BIOMASS AMENDMENTS IN RECENT FEDERAL LEGISLATION

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Partnership for Policy Integrity

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PFPI
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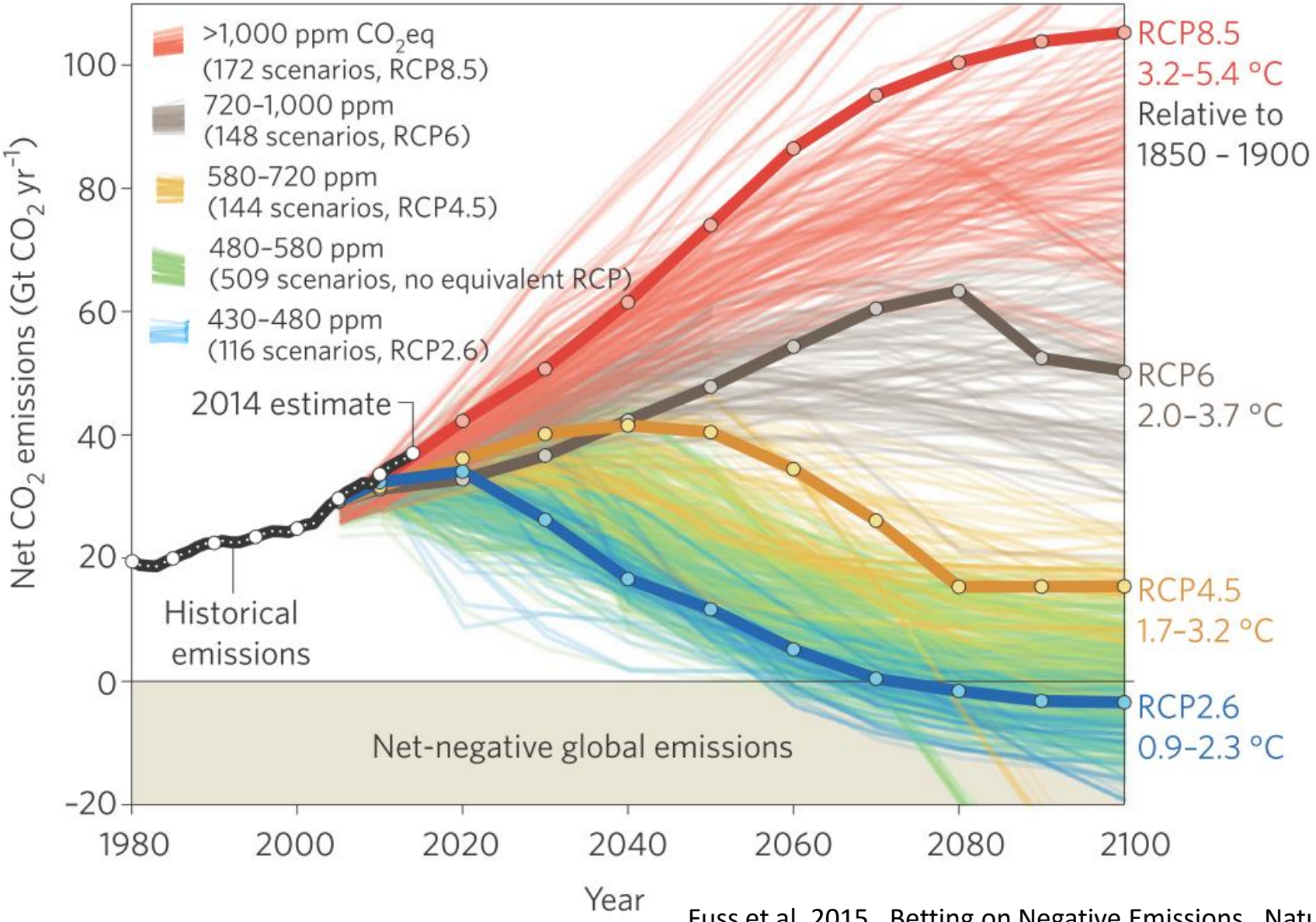
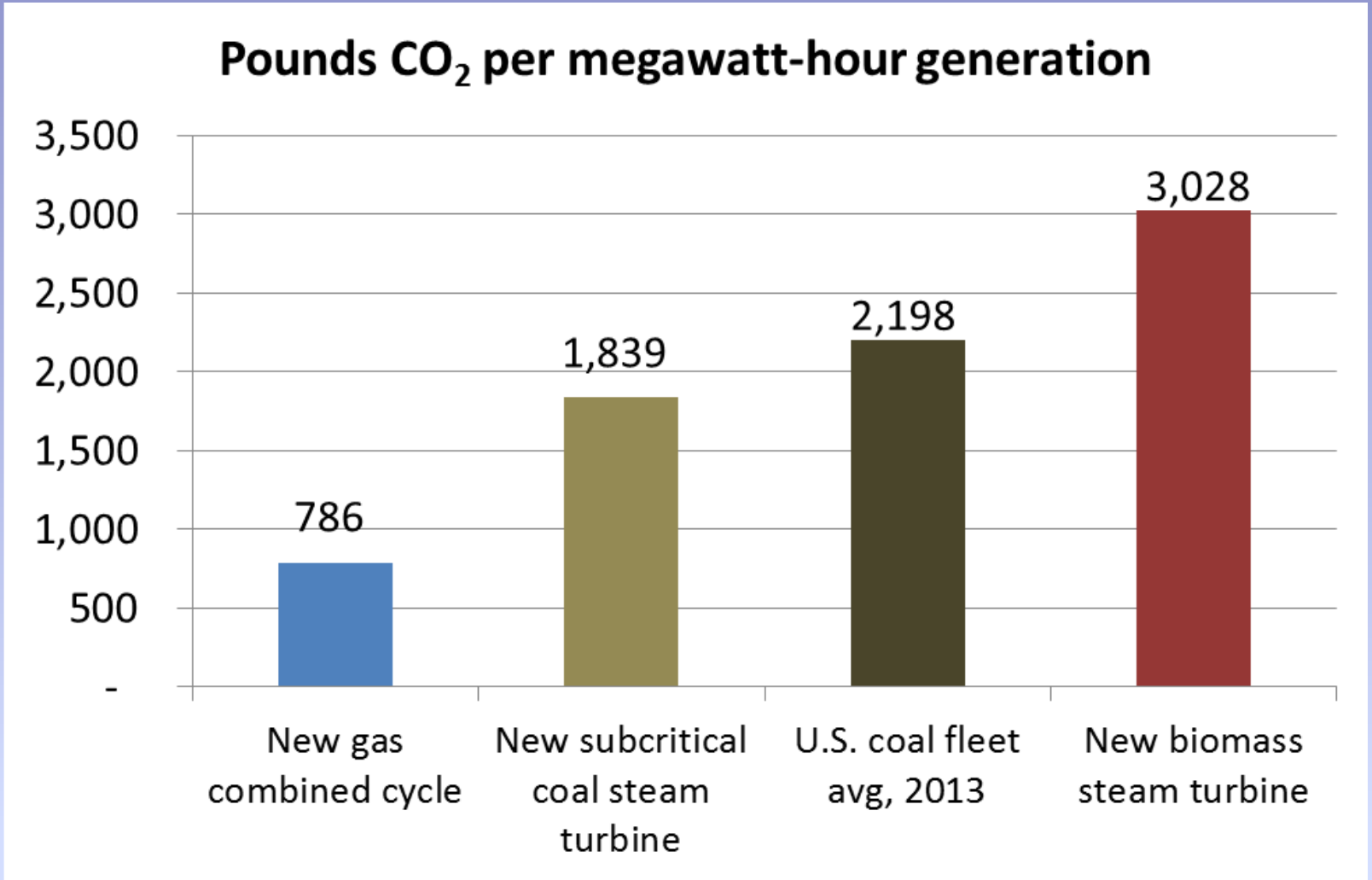
To keep temperature rise below 2 deg C, we need negative emissions



