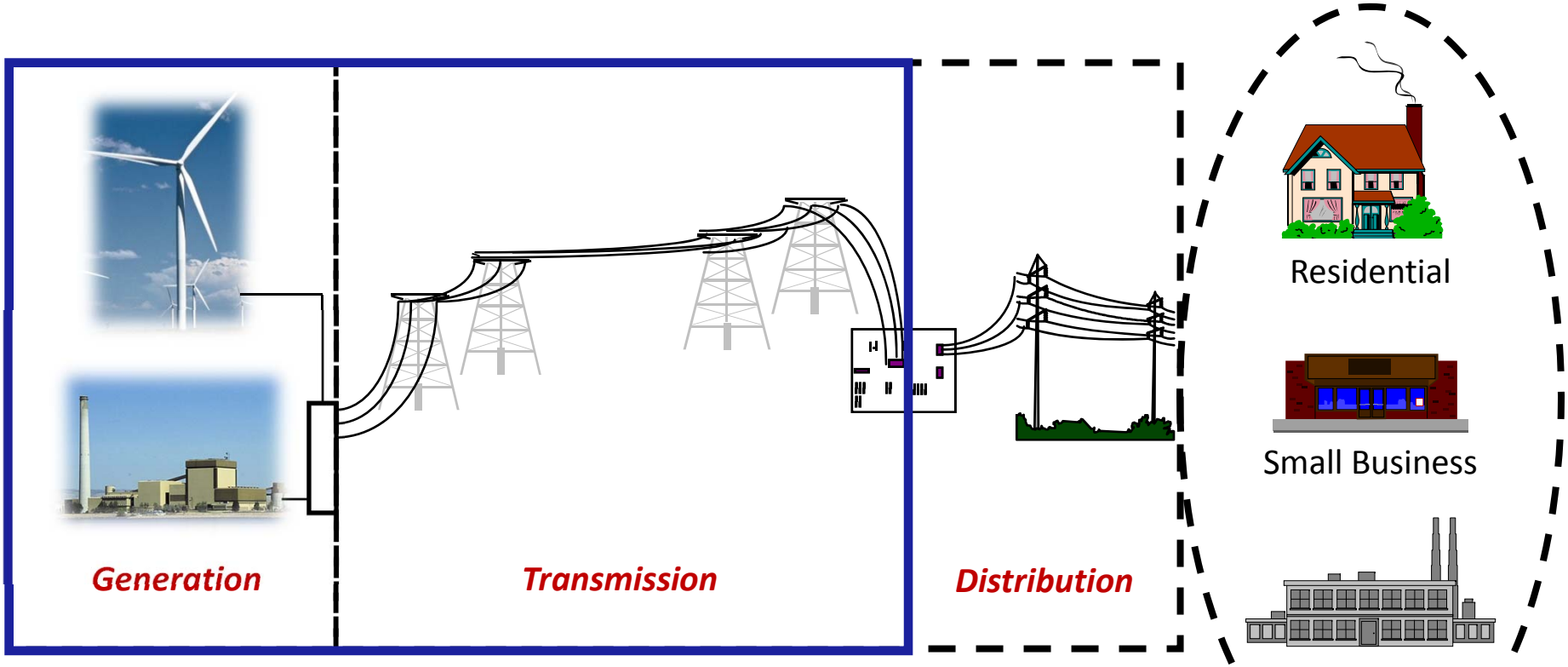
The Energy We Live By™

PLATTE RIVER
POWER AUTHORITY

Platte River Power Authority
Strategic Plan Review

Loveland Utility Commission
November 2013

Local Electric System Partnership



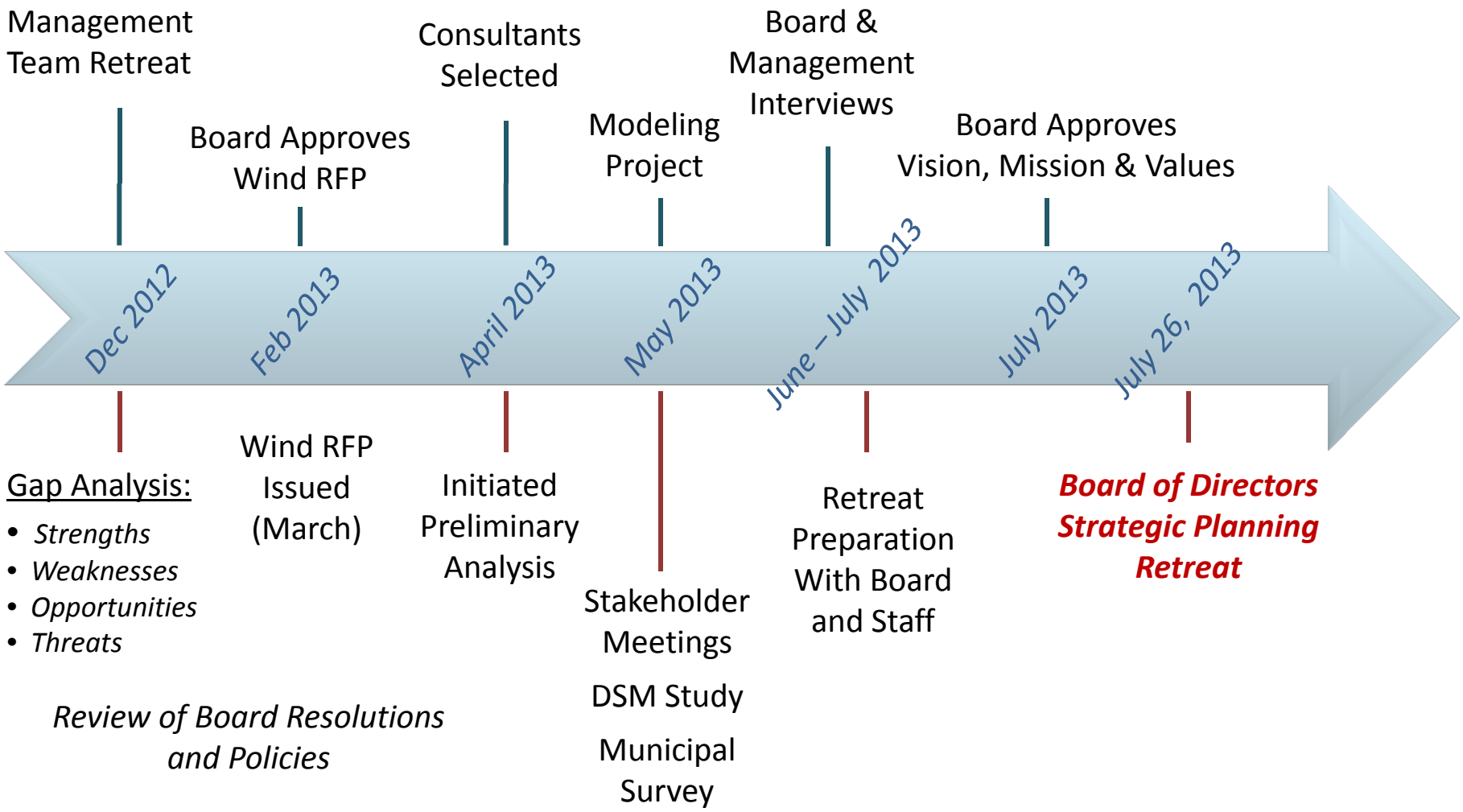
Platte River Power Authority

- Sole electricity supplier
- Not for profit
- Local governance
- Joint Ownership

Estes Park
Fort Collins
Longmont
Loveland

Customers

Planning Process Timeline



Board Retreat Directives

- Improve collaboration among Municipalities & Platte River
- Diversify resource portfolio
- Reduce carbon footprint
- Expand renewable energy supply
- Maintain competitive rates
- Seek technology & innovation opportunities
- Identify opportunities for joint customer surveys

