

A detailed map of the service area, showing county boundaries and names. A red star marks the location of 'Young Station Center, N.D.' in Cass County, North Dakota. Another red star marks the location of 'Headquarters Grand Forks, N.D.' in Grand Forks County, North Dakota. The map also shows parts of Minnesota. The text 'North Dakota' and 'Minnesota' is placed on their respective sides.

- z 11 member-owner cooperatives
 - 3 in North Dakota
 - 8 in Minnesota
- z 12 municipals
 - Northern Municipal Power Agency
- z 127,000 customers
- z 35,000 square miles

Overview

- z Load (kWh)
 - 62% residential
 - 31% commercial
 - 7% other
- z Forecasted growth rate
 - 2.4% / year



Overview

- z Growth centers
 - Fargo
 - Grand Forks
 - Bemidji



Overview

- z Winter peaking
 - 800 MW winter peak
 - 500 MW summer peak
- z Load characteristics

	Firm	Interruptible
Winter	60%	40%
Summer	90%	10%



334 employees

- 178 in Grand Forks
- 156 in Center

Headquartered in Grand Forks, N.D.

Overview

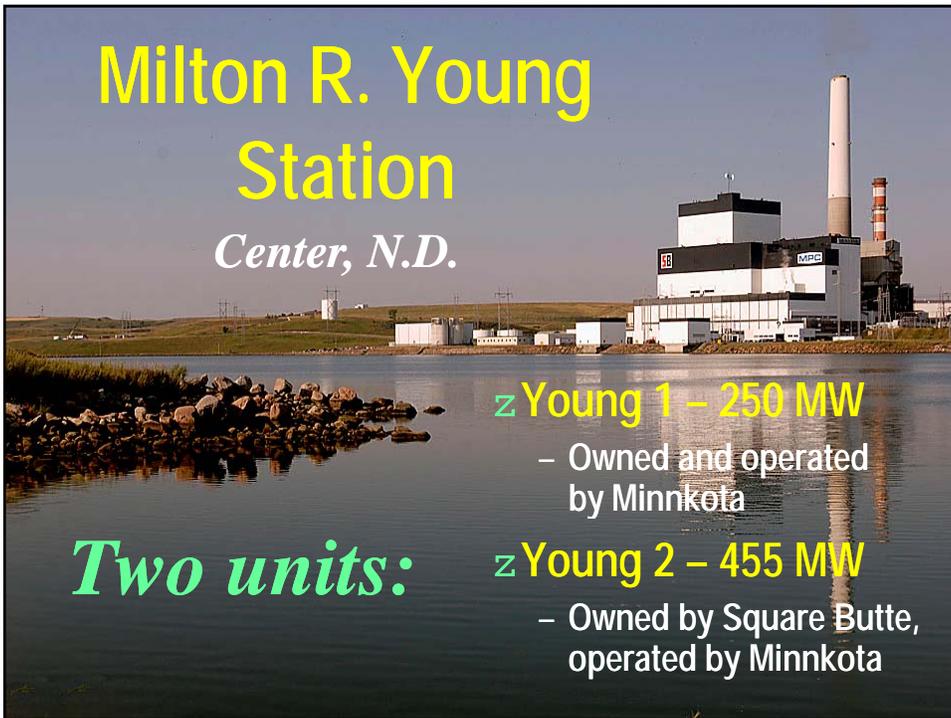
Generation (MW)

Coal	583
WAPA	122
Oil	70
Wind	101
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	875



Milton R. Young Station

Center, N.D.