Fuss et al, 2015. Betting on Negative Emissions. Nature.

Biomass power plants emit more CO_2 per megawatt-hour than coal or gas facilities



Biomass plants being built today emit **~65%** more CO_2 per MWh than modern coal plants, and **~285%** more than natural gas combined cycle plants

Re-sequestering that CO_2 takes decades

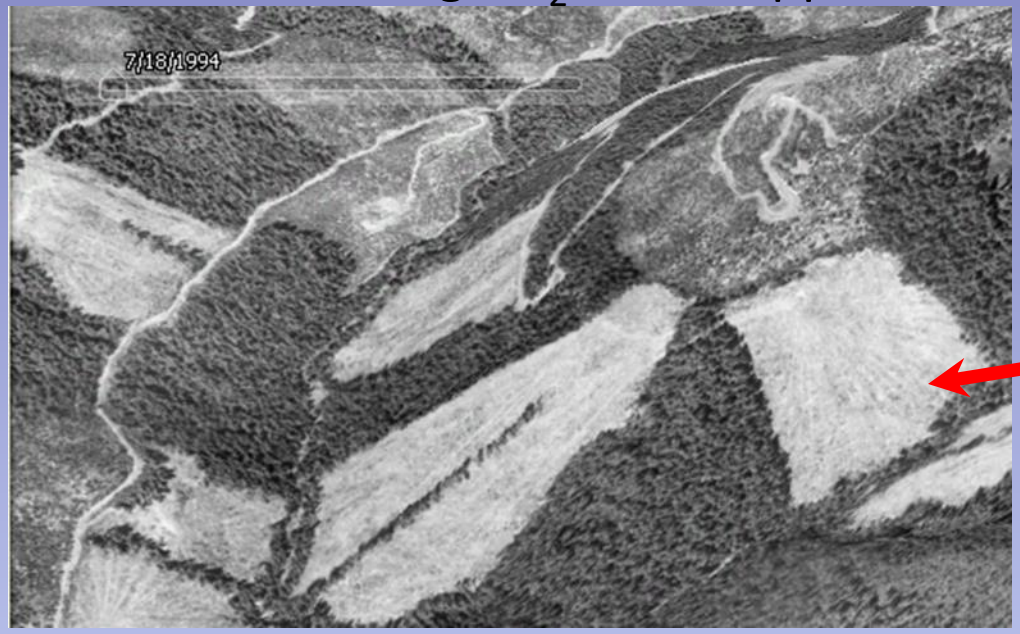
Manomet Study, Massachusetts

Years to Achieve Equal Flux with Fossil Fuels		
Fuel Source	**Coal, Electric**	**Gas, Electric**
Whole trees and logging residues	45 - 75	>90
Logging Residues Only	10	30

Time to parity with coal emissions >45 years;
time to parity with gas emissions > 90 years.

Similar timeframes for Southeastern forests – including pine plantations

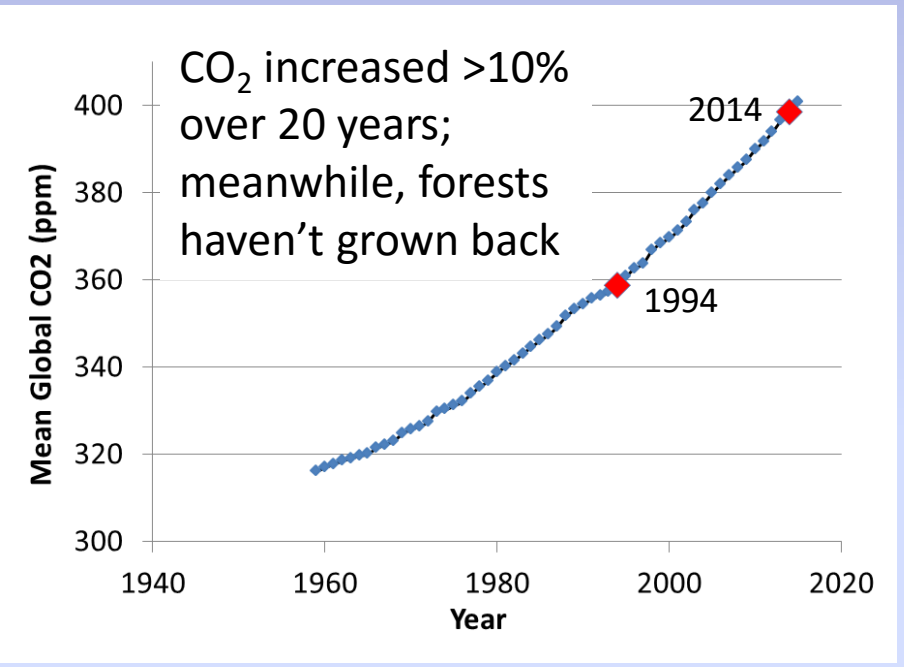
1994: Global avg CO_2 = 358.8 ppm*



Gifford Pinchot National Forest, WA
46.264868°, -121.941855°

25 acres - enough biomass to fuel a 50 MW plant for ~40 hours

* ftp://aftp.cmdl.noaa.gov/products/trends/co2/co2_annmean_mlo.txt



2014: Global avg CO_2 = 398.6 ppm

Energy Bill Biomass Language

(Sens. Collins, King, Klobuchar, Franken, Crapo, Daines, Risch)

