

Minnesota Electricity Prices

Jon Brekke

Summary

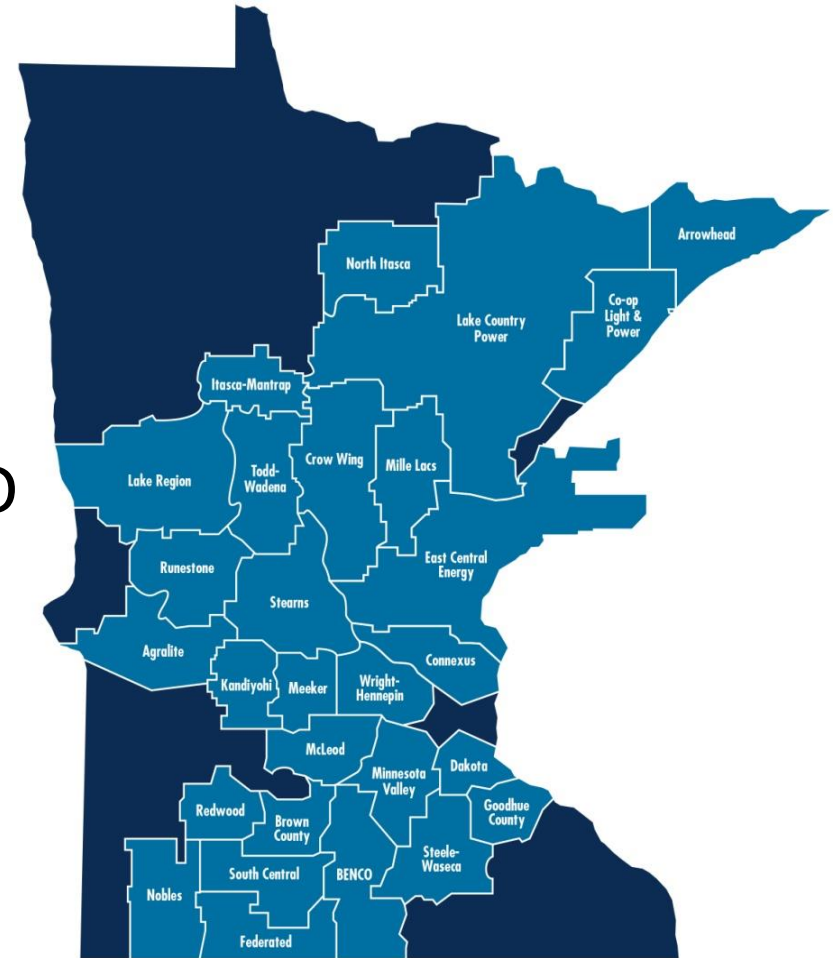
- ▶ Drivers include:
 - Fuel costs
 - Emissions reductions
 - Renewable energy additions
 - Plant investment – efficiency and reliability
 - Changes in the wholesale energy market
- ▶ Future outlook
 - Carbon management
 - Portfolio transition

Cooperatives in Minnesota

- ▶ Not for profit
- ▶ At-cost energy
- ▶ Democratically-controlled
- ▶ Member-oriented
- ▶ Reliability and cost focused

GRE and our membership

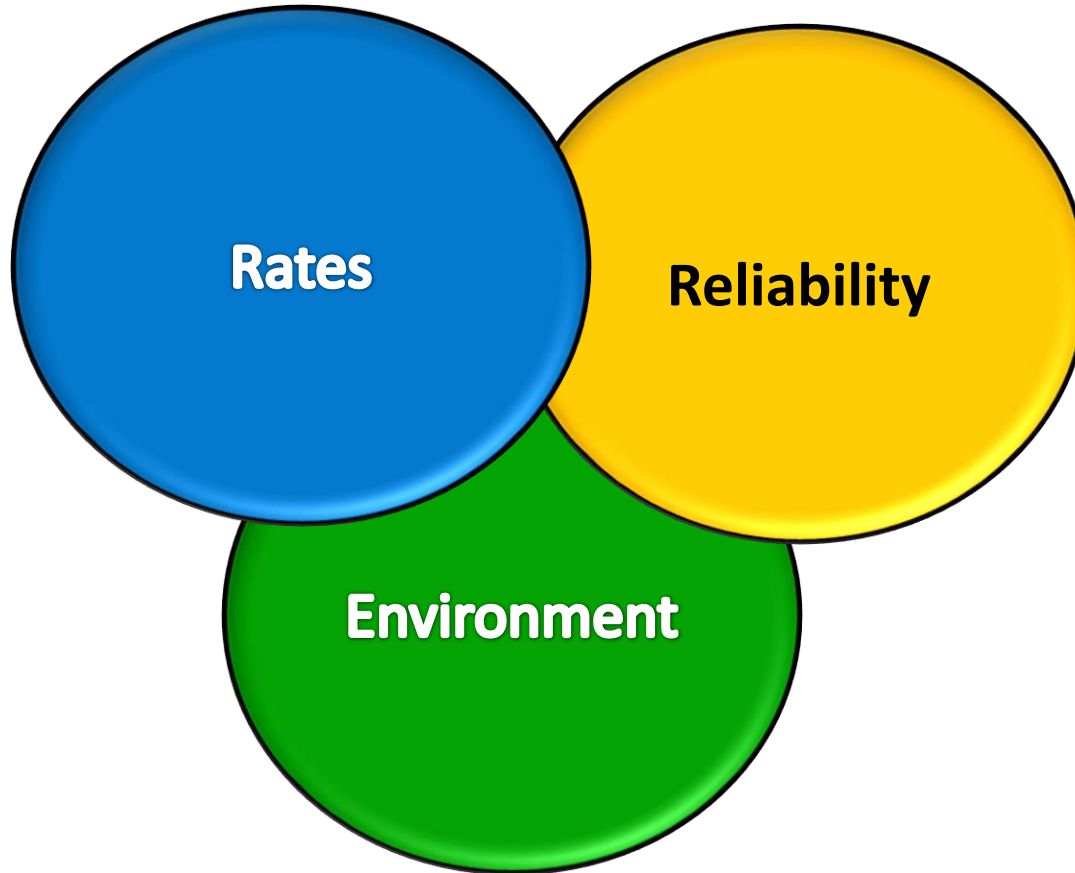
- ▶ 28-member cooperatives – 1.7 million people
- ▶ \$4 billion total assets
- ▶ \$1.02 billion revenue
- ▶ 915 employees (MN and ND)
- ▶ 3,573 MW generation
 - 710 MW renewables
- ▶ 4,696 miles transmission