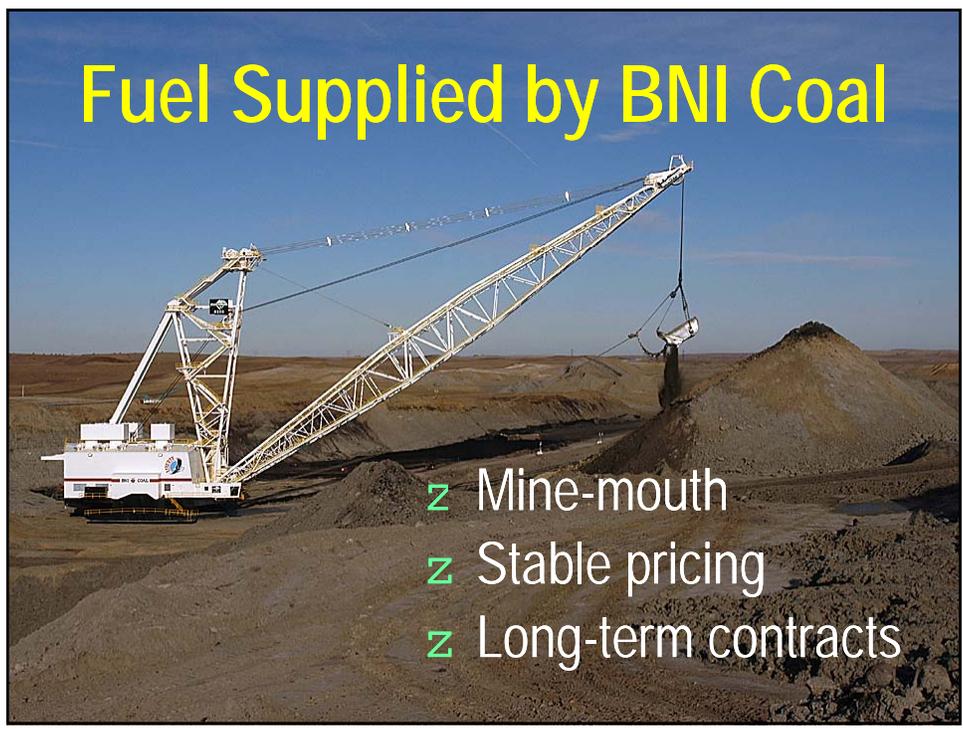
z Young 1 – 250 MW

– Owned and operated by Minnkota

Two units:

z Young 2 – 455 MW

– Owned by Square Butte, operated by Minnkota



Young 1 Turbine Upgrade

November 2006



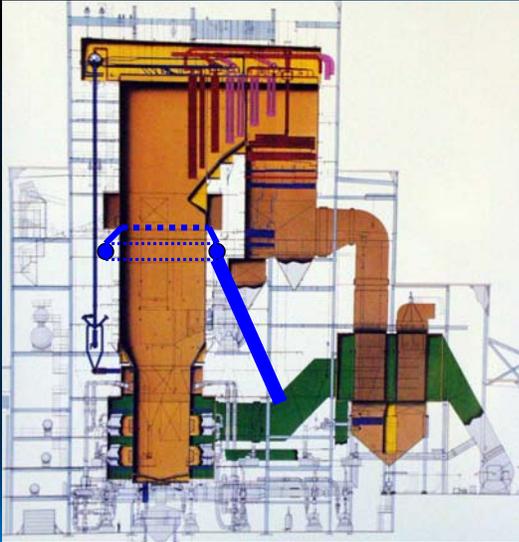
New HP-IP Inner Shell New HP-IP Rotor

Production increase of 5.2 MW



5 Vfkhgxdg
PdhwgdqfnRxwvjh
Fall 2007

Over-Fire Air (OFA)

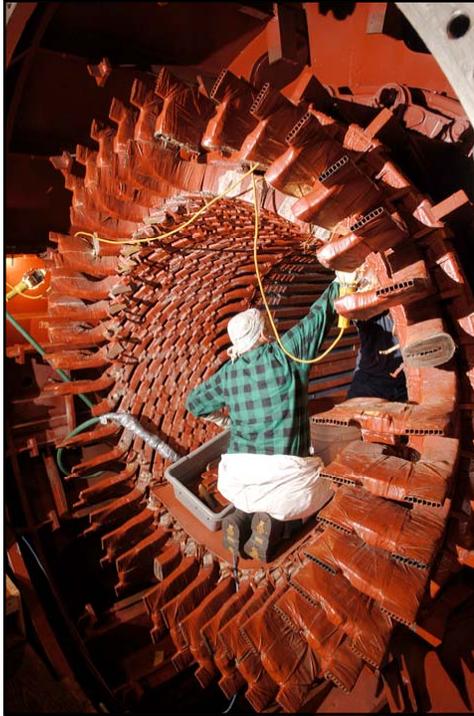


- z \$10,000,000 budget
- z NO_x control



Turbine

- z New HP-IP-LP



Generator

- z Rewound the rotor
– \$2.2 million
- z Rewound the stator
– \$6.6 million



Young 2 Outage Summary

- z Longest outage in Young 2 history
- z \$90+ million
- z Improvements to provide up to 20 MW of additional production without any increase in emissions



