

FUTURE OF OUR FORESTS: Energy's Role in Forest Management



**Harvesting Clean Energy
Conference**

Corvallis, Oregon

January 29, 2013

Presentation Overview

- Primary Product Is Forest Health
- Societal Benefits
- Federal Incentives
- State Incentives
- Current Trends
- Bioenergy Project Development Observations



Cone Wildfire, Lassen National Forest, Sept 2002

Thinned



Fire

Un-thinned

1

1:44 PM

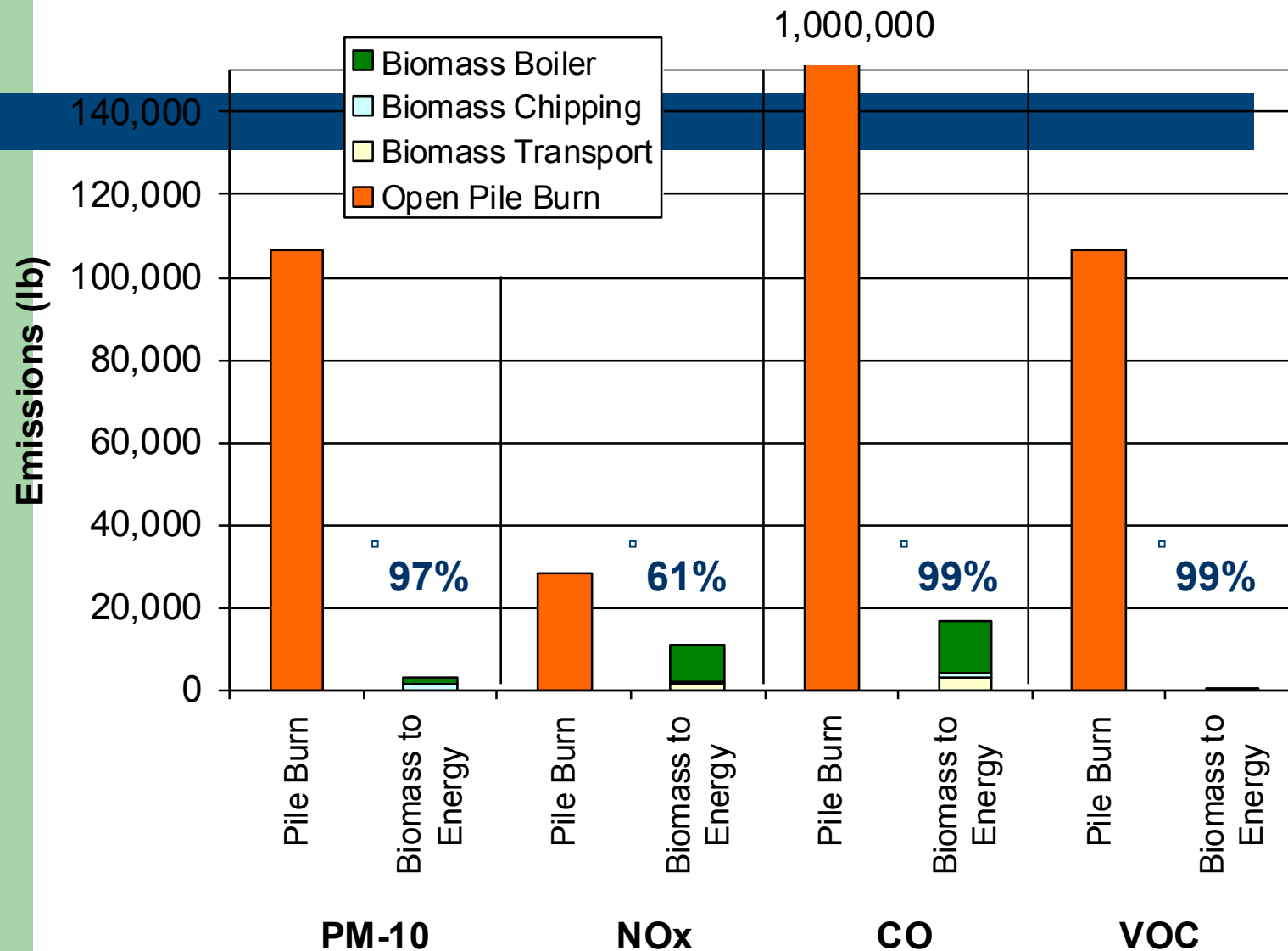




Conventional Biomass Disposal Method - Open Pile Burning



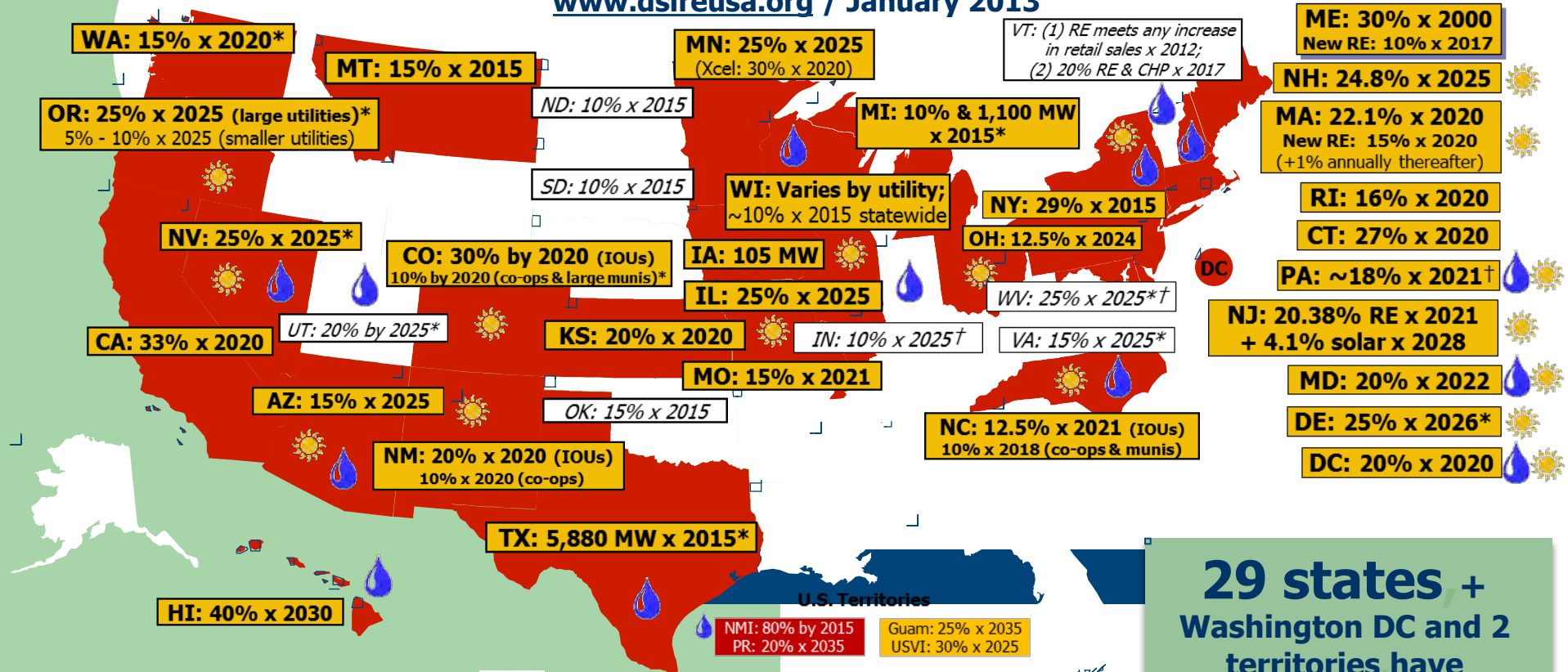
Criteria Air Pollution Emission Reductions Open Pile Burn vs. Biomass Fuel to Energy



Renewable Portfolio Standard Policies



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- Renewable portfolio standard
- Renewable portfolio goal
- 💧 Solar water heating eligible



Minimum solar or customer-sited requirement



Extra credit for solar or customer-sited renewables



Includes non-renewable alternative resources

29 states + Washington DC and 2 territories have Renewable Portfolio Standards

(8 states and 2 territories have renewable portfolio goals)

Federal Incentives and Policies (examples)

- Business Energy Investment Tax Credit
- Renewable Energy Production Tax Credit
- New Markets Tax Credit
- US DOE Procurement Policy



State Incentives and Policies (examples)

- Oregon - Biomass Producers Tax Credit
- Oregon - Business Energy Tax Credit
- Washington - Initiative 937
