

Maine Paper Days Climate Change Panel



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Other Considerations When Evaluating Energy Efficiency/GHG Reduction Strategies



- ① Other upcoming emissions control requirements
- ② Potentially available funding

Low Sulfur Oil Requirements



- **LD 1662, An Act to Improve Maine's Air Quality and Reduce Regional Haze at Acadia National Park and Other Federally Designated Class I Areas**
 - Lowers allowable sulfur levels in fuel oil
 - Reduces SO₂ emissions; and haze
 - Increases fuel costs

LD 1662, An Act To Improve Maine's Air Quality and Reduce Regional Haze at Acadia National Park and Other Federally Designated Class I Areas



Fuel Oil	Sulfur Limit	Date
Residual Fuel Oil (#4 or #6)	2.0% by weight	Current
	0.5% by weight	January 1, 2018
Distillate Fuel Oil	0.5% by weight	Current
	0.005% by weight	January 1, 2016
	0.0015% by weight	January 1, 2018

Existing Biomass Boilers (burning less than 10% coal)



Compound	Boiler Type	Old Boiler MACT	Preliminary New Floor, 99UCL	Units
PM	all	0.07	0.039	lb/MMBtu
HCl	all	0.09	0.024	lb/MMBtu
Hg	all	9.00E-06	9.5E-07	lb/MMBtu
CO	Stoker		2,810	ppm @ 3% O ₂
	FB		486	ppm @ 3% O ₂
	Fuel Cell		320	ppm @ 3% O ₂
	Dutch Oven		19,395	ppm @ 3% O ₂
	Susp Burner		247	ppm @ 3% O ₂

- ✦ Promulgate by end of 2010
- ✦ Compliance by end of 2013

Existing Biomass Boilers (burning less than 10% coal)



Compound	Boiler Type	Old Boiler MACT	Preliminary New Floor, 99UCL	Units
THC	Stoker		2	ppm @ 3% O2 as Propane
	FB		2	ppm @ 3% O2 as Propane
	Fuel Cell		4	ppm @ 3% O2 as Propane
	Dutch Oven		9	ppm @ 3% O2 as Propane
	Susp Burner		164	ppm @ 3% O2 as Propane
Total Dioxin/Furan TEQ	Stoker		4.5E-03	TEQ ng/dscm @ 7% O2
	FB		2.4E-02	TEQ ng/dscm @ 7% O2
	Fuel Cell		4.6E-04	TEQ ng/dscm @ 7% O2
	Dutch Oven		8.4E-01	TEQ ng/dscm @ 7% O2
	Susp Burner		1.1E-02	TEQ ng/dscm @ 7% O2

- ✦ Promulgate by end of 2010
- ✦ Compliance by end of 2013

EPA Proposes Listing of Hydrogen Sulfide as HAP



- Expected decision by end of 2011
- More control of H₂S ⇒ more combustion capacity
- Potential impacts on BART
- New SO₂ ambient standard (1-hr) by end of 2010

Potential Federal Economic Incentives



- **Renewable Energy:**
 - 30% investment tax credit cash grant for qualifying renewable energy projects that begin construction in 2010
 - ✦ Grant received when facility enter service
 - ✦ Includes incremental hydro (efficiency upgrades)

Potential Federal Economic Incentives



- **USDA Biomass Cross Assistance Program (BCAP)**
 - Matching payments to agricultural and forest land owners and operators for the amount paid for the collection, harvest, storage and transportation of eligible material by a qualified Biomass Conversion Facility
 - Payments to owners of designated “project areas” to cover 75% of costs to establish woody and non-woody perennial biomass crops, and up to 15 years of crop production
 - Intended to develop infrastructure for produce, transport and deliver biomass materials for use in energy

Potential State Economic Incentives Efficiency Maine Trust



- New entity to replace Efficiency Maine, brings all of Maine's energy efficiency efforts under one roof
- Funding sources:
 - RGGI (\$8-9 M/year)
 - ARRA Stimulus Funds (\$30 M in FY 2011)
 - System Benefits Charge (\$13 M in FY 2011)
- Will spend \$7.1 M on medium and large businesses in FY 2011
- Provide funds for high efficiency equipment, training and expertise in implementing energy efficiency measures

Competitive Grants for Large Energy Efficiency and Conservation Projects



- Administered by Maine PUC and the RGGI Trust
- \$6 million in ARRA and RGGI funds
- Goals:
 - Reducing kWh consumption (\$3 M)
 - Decreasing GHG emissions (\$3 M)
- New RFA expected to be issued in April-May 2010
 - Previous grant awards under this program ranged from \$200,000 to \$2 million, many recipients from the pulp and paper industry
 - Eligible commercial and industrial projects will save or create jobs, achieve energy savings and GHG reductions, and are “project-ready”
 - 30% of project costs must come from private funding