- Multiple possible options
- More analysis needed
- Need to find right balance

Strategic Direction

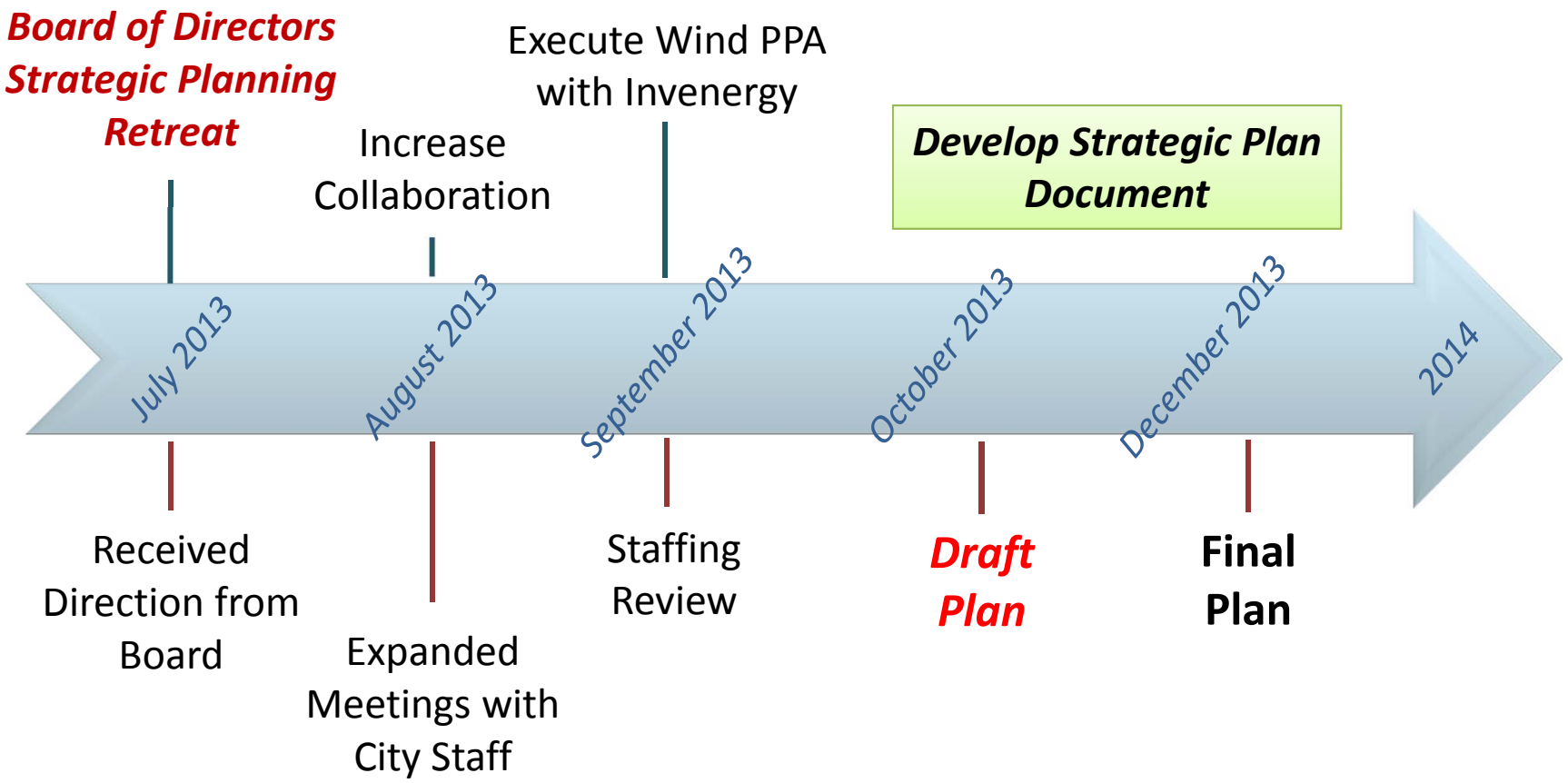
Strong Historical Foundation

Financial Strength	Excellent Operations	Environmental Stewardship & Compliance
High Quality Transmission & Infrastructure		
Baseload (Coal)	Peaking (Gas)	Hydropower & Wind

Strategic Direction

Build on Strengths
To A More Sustainable
Future Business Model

Planning Process Timeline (Cont'd)



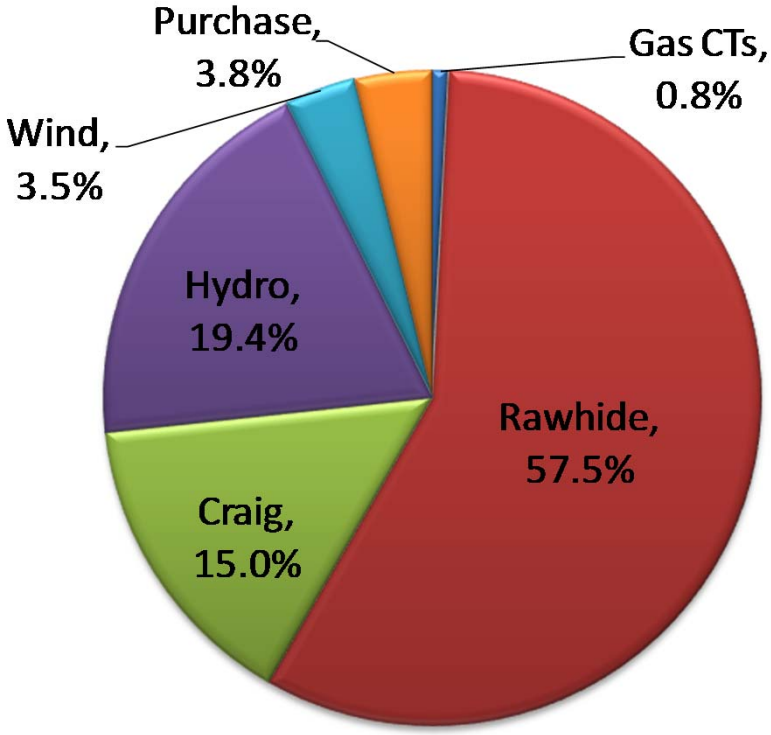
Initiatives, Objectives & Goals

2014 Strategic Plan Development

SWOT Analysis

Strengths	***Weakness***
• Strong financial position • Technical expertise • Well maintained power plants and infrastructure • Lowest wholesale rates in region • Excellent reputation / well respected in the industry • Culture of commitment and operational excellence	• Strategic planning and lack of adaptive strategy • Lack of diverse resources • Lack of bench strength and succession planning • Lack of energy market knowledge and experience • Relationships with cities at a policy level
Opportunities	***Threats***
• Community involvement • Strengthen partnerships • Asset optimization (water, transmission, generation, sales) • Improved communications • Leverage the four City's resources for improved efficiency • Partnering with the cities to create regional collaboration • Partnership opportunities with others to build generation • Increased communication and educational outreach • Leadership development	• Regulatory and legislative uncertainty • Looming knowledge loss • Lack of process documentation • Long term reliable water supply – need for firming project • Fuel price volatility including transportation costs • Outside pressures and not having an adaptive strategy • Loss of tax exempt financing • Continued consolidation of IOUs so there are fewer players in the market • Increased negative outlook for fracking and impact on natural gas supply • Litigation

