



EPA CHP Partnership Webinar--Biomass CHP Applications

April 30, 2009

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Current Situation - Biomass

- Rise of Renewable Portfolio Standards
- Rise of Carbon Legislation
- Fossil Fuel “Avoided Costs” Rising in Fits and Starts
- Numerous State/Federal Incentive/Programs
- Stimulus Legislation

U.S. Federal Incentives

- Production Tax Credit
 - 1 ¢/Kwh escalating
 - 10 years
 - In service by 12/31/13
 - Nonprofits can issue Clean Renewable Energy Bonds
- Investment Tax Credit
 - 30% if in construction by 2010
 - Trade for 30% federal grant
 - Eliminate PTC

U.S. Federal Incentives (Cont.)

- Combined Heat & Power Tax Credit
 - Up to 10% ITC
 - Dependent on size, efficiency
- USDA/DOE grant/loan guarantee programs



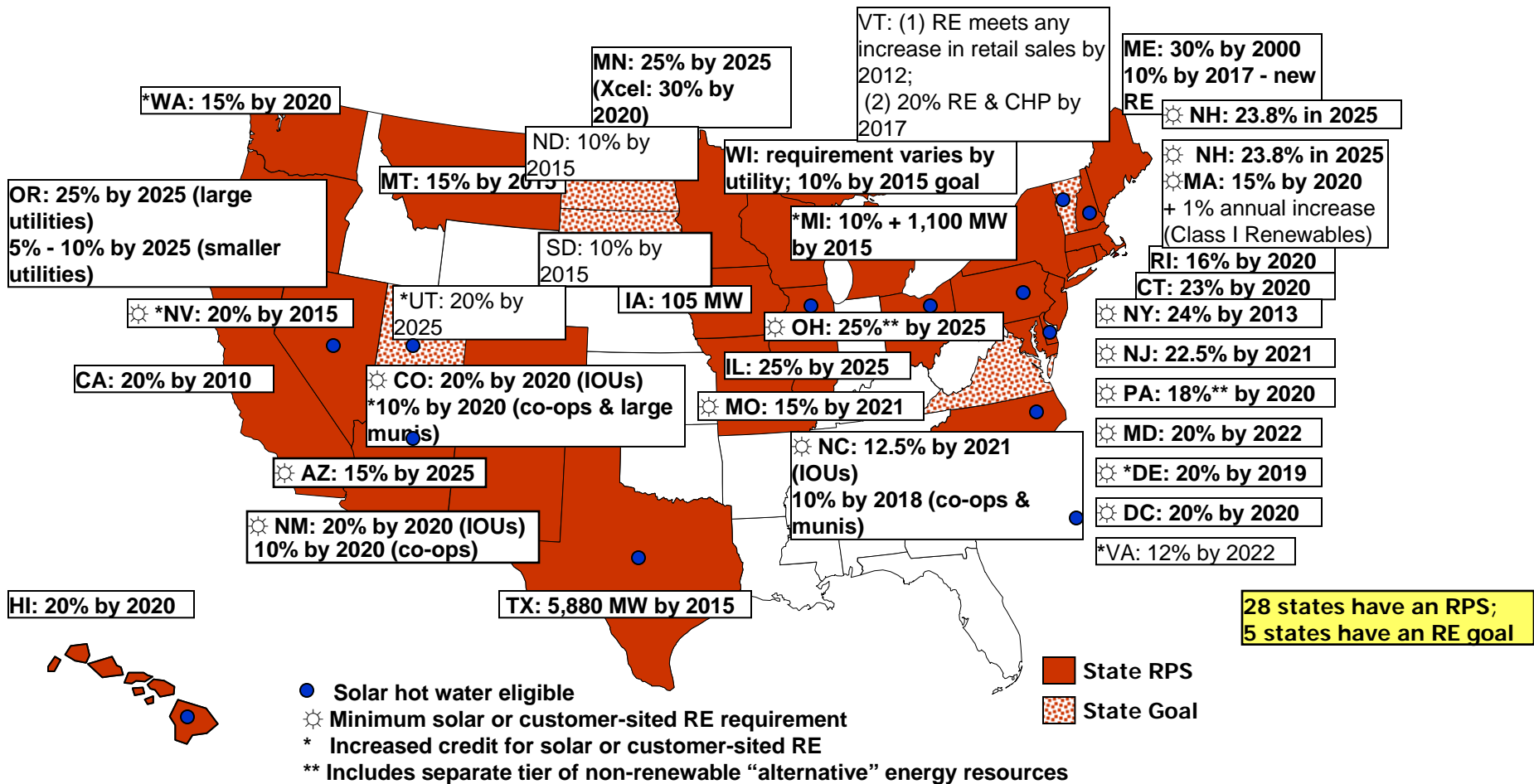
Western Regional Situation

- Most states with Renewable Portfolio Standards (RPS)
 - Some allow credits from other states
- Regional green credit trading market
 - WREGIS system in place
 - Definition of environmental attributes preserves carbon sales potential
- Various other incentives in place

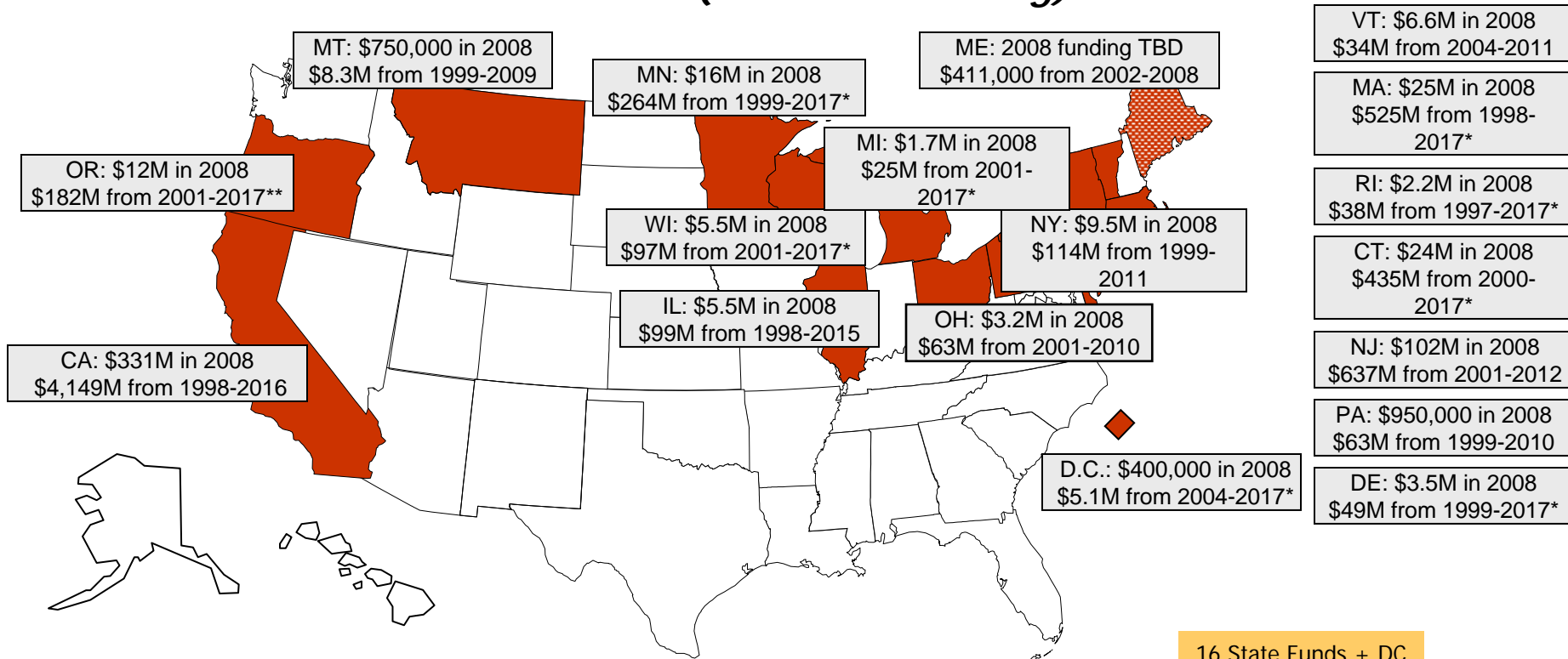
DSIRE: www.dsireusa.org

March 2009

Renewables Portfolio Standards



Public Benefits Funds for Renewables (Estimated Funding)




