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***BIOMASS POWER, COLORADO
FOREST HEALTH AND WATER
RESOURCES***

*JOINT SENATE/HOUSE WATER
RESOURCES REVIEW COMMITTEE*

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Energy Corporation*

THE EAGLE VALLEY PROJECT



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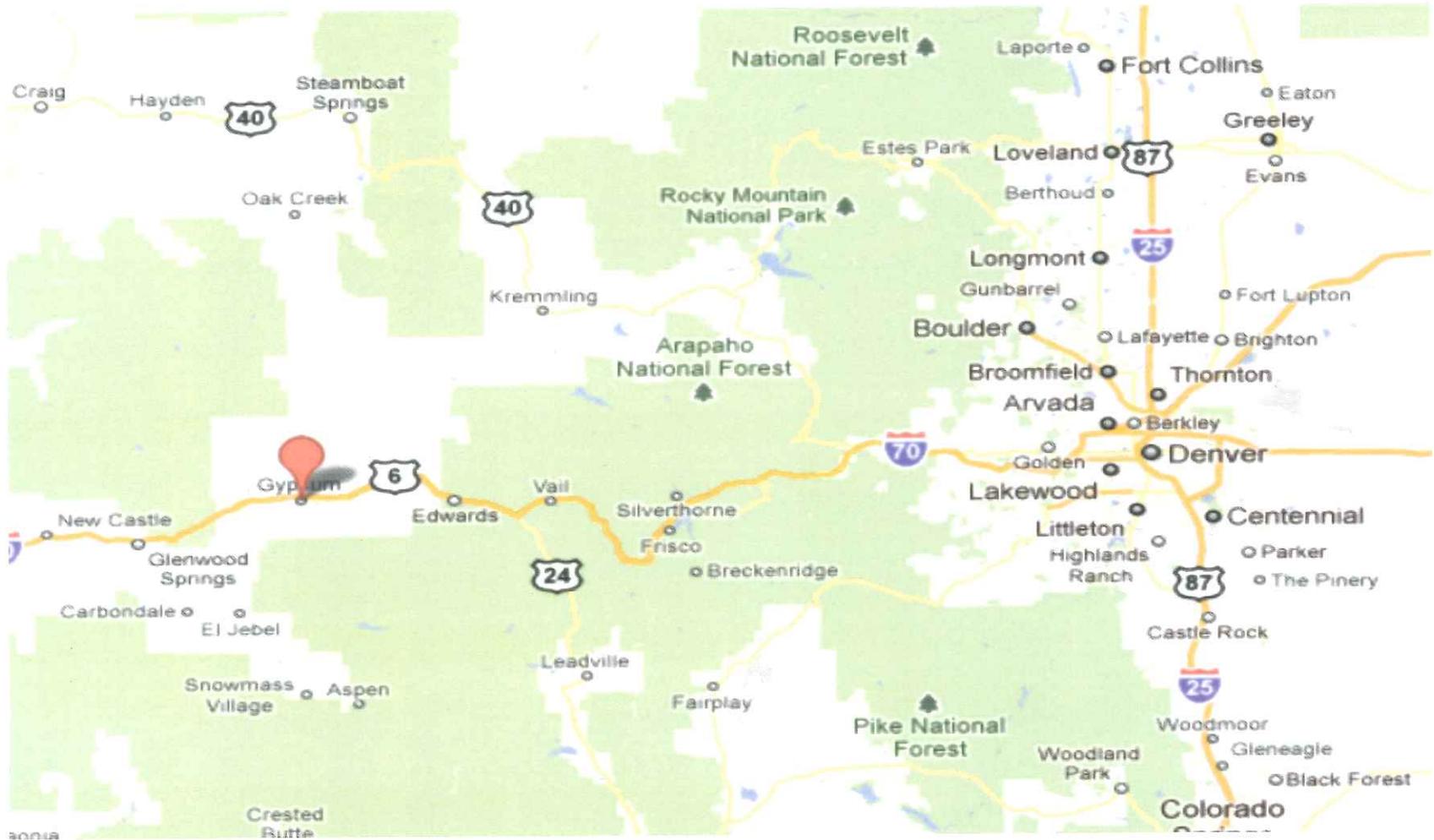
COLORADO'S FIRST UTILITY-SCALE BIOMASS POWER PROJECT

- 11.5 MW woody biomass CHP
- Located in Gypsum, CO, adjacent to wallboard plant
- Electricity sales to Holy Cross Energy, servicing Parachute to Vail, Glenwood Springs to Aspen
- Woody biomass
 - Forest thinnings, hazardous fuel reductions, deadfall, etc.
 - Not trash
- Construction started Dec 2011; completion late 2013



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EAGLE VALLEY CLEAN ENERGY, LLC GYPSUM, COLORADO



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*WHY SUPPORT
BIOMASS IN COLORADO?*



