

# Reinhold Environmental Ltd.



## 2010 NO<sub>x</sub>-Combustion Round Table & Expo Presentation

***February 8 & 9, 2010***

***Chattanooga, TN***

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# Renewable Energy Legislation & Regulation

Reinhold Conference

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February 9, 2010



# Legislation

- House
  - H.R. 2454 (Waxman-Markey): House reported a comprehensive climate and energy bill, including an RES on June 26, 2009
- Senate
  - S. 1462 (Bingaman): Energy Committee reported an energy bill including an RES (and transmission and carbon capture) on June 17, 2009
  - S. 1733 (Kerry-Boxer): Environment and Public Works Committee released a draft climate bill on September 30, 2009
    - Committee reported bill on November 5, 2009
  - Further Senate action?

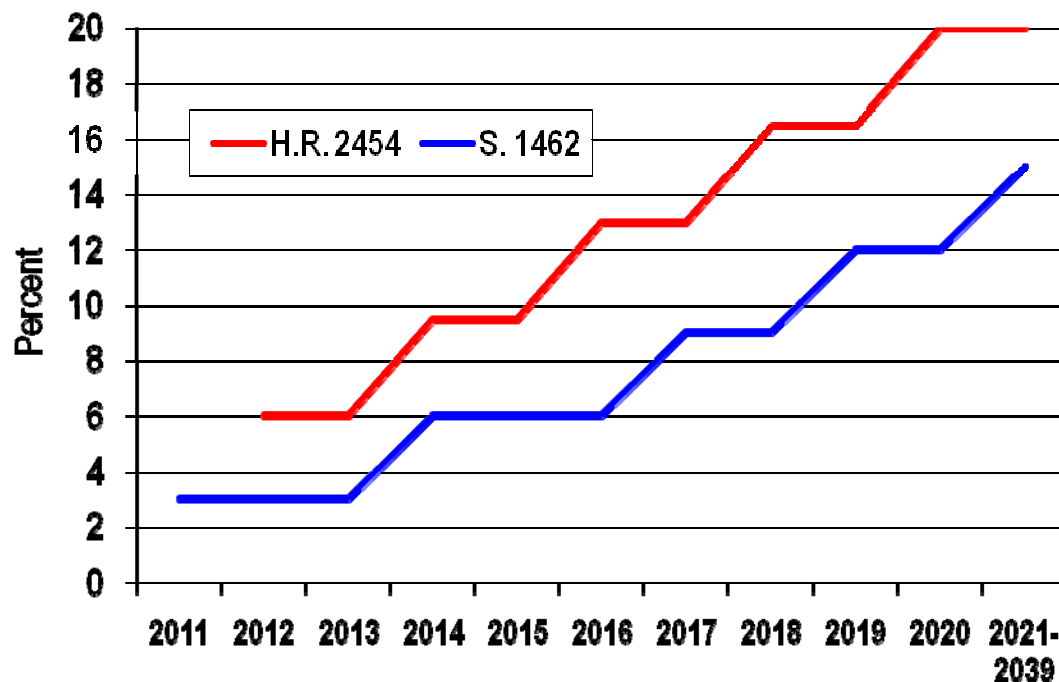
# Renewable Electricity Standards (RES)<sup>1</sup>

- Target requirement is a percentage of baseline = retail sales in calendar year minus...existing hydro, new nuclear, carbon capture and sequestration

- Qualifying renewables include: wind, solar, biomass, geothermal, wave power, incremental hydro, and municipal solid waste (the biogenic portion thereof)

- Energy efficiency can account for:
  - 25% of annual requirement in H.R. 2454
  - 26.67% of annual requirement in S. 1462

- Compliance options include:
  - Build/Purchase renewable energy
  - Install/Increase energy efficiency measures (up to legislated limits)
  - Buy RECs from other generators
  - Pay alternative compliance payment (ACP) of 2.1-2.5¢ per kWh (plus inflation)

