

Center for Applied Economic Research
Montana State University-Billings



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The Economic Impact of MT Energy Projects

- Examination of the jobs and additional income that could accompany proposed Energy Projects.
- Analyzed by the Center for Applied Economic Research, MSU-Billings.

Definition: Economic Impact

- The total amount of additional expenditures generated within an area which could be directly attributable to a particular event.

Types of Economic Impacts

- *Direct vs. Total Impact*
 - Direct: Due to operation of the new facility
 - Total: Direct + Business to business
 - + New Household Income
- *Local vs. Regional*
 - Larger area economies will have larger total impacts.

Measuring Scale: The Multiplier

- Tells us the ratio of Total to Direct impact.
- If 100 direct jobs spur 75 additional jobs in the area, the multiplier would be $(100+75) / 100 = 1.75$.
- Larger multipliers are better.

Potential Projects Examined

- Dry Mill Ethanol
- Coal Liquifaction
- Biodiesel
- Clean-Coal Power Plant

How the Projects Were Examined

- I estimated the potential operations impact with this facility “buying Montana” for any input that Montana currently produces.
- I assumed that this project was profitable at existing price levels.

A Dry Mill Ethanol Facility

- Location: Hill County, MT
- Size: \$85 M Facility Producing 40 Million Gallons Per Year

A Dry Mill Ethanol Facility

Impact	Jobs	Labor Income	Output
Direct	43	\$1.8M	\$110M

A Dry Mill Ethanol Facility

Impact	Jobs	Labor Income	Output
Direct	43	\$1.8M	\$110M
Total	91	\$2.4M	\$128M

A Coal Liquifaction Facility

- Location: Powder River County, MT
- Size: \$6B Facility Producing 30M Barrels per Year

A Coal Liquefaction Facility

Impact	Jobs	Labor Income	Output
Direct	2,000	\$125M	\$4.8B

A Coal Liquefaction Facility

Impact	Jobs	Labor Income	Output
Direct	2,000	\$125M	\$4.8B
Total	4,350	\$189M	\$6.7B

A Biodiesel Refinery

- *Location: Roosevelt County, MT*
- *Size: 15 Million Gallons Per Year*

A Biodiesel Refinery

Impact	Jobs	Labor Income	Output
Direct	31	\$1.5M	\$50M

A Biodiesel Refinery

Impact	Jobs	Labor Income	Output
Direct	31	\$1.5M	\$50M
Total	158	\$5.6M	\$67M

A Biodiesel Refinery & Local Oilseed

Impact	Jobs	Labor Income	Output
Direct	354	\$10.2M	\$57M

A Biodiesel Refinery & Local Oilseed

Impact	Jobs	Labor Income	Output
Direct	354	\$10.2M	\$57M
Total	567	\$20.5M	\$78M

A Clean Coal Mine-Mouth Power Plant

- Location: McCone County, MT
- Size: 500MegaWatt Power Plant

A Clean Coal Mine Mouth Power Plant

Impact	Jobs	Labor Income	Output
Direct	142	\$12M	\$190M

A Clean Coal Mine Mouth Power Plant

Impact	Jobs	Labor Income	Output
Direct	142	\$12M	\$190M
Total	355	\$17M	\$260M

Other Potential Energy Projects

- Conventional Coal-Fired Energy
- Wind Turbine Facilities
- Alternate Locations for Ethanol
- Transmission Lines

Construction Impacts

- *Can be a brief shock to the system*
 - Construction Crews overloading communities
 - Significant opportunities for some businesses

Construction Impact: An Example

Impact	Jobs	Labor Income	Output
Direct	135	\$4M	\$10M

Construction Impact: An Example

Impact	Jobs	Labor Income	Output
Direct	135	\$4M	\$10M
Total	194	\$5.7M	\$15M

How Do We Maximize The Benefits?

- *Keep the new spending local*
- *How do we know what is needed?*
 - *Construction Phase: EIS Statement*
 - *Operations: Industry Sources, EDA,...*

Conclusion

- Energy projects can create significant additional economic activity in MT if we can supply the inputs.

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The End

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What Do Households Buy?

A \$1M Increase In HH Spending

- *70% spent in MT*
- *Multiplier of 1.3*
- *\$172K on Home Sales or Real Estate*
- *\$110K on Health Care*
- *\$56K on Restaurants, Nightclubs*