Energy Resource Portfolio – 2012

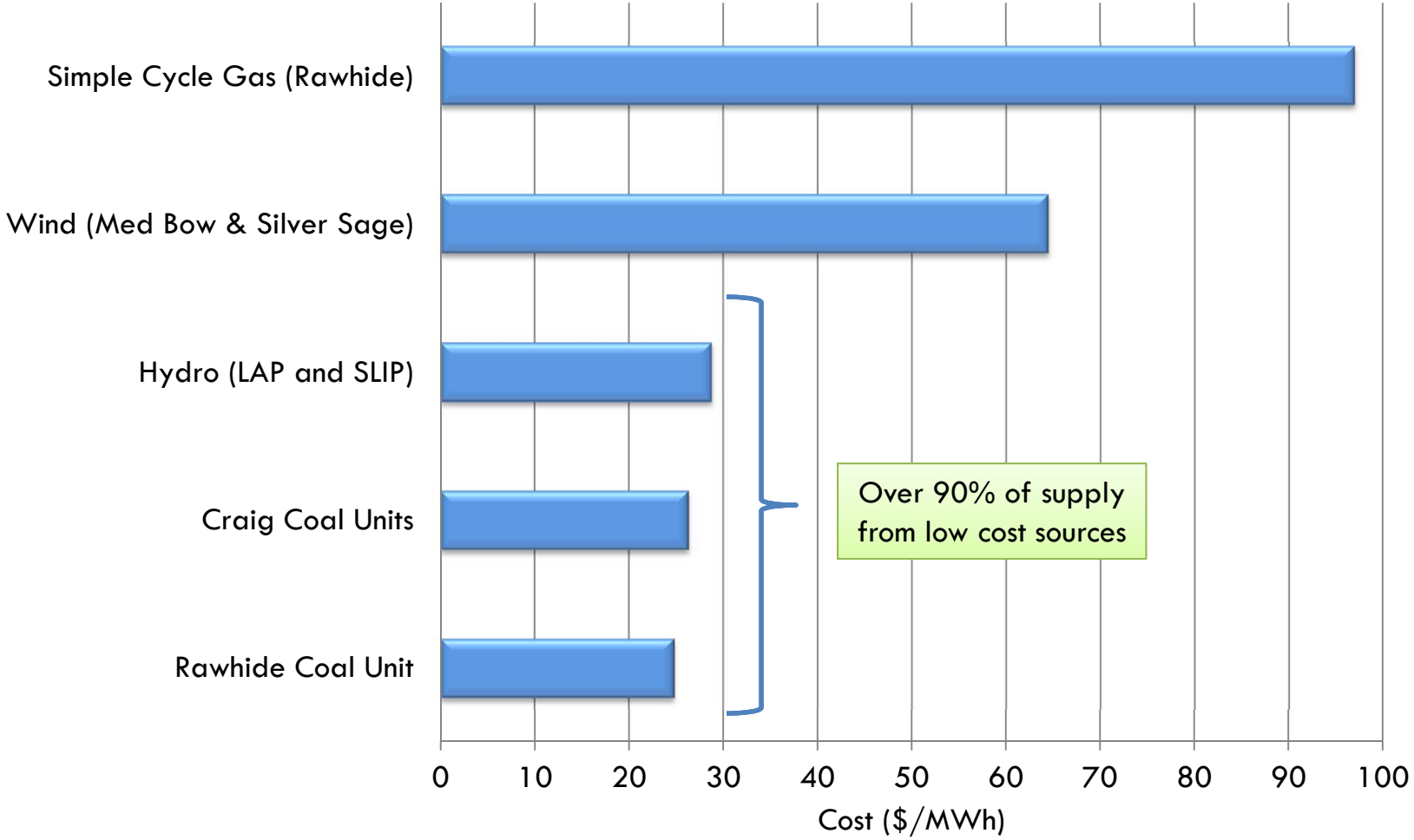


72.5% Coal Generation