16 State Funds + DC
~\$6.8 B by 2017

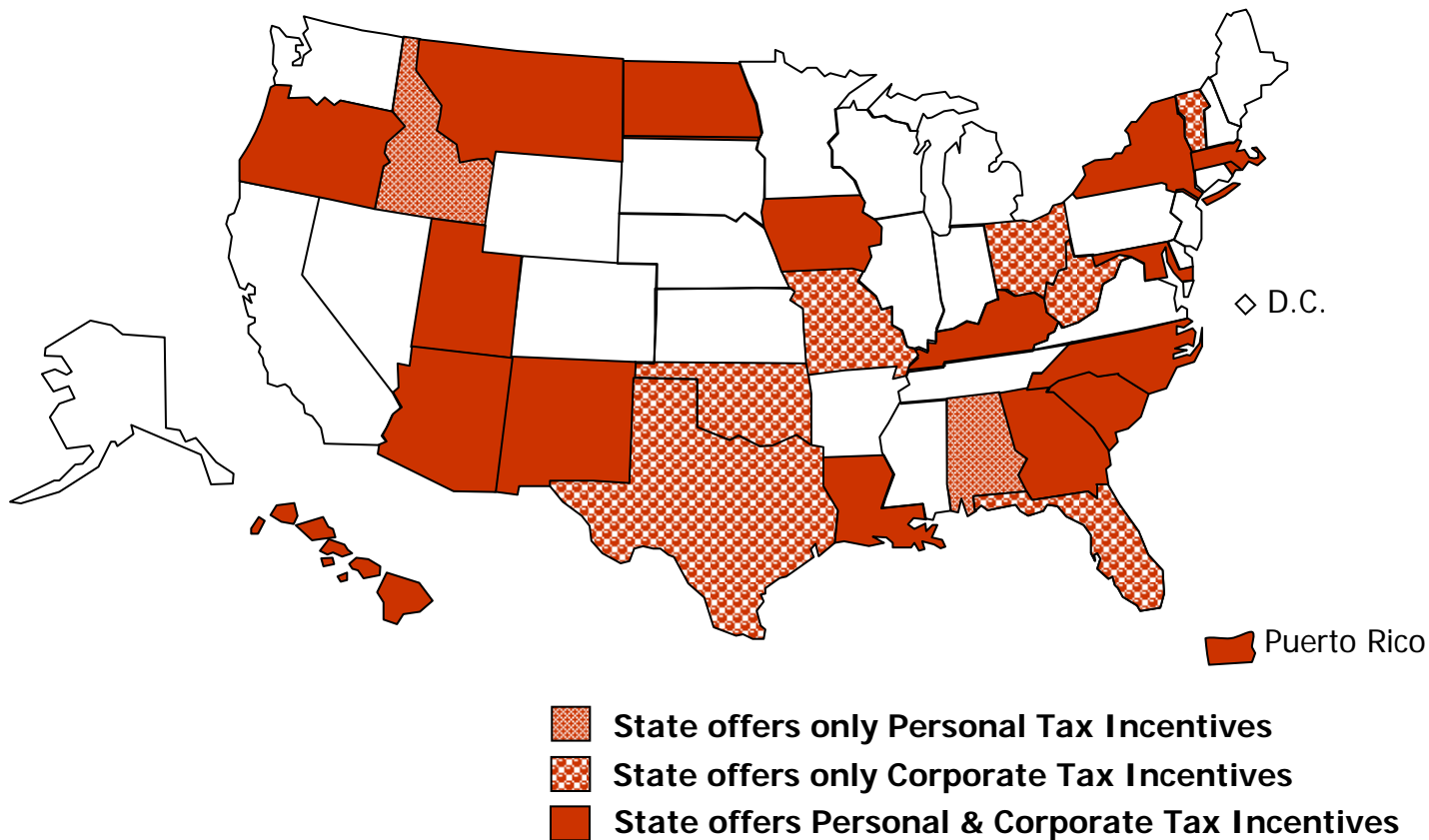
* Fund does not have a specified expiration date.