Our structure

- ▶ GRE board of directors (26)
 - Distribution directors elected by member consumers
 - GRE directors come from member boards
- ▶ GRE board sets wholesale power rates, budgets, policies, and strategies
- ▶ GRE members elect GRE board and approve all resource decisions
- ▶ All 28 members have long term power supply and transmission contracts with GRE
- ▶ Monthly GRE board and member CEO meetings

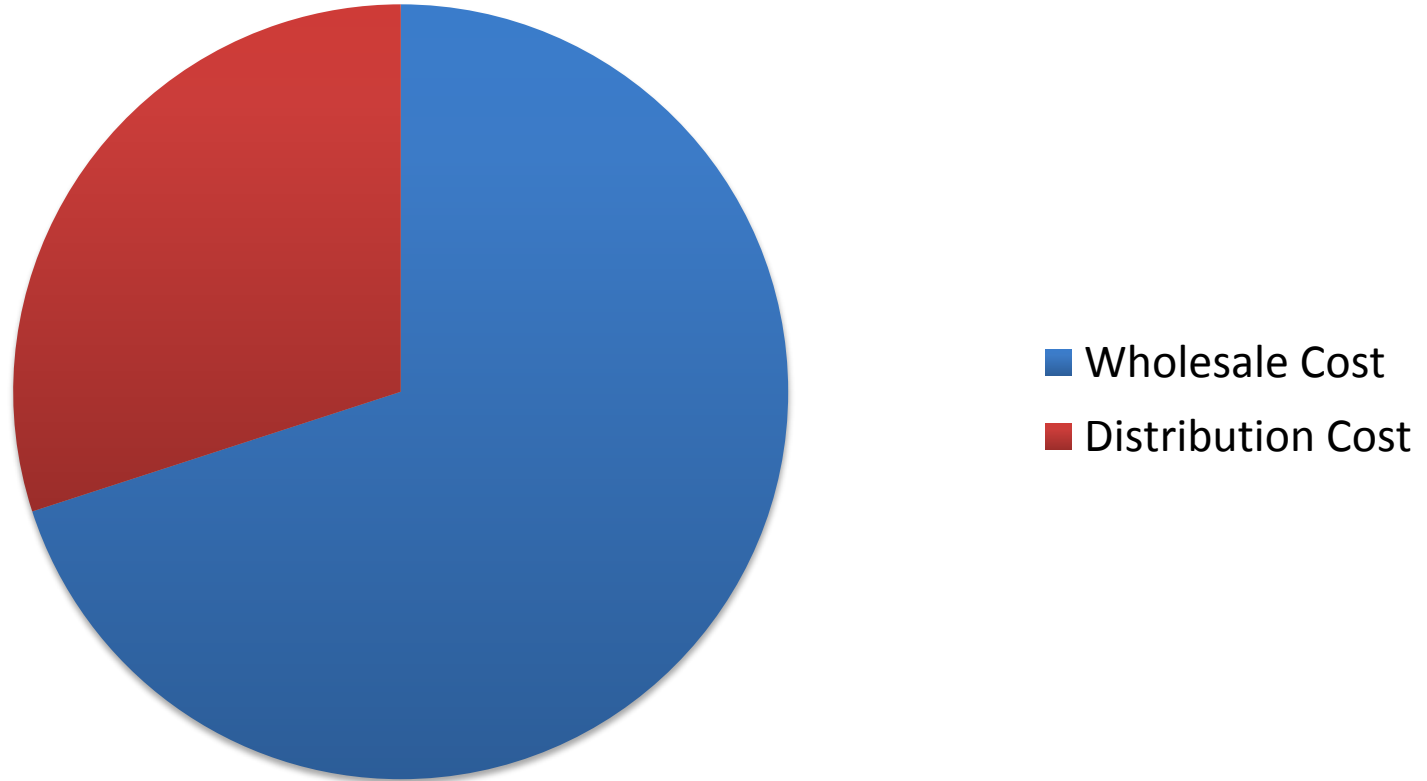
Our triple bottom line



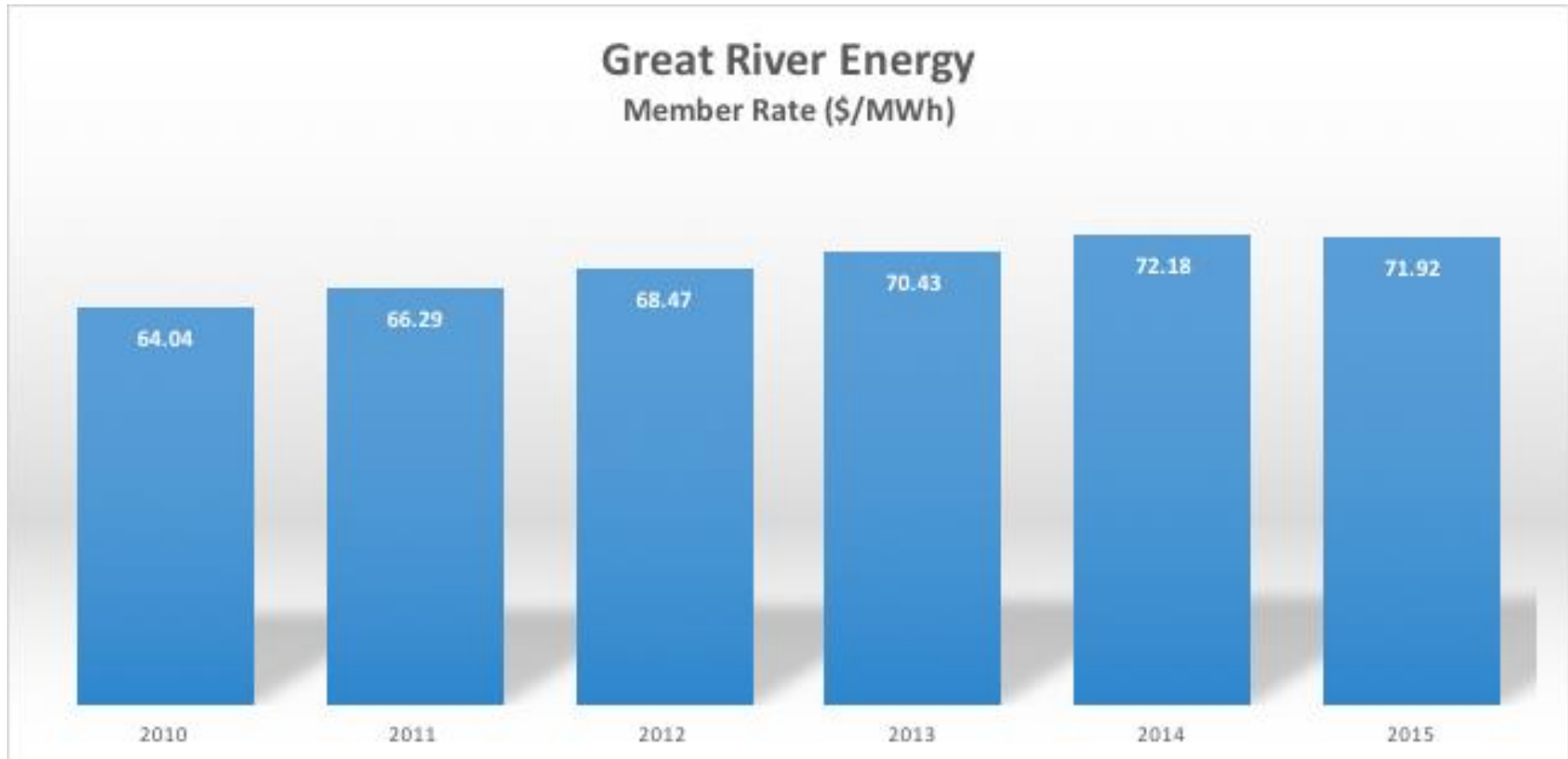
Comparison of utility types

	Investor-Owned	Publicly Owned	Cooperatives
Customers per mile of line (density)	34	48	7.4
Revenue per mile of line	\$75,500	\$113,000	\$15,000
Sales (billion kilowatt hours)	2708	570	413
Residential	36.6%	37.2%	57.9%
Commercial	39.0%	36.8%	20.3%
Industrial	24.3%	26.0%	21.8%