"To support the key role that forests of the US can play in addressing the energy needs of the US, the Secretary, the Secretary of Agriculture, and the ***Administrator of the Environmental Protection Agency shall****, consistent with their missions, jointly –*

1. *ensure that the federal policy relating to forest bioenergy –*

A. *is consistent across all Federal departments and agencies; and*

B. *recognizes the full benefits of the use of forest biomass for energy, conservation, and*

1. *responsible forest management; and establish clear and simple policies for the use of forest biomass as an energy solution, including policies that –*

A. reflect the carbon-neutrality of forest bioenergy *and recognize biomass as a renewable energy source, provided the use of forest biomass for energy production does not cause conversion of forests to non-forest use;*

House and Senate Appropriations Bills Biomass Language

House Version: *"The **Administrator of the Environmental Protection Agency** shall base agency policies and actions regarding air emissions from forest biomass including, but not limited to, air emissions from facilities that combust forest biomass for energy, **on the principle that forest biomass emissions do not increase overall carbon dioxide accumulations in the atmosphere when USDA Forest Inventory and Analysis data show that forest carbon stocks in the U.S. are stable or increasing on a national scale**, or when forest biomass is derived from mill residuals, harvest residuals or forest management activities. Such policies and actions shall not pre-empt existing authorities of States to determine how to utilize biomass as a renewable energy source and shall not inhibit States' authority to apply the same policies to forest biomass as other renewable fuels in implementing Federal law."*

(http://www.pfpi.net/wp-content/uploads/2016/06/House-version-of-amendment.pdf)

Senate version: Similar, but forest stocks evaluated on regional basis, not national.

(http://www.pfpi.net/wp-content/uploads/2016/06/Senate-version-of-amendment.pdf)

Enviva pellet plant, Ahoskie, North Carolina – 78% hardwood

Photo: Dogwood Alliance (www.dogwoodalliance.org)

Pellet industry harvesting in North Carolina: ***"Little remains but stumps and puddles in what was once a bottomland hardwood forest"***

Joby Warrick, Washington Post 6/2/2015

"How Europe's climate policies led to more U.S. trees being cut down"

3,000 MW Drax coal/wood plant, Yorkshire, UK

April 2014 – March 2015: Drax burned **4.8 million tons of biomass***

95% wood pellets, almost all from US and Canada

* Data from UK Office of Gas and Electricity Markets (OFGEM)

