

# Industrial Wood Pellets:

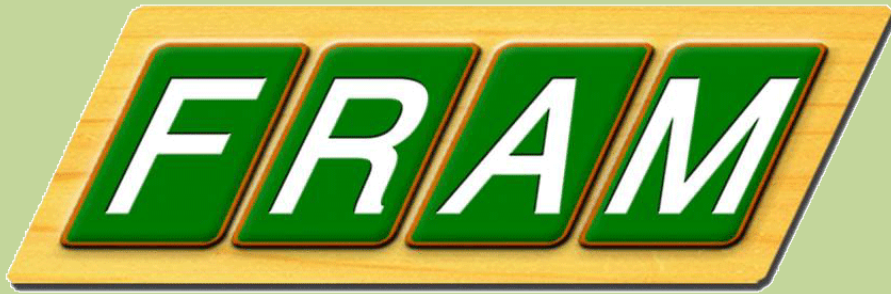
## A Fragile Balance



**Task 43**

**February 21, 2012**





*RENEWABLE FUELS*



## TIMELINE

2005	Fram Founded
2007	ACP Complete
2008	Production
2010	ACP Expansion
2011	TFP Position



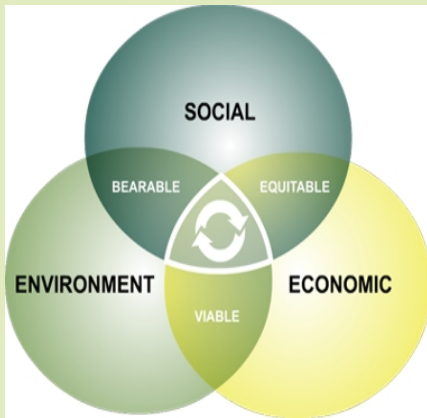


# Fragile Balance Scenarios

Sustainability vs. Environmental Concerns

Environmental Sustainability vs. Economic Sustainability

Increasing Production Costs vs. Fixed Price Contracts

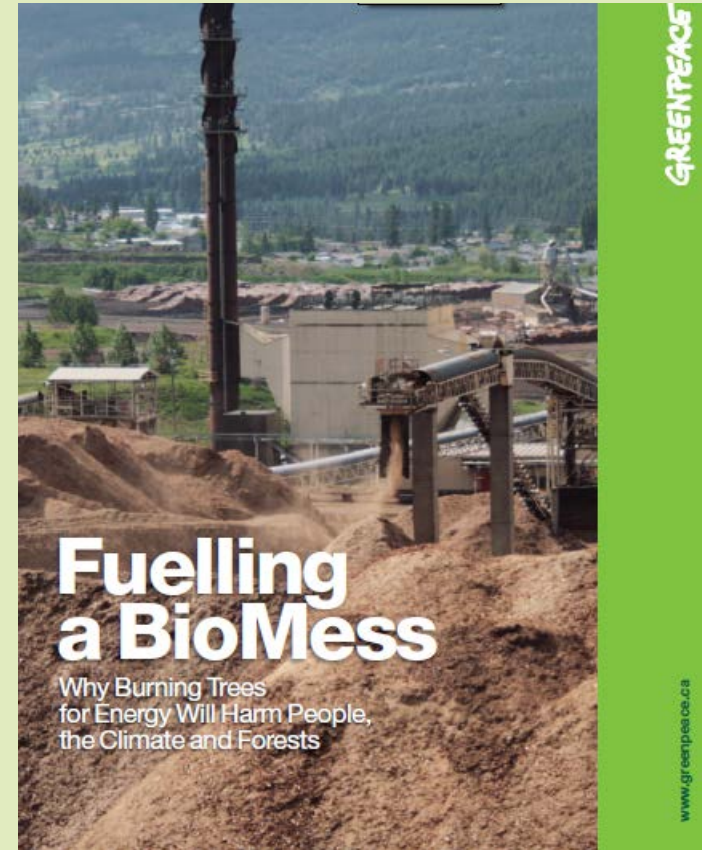


# Sustainability vs. Environmental Concerns

- “BioMess” – By Greenpeace
  - Published in October 2011

## What they want you to believe:

1. Biomass for energy will deforest the world
  2. Biomass is not carbon neutral
  3. Burning biomass is an air quality hazard
- .....the list goes on and on



**By Fighting Biomass... Are these organizations advocating the use of COAL???**

# Sustainability vs. Environmental Concerns

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- The Facts
  - The forestry industry benefits from markets provided by wood energy sector.
    - In Georgia growth exceeds removal by **38%**
    - Healthy markets for wood products increases replanting
  - Environmental concerns are taken seriously
    - Sustainability programs are among contract requirements for buying and selling wood energy products.