Future Environmental Control Projects

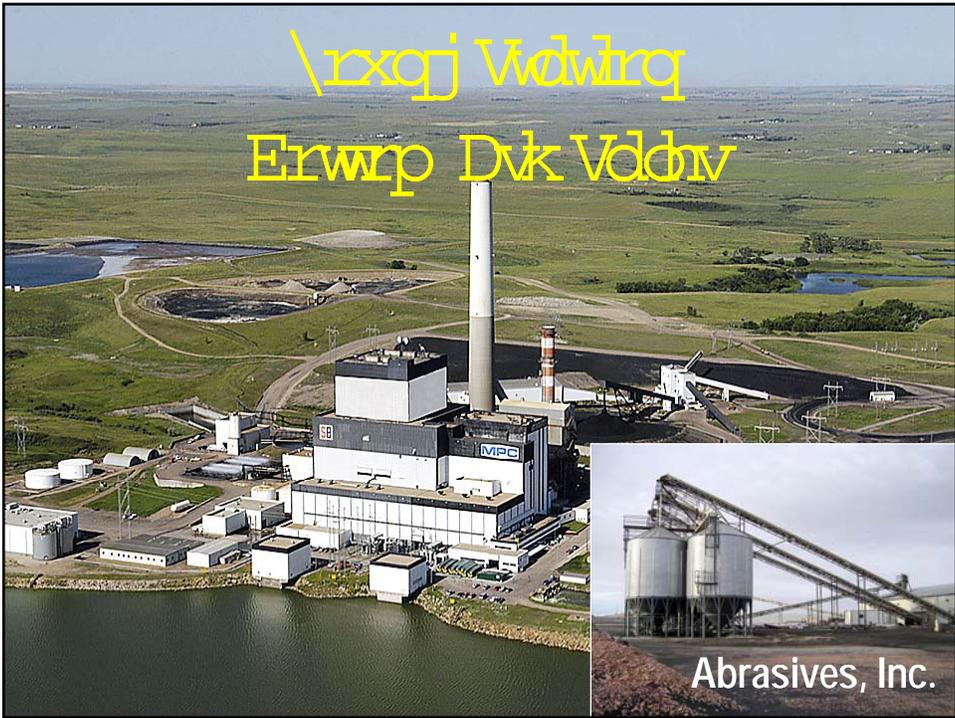


New Scrubber Young 1

- z Wet scrubber with 95% removal of SO₂
- z In service by 12-31-11
 - Anticipated start-up early summer 2011
- z Estimated cost of \$88 million

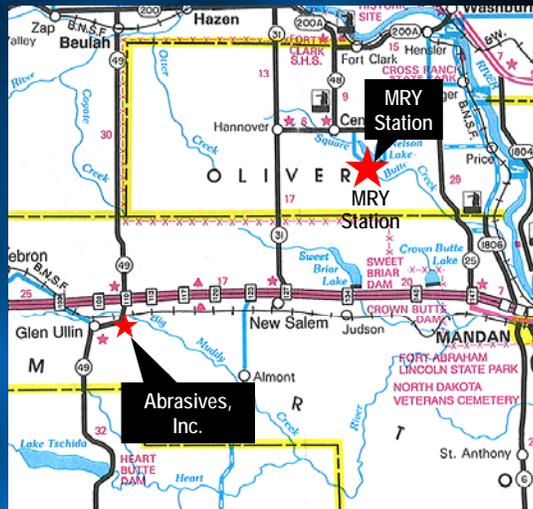
Modified Scrubber Young 2

- z Will require a new stack
- z In service by 12-31-10
- z Estimated cost of \$35.6 million



Abrasives, Inc.

- z Primary usage
 - Blast abrasives
 - Roof granules
 - Other
 - Golf course "sand"



BNI Use

Truck access on the slopes into the pits



Bottom Ash Sales Summary



- z Win-win situation
 - Reduced cost for MRY Station
 - Business opportunity for Abrasives, Inc.
- z Use of coal byproducts, versus landfill
- z Fly ash used as displacement for lime

