



Effects of Renewable Energy Incentives on Forest Products Markets

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Outline

1. Background
2. Alternative Fuel Mixture Tax Credit (AFMC)
3. Biomass Crop Assistance Program (BCAP)
 - Notice of Funds Available vs. Draft Rules
 - Fibre flows
 - Business-as-usual vs. new behavior
 - Subsidy efficiency
4. Renewable Electricity Production Credit (REPC)
5. Conclusion





AFMC

- Created as part of 2005 U.S. Highways Act
- Intended for transportation fuels
- \$0.50 per gallon
- U.S. pulp companies began accessing credit in 2009 for black liquor mixed with small quantities of diesel fuel.
- Black liquor is by-product of Kraft pulping, routinely burned for disposal, energy and chemical recovery





AFMC

- Program paid \$8.5 to \$9 billion
- Large capital infusion at time of historical market weakness
 - Competitive advantage for US producers
 - Concerns over likelihood of market distortions





Biomass Crop Assistance Program

- Part of 2008 US Farm Bill
- Two main components:
 - Project Areas Strategy (long term fibre supply)
 - Collection, Harvest, Storage and Transportation [CHST] (short term fibre supply)
- Matching subsidy of up to US\$ 45 per odst of eligible biomass
- Payments began 08/2009 under Notice of Funds Available

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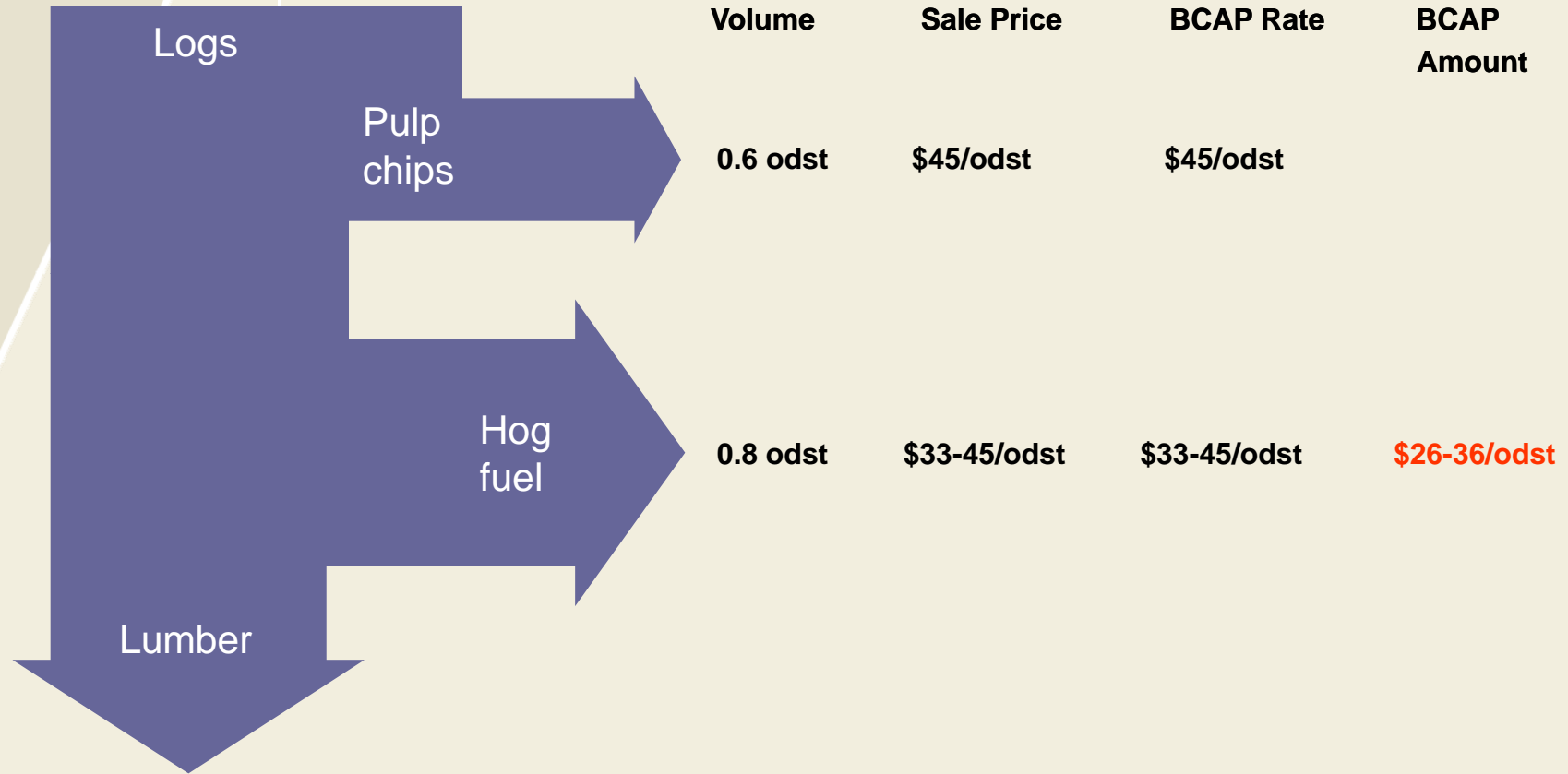
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BCAP – Fibre Flows



