



# Energy Promotion and Development Division

Montana Department of Commerce

SENATE FINANCE & CLAIMS <sup>3</sup>

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## Montana Department of Commerce Energy Promotion and Development Division

- Created in 2007 to facilitate energy resource development leading to job creation and economic development
- Works with businesses, government agencies, economic development organizations, communities, regional energy planning entities and other energy coalitions
- The Division has worked on nearly 300 projects since its creation

### What We Do and Produce

- Business technical assistance for large and small companies (TransCanada, NaturEner, Enbridge and Zinc Air)
  - guidance on permitting, siting, local government relations, financial assistance, etc.
- Represent Montana in energy planning with entities like including BPA, WAPA, WIEB, and WECC
- Develop and provide information on energy issues in Montana
  - Weekly energy facts (*Montana Energy Currents*)
  - quarterly newsletter and
  - presentations delivered across the state
- Produce brochures, maps and media ads marketing Montana energy opportunities
- Author articles for trade journals including *Coal People*, *Bakken Breakout*, *WindPower Monthly*, *Forest Business News* and more
- Published studies of a CO2 Pipeline Routes, MBMG Geothermal inventory and Biomass Power Plants
- Obtained \$150,000 in DOE and NGA renewable energy grants

### Biggest Success Stories

- MATL - \$300 million investment
- Glacier and RimRock Wind Farms - \$950 million investment
- Keystone XL On-ramp - \$1.1 billion investment

# Montana Means Coal

## Approx. Employment

Mining.....	1165
Electric Facilities.....	475
Severance Taxes (2011).....	\$55 million
Production (2011).....	42 million tons

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The State of Montana, through the Energy Promotion and Development Division, is taking on a catalytic role to bring together state agencies, developers, and other stakeholders to ensure further development of Montana's vast coal resources while ensuring Montanan's right to a clean and healthful environment.

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## Project Spotlight

### **Ambre Energy**

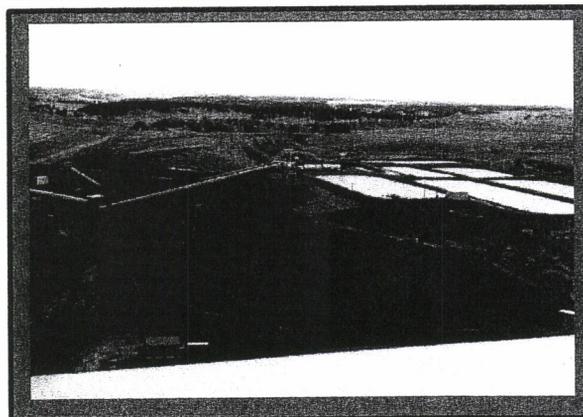
Ambre entered the Montana coal industry in 2011 when they purchased 50% of the Decker coal mine in southern Montana. The mine currently employs 160 workers and Ambre plans on expanding operations to access the 121 million metric tons of coal reserves at the mine.

#### EPDD Assistance

- Facilitated discussions with state regulatory agencies on mine development and expansion

"The assistance provided to Ambre by your team in the Energy Promotion and Development Office of the Montana Department of Commerce has been invaluable. As a new participant in the US energy industry, the support provided by the Montana Government has been excellent and we appreciate greatly the guidance and assistance provided."

-Michael Mewing



# Montana Means Hydro

Existing hydroelectric dams.....40  
Generating capacity.....  
Percentage of electricity from hydro...42%

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For more than 100 years, hydroelectric facilities have lit homes and powered businesses in Montana. The electricity generated at Montana's dams is affordable, clean, and dependable. New techniques, such as utilizing existing drops on irrigation canals, and technologies, like using more efficient turbines at existing dams, have been responsible for Montana's increased production from hydroelectric facilities in recent years.