Wholesale vs. Distribution

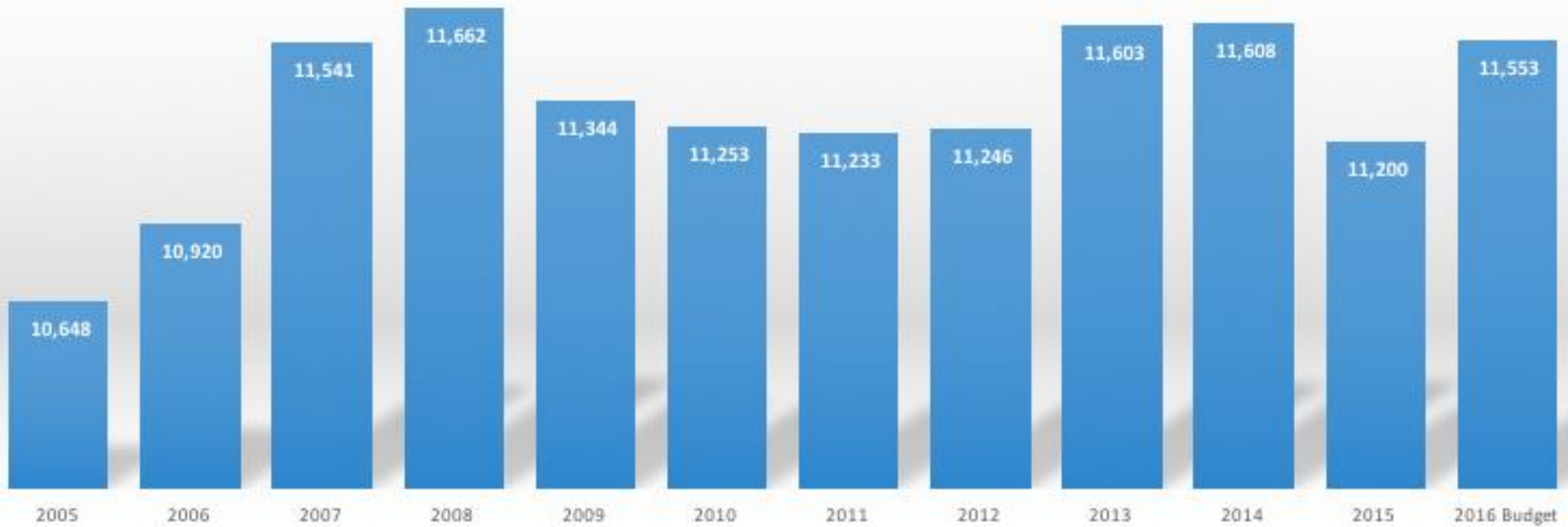


Average member rate

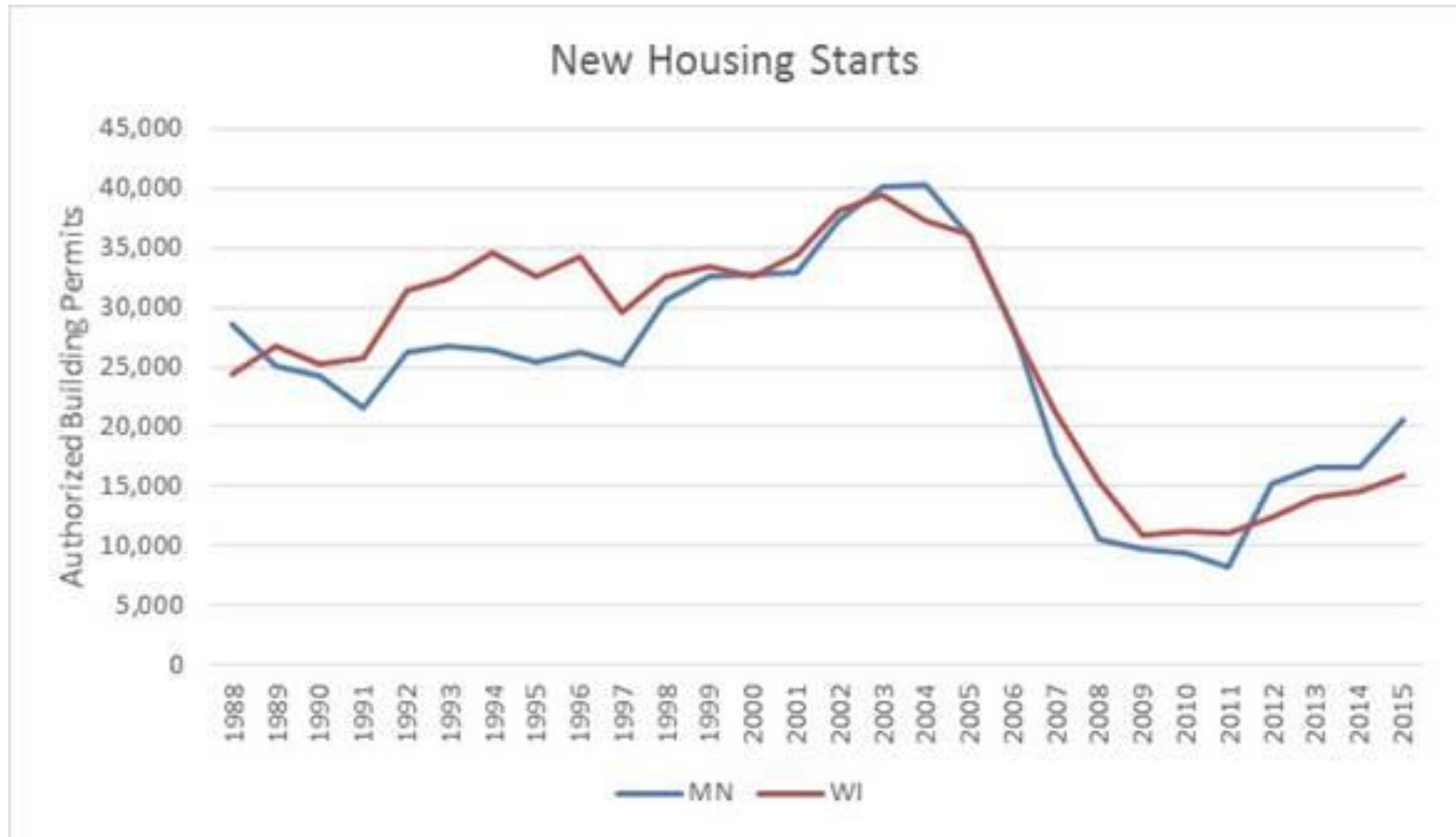


Member energy sales

Member GWh



Residential construction

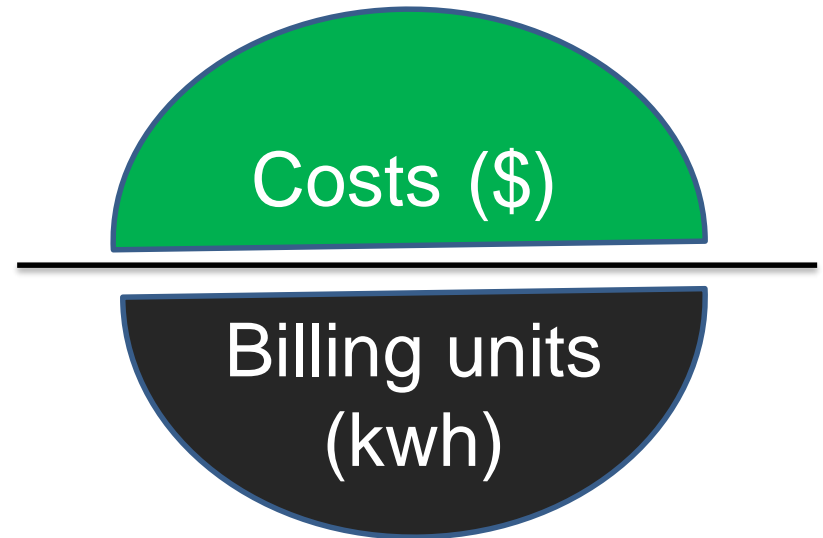


Electricity prices

- Cost vs rates

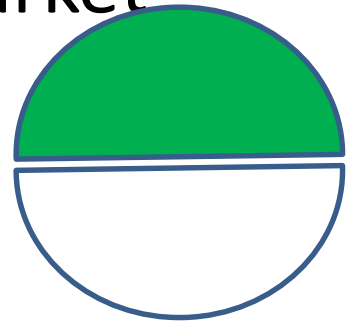
- Costs = Revenue requirement (\$)
- Rates = Mechanism to recover costs (\$/kWh)

- Rates calculation:



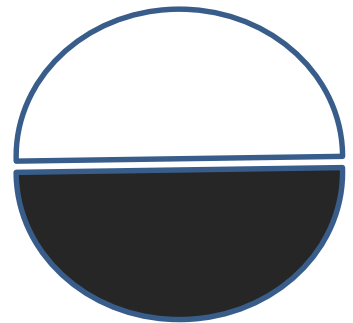
Costs – top drivers

- ▶ Plant investment for reliability and efficiency
- ▶ Fuel costs
- ▶ Emissions reductions
- ▶ Renewable energy additions
- ▶ Changes in the wholesale energy market

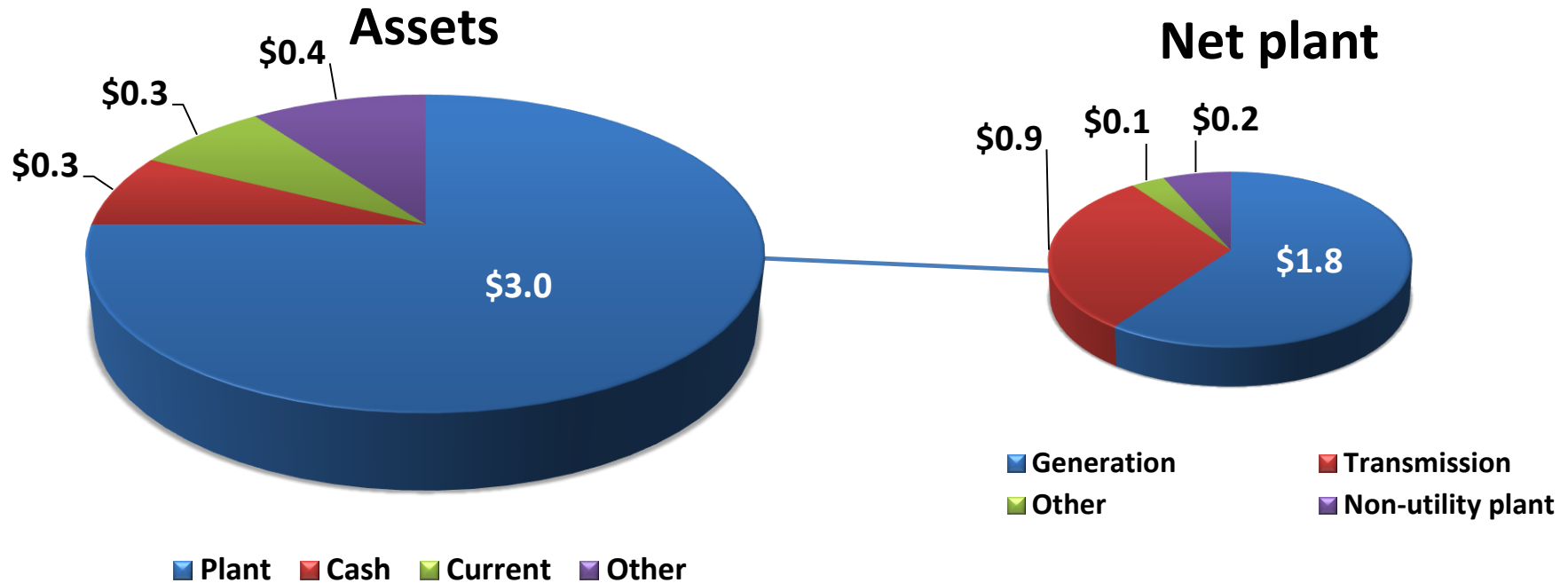


Billing units – top drivers

- ▶ Residential growth stalled
 - Great recession
 - New construction remains well below pre-recession levels
- ▶ Energy-efficiency
- ▶ Distributed generation

