Energy Efficiency in Minnesota

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Center for Energy and Environment

- Energy services to over 70,000 single, multifamily and commercial buildings
- Authored over 100 research projects
- Developed greenhouse gas reduction plans for:
  - 1993 – Minneapolis/St. Paul Urban CO2 Project Plan
  - 1995 – Minnesota CO2 Action Plan

Center for Energy and Environment

- Currently managing Small Business One-Stop Efficiency Shop for Xcel Energy
- Extensive recommissioning experience
- Currently managing the Public Buildings Enhanced Energy Efficiency Program for state and local governments
- CEE Financial Resources - $115 million in loans

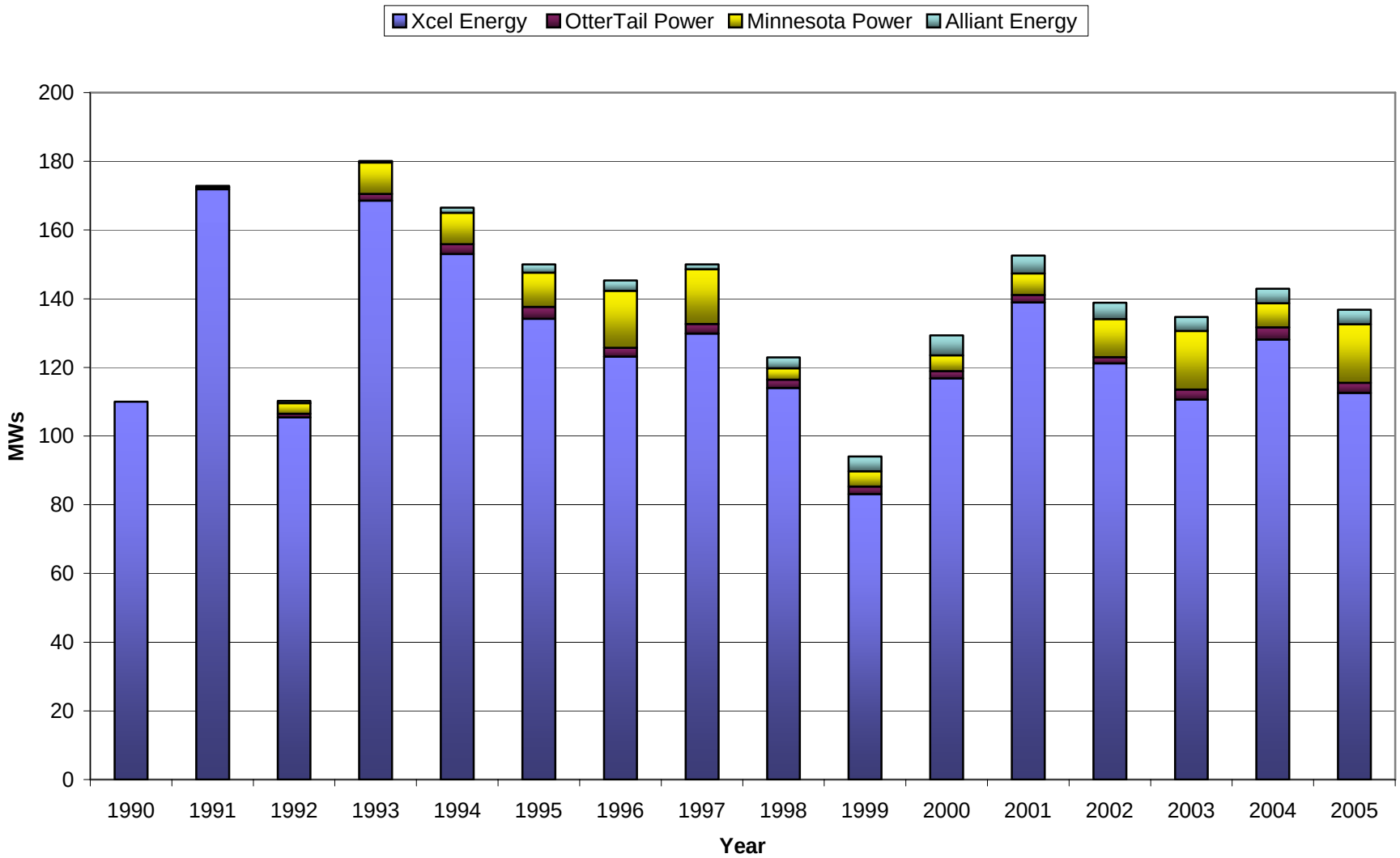
History of Energy Efficiency in Minnesota