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## Project Spotlight

### **Turnbull Hydro**

Capacity – 13 MW

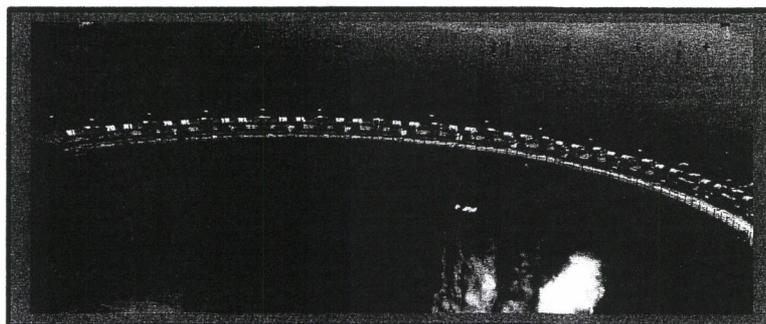
Capital Investment – \$10 million

“EPDD’s guidance and counsel helped us identify a clear path to resolving our water rights issues that had the potential to delay and potentially kill the project.”  
-Ted Sorenson, President, Turnbull Hydro LLC

The Turnbull Hydroelectric project utilizes existing drops in a canal in the Greenfields Irrigation District to generate electricity without any impact to irrigation users. Greenfields is partner in the project and intends to use profits generated for upgrades to their existing ditches and canals. The output from the project is sold to NorthWestern Energy to meet their Renewable Portfolio Standard requirements.

#### EPDD Assistance

- Facilitated discussions with developer and state and federal agencies to overcome water right problems.



# Montana Means Oil & Gas

Total Direct Jobs.....	7500
Total Direct Economic Output.....	\$9 billion
Oil Production Taxes Paid (2011) .....	\$215 million
Property Taxes Paid.....	\$78 million
Total Wells Drilled.....	45,500
Producing Oil Wells.....	4800
Producing Gas Wells.....	6500

Montana has a long history of responsible oil and gas exploration and production. Recent technological advancements have led to a revitalization of development of these staple energy resources under the Big Sky. The Montana oil industry provides a secure source of domestic energy and is responsible for thousands of good paying jobs and billions of dollars in economic activity.

## Project Spotlight

### **Dave Gates Generating Station**

Capacity – 150 MW  
Capital Investment – \$200 million  
Construction Employment – 265  
Construction wages – \$24.5 million  
Permanent Jobs – 11  
EPDD Assistance

- Facilitated siting discussions between NorthWestern Energy and Anaconda-Deer Lodge County



### **Keystone XL**

Construction Jobs — 1200  
Permanent Jobs — 10  
Capital Investment — \$1.1 billion  
Annual State Taxes — \$60 million  
EPDD Assistance

- Conducted meetings in Billings between developer and Bakken producers to include Baker on-ramp in project
- Acted as liaison with the Governor's Office and the US State Department to keep permitting process on track.

We have found the (Energy Promotion and Development) Division staffed by knowledgeable public servants who have been supportive of TransCanada's business development activities, who have been responsive to our requests for assistance and direction, and have been pro-active in promoting economic development in Montana."

-Scott Farris, Director of Government Relations, TransCanada

# Montana Means Geothermal

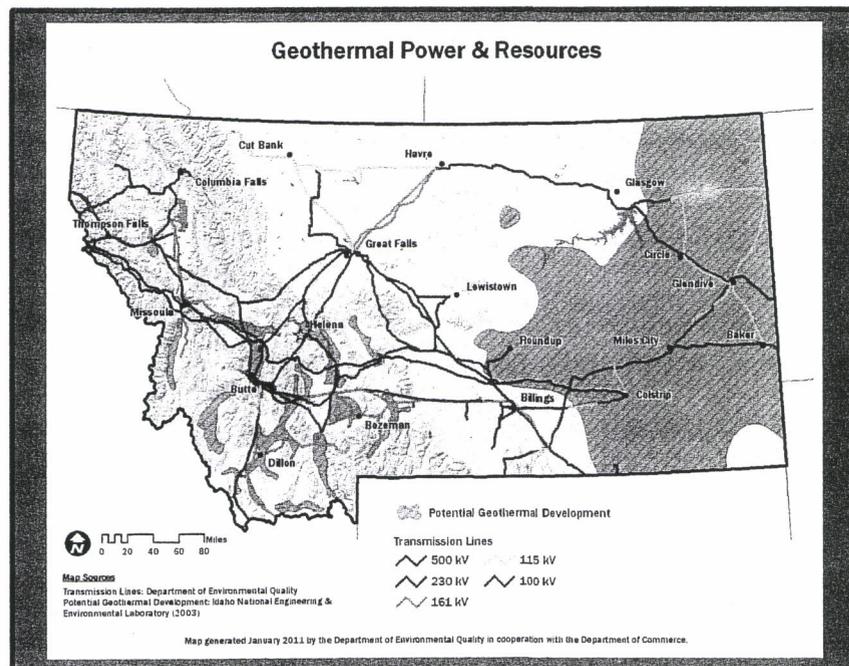
Total Geothermal Development Areas.....At least 50  
Total High-Temperature Sites.....At least 15  
Surface Temperature at Seven Sites.....150°  
Estimated Deep-Reservoir Temperature.....350°

