

Statewide Biomass Assessment

Current Inventory and Future Potentials



Biomass Categories

- Agriculture
- Forestry
- Municipal Wastes
- Dedicated Biomass Crops

72 Million BDT/y gross potential
(2003)

Agriculture

21 Million BDT/y

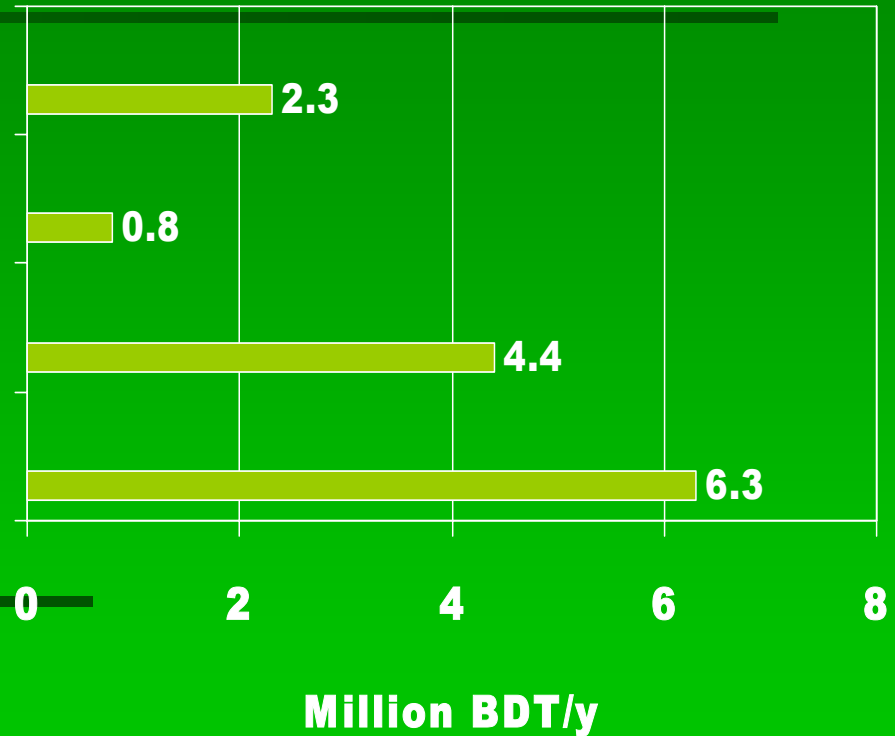
- Orchard and vineyard
- Field and seed
- Vegetable crop
- Food processing
- Animal manure



Forestry

14 Million BDT/y

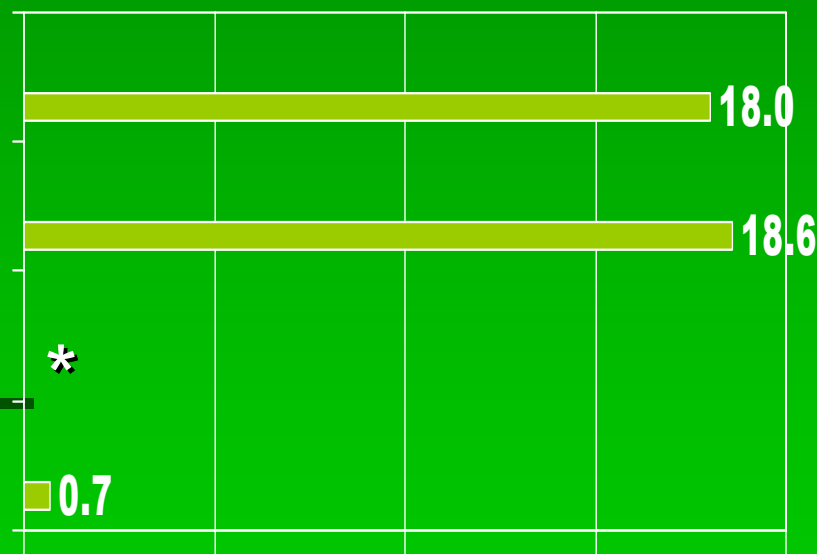
- Mill residues
- Logging slash
- Forest thinnings
- Chaparral



Biomass in Municipal Wastes

37 Million BDT/y*

- Biomass in Municipal solid waste (MSW)
 - Landfilled
 - Diverted
- Waste water
- Biosolids



*not including solids with waste water

0 5 10 15 20

Million BDT/y

Biomass in Landfilled MSW (18 Million BDT/y)

- Paper and cardboard
- Construction and demolition wood
- Food waste
- Green waste
- Other organics excluding plastics and tires



Million BDT/y

Electricity Generation Potential from Biomass--2003

| | Agriculture | Forestry | Municipal Wastes | Total |
|---|------------------------|------------------------|------------------------|-------------------------|
| Production -- Million BDT/y | 21 (30%)* | 14 (19%) | 37 (51%) | 72 (100%) |
| Gross Potential Generation--MWe | 2,083 (4.1%) | 1,834 (3.6%) | 4,200 (8.2%) | 8,118 (15.9%) |
| Technical Potential Generation--MWe | 998 (2.0%) | 982 (1.9%) | 1,670 (3.3%) | 3,650 (7.2%) |