** The Oregon Energy Trust is scheduled to expire in 2025.

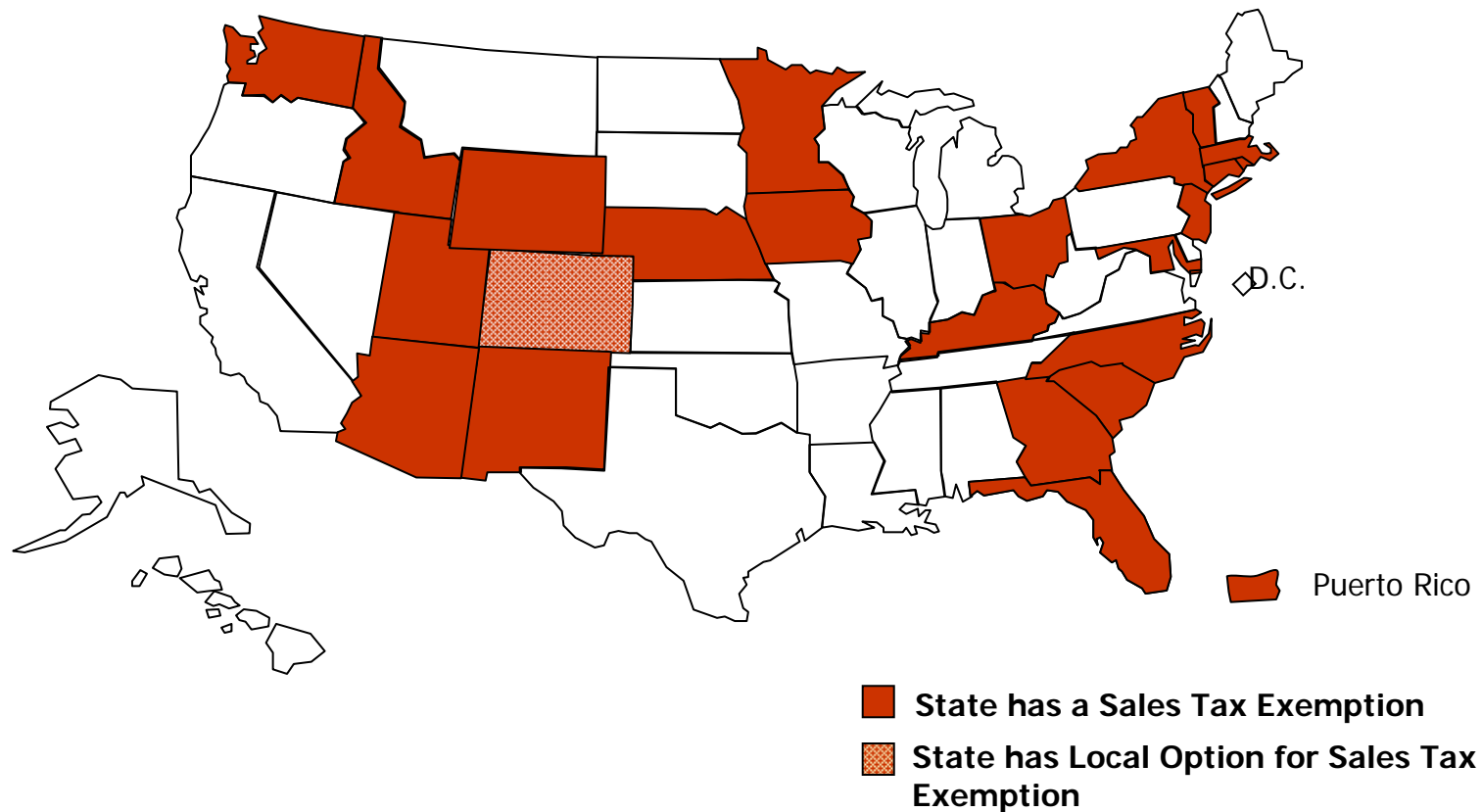
(NOTE: Slides 2-9 explain the methodology for calculating funding estimates.)