- 1980 – legislation passed requiring at least one utility pilot program
- 1989 – regulated utilities required to spend percent of gross revenue on EE programs (natural gas = .5%; electric = 1.5%)
- 1991 – coops and munis must spend .5%
- IRP, financial incentives
- 1994 – NSP (now Xcel) required to spend 2%

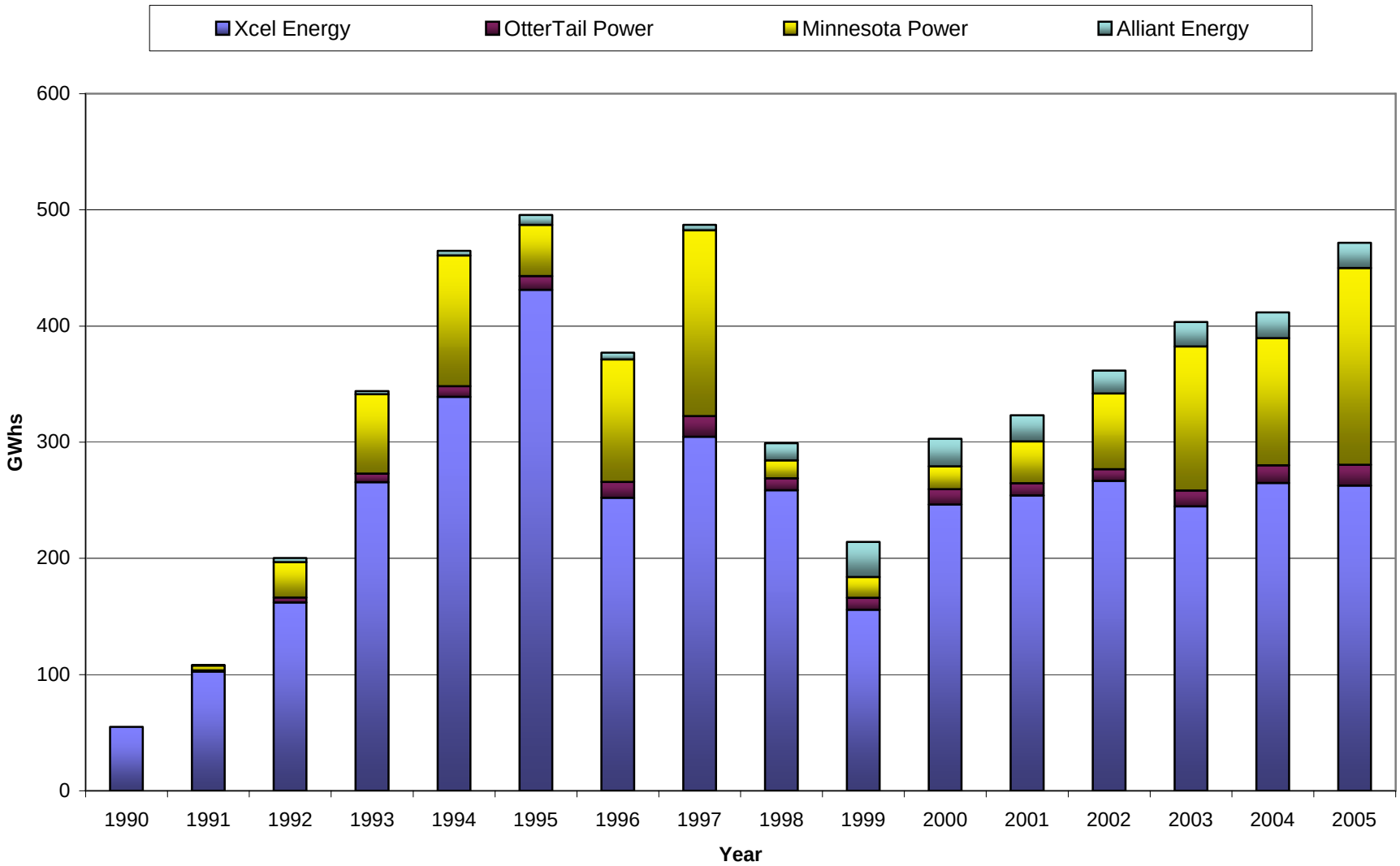
History of Energy Efficiency in Minnesota (cont.)

