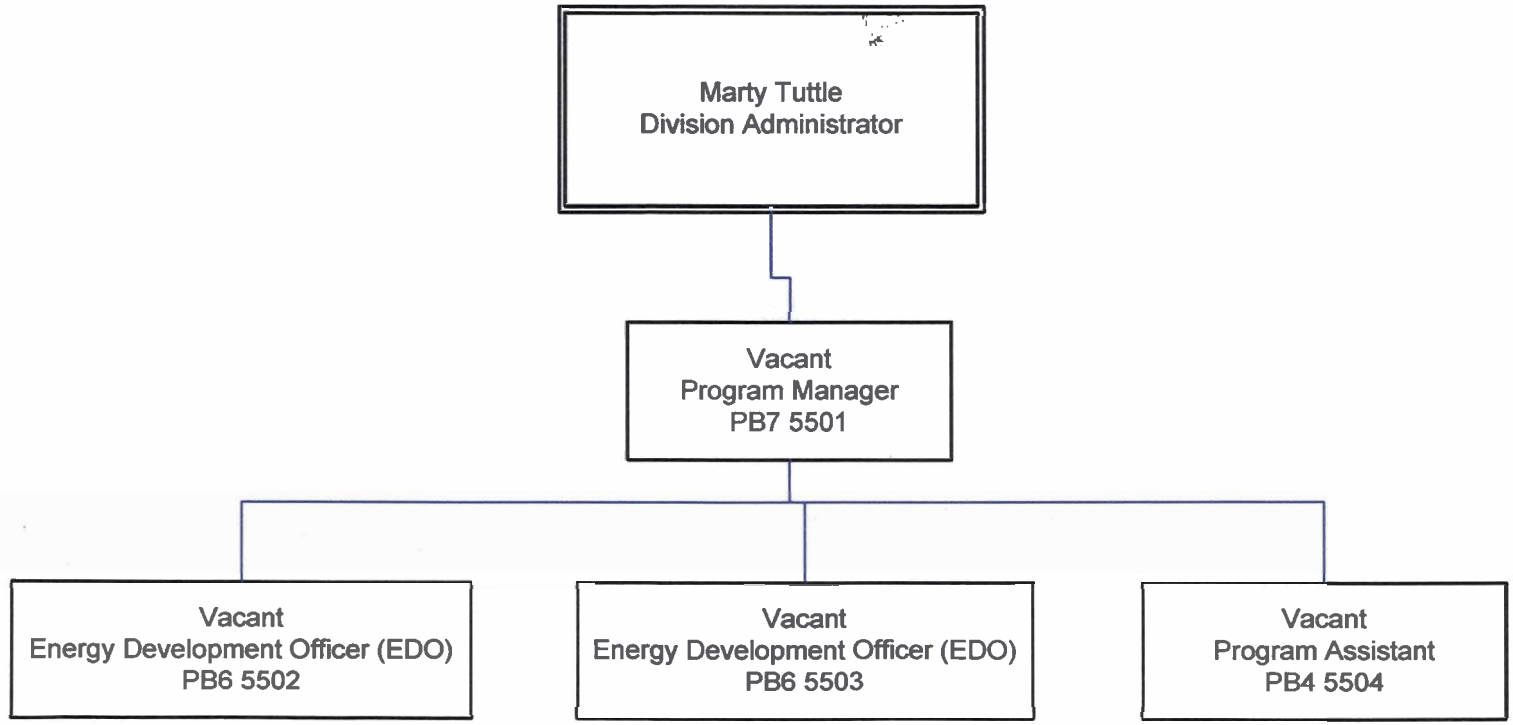
Energy Infrastructure & Promotion Division