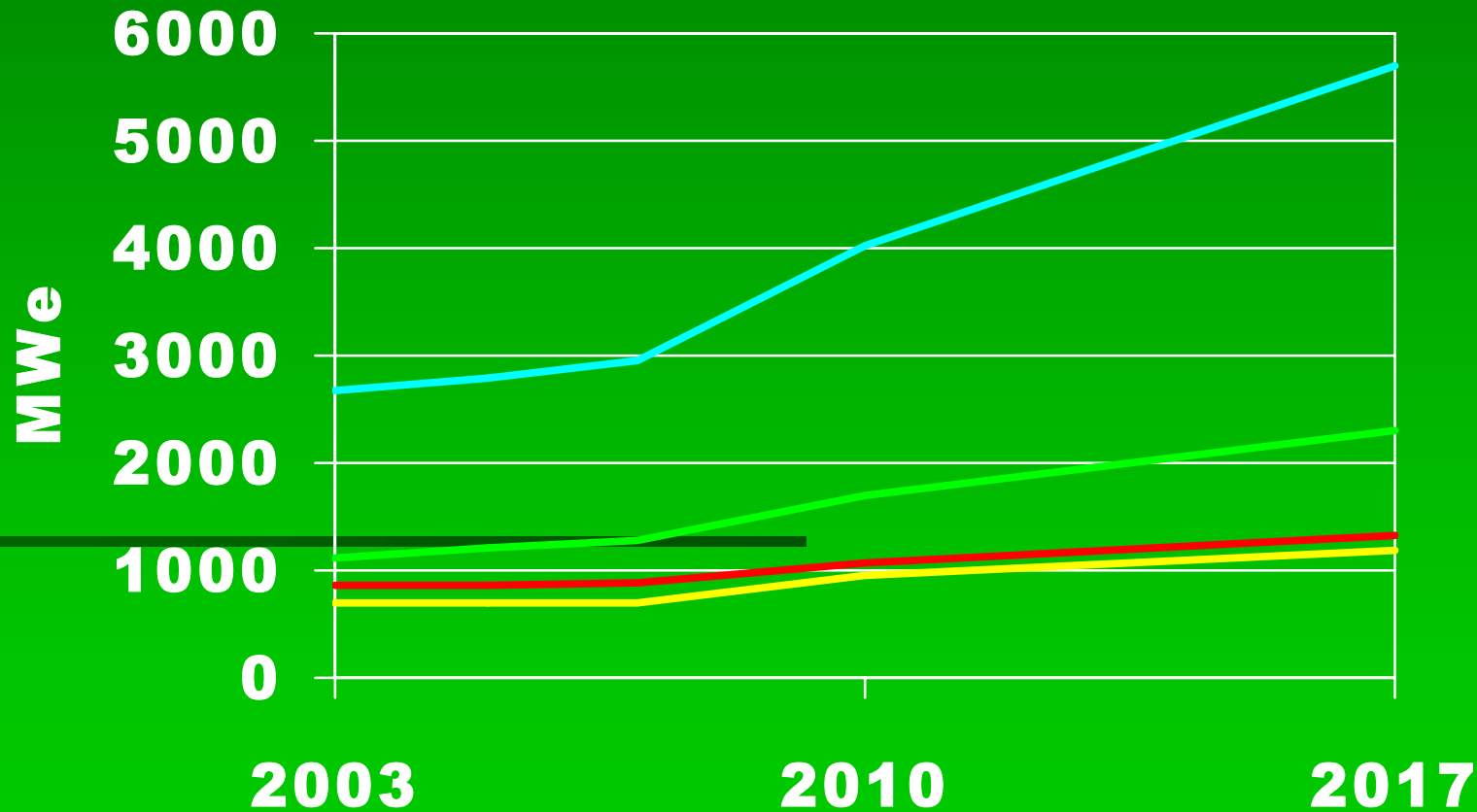
*(% of State)

Incremental Generation Potential from Biomass--2003

| | Agriculture | Forestry | Municipal Wastes | Total |
|--|----------------------|----------------------|------------------------|------------------------|
| Technical Potential Generation--MWe | 998 (2.0%) | 982 (1.9%) | 1,670 (3.3%) | 3,650 (7.2%) |
| Existing and Planned Capacity--MWe | 147 (0.3%) | 283 (0.6%) | 548 (1.0%) | 978 (1.9%) |
| Net Potential Generation--MWe | 851 (1.7%) | 699 (1.4%) | 1,122 (2.2%) | 2,672 (5.2%) |

(% of State)

Net generation potential including technology improvements and resource development to 2017



— Agriculture — Forestry — Municipal — Total

Dedicated crop additions

- Expanded California ethanol market could induce increased corn production
 - 2 million acres for 1 billion gallons
- Potential increased residue yields and availability
- Sugar crops (cane, sorghum, beet, others) as ethanol feedstocks
- Crops for biodiesel and other products
- Hydrogen from biomass