Montana citizens have long enjoyed the benefits of geothermal energy. Hot springs tucked away in the Rockies and eastern plains have provided a welcome heat source during Montana's colder months. These geologic features are part of a far greater energy source that is arguably Montana's most underestimated energy source and could provide clean, renewable base load electricity.

## Project Spotlight

### Dewhurst Group

The State of Montana has participated in a geothermal exploration and feasibility study for developing a commercial scalable, community-based, and low temperature geothermal power plant near Warm Springs. The Dewhurst Group employed the use of advanced exploration techniques including aeromagnetics and magnetotelluric surveys.



# Montana Means Wind

Generating Capacity (2005).....	1 MW
Generating Capacity (2011).....	386 MW
Generating Capacity (2012).....	647 MW
Permanent Jobs.....	86
Capital Investment.....	\$1.4 billion

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Montana leads the nation in wind energy power potential and the state is at the center of North America's wind heartland. Wind energy is clean and renewable and provides the green complement to Montana's world-class reserves of coal as well as oil and natural gas. Much of Montana's wind has yet to be tapped and represents a great investment opportunity.

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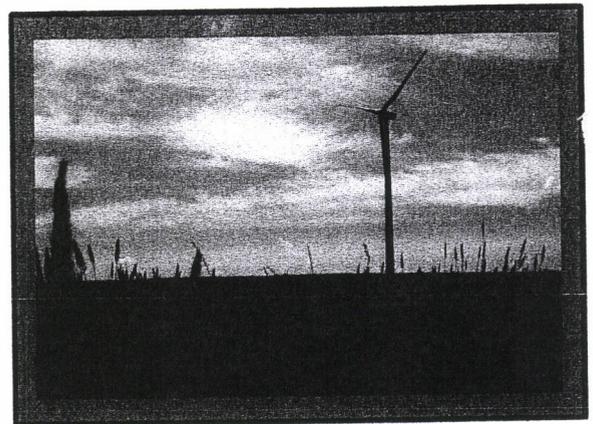
## Project Spotlight

### Glacier Wind Farm

Capacity – 210 MW  
Construction Jobs – 486  
Permanent Jobs – 40  
Capital Investment – \$550 million

### Rim Rock Wind Farm

Capacity – 189 MW  
Construction Jobs – 300  
Permanent Jobs – 20  
Capital Investment – \$400 million



### EPDD Assistance

- Assisted with regulatory issues including securing transmission capacity and financing

“The support that we have received from the Energy Promotion and Development Division has greatly facilitated our accomplishments on these two wind farm projects and our progress would not have been as smooth or as timely as it has been without the Division’s capable assistance.”

-Jose Maria Sanchez Seara, CEO, NaturEner

# Montana Means Bioenergy

Acres available for oilseed production .....	16.5 million
Non-reserved forest land.....	19 million acres
Rank for safflower production.....	2 <sup>nd</sup>
Rank for canola production.....	3 <sup>rd</sup>

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The continued expansion of biofuel and biomass energy projects is an important component of Montana's official energy policy, which encourages the development of "biomass plants to generate heat for industrial use, electricity, or both, and as a means to manage Montana's forests".

