



# **Low Energy Prices + Jobs = Healthy Communities**

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# High Energy Prices Hurt Homes and Businesses

- High energy prices forces business cutback and shut downs
- Our traditional communities have a population for a reason with or without a local economy
- School population as indicator



# Rural Southeast Alaska Native Unemployment

Angoon	87%		Yakutat	49%
Hoonah	70%			
Hydaburg	90%		<b><u>URBAN AREAS</u></b>	
Kake	75%		Juneau	17.5%
Kasaan	49%		Ketchikan	23.0%
Klawock	59%		Sitka	24.5%
Saxman	71%		<b>Average</b>	<b>62%</b>

*Calculated by CCTHITA TANF Program  
as of December 31, 2006*





	Jan-07	Aug-07	Feb-08	Jun-08	Oct-08	Feb-09	Jul-09	Jan-10	Jun-10	Jan-11	Jun-11
Gulf Coast							\$3.78	\$3.90	\$3.93	\$4.19	\$5.00
Interior	\$3.73	\$3.94	\$4.50	\$5.62	\$4.84	\$4.76	\$5.16	\$4.94	\$5.02	\$4.94	\$5.60
Northern	\$1.41	\$1.38	\$1.46	\$1.72	\$1.80	\$1.77	\$1.64	\$1.80	\$1.62	\$1.83	\$1.74
Northwest							\$6.96	\$5.32	\$5.84	\$5.65	\$5.93
Southeast	\$3.31	\$3.46	\$3.82	\$5.18	\$1.96	\$3.73	\$3.50	\$3.60	\$3.67	\$4.16	\$4.89
Southwest	\$3.53	\$3.67	\$3.94	\$5.37	\$5.08	\$4.77	\$5.06	\$4.57	\$4.84	\$4.91	\$5.68
Western	\$4.49	\$4.73	\$4.71	\$5.65	\$6.99	\$7.00	\$6.59	\$5.06	\$5.14	\$5.46	\$5.75

# Example: Southeast Alaska Wood Pellets



# What is a wood pellet?



	<b>Water Content W (in %)</b>	<b>Thermal Value Absolute (in BTU/lb)</b>	<b>Transport Density (in lb/ft<sup>3</sup>)</b>
Wood Pellets	5	7,737	40.5
Forest wood chips, dry	30	5,416	14.6
Forest wood chips, wet	60	2,600	19.3
Heating Oil	-	18,260	52.9

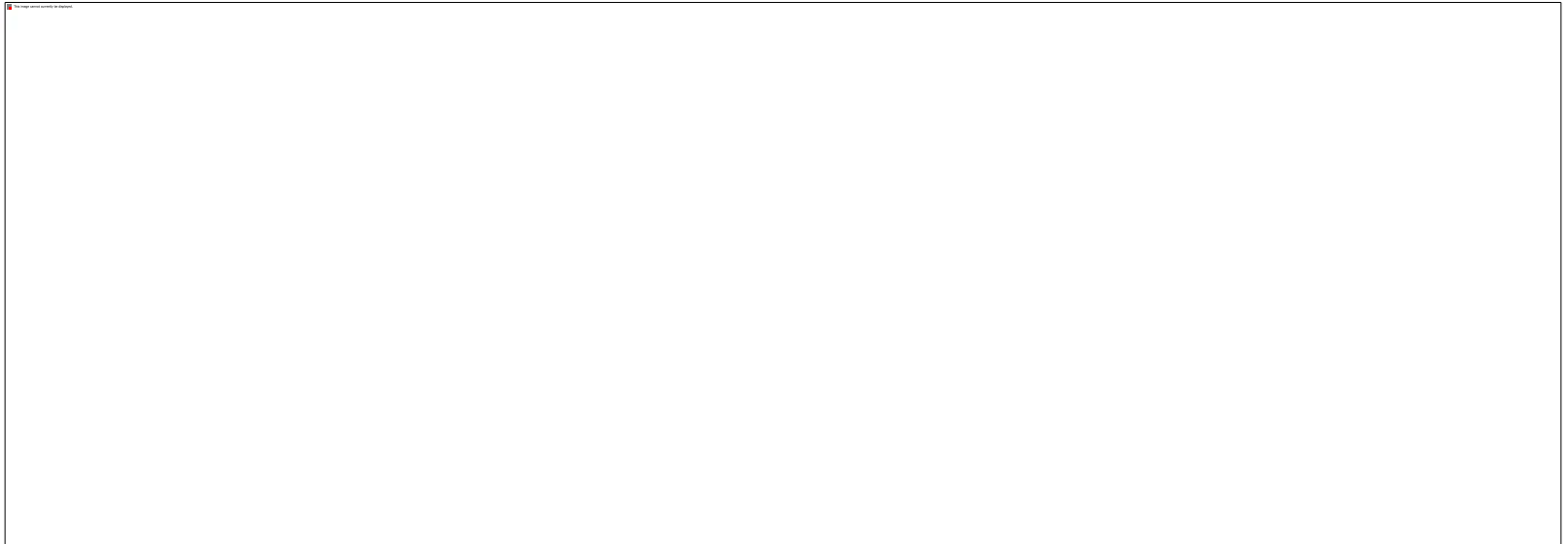


# Fuel Comparisons

Pellet Price/ton	\$/mbtu
\$ 300.00	\$ 21.52
\$ 350.00	\$ 25.10
\$ 400.00	\$ 28.69
\$ 450.00	\$ 32.28
\$ 500.00	\$ 35.86
\$ 550.00	\$ 39.45
\$ 600.00	\$ 43.04