Based on sales to Municipalities

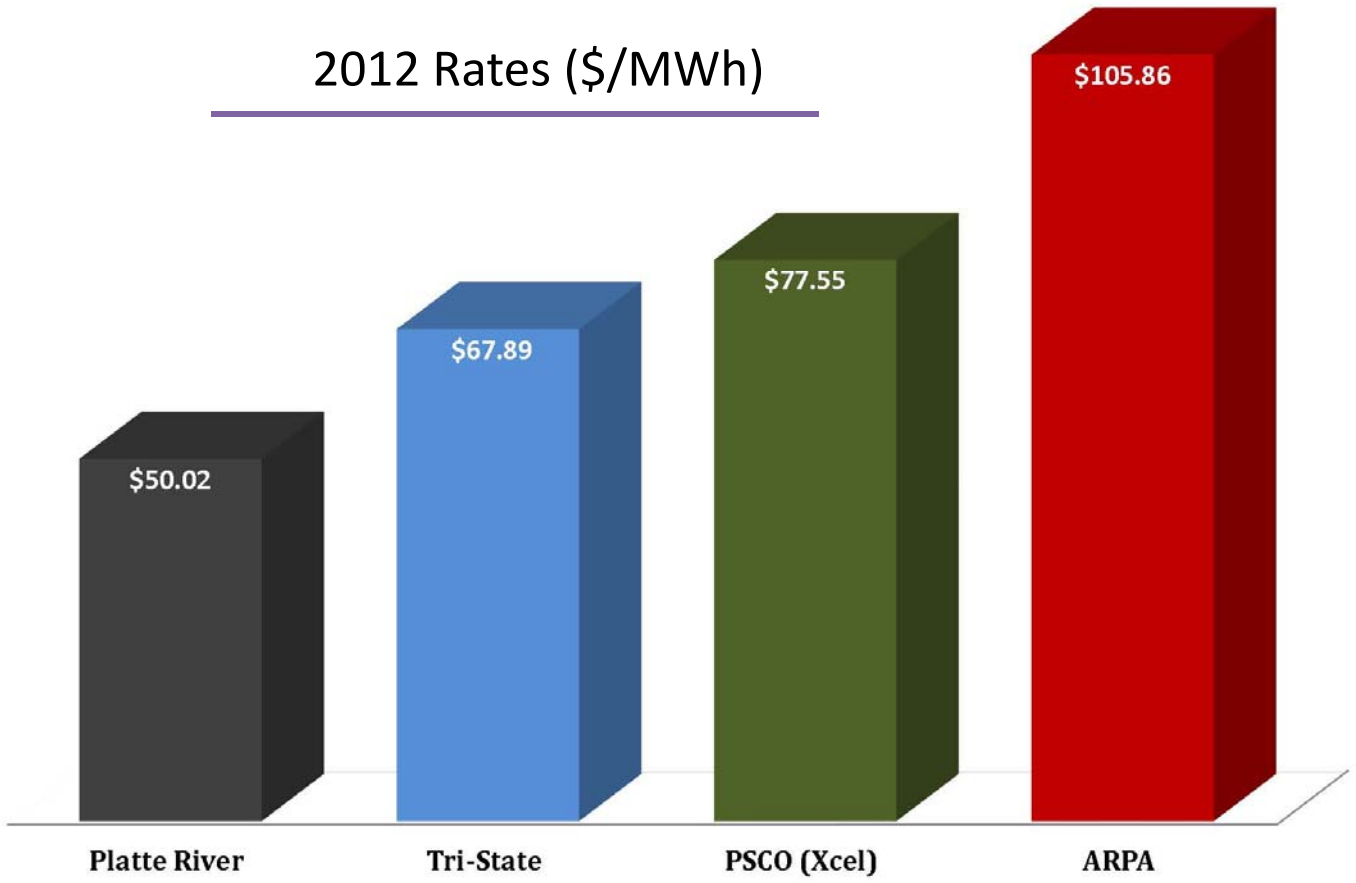
All Sales: ***(2012)***		
	Coal	81%
	Hydro	16%
	Other	3%

