Minnesota Electricity Prices

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Summary

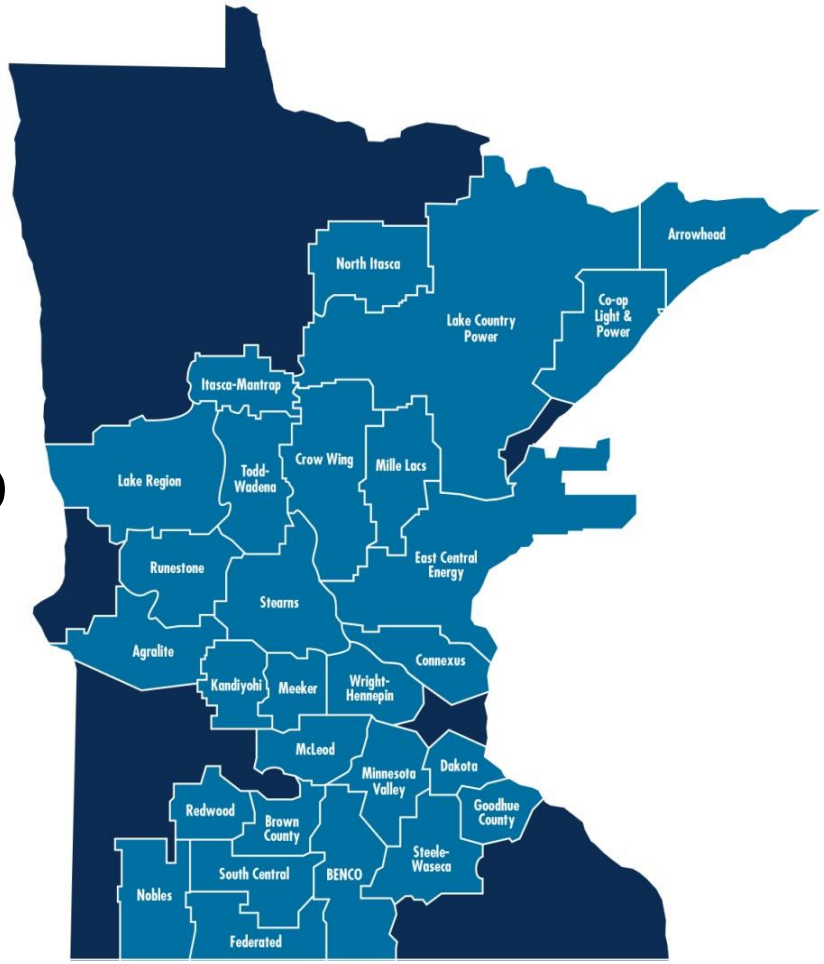
- Drivers include:
  - Fuel costs
  - Emissions reductions
  - Renewable energy additions
  - Plant investment – efficiency and reliability
  - Changes in the wholesale energy market
- Future outlook
  - Carbon management
  - Portfolio transition

