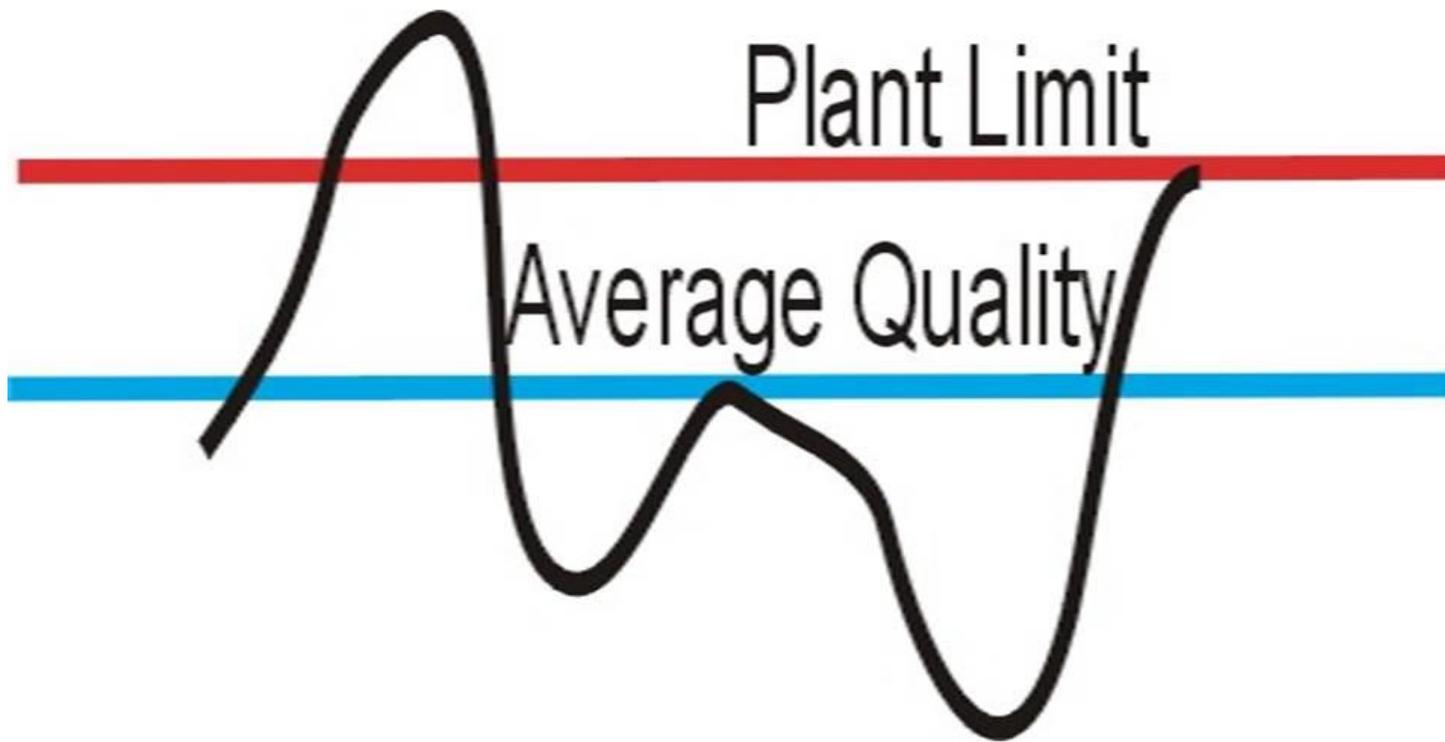


Average Quality



Coal Combustion Inc.
Understanding the business of coal





CCI Coal Combustion Inc.
Understanding the business of coal





What properties blend?

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Coal Blending

Chemical Data Blends

- Heating Value
- Sulfur
- Ash Chemistry



Coal Blending

Physical Test Difficult

- Hardgrove (HGI)
- Ash Fusion Temps
- Combustion Properties





How to blend?





**Mine
Yard**

**Vessel
Boiler**

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**Blending –
Coals on same belt
Mixing – tons plus tons**





**Mine – Many Coals
are blended at mine
to meet specs**



Mine Blending



**Mine – Similar rank
Usually blend for
Ash and Sulfur,
other elements, Cl, Na**

**Vessel – Blending/Mix
while loading larger
ship, 300/200 ton mix
worked, best is blending**







Vessel –
Blend is delivered to plant
Can't un-blend



Yard – Must have space
Blend both coals on same belt
Mix tons of one plus tons other
Reclaim plus train/vessel



Boiler – Individual mills on Separate coals

**Boiler –
Blend proportion
Can be adjusted daily**



**Boiler –
Air to Fuel Ratios
Should be balanced
Coal flow x CV**



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Thank you so much!





Questions ?