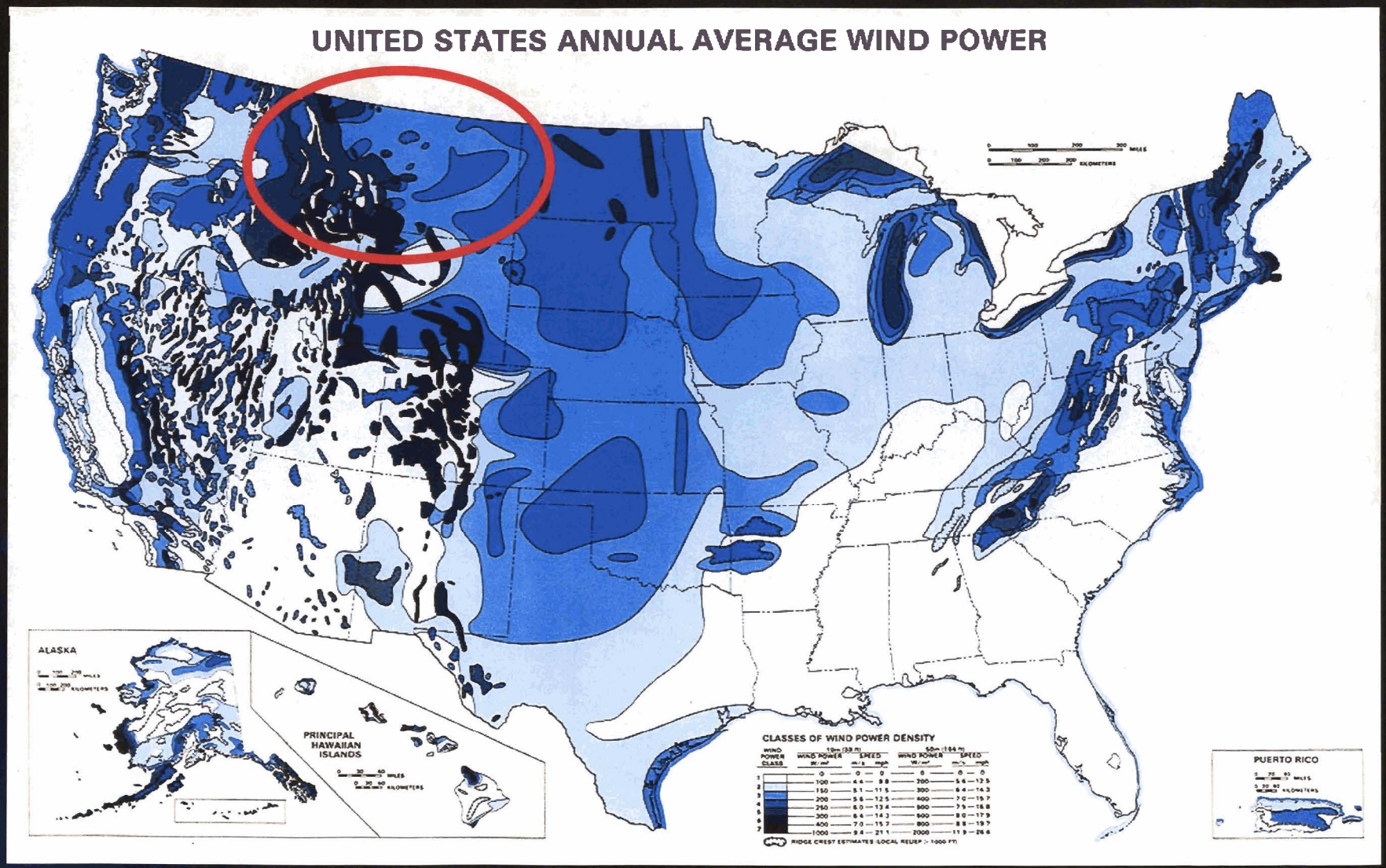
MONTANA
Department of Commerce