Cooperatives in Minnesota

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

GRE and our membership

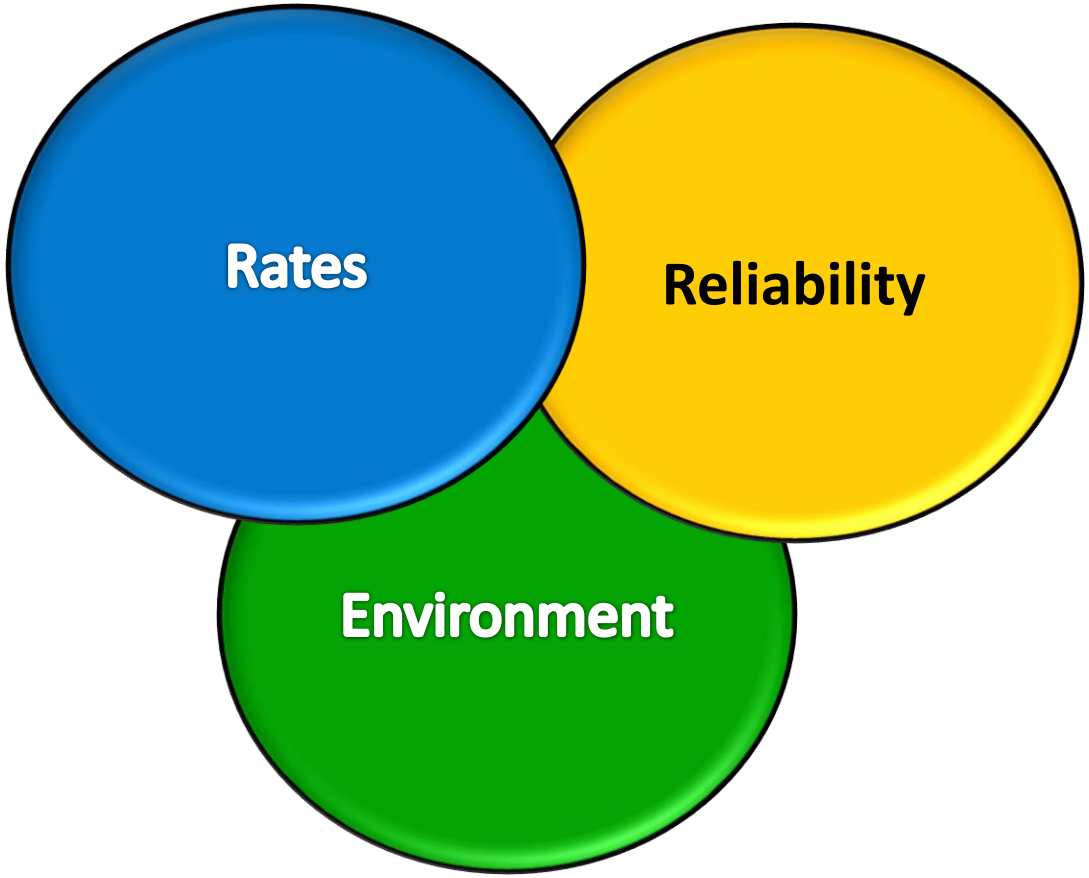
- 28-member cooperatives – 1.7 million people
- $4 billion total assets
- $1.02 billion revenue
- 915 employees (MN and ND
- 3,573 MW generation
  - 710 MW renewables
- 4,696 miles transmission