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Hohuj |
Z log

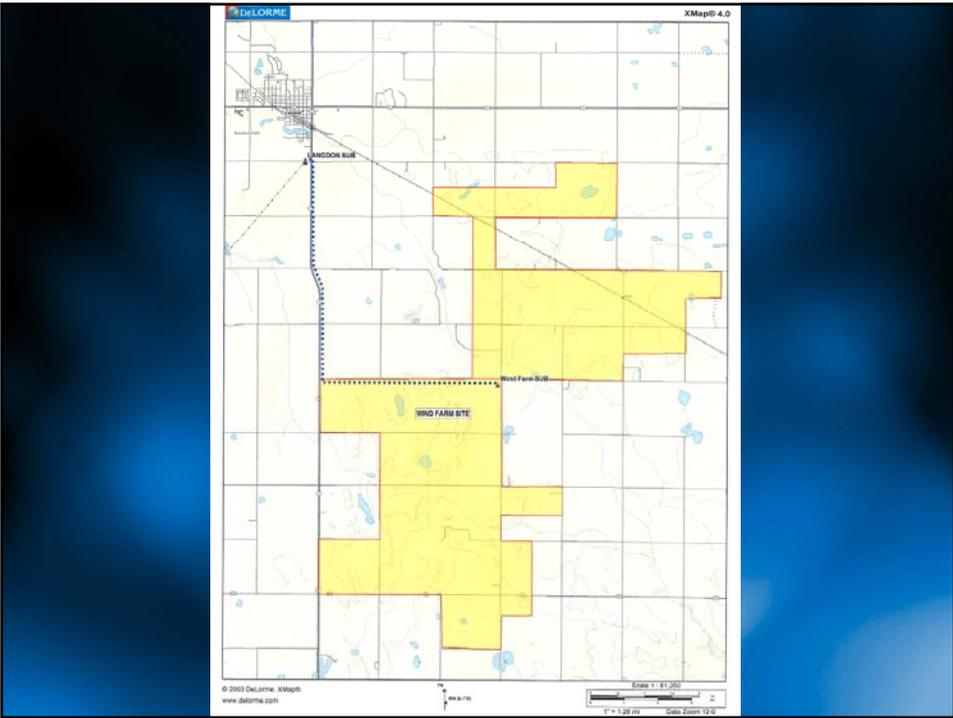






Langdon Wind Energy Center

- z FPL Energy, Otter Tail and Minnkota are the partners
- z Located south of Langdon, N.D., in Cavalier County
- z FPL Energy will own the majority of the turbines

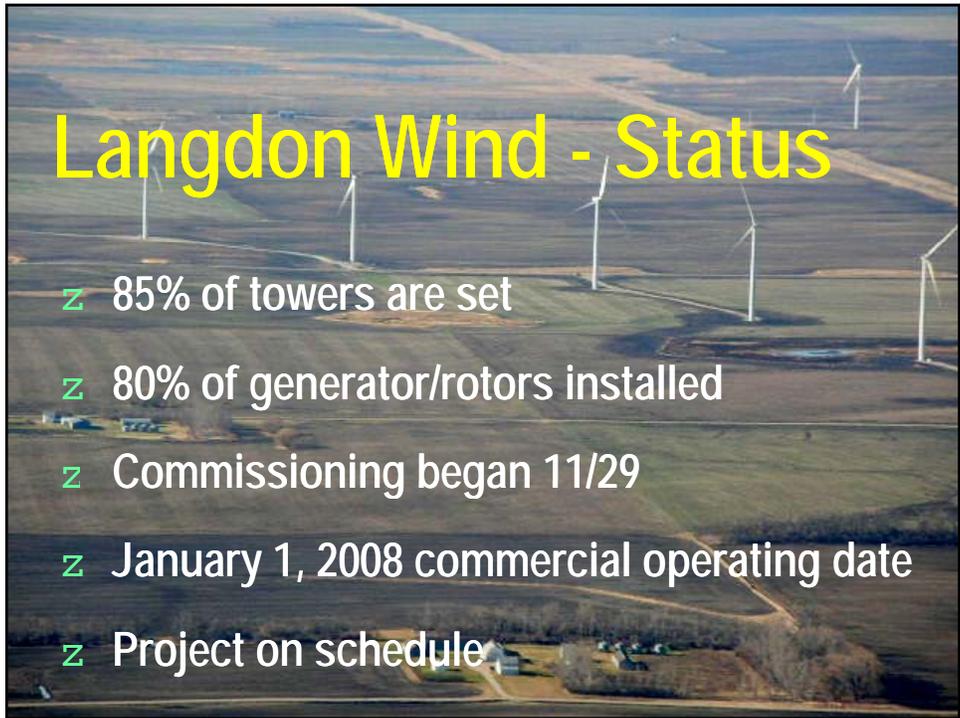




Langdon Wind Energy Center

- z Minnkota's share will be 99 MW
- z 350 million kWh annually
- z 10% of member sales
- z 25-year power purchase agreement
- z Operational by the end of 2007 or early 2008