Existing Resources – Operating Costs

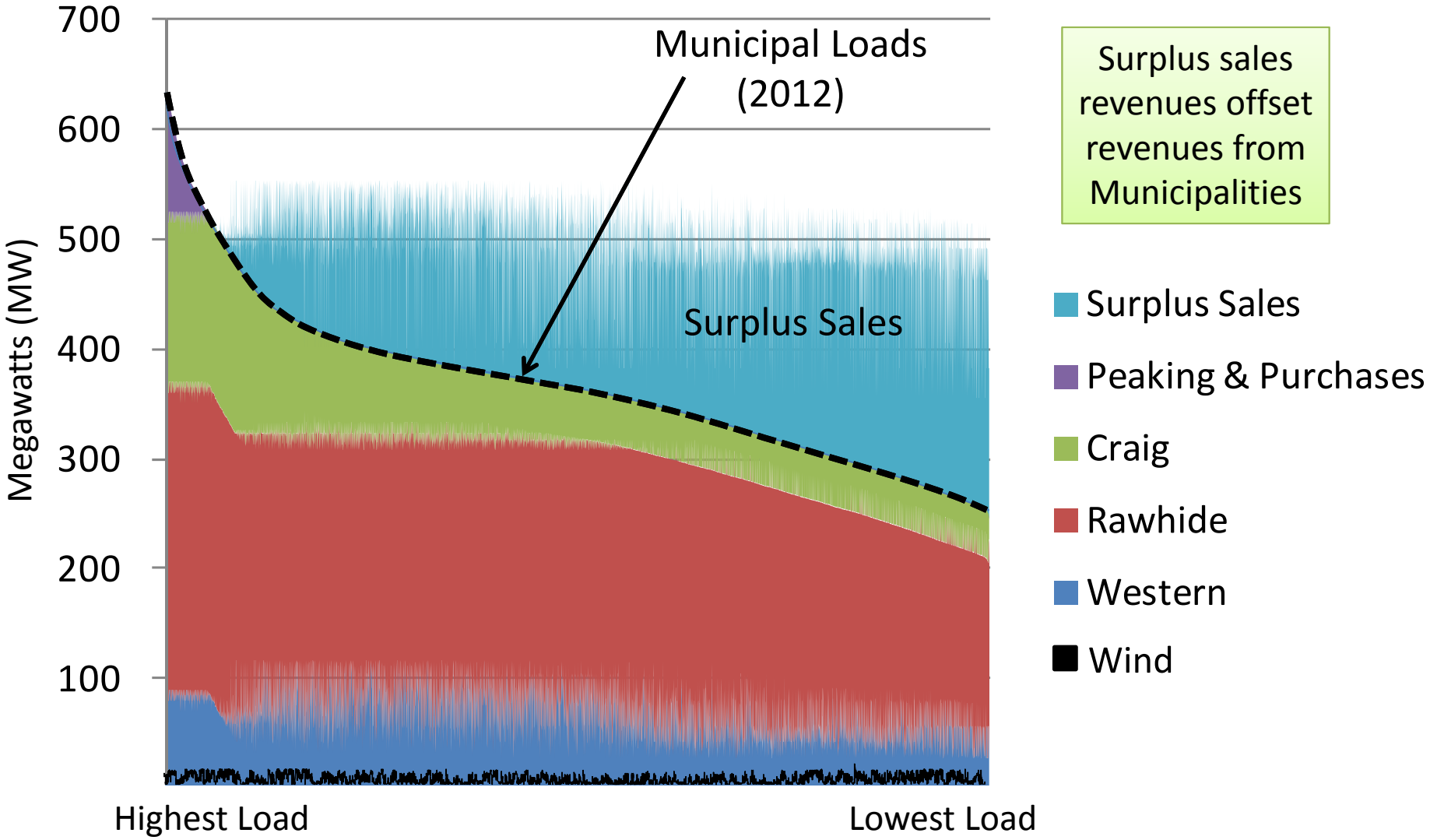


2012 average operating costs