- 1995 – PUC adopts DSM lost revenue recovery as utility incentive
- 1998 – PUC suspends lost revenue recovery and adopts incentives based on shared savings
- 2001 – Coop/muni required spending moved to 1.5% electric, phased in thru ’05

Historic Electric CIP Demand Savings (MWs)



Historic Electric CIP Savings (GWhs)



Next Generation Act 2007

- Energy Savings Goal
- Research Funding
- Financial Incentives
- Decoupling

Savings Goals

- Utilities to file 3 year plans describing how they will reach 1.5% goal
- Goal may be modified to minimum of 1% if 1.5% goal can’t be met due to:
  - Historical conservation efforts
  - Load growth
  - Customer class make-up
  - Or other factors

Savings Goals (cont.)

- If goals are modified to less than 1.5%, utilities must work to achieve goal by promoting other efforts:
  - Energy codes
  - Appliance standards
  - Market transformation programs
  - Programs that change customer behavior
  - Green buildings, LEED, Energy Star
  - System efficiency improvements

Applied Research

- Directs the Department of Commerce to oversee development of research plans for all utilities, to include:
  - Identifying new technologies and strategies to maximize energy savings
  - Improving effectiveness of conservation programs
  - Documenting carbon dioxide reductions from the programs
  - Utilities assessed for research projects with statewide significance