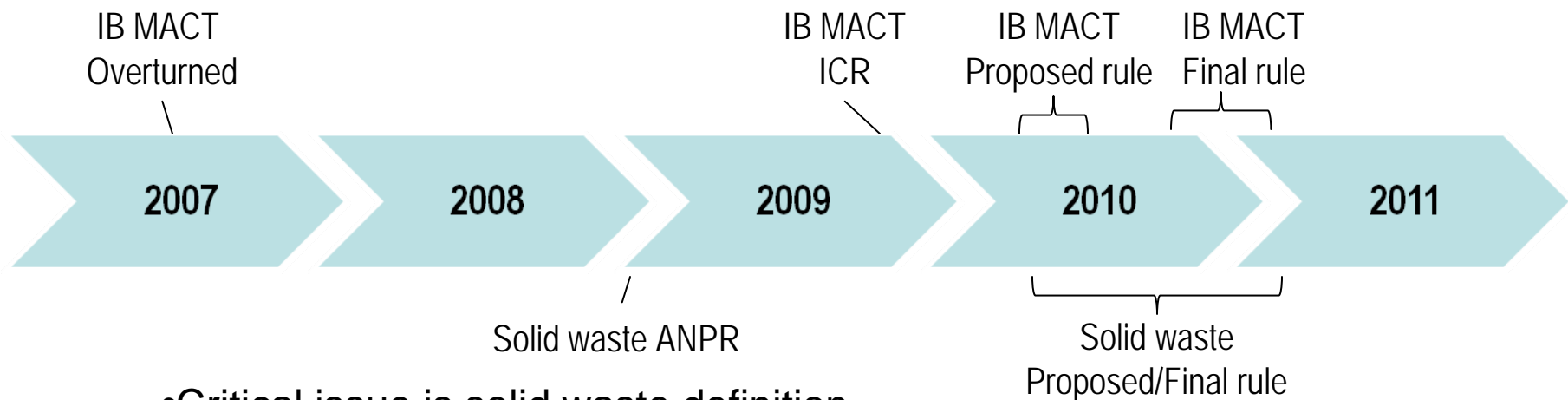


<sup>1</sup>Exact baseline exclusions and qualifying renewables may vary depending on the bill

## RES BIOMASS DEFINITIONS

	H.R. 2454 (WAXMAN-MARKEY)	S. 1462 (BINGAMAN)
<b>AGRICULTURAL MATERIAL</b>	Feed grains, agricultural commodities, crop residue, vegetative waste material	Crops, crop byproducts, and crop residues on land that is on the date of enactment: 1.cropland (including fallow land and not including planted forest land); or 2.pastureland
<b>MATERIAL FROM PRIVATE LANDS AND</b>	Any organic matter that is available on a renewable or recurring basis	Slash, brush, trees, and other vegetation
<b>MATERIAL FROM PUBLIC LANDS</b>	Materials, pre-commercial thinnings, or removed invasive species including those that are byproducts of preventive treatments (such as trees, wood, brush, thinnings, chips, and slash), that are removed as part of a federally recognized timber sale, or that are removed to reduce hazardous fuels, to reduce or contain disease or insect infestation, or to restore ecosystem health, and that are not from old growth stands and late successional stands	Slash; brush and trees that are byproducts of ecological restoration, disease or insect infestation control, or hazardous fuel reduction treatments, and 1.are from stands on land that: a. were killed by an insect or disease epidemic or a natural disaster; and b. do not meet the utilization standards for sawtimber; or 2.do not exceed the minimum size standards for sawtimber
<b>WOOD WASTES AND BYPRODUCTS; PAPER PRODUCTS</b>	Vegetative waste material (including wood waste and wood residues) Residues and byproducts from wood, pulp, or paper products facilities	Residues and byproducts from milled logs
<b>CONSTRUCTION WASTE</b>	Yes	Wood including pallets, railroad ties, crates, solid-wood manufacturing and construction debris, if diverted from or separated from other waste out of a municipal waste stream
<b>FOOD WASTE</b>	Yes	Yes
<b>YARD WASTE</b>	Yes	Yes
<b>ANIMAL WASTE</b>	Yes	Yes
<b>ALGAE</b>	Yes	Yes

# Regulation



- Critical issue is solid waste definition
  - CISWI – if biomass is a “solid waste”
    - More stringent than IB MACT
    - Co-firing issue
    - HAPs and criteria pollutants
  - IB MACT – if biomass is not a “solid waste”
    - HAPs
    - Categories and subcategories
    - EPA has a health-based emission limitations option