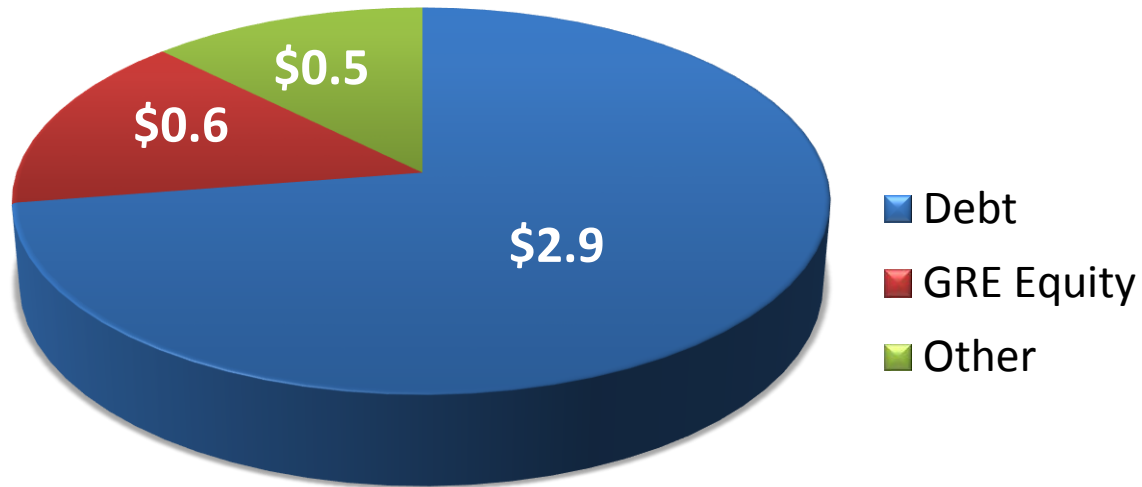


2015 assets – total = \$4.0B



- ▶ \$1.4B in 1999
- ▶ Plant – G&T
- ▶ Strong cash position

2015 liabilities – total = \$4.0B



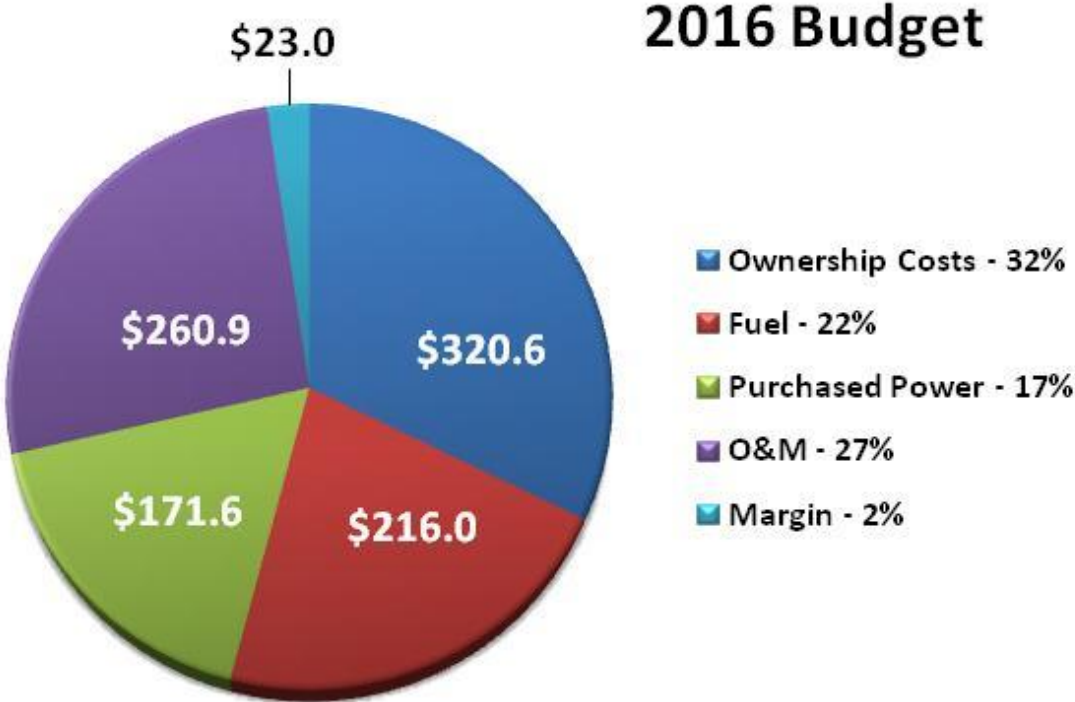
Debt

- ▶ \$1.1B in 1999
- ▶ Bond issues as primary source

Equity

- ▶ 20% goal by 2020

2016 expense categories

