

# Basin Electric Power Cooperative

Ron Rebenitsch, PE

# Project Description

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- Located at Chamberlain, SD
- Two 1.3 MW Nordex units
- Permitting is almost complete
- First wind project financed by RUS
- **Owned by Basin Electric**

# Project Issues and Lessons Learned

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- Wind is a fledgling industry - Utilities and vendors are still learning
- Use consultants - Guidance & Specs
- Warranty
  - Read it - Understand it!
  - Have it assigned to you

# Project Issues and Lessons Learned

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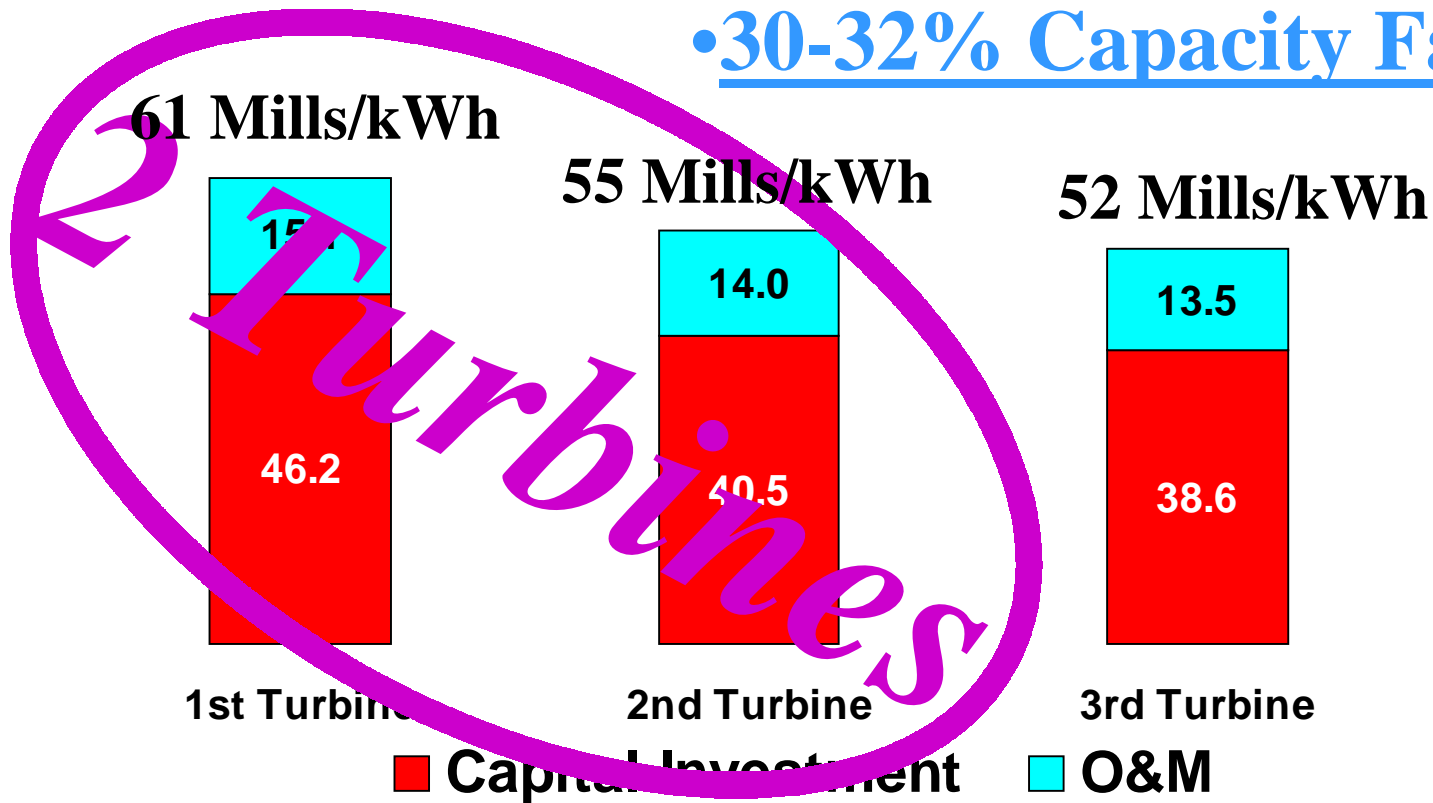
## *Two Major Hurdles*