 Funded by voluntary contributions

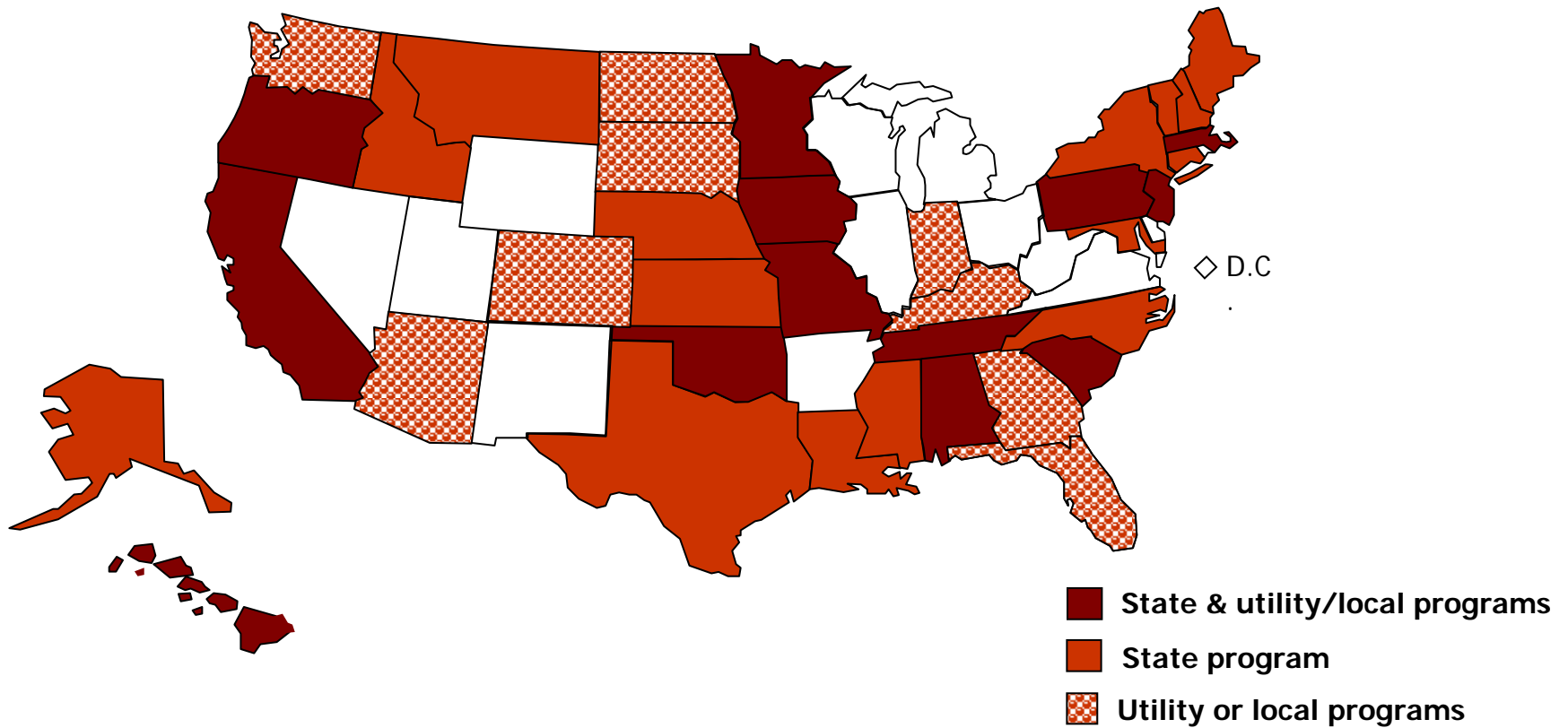
State Income Tax Credits & Deductions for Renewables