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

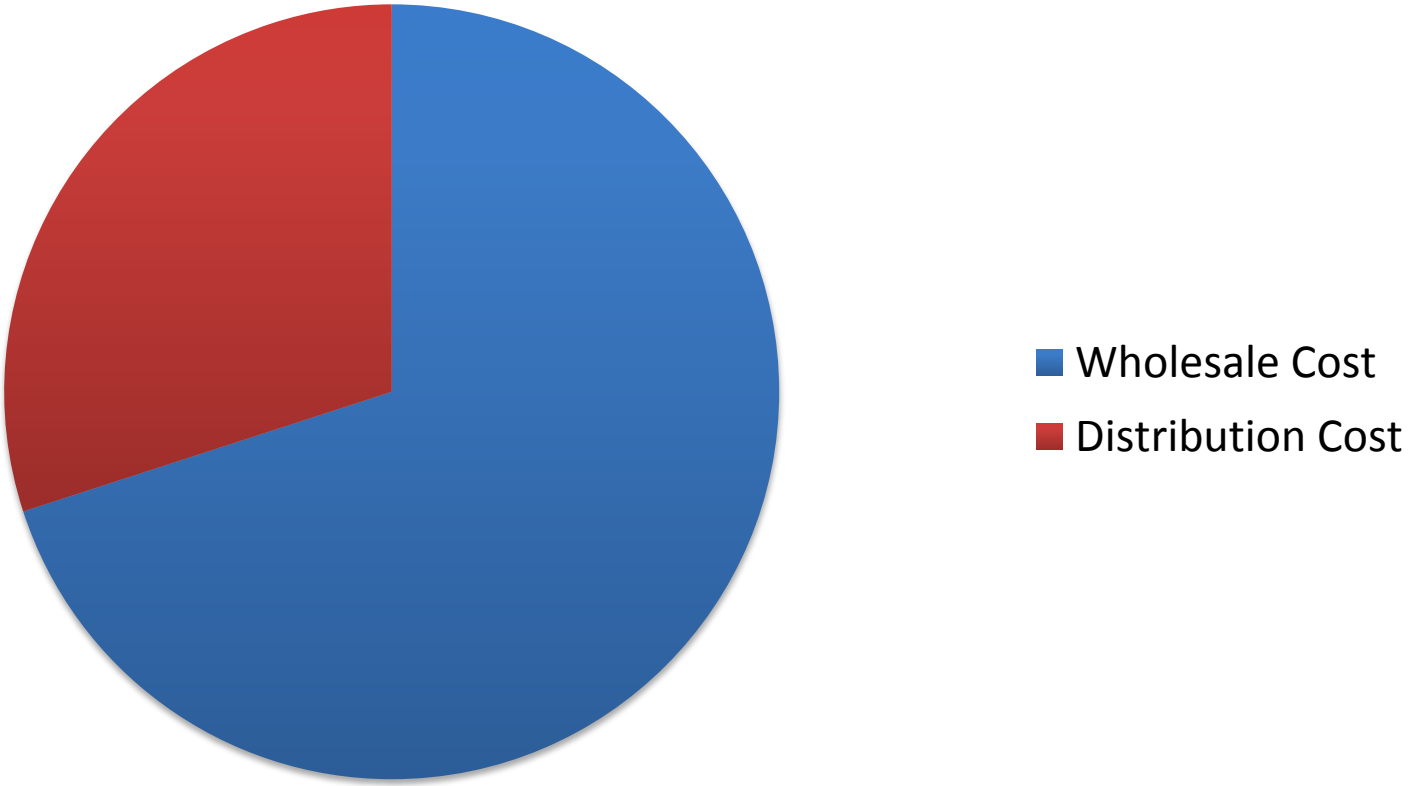
Our triple bottom line



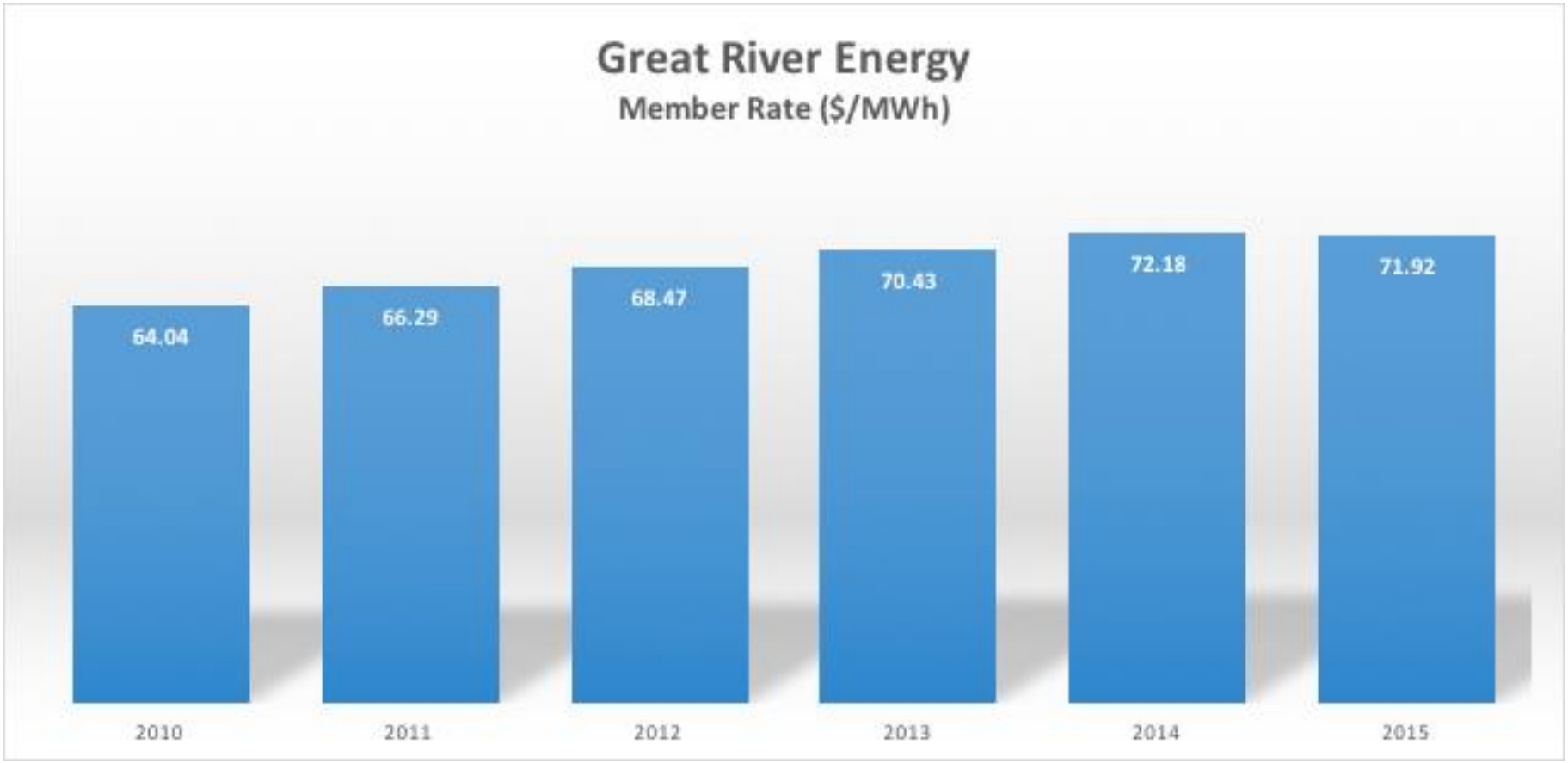
Comparison of utility types

	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