■ **Economics**

■ **Transmission**

# Economy of Scale...

- 15 year life
- 30-32% Capacity Factor



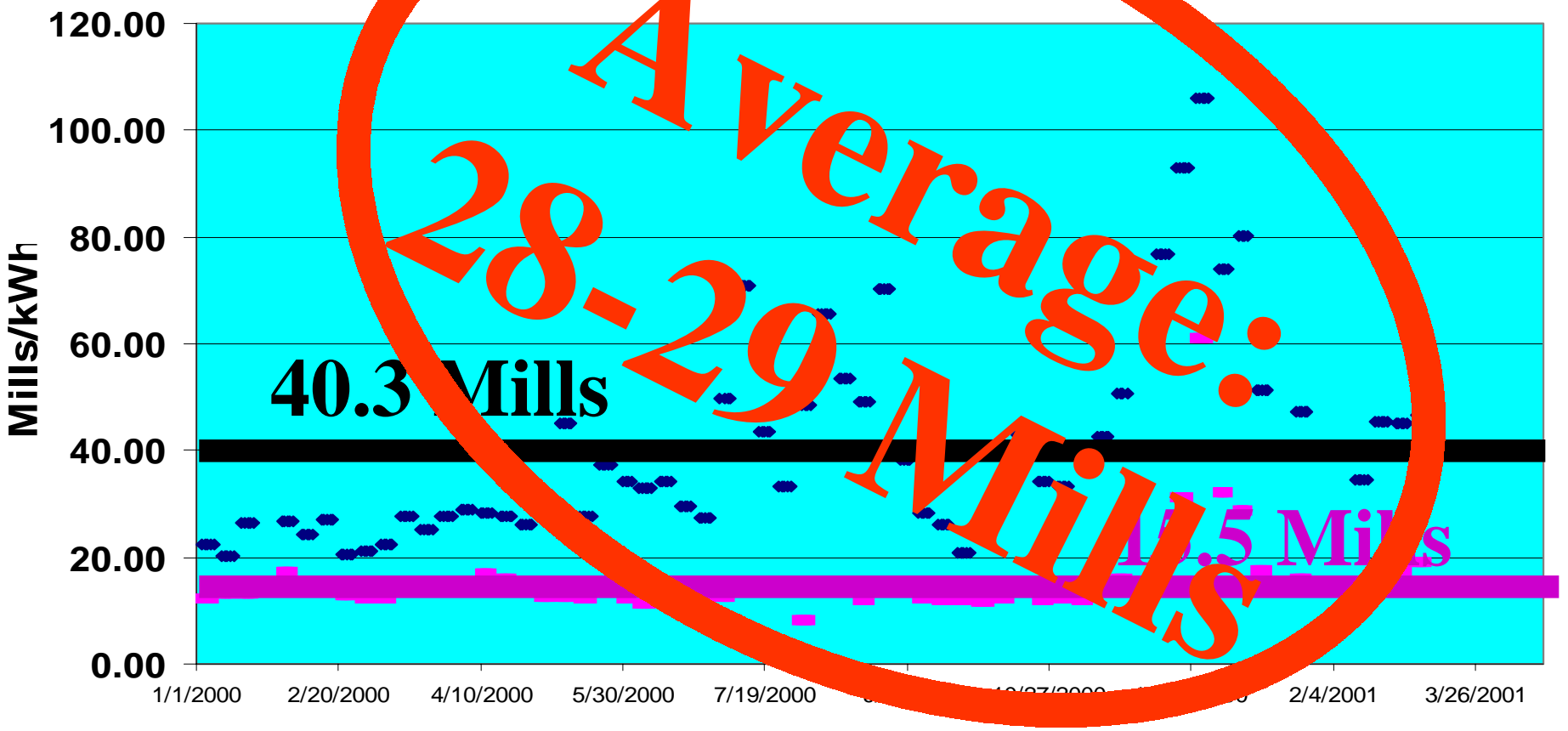
# Typical Cost of Power to Consumer





# MAPP Spot Prices: Jan 2000 to Mar 2001

Weekly Average Index Values for MAPP Power Market  
Source: *Power Markets Weekly*



◆ ON-PEAK      ■ OFF-PEAK

# Transmission

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## ***Know the rules of the game***

- Get your request in the Queue
- Identify interconnection requirements
- Check with the grid operator
- If no capacity and no project budget for transmission improvements.....  
Don't waste your time !

# Overall Project Evaluation

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- We delayed too much
- Costs increased due to delays
- Schedule is now tight
- Still have room for a 3rd turbine

# Future Plans Involving Wind

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- Complete these first two turbines
- Build more...

***“If they come, we will build it!”***

## *Some thoughts on wind and transmission...*

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### *Wind is not a firm power supply...*

- Why does a non-firm power supply need firm transmission?.....
- Why not buy non-firm only when you need it - and reduce cost?...

**Answer: Risk!!!**

# One possible option....

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- ... partner with a gas peaker and use the peaker's firm transmission?
- Transmission will be used more efficiently
- Then wind wouldn't bear the cost burden of firm transmission for a non-firm resource