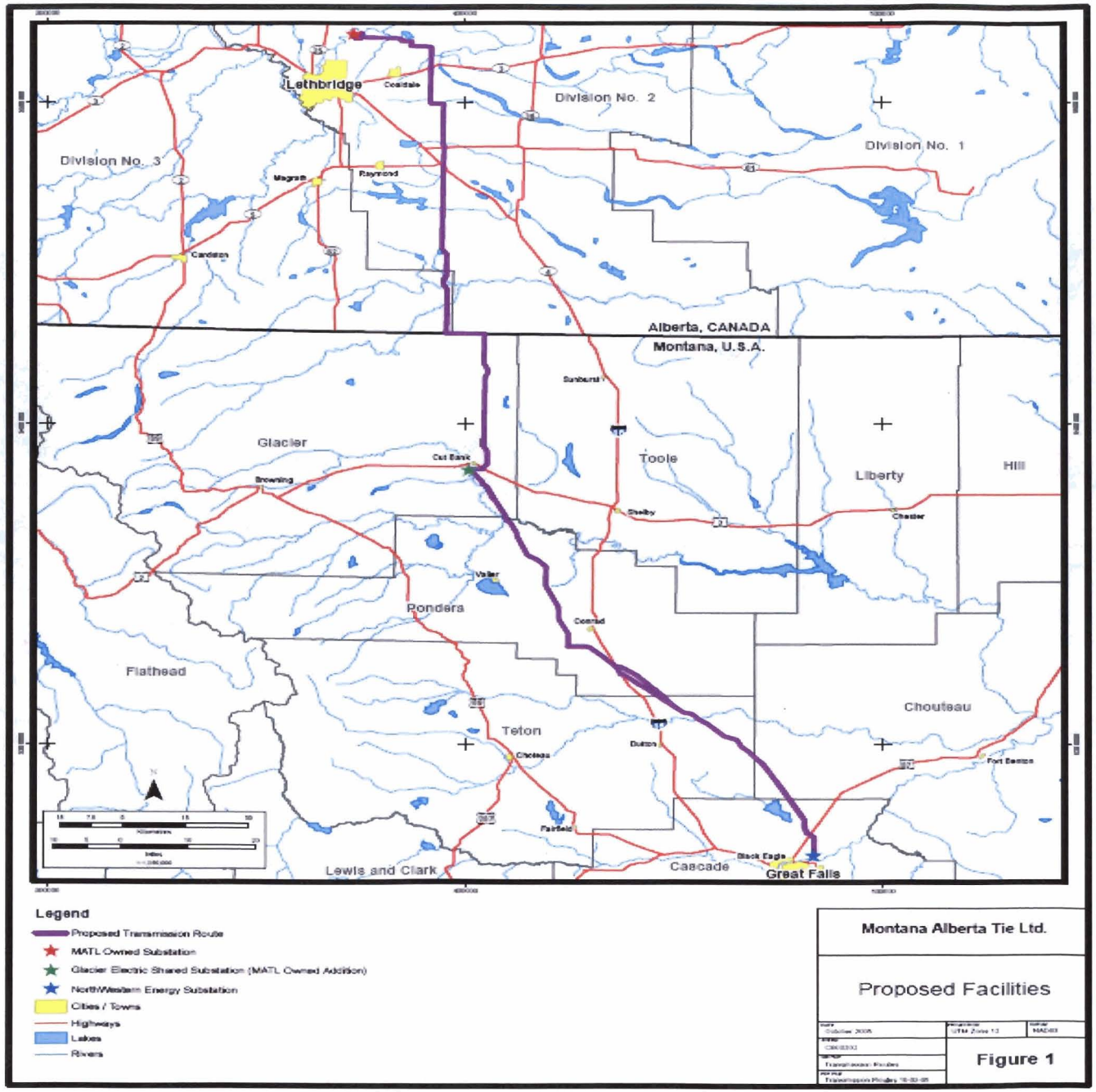
Energy & Telecommunications Committee Meeting
July 10, 2007