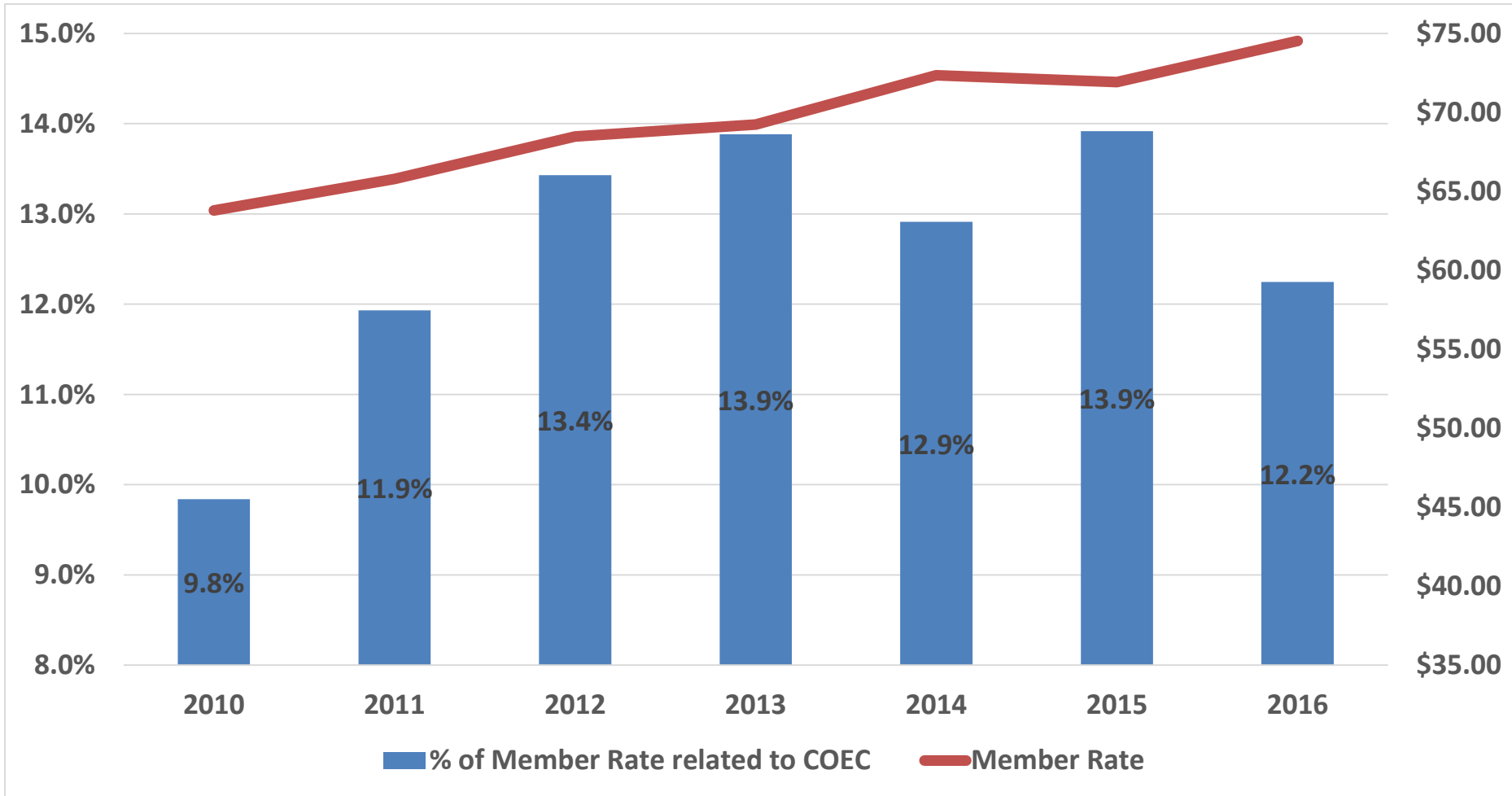


Total Cost = \$992.1 Million

Capital spending

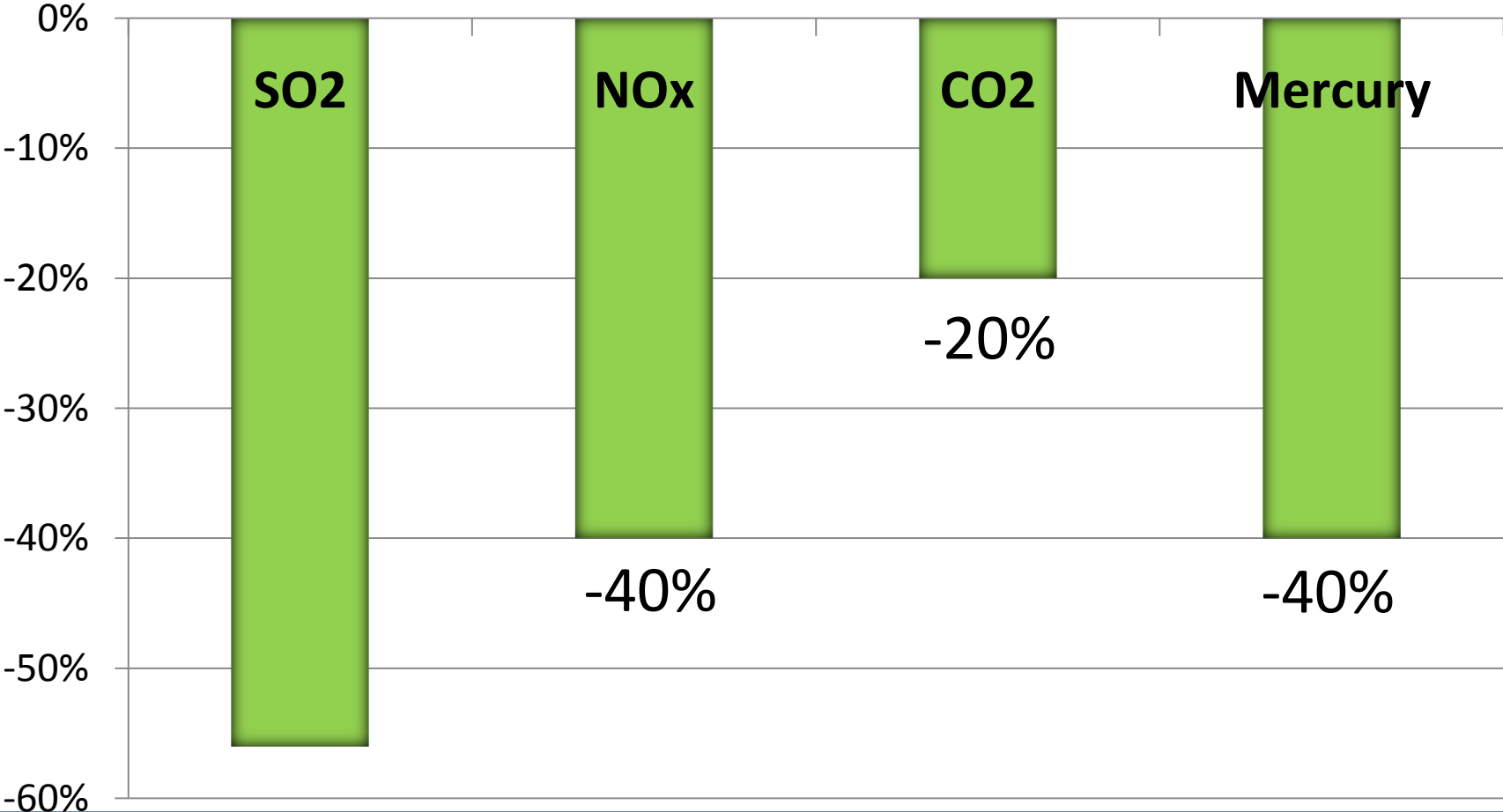


Cost of environmental compliance as percentage of member rate



Portfolio emission reductions

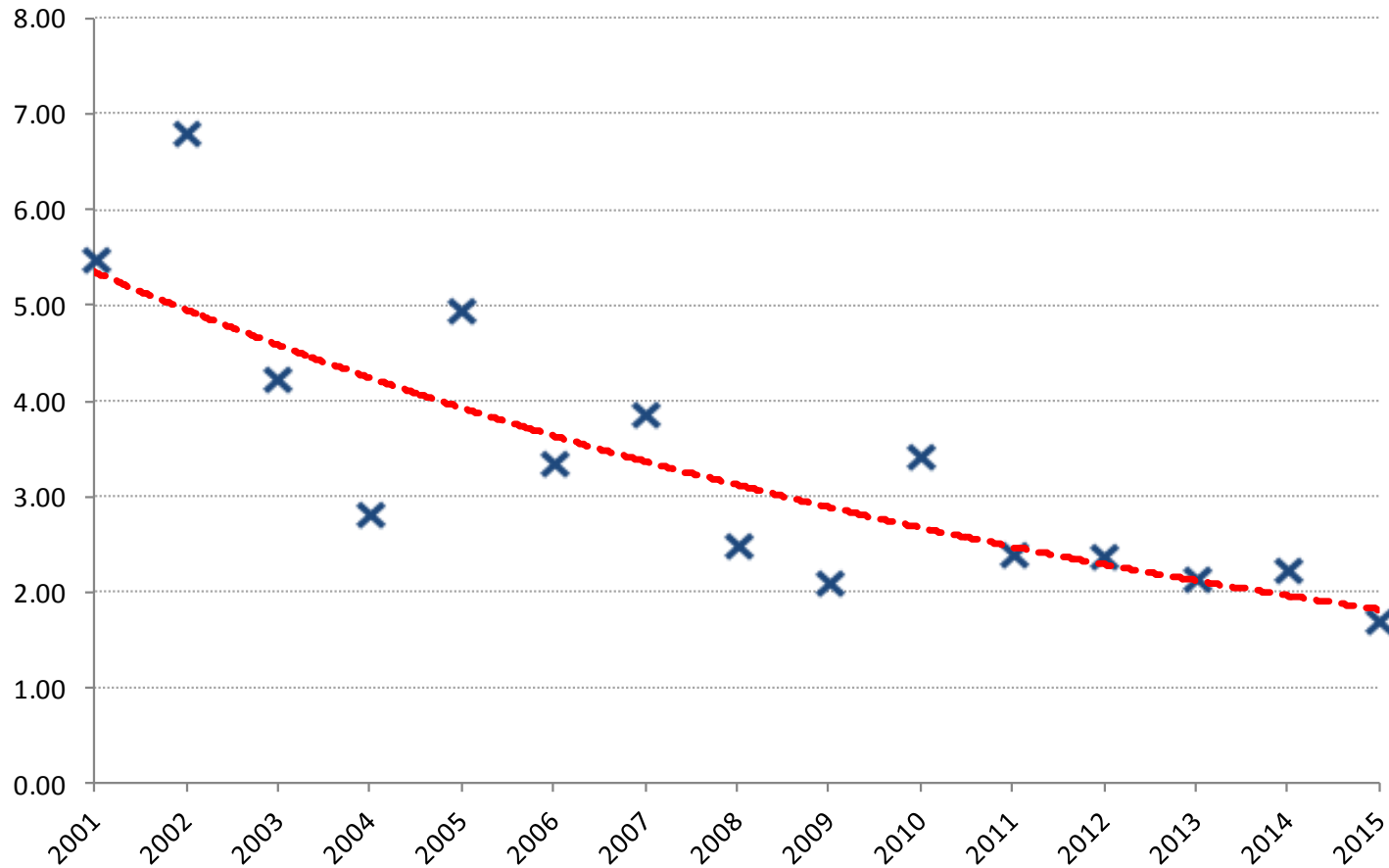
Percent decrease since 2006



-56%

Reliability – strong and improving

Total outages per substation



Summary

- ▶ Drivers include:
 - Fuel costs
 - Emissions reductions
 - Renewable energy additions
 - Plant investment – efficiency and reliability
 - Changes in the wholesale energy market
- ▶ Future outlook
 - Carbon management
 - Portfolio transition