State Sales Tax Exemptions for Renewables



Loan Programs for Renewables





State/Province Summary- Washington

- Puget, PacifiCorp and Avista hold auctions for new renewable capacity
- Much of state in hands of PUD's
 - Just beginning to be interested buyers
 - Not easy to wheel through
- Aggressive RPS of 15% by 2020, but no black liquor

State/Province Summary-Idaho

- Avista, PacifiCorp, Idaho Power have posted avoided cost rates
 - Starting at \$50/MWH and escalating
 - Depends on need for new capacity
- Renewable Energy Project Bond Program
 - State will issue bonds to finance your project
- No RPS

State/Province Summary- Montana

- RPS of 15% in 2015
 - Applies to investor owned utilities
 - Allows purchase of green tags for compliance
 - Biomass must be “non-toxic” and “low emission”
 - Must purchase 75 MW of 5MW and smaller locally owned projects

State/Province Summary- Montana (Cont)

- Corporate Tax Credit
 - 35% of cost of project as credit
 - Must be against tax due from project
 - Can be carried forward for 7 years
- Corporate Property Tax Reduction
 - 50% Reduction for 15 years
 - Must choose tax credit or property tax reduction

State/Province Summary-Oregon

- PacifiCorp and PGE have posted avoided costs
 - About \$65/MWH, through 2011 and then inflate rapidly
 - Green tags stay with seller when selling at these rates
- Business Energy Tax Credit (BETC)
 - 50% of cost of project on 10/10/10/10/10 basis
 - Maximum of \$20 million in project cost
 - Can be sold up front to help finance project

State/Province Summary-Oregon

(Cont.)

- Energy Trust of Oregon
 - \$10 million per year in renewable grants
 - Held biomass solicitation (now invite projects to apply)
 - Demand green tags in exchange for grant (fatal flaw)
 - Forest Fuel Tax Credit
 - \$10/GT State Income Tax Credit (can be sold)
 - Requires transfer of ownership

State/Province Summary-Nevada

- RPS of 20% by 2015
 - Allows green tag purchase
 - Utilities currently falling short
- Corporate Property Tax Reduction
 - 50% reduction for 10 years
- Corporate Sales Tax Exemption
 - 100% of project exempt

State/Province Summary- California

- RPS of 20% by 2010 (Goal of 33% by 2020)
 - Does not allow green tag compliance for PG&E, SCE, SDG&E (vote on tradeable green tags)
 - Does allow green tag compliance for PacifiCorp, Sierra Pacific Power
 - This will require 8-10,000 MW by 2010
 - Satisfied by auctions
 - Posted MPR's of 10-11 ¢/kwh

State/Province Summary- California (Cont.)

- Renewable Resource Trust Fund
 - Applies only to PG&E, SCE, SDG&E
 - Off-peak payment to existing biomass plants
 - Supplemental energy payments to accepted new projects above MPR
 - \$140 million collected annually

Regional Roundup- Pacific Northwest

- BPA finally defined post 2011 program
 - Finally starting to stir on renewables
 - RFI/RFP
- CA Tradeable Green Tag Program has huge implications
- National RPS will fill in gaps in region (ID, WY, UT)



Regional Roundup- Pacific Northwest (Cont)

- Biomass power prices rising
 - Despite softness in fossil prices
 - 6 ½ -7 ¢/kwh without green tags
 - 8 ¢/kwh with green tags
- Boost from Stimulus Bill grants
 - Limited time horizon

What to do with “Old” Plants

- PTC for existing plants expires on 12/31/09
- Pre 2005 plants do not qualify for most RPS programs
- In national RPS Bill, green tags cannot be traded
- Plant can be made “New” according to IRS
 - Current FMV can be only 20% of “New” value
 - Would then qualify for PTC/ITC grant
 - Could qualify for state RPS programs
 - May get other grants if “New” money is for efficiency improvements, pollution control

Bottom Line

- Worst time for forest products industry in our lifetime
- Best time for biomass power industry in our lifetime
 - If you need steam/hot water for heating, you can likely justify biomass cogen