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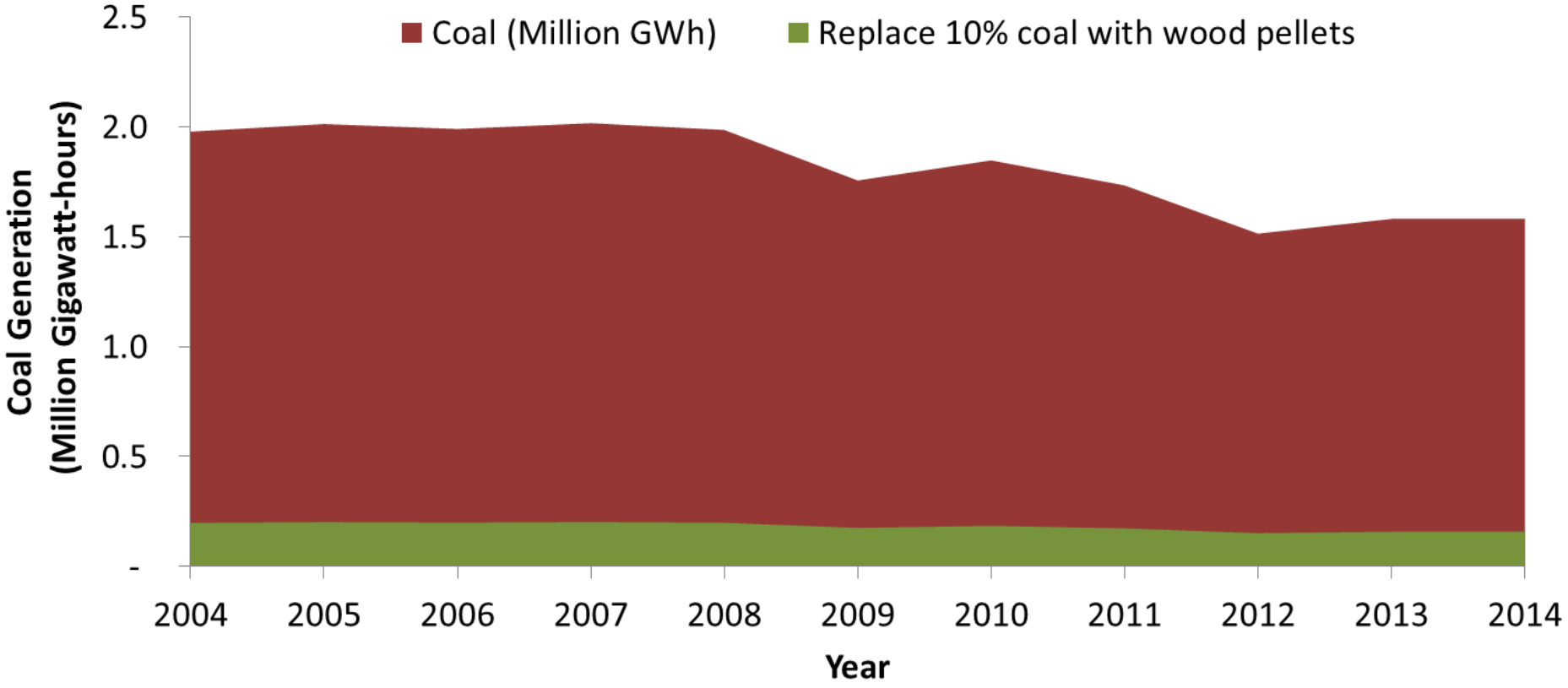
ZILKHA BIOMASSENERGY

THE NEW NORTH AMERICAN WOOD PELLET MARKET: THE EASY SOLUTION FOR UTILITIES & IPPS WITH AGING COAL PLANT ASSETS

- Get the Latest on the EPA's Clean Power Plan (CPP), 38+ State Renewable Portfolio Standards (RPS)/RPS variants, and other regulations impacting Coal Plant owners
- Learn how modifying pulverized coal power plants to utilizing industrial wood pellets can provide the lowest cost renewable and dispatchable power for CPP and RPS compliance
- Leading pellet producers discuss the prospects of the emerging North American market and outline benefits of the different types of pellets used following conversion
- U.S. and Canadian forest landowners provide perspectives and their projections for sustainable supplying a North American market
- Hear case studies from Utilities and Independent Power Producers (IPPs) who have successfully converted or are considering converting to wood pellets for power generation or co-firing

Replacing 10% of US coal power with wood pellets 2004 – 2014 would require cutting millions of acres of forest



Total wood over 10 years:	**3.3**	**billion tons**
Total forest acres over 10 years:	**39.2**	**million acres***
Total biomass CO2 over 10 years:	**4.0**	**billion tons**

*the equivalent of clearcutting 90% of timberland in Georgia and North Carolina

Emissions from Maine biomass plants, 2012

(EPA "EGRID" data; boilers burning forest wood, waste wood, and black liquor)

Plant name	NOx (tons)	SO2 (tons)	CO2 (tons)
Androscoggin Mill	1,040	3,337	1,514,723
Domtar - Woodland Mill	358	1,669	589,808
East Millinocket Mill	270	51	192,179
Indeck Jonesboro Energy Center	80	3	85,226
Indeck West Enfield Energy Center	191	7	201,167
Lincoln Paper & Tissue	265	1,041	431,574
Red Shield Envir Old Town Facility	517	1,123	575,522
ReEnergy Fort Fairfield	467	54	316,280
ReEnergy Livermore Falls	105	53	311,313
ReEnergy Stratton LLC	143	74	433,381
Rumford Cogeneration	544	2,553	854,890
S D Warren Westbrook	620	300	358,553
Verso Paper	287	41	263,020
Total, wood and black liquor boilers	**4,889**	**10,308**	**6,127,636**
Other power boilers (incl tires, garbage)	**2,611**	**10,673**	**4,103,382**

What you can do:
Sign FOE's letter on the bill (email Ben Schreiber: bschreiber@foe.org)

Stay in touch!

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