



# Are Feed-In Tariffs needed in Minnesota?

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# Xcel Energy

- ◆ **#1 Wind Provider in the US (MW installed)**
  - AWEA rankings 2006,2007
- ◆ **#1 Green Power Program in US (customers)**
  - US DOE (NREL) 2007
- ◆ **#5 Solar provider in US (MW installed)**
  - SEPA 2007 Rankings
- ◆ **Plans 8000 MW of wind and 1000 MW of solar by 2020**

# Societal Benefits of Renewables

- ◆ **Electric Energy to meet demand**
- ◆ **Environmentally benign – avoids more polluting resources**
- ◆ **“Free fuel” resources provide a hedge against increasing fuel prices**
- ◆ **Provide a hedge against economic costs of future carbon regulation**
- ◆ **Use of natural resources promotes energy independence**
- ◆ **Local Economic Development**

# Electric Utility Obligations

- ◆ **Deliver adequate and reliable service at reasonable rates**
- ◆ **Maintain sufficient resources to meet all demand in its service territory**
- ◆ **Meet or exceed legislative and regulatory policy goals such as renewable, conservation and environmental targets**

# A FIT for Minnesota?



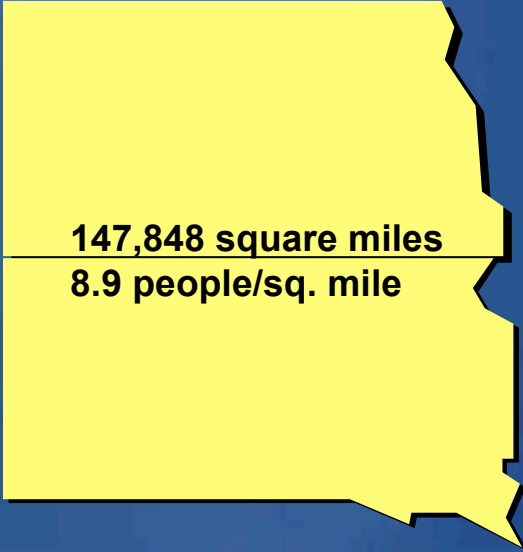


# Potential Disadvantages of FIT


- ◆ Same benefits at higher costs
  - ◆ “Market-clearing price” results in excess profits for developers and costs to customers
  - ◆ Higher prices for less efficient installations
- ◆ Unlimited purchase obligation creates planning challenges and potential supply gaps
- ◆ Inefficient development process may lead to costly infrastructure needs

# The Midwest is not Germany

- ◆ More land area
- ◆ Lower population density
- ◆ Better wind resources
- ◆ Lower overall electricity prices



147,848 square miles  
8.9 people/sq. mile



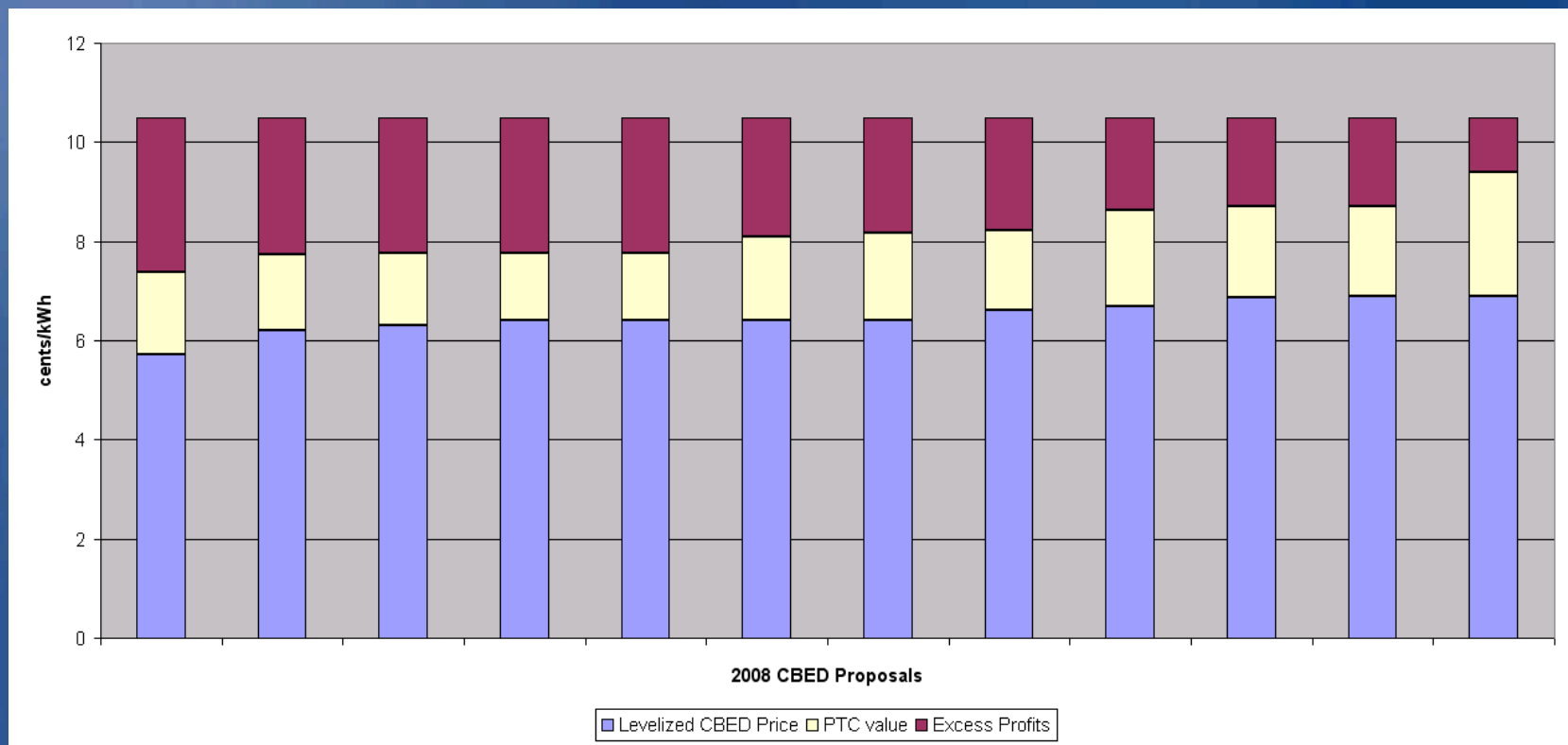
137,810 square miles  
597.9 people/sq. mile

## **Xcel RES implementation provides a FIT structure at a market price**

- ◆ **Xcel procures bundled energy and RECs under long-term fixed price contracts**
- ◆ **Xcel does not rely on potentially volatile short-term REC markets for future compliance**
- ◆ **Xcel RES PPAs are pre-approved for real time cost recovery, providing an extremely safe revenue stream for financing purposes**
- ◆ **Xcel uses a competitive solicitation that provides cost recovery and reasonable profits at a market-determined price**



# FIT v. Market Comparison



# Technology Advancement: Solar

- ◆ We have vast expanses of more cost-effective renewable resources (wind, biomass)
- ◆ Development of the entire spectrum of renewables not on Minnesota's back
- ◆ MN solar installations should initially be targeted to provide information on how different technologies work in various locations
- ◆ Other states should lead on cost/technology improvement

# Conclusions

- ◆ Like any resource procurement, we need to obtain renewables benefits at the lowest possible cost to customers
- ◆ Minnesota does not present the “market failures” that make FITs more effective than renewables standards in other places
- ◆ Xcel’s RES implementation strategy offers a stable financial structure for renewable development at a competitive price