Exhbit #8

US Annual Average Wind Power



Tie Line Route

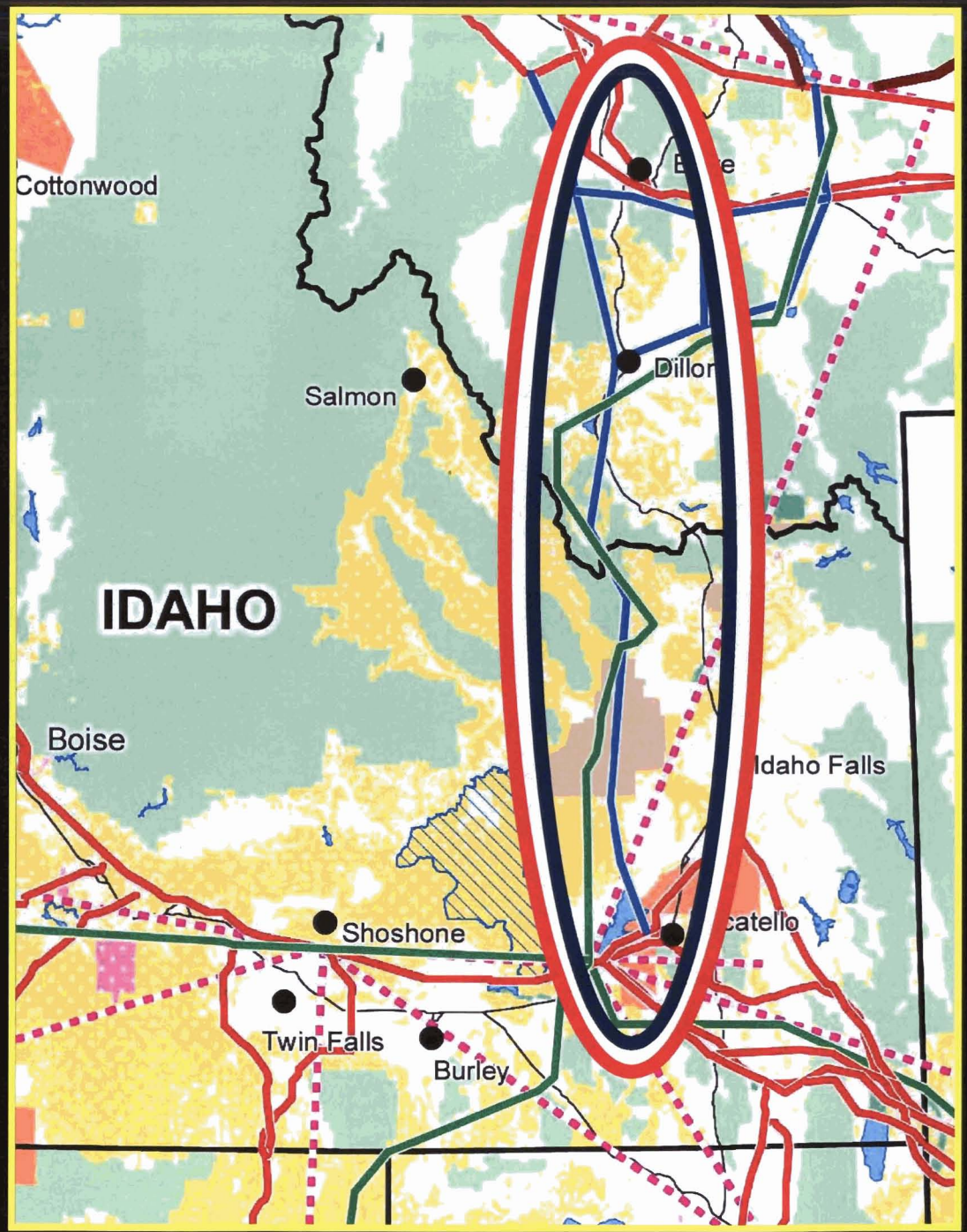


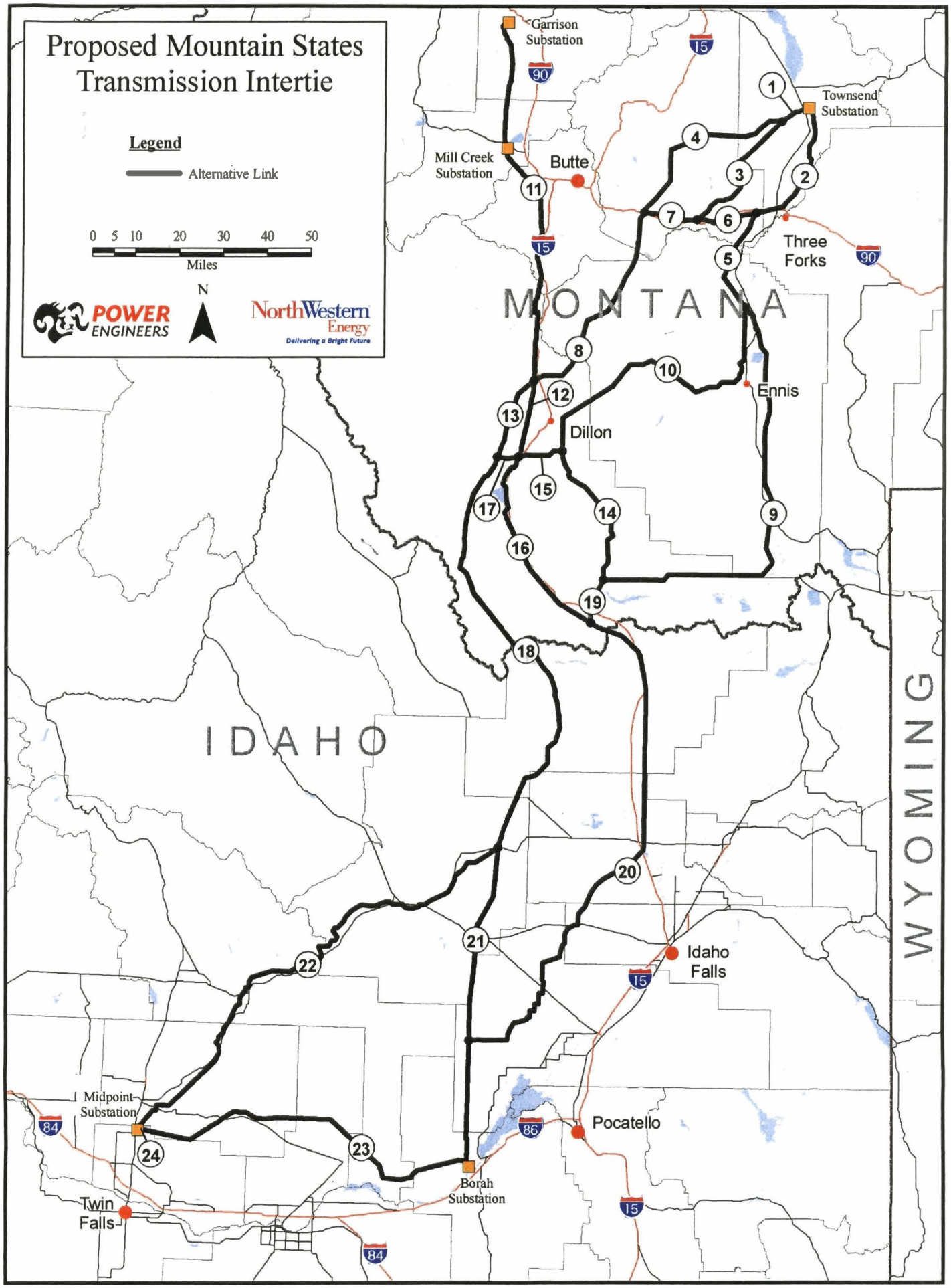
Path 18

SW MT to Idaho

As much as **1000+ MW** Capacity

Up to **$185 Million** cost




Proposed Mountain States Transmission Intertie