- California – SB 1122



Current West-Wide and Federal Trends – Part I

- Conversion of existing coal fired power generation facilities to biomass or to co-fire with biomass.
- State legislative push towards small-scale distributed generation facilities. Example – move to technology specific feed in tariff rates (California Senate Bill 1122)
- Diversion of forest biomass away from BAU practice of pile and burn and towards alternative uses – including bioenergy.

Current West-Wide and Federal Trends – Part II

- Much interest in replacing aging fossil fuel fired thermal energy systems with biomass fired systems.
- Capital costs for small-scale biomass gasification systems are trending downward (<\$5M/MW).
- **Downward pressure on wholesale energy prices. Several states have SRAC and MPR pricing tied directly to current natural gas prices.**

Recommendations in Support of Policies that Incentivize Bioenergy Project Development

- De-couple NG pricing from RE wholesale prices
- Confirm ratepayer benefits associated with bioenergy
- Consider feed in tariff energy pricing policies specific to the bioenergy sector



Bioenergy Project Development - Deal Killer Issues to Consider

- Fuel/Feedstock Supply
- Community Support
- Offtake Agreements
- Project Economics
- Appropriate Conv. Technology
- Siting/Infrastructure & Permitting





Tad Mason, CEO TSS Consultants
Rancho Cordova, California
916.266.0546
tmason@tssconsultants.com

www.tssconsultants.com