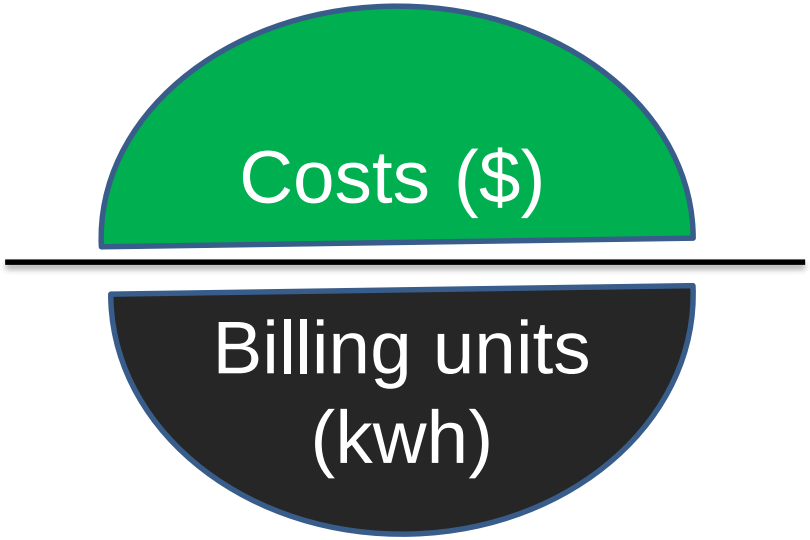
Member energy sales

Residential construction

Electricity prices

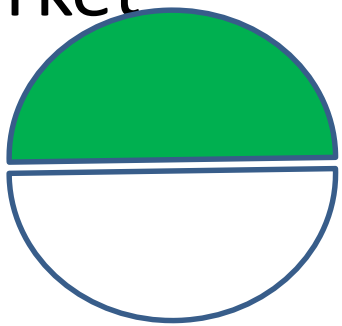
- Cost vs rates
  - Costs = Revenue requirement ($)
  - Rates = Mechanism to recover costs ($/kWh)

- Rates calculation:



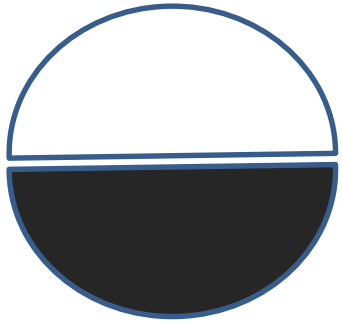
Costs – top drivers

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

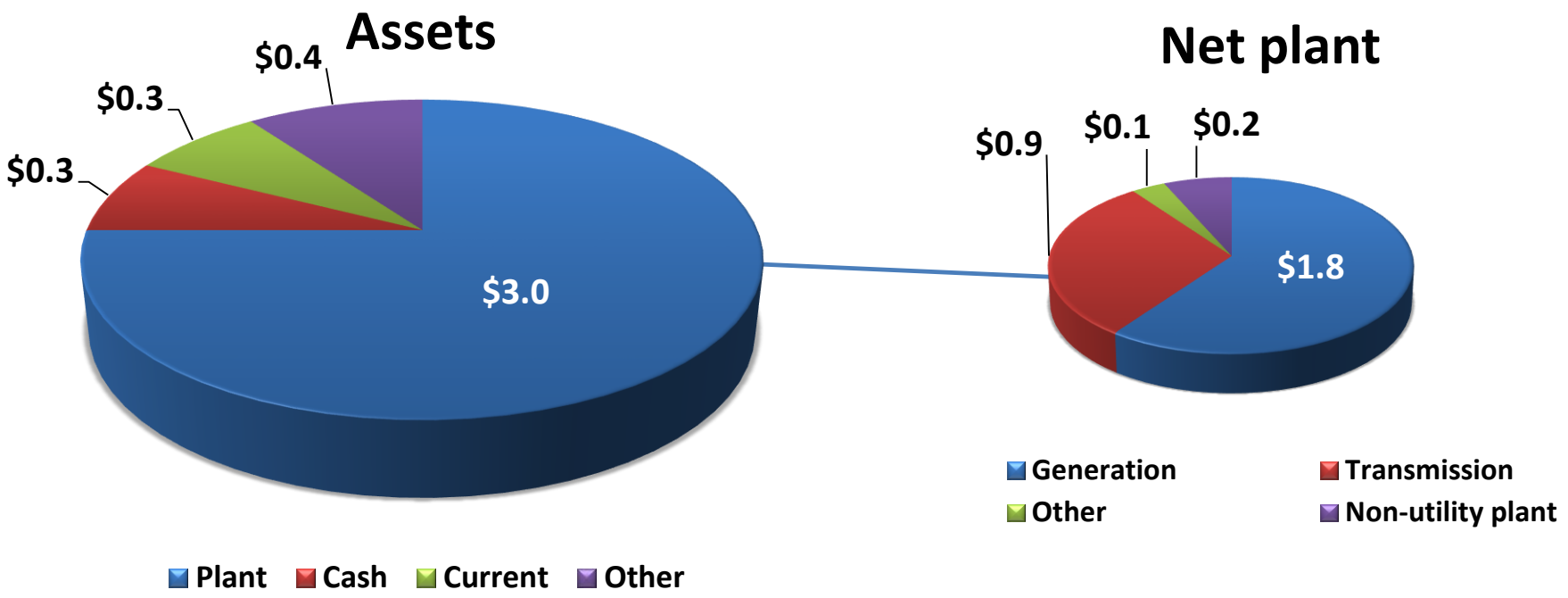


Billing units – top drivers

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