Lumber price: 353 \$/1000 bf

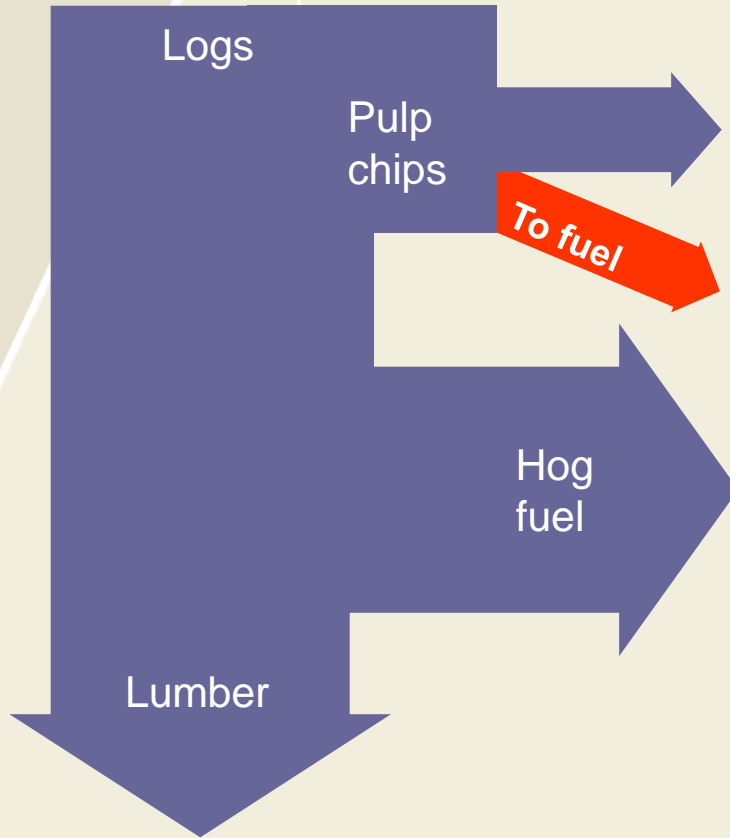
BCAP Subsidy: 26-36 \$/1000 bf

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BCAP – Fibre Flows



Volume	Sale Price	BCAP Rate	BCAP Amount
0.4 odst	\$45/odst		
0.2 odst	\$45/odst	\$45/odst	\$9/odst
0.8 odst	\$33-45/odst	\$33-45/odst	\$26-36/odst

Lumber price: 353 \$/1000 bf

BCAP Subsidy: 35-45 \$/1000 bf

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BCAP – Payments to date

- 08/2009 – 04/2010
- \$ 181 million paid out
- 98.5% (\$178 million) for wood fibre
- 50.4% (91 million) for fibre types traditionally utilized in the value chain (bark, chips, pellets, shavings, sawdust)