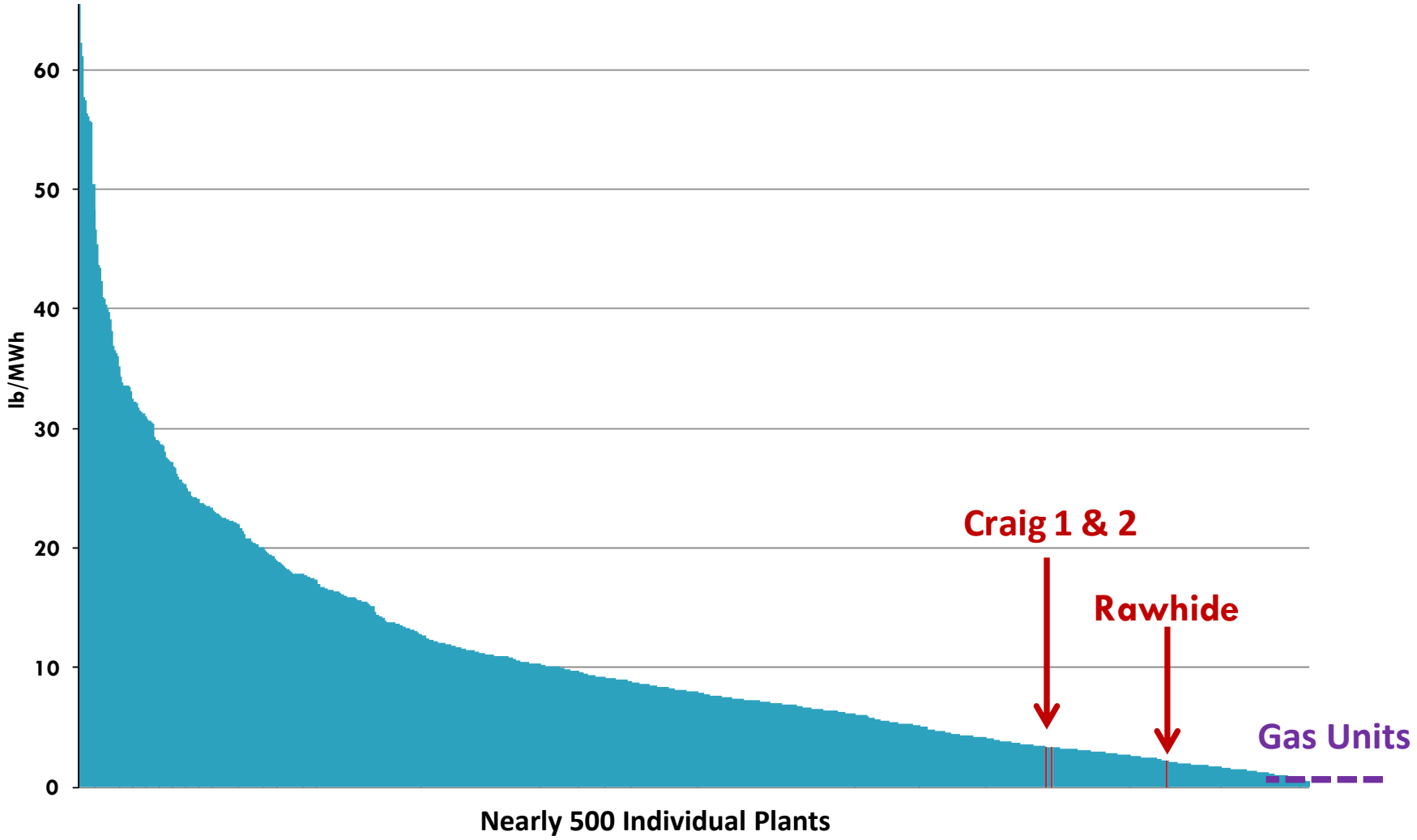
Wholesale Electric Rate Comparison

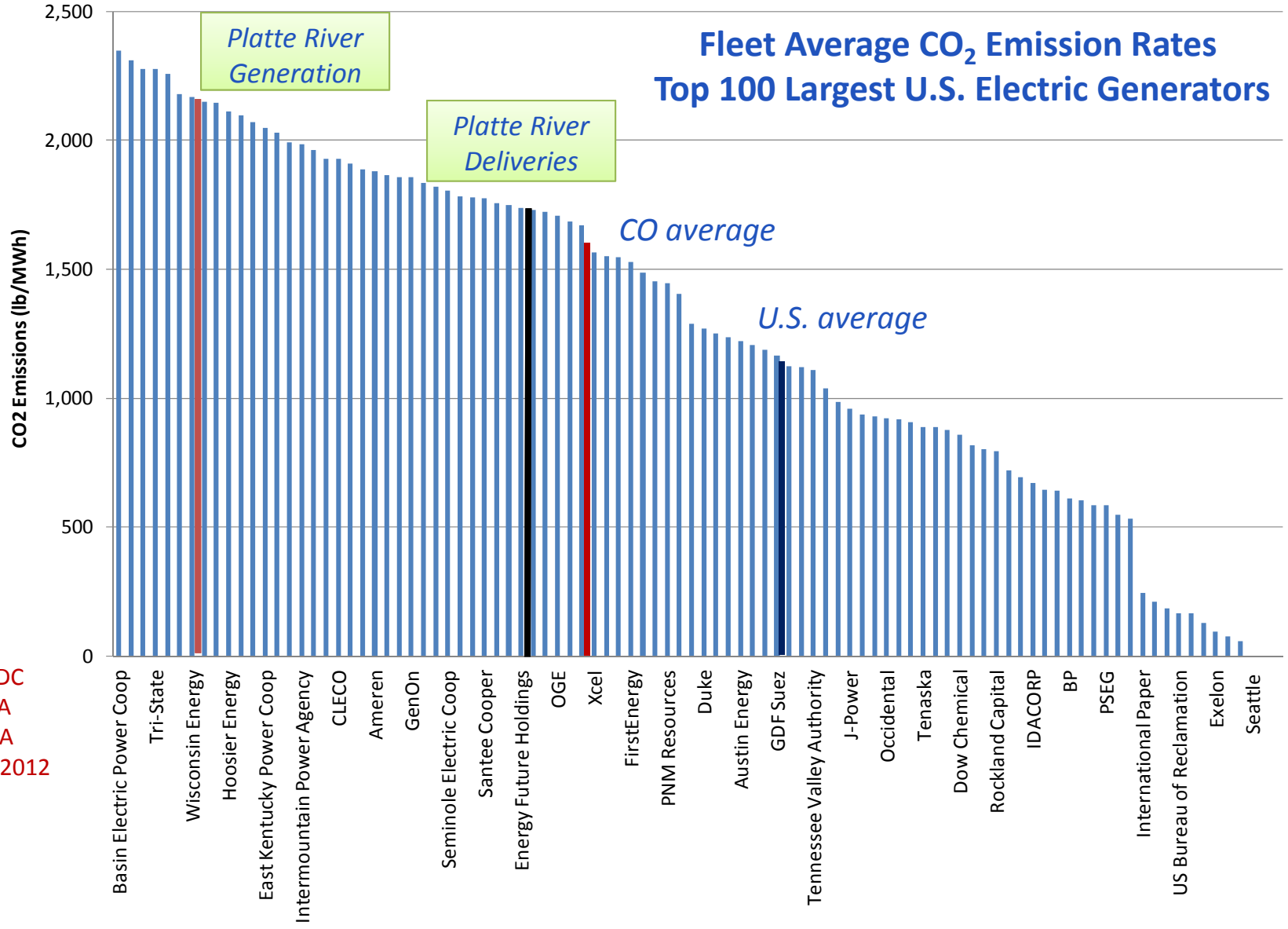


Resource Utilization