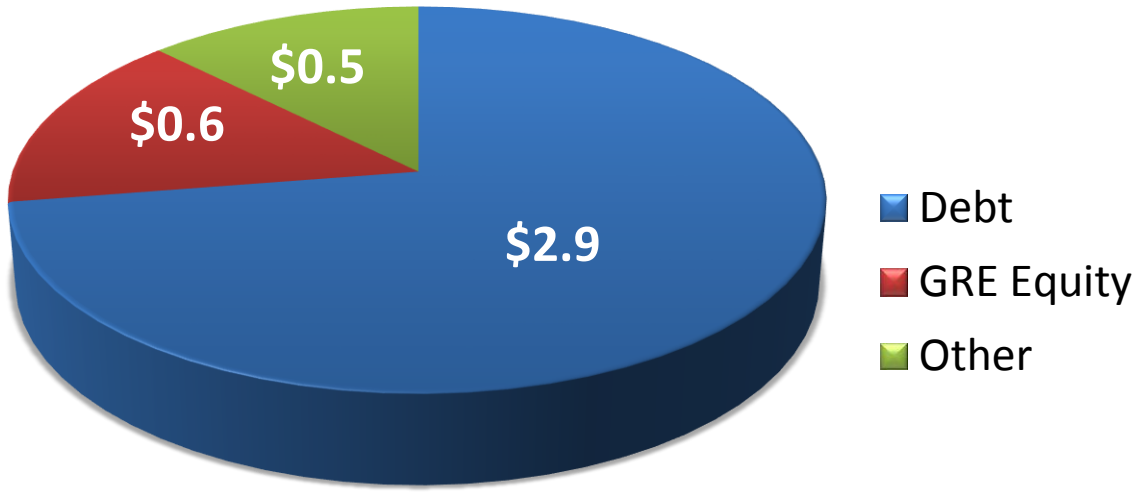


2015 assets – total = $4.0B



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

2015 liabilities – total = $4.0B



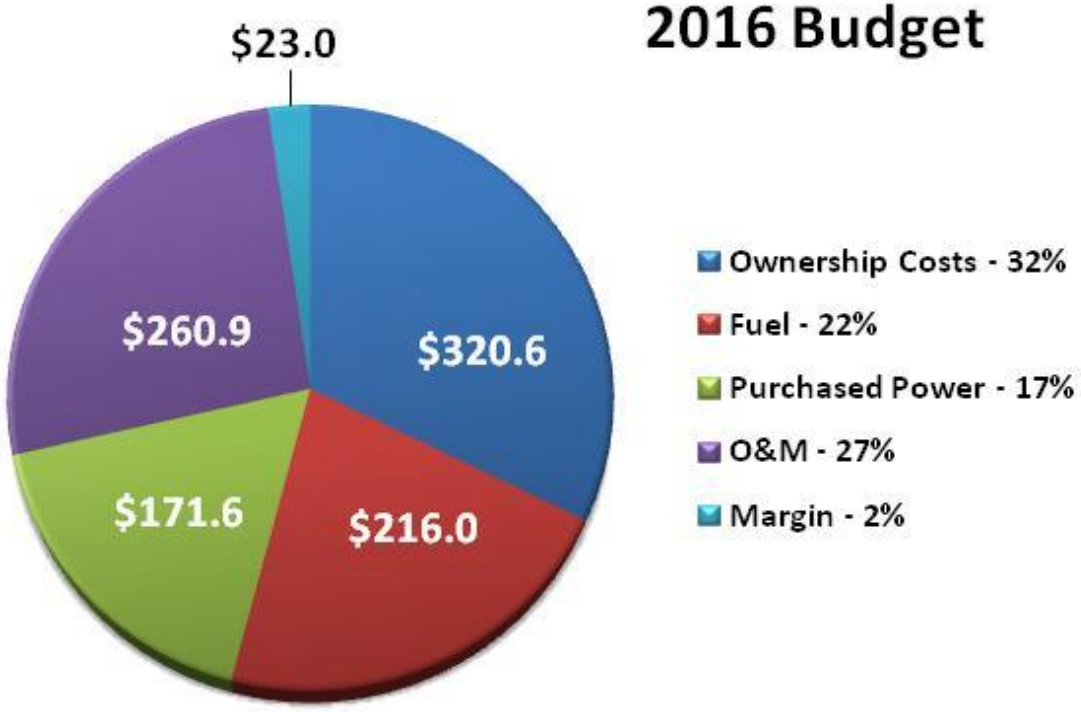
Debt