BCAP – Draft Rules

- Draft rules propose three payment options:
 1. Tiered
 2. Baseline
 3. Hybrid
- Significant differences in payment allocations for business-as-usual vs. new behavior
- Final rule expected May/June 2010





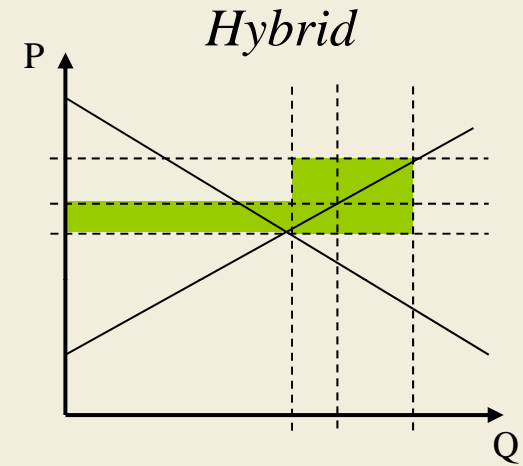
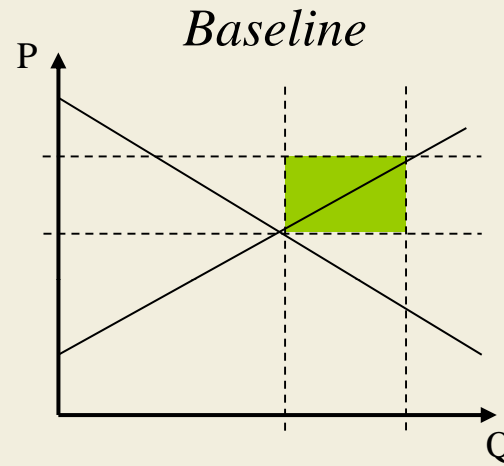
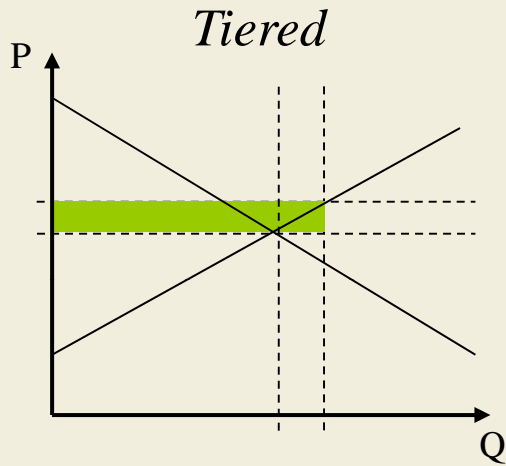
BCAP Payment Options

- **Option 1 - Tiered**
 - Up to \$16 per ton for biomass used for products other than cellulosic ethanol
 - Up to \$45 per ton for biomass used for cellulosic ethanol
- **Option 2 – Baseline**
 - Up to \$45 per ton for use above historic baseline
 - Up to \$45 per ton for use in cellulosic ethanol (no baseline)
- **Option 3 – Hybrid**
 - Up to \$16 per ton for biomass below historic baseline
 - Up to \$45 per ton for biomass:
 - Above historic baseline
 - Used in full conversion to renewables
 - Shows exceptional promise for innovative/advanced biofuels¹⁰





BCAP – Payment Options



BAU	\$554.4 M		\$ 554.4 M
New	\$2.4 M	\$24.9 M	\$24.9 M
Total	\$ 556.8 M	\$24.9 M	\$581.3 M





Renewable Electricity Production Credit

- Production incentive (\$0.006 for open-loop) for electricity from biomass sold into the grid
- Amendments would make internal use eligible
- Total expected payments to US pulp producers for primarily business-as-usual practices: \$7.6 B





Conclusion

- Impacts on forest products markets through:
 - Subsidies for business-as-usual operations, distorting forest products markets
 - Fibre competition (e.g. redirection of pulp and composite panel production feedstocks to energy)
- Number and scale of these incentives makes this an ongoing issue