#2 Fuel Oil \$/Gal	\$/mbtu
\$ 2.00	\$ 17.05
\$ 2.50	\$ 21.31
\$ 3.00	\$ 25.57
\$ 3.50	\$ 29.83
\$ 4.00	\$ 34.10
\$ 4.50	\$ 38.36
\$ 5.00	\$ 42.62
\$ 5.50	\$ 46.88
\$ 6.00	\$ 51.15

Electricity \$/kwh	\$/mbtu
\$ 0.07	\$ 20.51
\$ 0.08	\$ 23.44
\$ 0.09	\$ 26.37
\$ 0.10	\$ 29.30
\$ 0.11	\$ 32.23
\$ 0.12	\$ 35.16
\$ 0.13	\$ 38.10
\$ 0.14	\$ 41.03
\$ 0.15	\$ 43.96



# Creating the Wood Pellet Industry

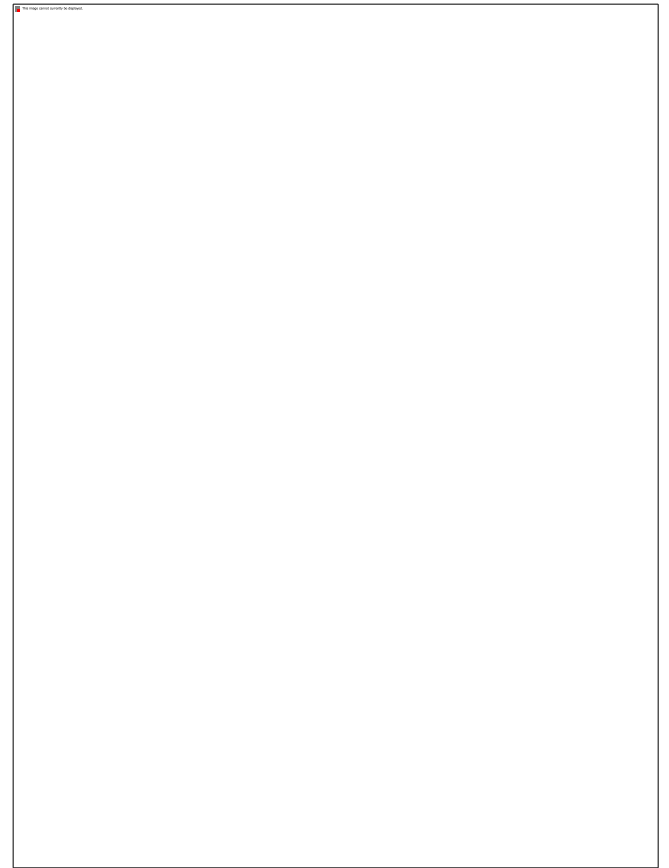
- Economy of scale
- Regional Coordination
- Local pellet mill
- Community buy in
- Find the anchor demand





# Sealaska Pellet Fuel Spill

- Human Error
- No Harm to Environment
- No Fines
- Easy Cleanup!



# Creating Industries

## DO

- Projects which bring something to your community
- Show business alternative technologies
- Bring in the right equipment

## Don't

- Go cheap
- Forget the big picture
- Forget to educate people on the facts
- Forget change is often met with resistance