# Environmental vs. Economic Sustainability

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## Important Considerations

Return to Land Owner

Conversion to a Money Crop

Customer Responsibility

Economic Supply Chain

Logistics



**All parts of the supply chain MUST share responsibilities influencing both environmental and economic sustainability**

# Certification Obstacles

- 90% of forest lands are privately owned
- Certification requires time and \$\$ relative to land ownership size
- Certification offers no price premium to Land owner

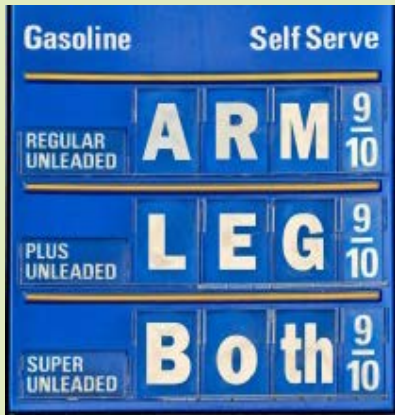


# Logistics Challenges

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- Pirate Ship Owners
- No Discounts
- Discharge Obstacles
- High Port Costs
- Limited Storage
- New Fuel Regulations
- Bunker Increase







# European Energy Policy

Energy 2020 Strategy

Renewable Energy Targets

Contribution of biomass versus other renewable energy sources

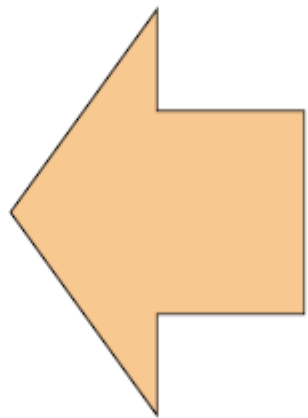
Economics – PRIMES model scenarios

National Renewable Energy Action Plans

- 20% emissions reduction
- 20% efficiency improvement
- 20% renewable energy
  
- **Separate targets for each member state**
- Trajectory to 2020

- Cost-efficient scenarios for RES supply

- **Targets by sector**
- Measures to meet targets





# UK Biomass Policy

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- UK ROC Program
  - 1.0 ROC's /MWH using enhanced co-firing
  - Consultation period ends January 31, 2012
- Implications
  - UK will possibly require more than 15 Mil tons by 2016
  - EU could require more than 44 Mil tons by 2020
  - The U.S. Southeast could play a large role as a supplier of biomass to the UK and EU.

# Global Market

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**Worldwide Installed Capacity : 32 MMT**

**Worldwide Demand: 16 MMT**

## Global Pellet Consumption (in millions)

	2010	2015	2020
Western Europe	10.8	16.4	23.8
China	.6	3.0	10.0
Japan/Korea	.2	3.8	5.5
North America	3.4	4.3	5.6
TOTAL	15.0	27.5	44.9

Source: Poyry



# Global Market

**Worldwide Installed Capacity : 32 MMT**

**Worldwide Demand: 16 MMT**

Global Pellet Production (in millions)			
	2010	2015	2020
Western Europe	7.7	10.7	13.0
China	.6	3.0	10.0
Japan/Korea	.1	.4	1.1
North America	4.9	8.5	11.0
Other ( Russia, Eastern Europe, South America)			11.0
<b>TOTAL</b>	<b>13.3</b>	<b>22.6</b>	<b>46.1</b>

Source: Poyry

# The Future....

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Opportunity

Obstacles

Opposition

Obligation



# Get Involved

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U.S. Industrial Pellet Association



Pellet  
Fuels  
Institute