Legend
Alternative Link
0 5 10 20 30 40 50
Miles
N
POWER ENGINEERS
NorthWestern Energy
Delivering a Bright Future
Garrison Substation
Townsend Substation
Mill Creek Substation
Butte
Three Forks
Ennis
Dillon
Idaho Falls
Pocatello
Midpoint Substation
Borah Substation
Twin Falls
MONTANA
IDAHO
WYOMING
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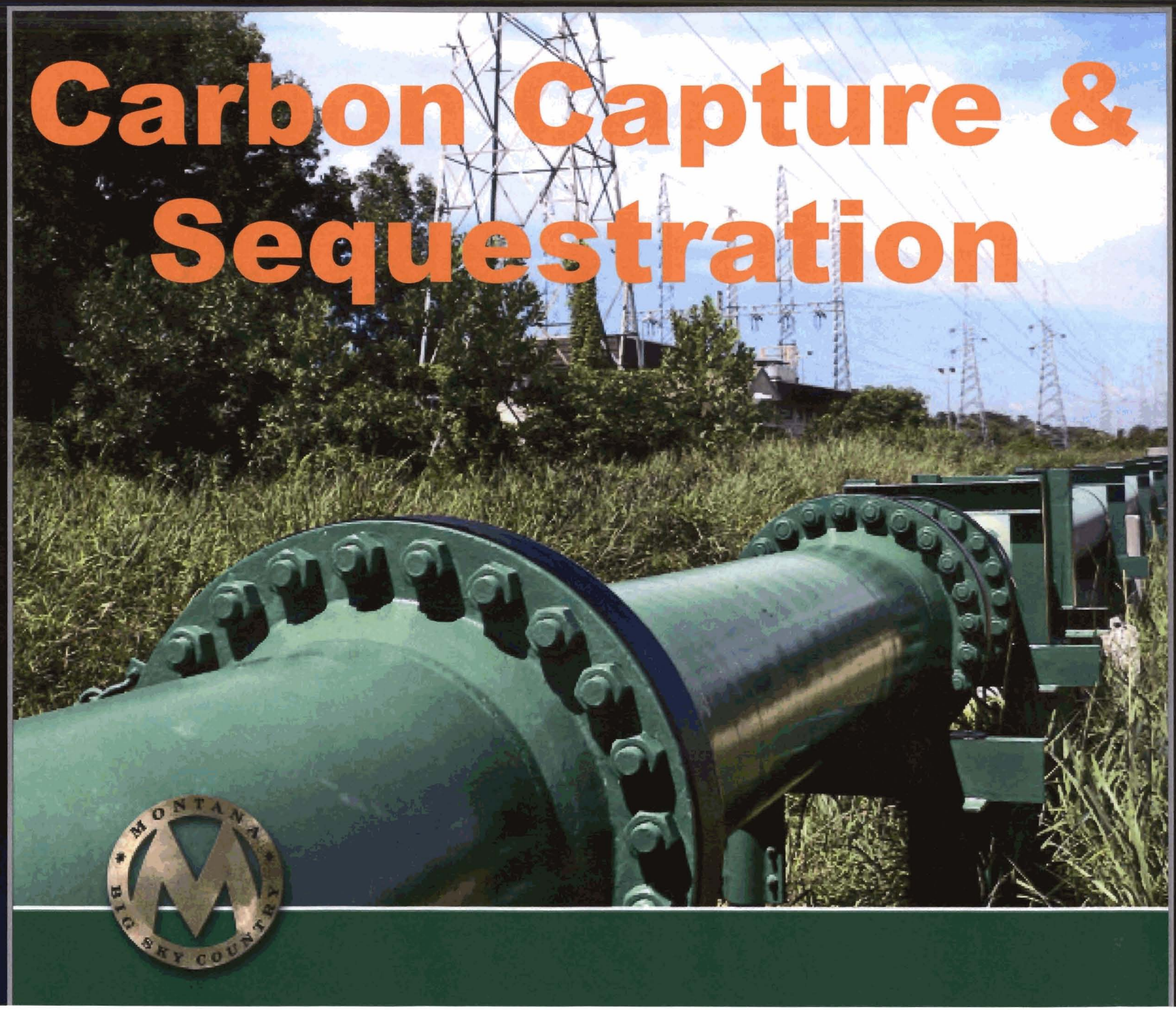
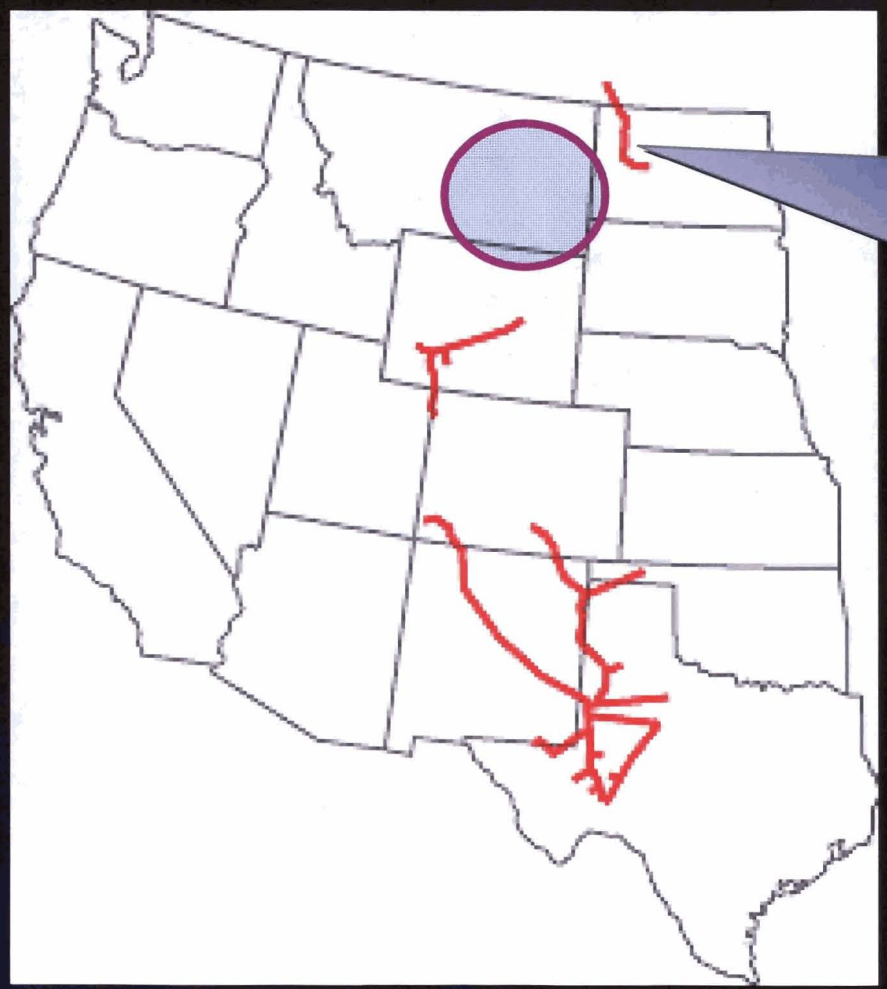
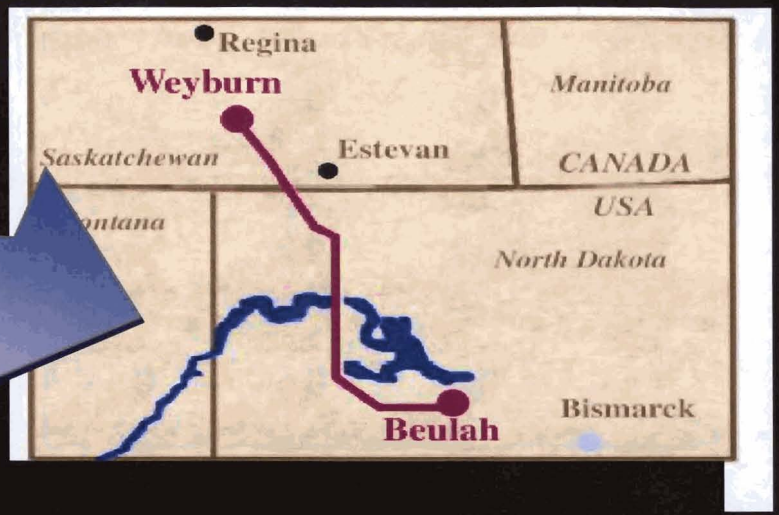
The NorthernLights Project