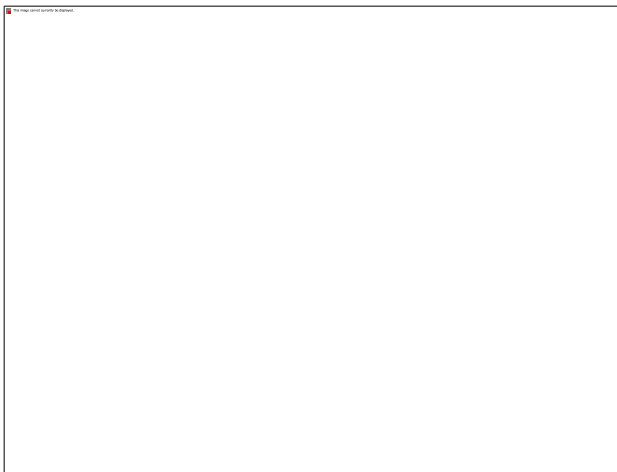
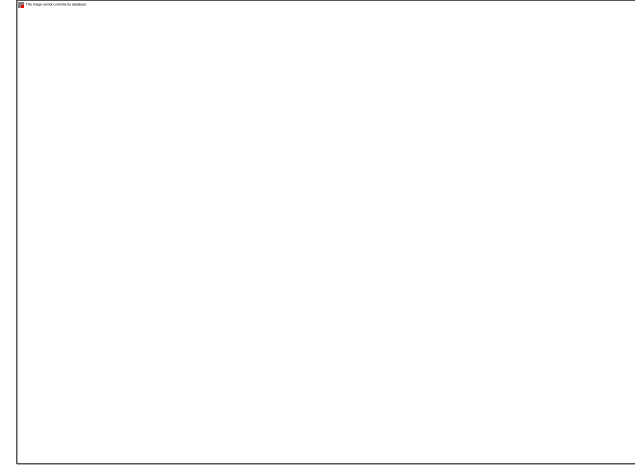
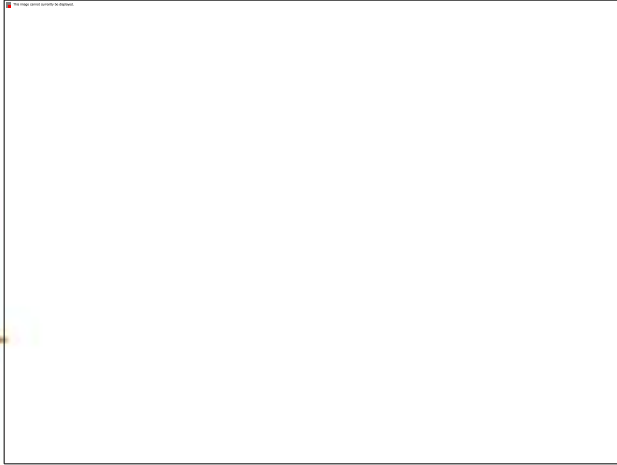


# Example: Sealaska/MBS Kake Call Center

- Data center for the US Bureau of Prisons
- Insourcing 5 jobs to rural Alaska
- Compatible with village lifestyles
- Low energy business



# Example: Yukon Firewood/Biomass



# Example: Southeast Greenhouses

- Vertical Farming, LED lighting
- Waste heat or alternative heating
- Scale of the facility
- Who will work there
- 1 per region or 1 per community?
- Grow what? Affordable? Profitable?



# Regional Cooperation and Coordination

- Economies of Scale
- Sharing successes
- Sharing failures
- Sharing infrastructure



# Regional Cooperation and Coordination

- What resources does your community have?
- What businesses did you have in the past?
- What are the issues that killed your businesses?
- What business ideas have residents come up with?
- Can you rally community and regional support around a common issue?



# Soboleff Indicator of Community Health

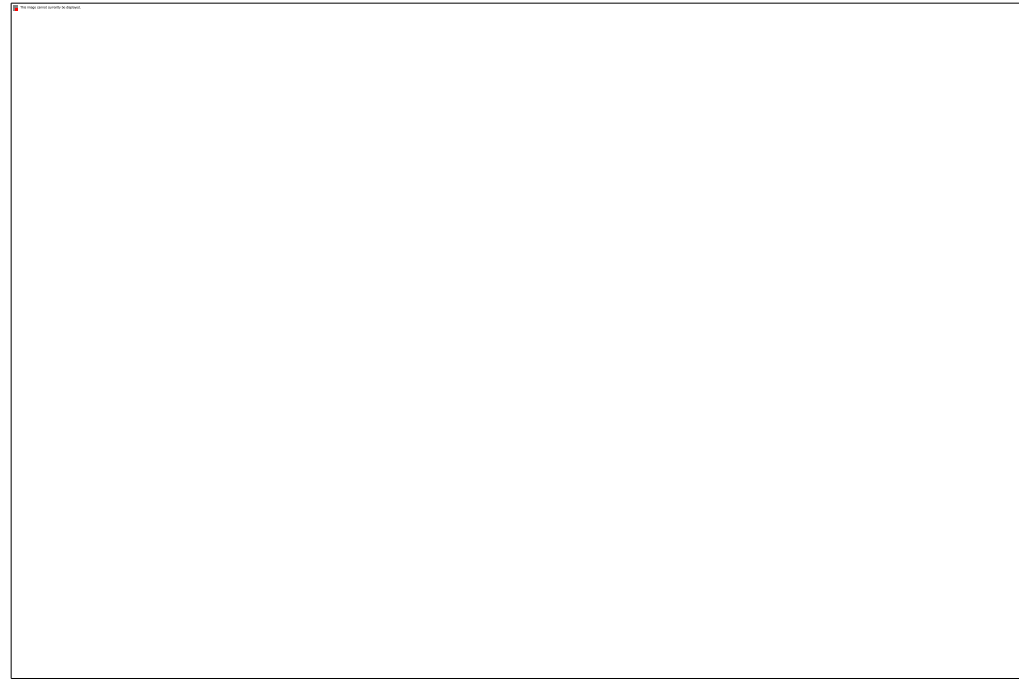
(Time/Money/Hassle chart)



- Oil is hands off
- Wood is hands on







**“If you don’t start this year,  
you will be one year older  
when you do”**