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MAKING A DIFFERENCE

- Forest health – a CO imperative
 - Clean water
- Renewable base-load power source
- Local jobs and economic stimulus
- Small size - minimal impact
- Reliable technology; 30-50 year tool



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BIOMASS - UNIQUE FOREST HEALTH TOOL



- **Hazardous Fuels Mitigation**
 - Reliable outlet for hazardous fuel
 - Expands treatment – all species
 - “Waste” of the forest- avoid slash piles
- **Extends Reach of Forest Managers**
 - Stretches budgets; treat more acres
 - White River NF stewardship multiplies acres treated at same cost to USFS
 - Long term planning – 30-40 year tool
- **Doesn't burden the forest**
 - 2,500 acres p.a./70,000 BDT/11.0 mm bd ft



PROMOTES HEALTHY FOREST INDUSTRY

- **Doesn't compete for higher value timber**
 - Targets trimmings, small diameter & POL (product other than logs)
 - Valuable logs go to mills, not bioenergy
- **Complements sawmill industry**
 - Buys shavings and trimmings
 - Increases profit margin to sawmill process
- **Balances forest products industry & jobs**
 - Not subject to market volatility



Wood Chips



Bark



Sawdust



Planer Shavings



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LONG TERM LOCAL JOBS & SPENDING

- \$46 million capital project
- **Local Jobs**
 - 107 construction jobs
 - 42 stable, well paying jobs
 - Rural development; new families
- **Local Spending**
 - \$14.5 million construction
 - \$5.0 million/year direct spending
 - Indirect spending multiplier
- **Stimulates more industry & jobs**



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*HOW TO SUPPORT
BIOMASS IN COLORADO*



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UNCOMPAHGRE PLATEAU BEFORE



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UNCOMPAHGRE PLATEAU
AFTER



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THE END-GAME

- **Make bioenergy THE renewable energy focus in Colorado**
 - Recognize value of bioenergy, especially in CO
 - Biomass benefits far outweigh other renewables – forest health, stretch budgets, jobs, stimulus
- **Target 120 MW in new biomass production over 5-7 years (“right-sized” for CO)**
 - 6-8 small facilities strategically placed for forest restoration
 - CHP - energy + thermal to replace carbon
- **The challenge – higher costs**
 - Sensitive forests don’t support large facilities
 - Small facilities cost more



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WHAT'S NEEDED TO DEVELOP BIOENERGY

- **Customer**
 - Long term purchase agreement; energy/thermal
 - Incentive to pay more
- **Stable, long term fuel supply (critical to financing)**
 - 10-20 year Stewardship agreements
 - Timber sales
- **Financing**
 - Grants
 - Bonds & loan guarantees



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HOW CAN THE LEGISLATURE HELP? CUSTOMERS

- **Help overcome premium price of bioenergy**
 - State must recognize the “returns” from biomass support
 - Create biomass “carve out” in state renewable energy standards
 - Multiplier for biomass RECs
 - Give utilities credit for buying tradeable RECs sourced in CO
- **Encourage utilities to embrace CO biomass**
 - Source more renewables from inside CO
 - Allow local utilities to buy local biomass (relax restrictions on purchases from outside sellers)



HOW CAN THE LEGISLATURE HELP? STABLE FUEL SUPPLY

- **Legislate and direct Colorado State Forest Service**
 - CSFS is responsible for stewardship of state forests
 - Encourage long term stewardship agreements & timber contracts, emphasize forest treatment in addition to saw log harvesting
 - Re-authorize “good neighbor” cooperation with US Forest Service so CSFS can treat more forest in CO
 - Give CSFS budget and direction to enact aggressive treatment program
 - Focus efforts where there is a need and industry to take care of the need



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HOW CAN THE LEGISLATURE HELP?

FINANCIAL SUPPORT

- **Expand State and OEDIT financial support**
 - Re-create Clean Energy Development Authority bonds to finance new bioenergy projects
 - Authorize grants for new projects' development phase
- **Create state tax credits**
 - Production tax credits (PTC) or investment tax credits (ITC) to bolster finances of bioenergy facilities
- **Offer biomass utilization grants**
 - Similar to US Forest Service, subsidizes development costs
 - Subsidize beetle kill treatment programs
- **Give some flex for bordering state facilities that help CO forests**



HOW CAN THE LEGISLATURE HELP? OTHER

- **Tax friendly classifications**
 - Forestry equipment as agricultural; other?
- **Road permits for biomass carriers**
 - Same weight rules as special use carriers (indivisible load carriers)
 - Make interstate weight limits same as secondary roads
 - Encourage and support federal legislation to increase CO interstate weight limits for bioenergy
- **Other?**



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THANK YOU!

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