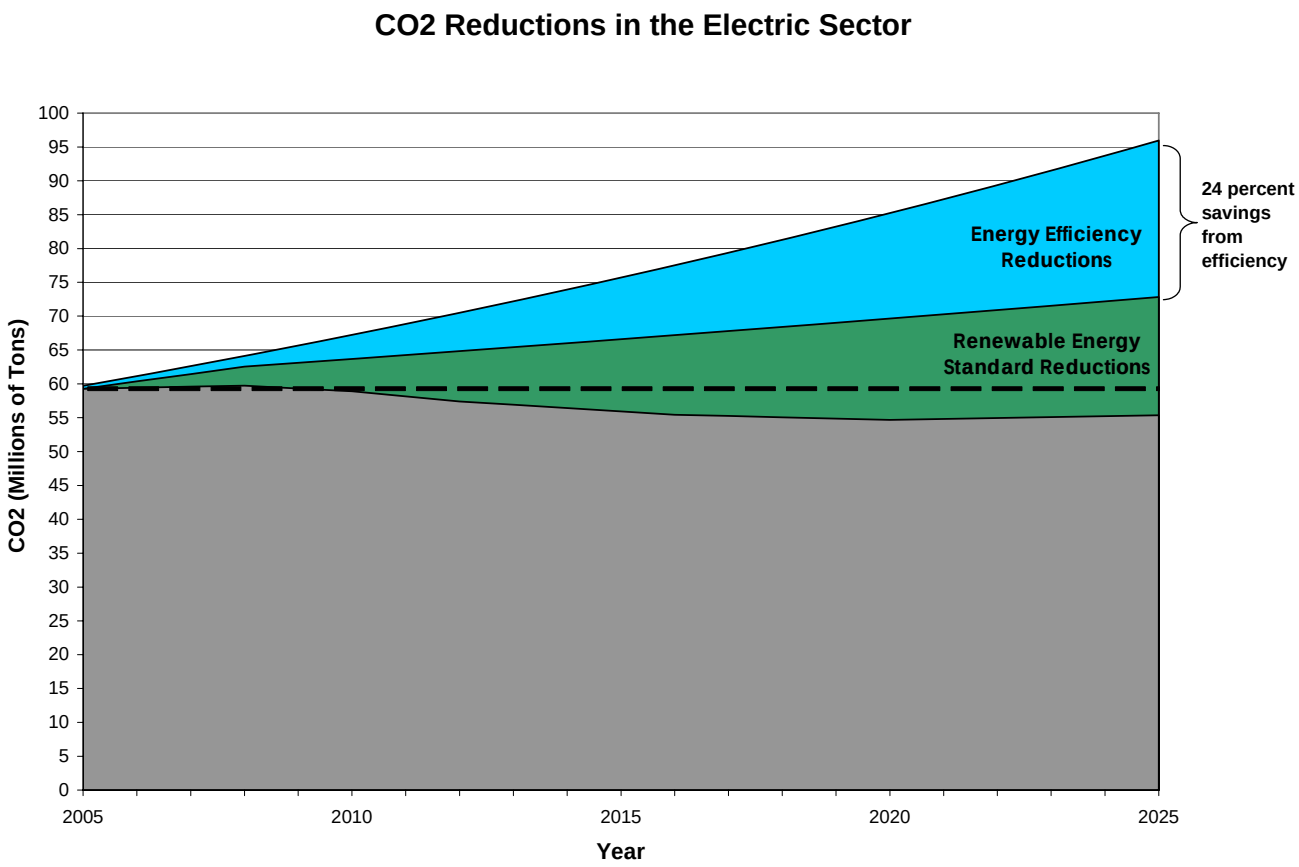
Financial Incentives

- MN PUC review of current DSM financial incentive plans modify those plans to facilitate achievement of 1.5%
- Most current plans will need adjustment to reflect much higher savings goals

Decoupling

- MN PUC to establish criteria for decoupling pilot projects
- Gas and electric utilities may volunteer to run pilot projects consistent with criteria for up to 3 years
- Pilot projects may be extended beyond 3 years if approved in a general rate case

Energy and Renewable Savings



Meeting the Goals

- Most utilities are committed to increased savings
  - 2010 is the first year that utilities are expected to plan to achieve the 1.5% savings goals
  - Gas utilities have been given more time to meet the 1.5% goal
  - No utilities have proposed to achieve the 1.5% goal with just utility efficiency programs

Meeting the Goals

- Xcel Energy continues to be the leader

MN Demand Side Management Savings Goals

	Electric		Gas	
	Actual/Proposed		Actual/Proposed	
Year	MWh	% of Sales	Dth	% of Sales
2005	262,558	0.86%	1,150,968	1.63%
2006	256,386	0.83%	927,028	1.48%
2007	259,207	0.85%	888,460	1.26%
2008	331,025	1.07%	613,134	0.91%
2009	288,147	0.90%	608,485	0.86%
2010	348,187	1.13%	785,778	1.11%
2011	365,951	1.19%	808,916	1.14%
2012	398,062	1.29%	851,387	1.20%

2005-2008 – Actual Savings
2009 – Approved Goal
2010-2012 – Proposed in Triennial

Additional Strategies and Partnerships are Needed

- Trillion BTU program
  - A new program designed to complement Xcel Energy's existing programs
  - Provides additional technical and demonstration assistance to customers
  - Most importantly, it provides low cost easy-to-use financing in partnership with the St. Paul Port Authority and other economic development authorities

Additional Strategies and Partnerships are Needed

- Public Buildings Enhanced Energy Efficiency Program
  - Application and Screening
  - Investigation and Analysis
  - Utility Rebates
  - Implementation
  - Financing – primarily tax exempt lease purchase
  - Measurement & Verification

Additional Strategies and Partnerships are Needed

- One-Stop Community Energy Services
  - Need to serve hundreds of thousands of customers
  - Community engagement
  - Targeted workshops
  - Low cost materials/no cost measures
  - Energy feedback reports
  - Home visit – Utility funded
  - Incentives, financing and rebates – Utility funded
  - On-going energy feedback reports

Summary

- 2007 legislation has significantly improved utility commitment to spending on efficiency
- Achieving 1.5% goal will be difficult
- Need much deeper market penetration
- Need to invest in longer payback items
- Support from state and local governments and the entire community is necessary if goals are to be achieved

Thank you

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