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

Equity

- 20% goal by 2020

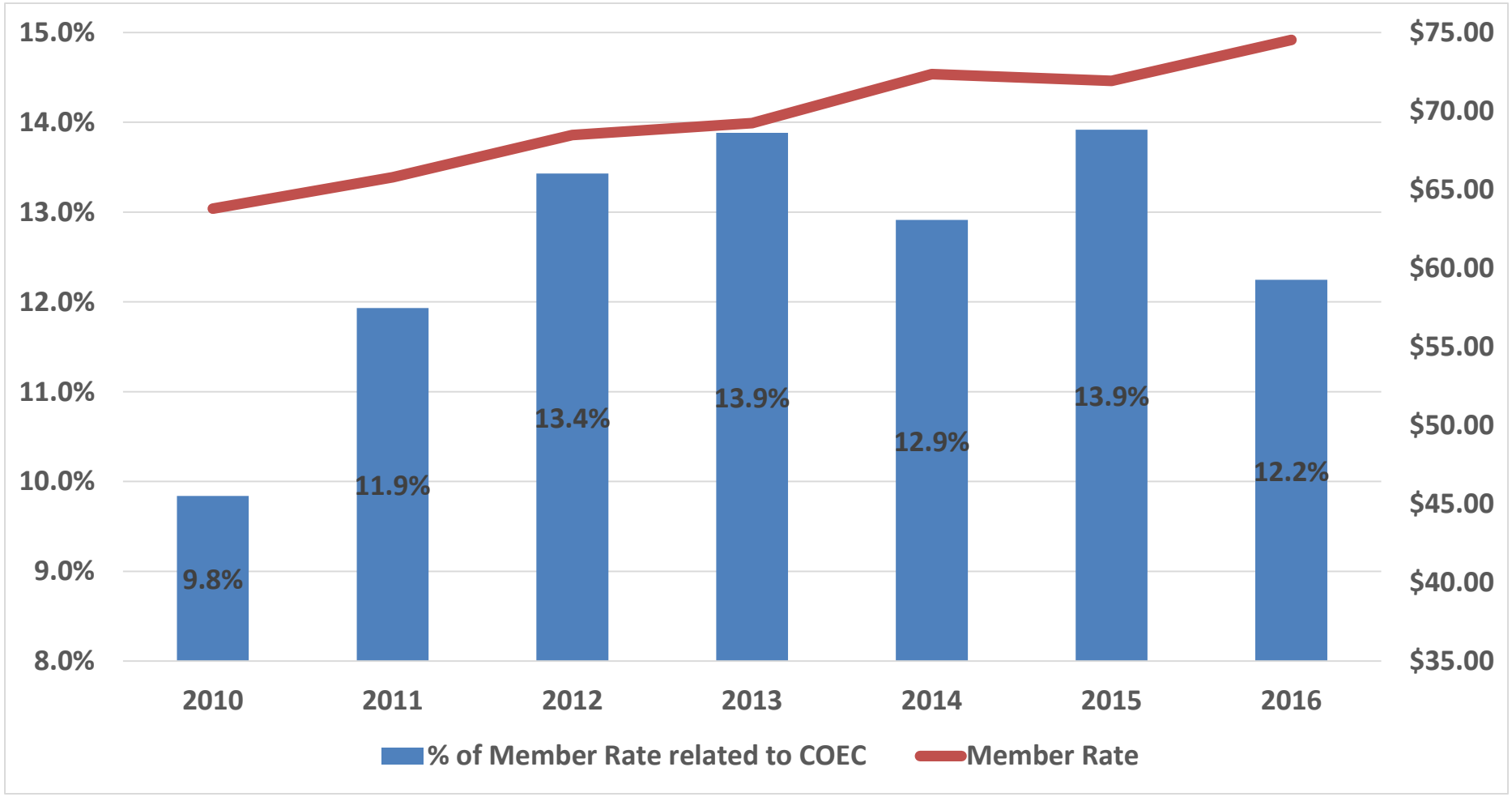
2016 expense categories



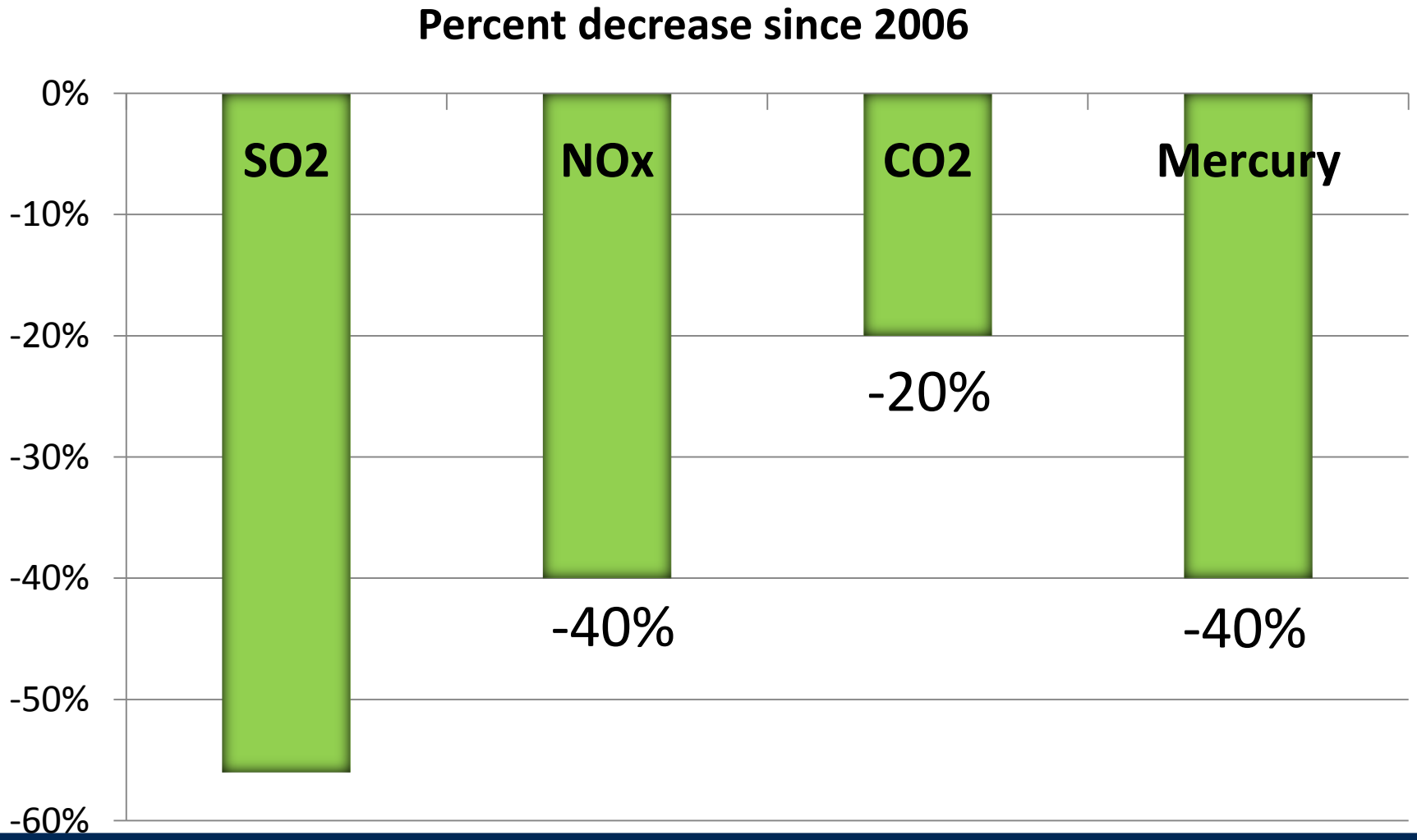
Total Cost = $992.1 Million

Capital spending