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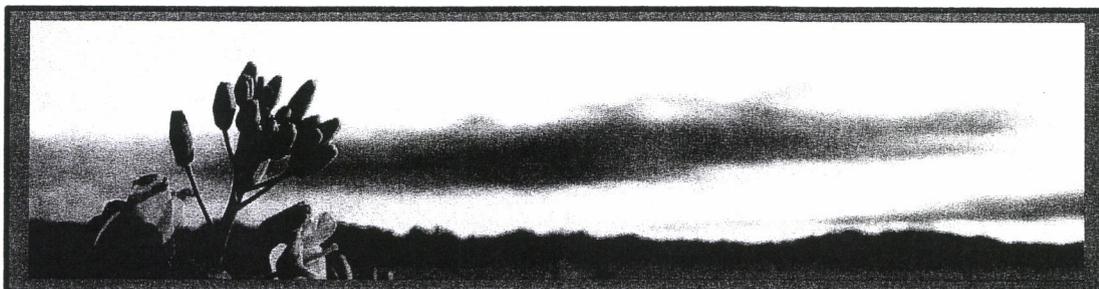
## Project Spotlight

### **Montana Bioenergy Feasibility Studies**

In 2009, the Energy Promotion and Development Division issued a request for proposals to conduct a study on the feasibility of developing a woody biomass energy generation plant in Western Montana. Ultimately, EPDD granted \$475,000 to four entities which resulted in a comprehensive two-volume study that gauged the feasibility of a biomass facility along with fuel assessment. A second report looked specifically at the feasibility of locating a combined heat and power plant at seven existing sawmills in western Montana.

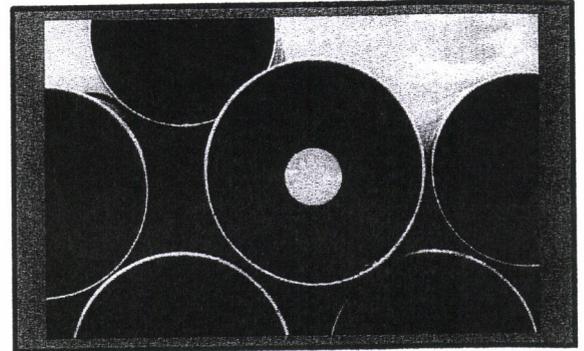
### **Burlington Northern Santa Fe Biodiesel Trial**

BNSF partnered with MSU Northern and Opportunity Link to conduct a one-year trial of a blend of 20% biodiesel (B20) in a locomotive engine. The 9,655 gallons of biodiesel used in the trial were made from Montana grown oilseeds (primarily safflower, canola, and camelina) and produced by Earl Fisher Biofuels and MSU-Northern. The trial successfully demonstrated use of B20 under extreme weather conditions with temperatures ranging from -35°F to 111°F. Additional project partners include the Montana Department of Environmental Quality, the Montana Department of Agriculture and Bear Paw Development Corporation.



# Montana Means Energy Infrastructure

Electrical Transmission Lines.....7000+ miles  
Energy Pipelines.....15,000 miles



More than half of the electricity produced in Montana is sold to customers outside of the state. In addition to electricity, Montana exports substantial amounts of other energy resources including oil, gas, and coal. All of these products require a robust energy infrastructure system including transmission lines, pipelines, and railroads. Energy storage systems are becoming an increasingly important component of our electric system.

## Project Spotlight

### **Montana Alberta Tie Ltd. (MATL)**

Construction Jobs — 180  
Permanent Jobs — 10  
Capital Investment — \$213 million  
EPDD Assistance

- Facilitated coordination in permitting process between US Department of Energy and MT Department of Environmental Quality
- Brokered meetings between developers and landowners

“Time and again we found the need for counsel, guidance and advice and found such to be invaluable in the Energy Promotion and Development Division”  
-Johan Van’t Hof, CEO of initial MATL developer  
Tonbridge

### **Zinc Air**

The electrical storage market is expected to quadruple from 2012-2016 due to increased penetration of variable renewable electrical generation. Zinc Air Inc. is one Montana company looking to serve this emerging industry through their innovative and scalable technology. Zinc Air has been steadily growing since their inception in 2009 and, as of December 2012, employs 45 people at their facility in Columbia Falls.