Carbon Capture & Sequestration



Existing CO_2 Pipelines





Pipeline Route from North Dakota Gasification Plant to Weyburn Oil Field

- 5,000 tons / day CO_2
- 204-mile CO_2 pipeline from Dakota Gasification Plant
- 130M barrels oil over 20-year project [EOR]
- 1M tons / year CO_2 sequestered

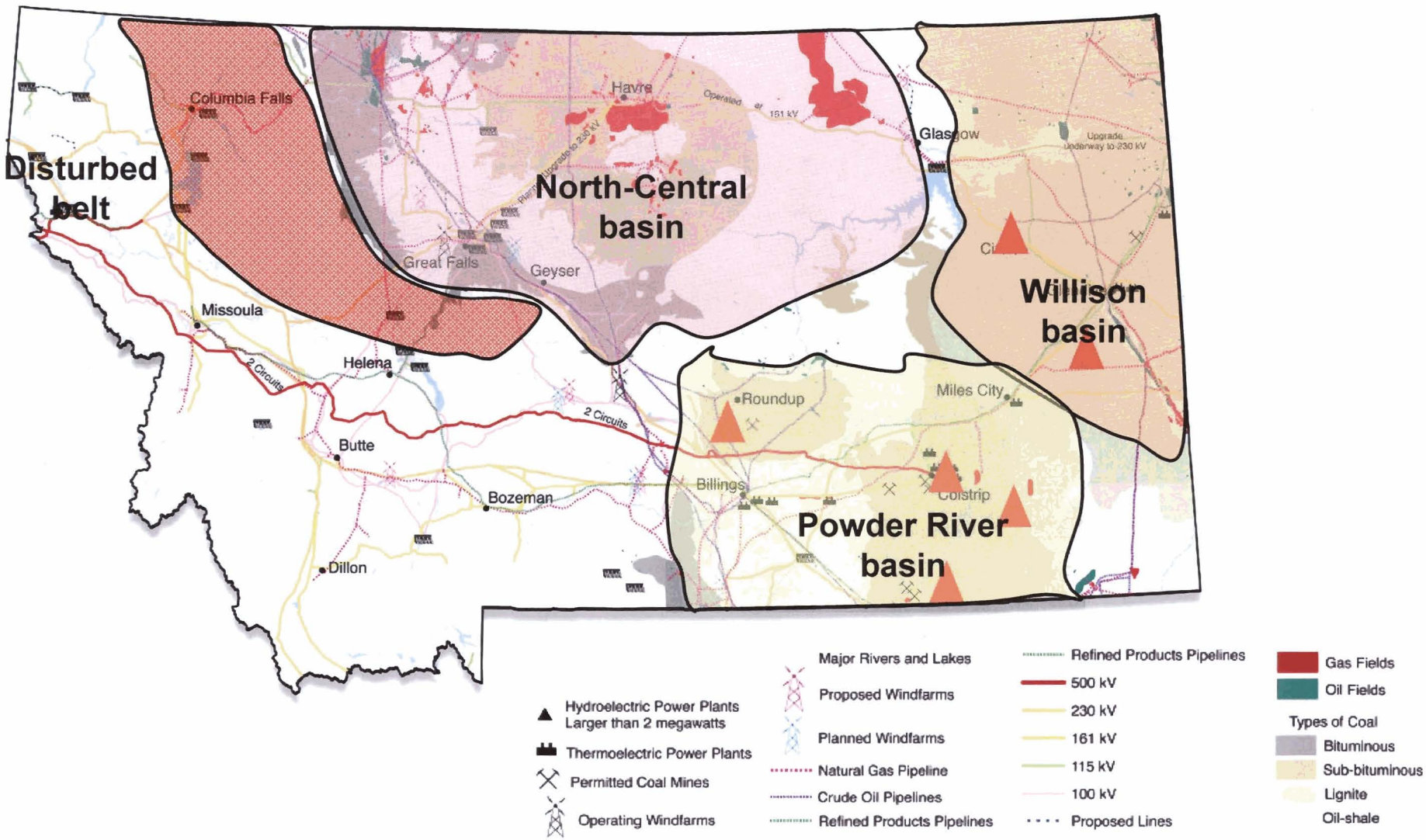
Source: Carl Bauer, NETL, DOE, 10-18-05

EnergyINet
Unlocking Tomorrow's Energy

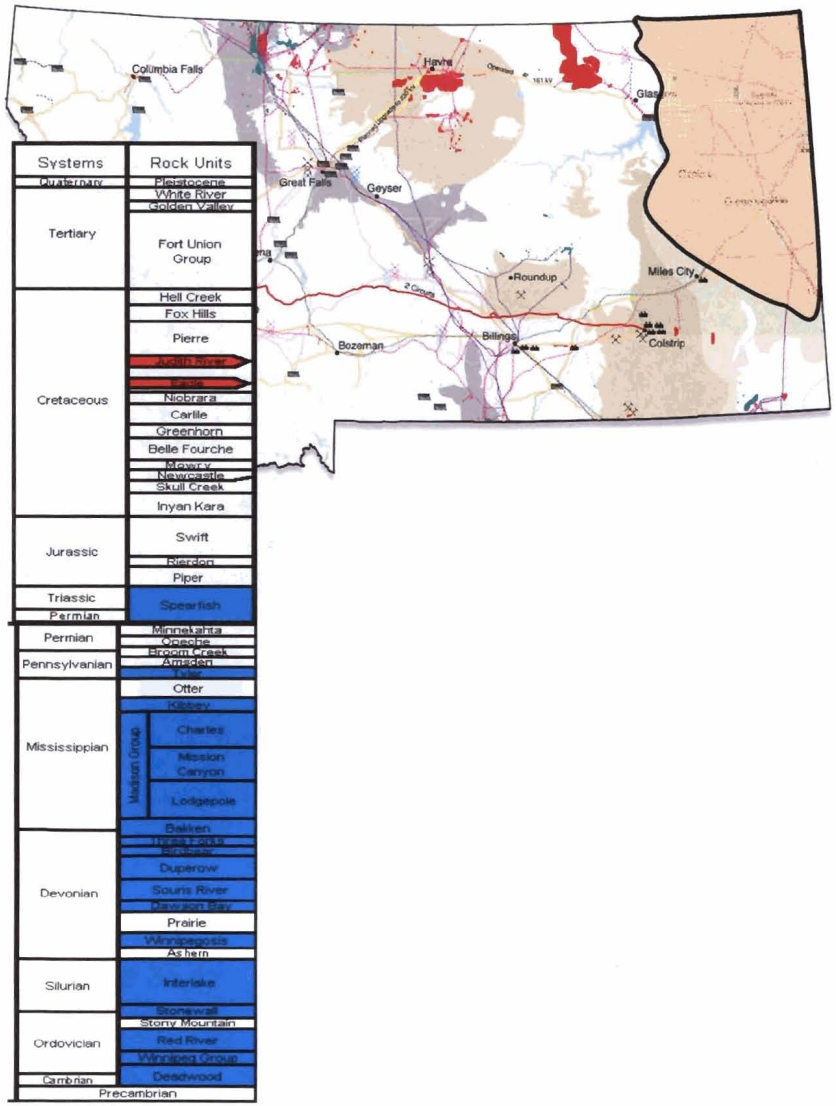
Transport from North Dakota

- 200 miles of pipe
- 14 inch to Tioga, 12 inch to Weyburn
- Inlet pressure 2500 psi
- Delivery pressure 2200 psi
- 5,000 + metric tonnes per day
- Deliver to Weyburn and now Midale

The four main CO_2 storage areas each have distinctive geology and plays for commercial deployment



Williston Basin: Montana's most productive petroleum basin is full of targets



Saline Aquifers

- 20 different target formations
- Oil-bearing units extend over whole region

Depleted Oil & Gas fields

- Cum. Prod: 440 MBOE, 1.1 TCF
- East Poplar, Flat Lake, Cabin Cr.
- Cabin Cr., Cedar Cr.

Key targets: Saline fm. & EOR/EGR

- Cambio-Ord. strata
- Red-River carbonates (Ord.)
- Devonian-Mississippian carbs
- Judith River, Eagle (Cretaceous)

Important points:

- Complex stratigraphy
- Some very deep targets
- Structurally simple