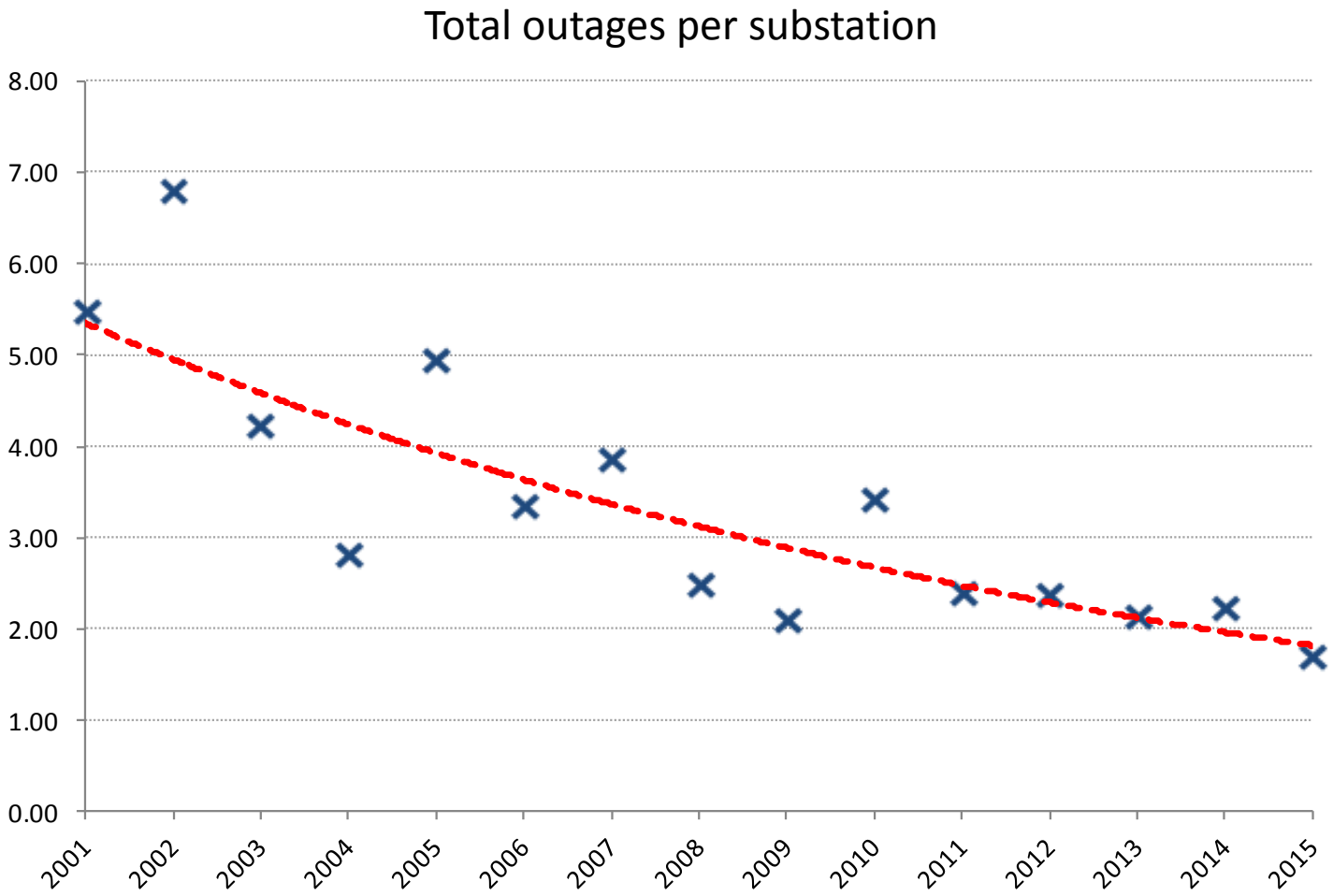
Cost of environmental compliance as percentage of member rate



Portfolio emission reductions



Reliability – strong and improving



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