Langdon Wind - Status

- z 85% of towers are set
- z 80% of generator/rotors installed
- z Commissioning began 11/29
- z January 1, 2008 commercial operating date
- z Project on schedule



Launched in 2002

- z First turbines erected in North Dakota
 - Subscription-based program
- z 900 kW each



Valley City



Petersburg

Infinity Wind Energy

- z Operational data shows consistent overall performance from 2002 through 2007
- z Wind turbine maintenance is increasing

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- z Beginning Dec. 1, 2006, the Minnkota Board of Directors authorized payment of 4¢/kWh for qualifying renewable energy
- z Focus on customer-owned generation
- z Proposals are continually received

Polk County Solid Waste Recovery Plant

- z Became operational in April of 2007
- z Solid waste is burned from homes and businesses in surrounding counties
- z Recyclable materials sorted out
- z Steam drives a turbine generator



Grand Forks Truss Plant

- z Partnered with Energy & Environmental Research Center at UND
- z Pilot biomass gasification project
- z Plant sawdust and wood waste burned to produce a combustible gas



City of Fargo Landfill Methane Generation

- z Capturing landfill gas from decomposing garbage
- z Methane fuels an on site Caterpillar generator

Future Needs

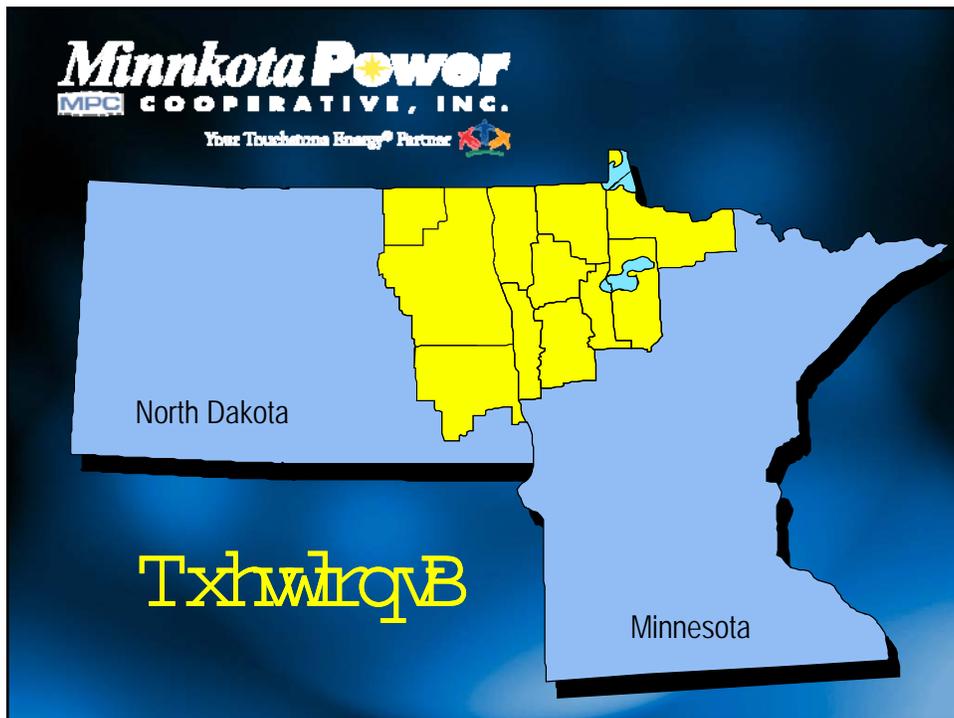
- z Minnkota needs additional baseload generation to serve the associated systems
- z Studying several options including coal, hydro and more wind
- z New transmission capacity will be required to serve firm loads





Summary

- z Environmental improvements at existing plants an ongoing effort, up to \$300M in upgrades in next five years
- z Bottom ash sales create win-win situation
- z Renewables will provide a larger portion of Minnkota's power supply portfolio in the future



Minnkota Power
MPC COOPERATIVE, INC.
Your Trustworthy Energy Partner

North Dakota

Minnesota

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