NOx & SO_2 emissions – U.S. Coal Units



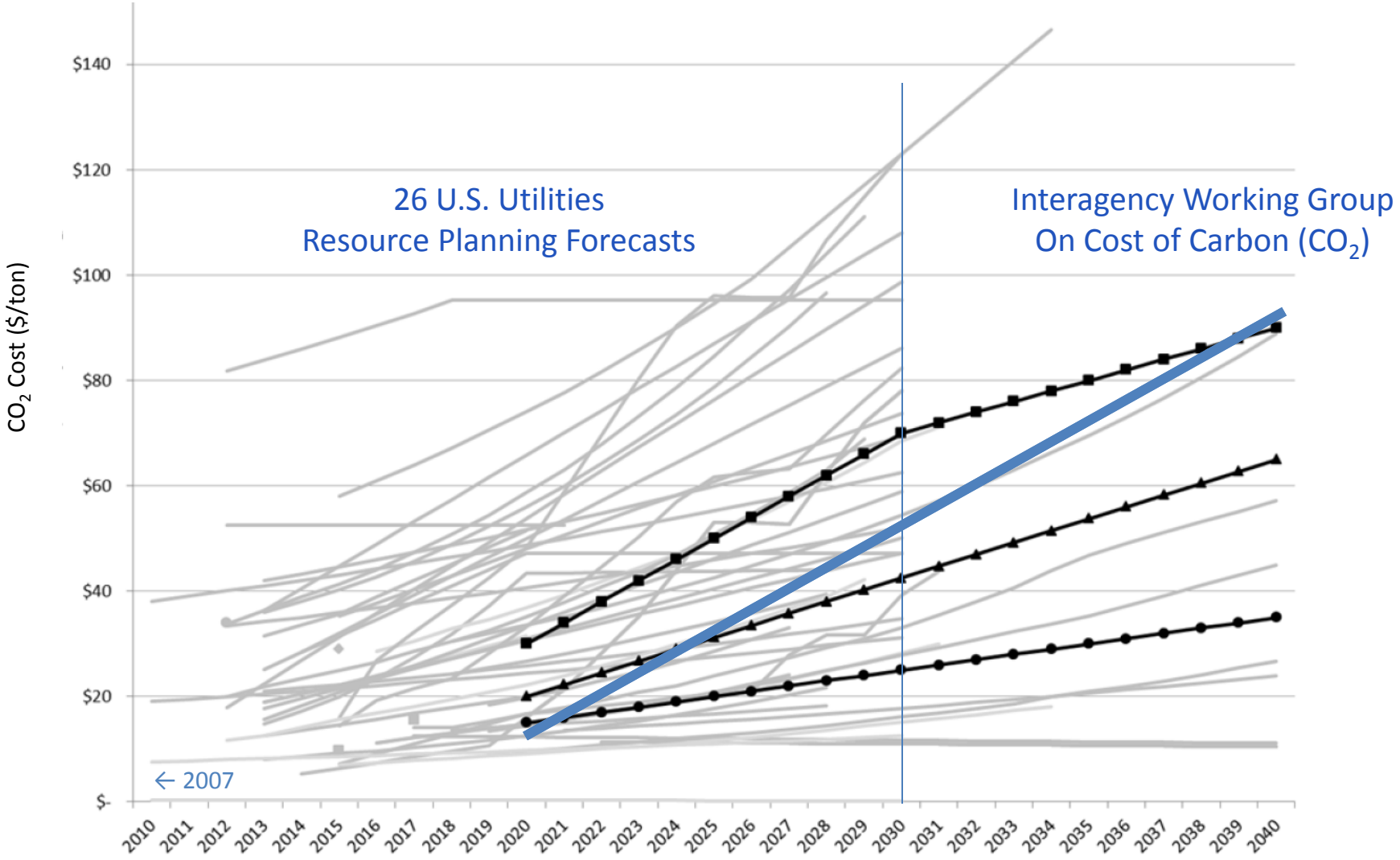


NRDC
EIA
EPA
2011/2012

Resource Portfolio Risks

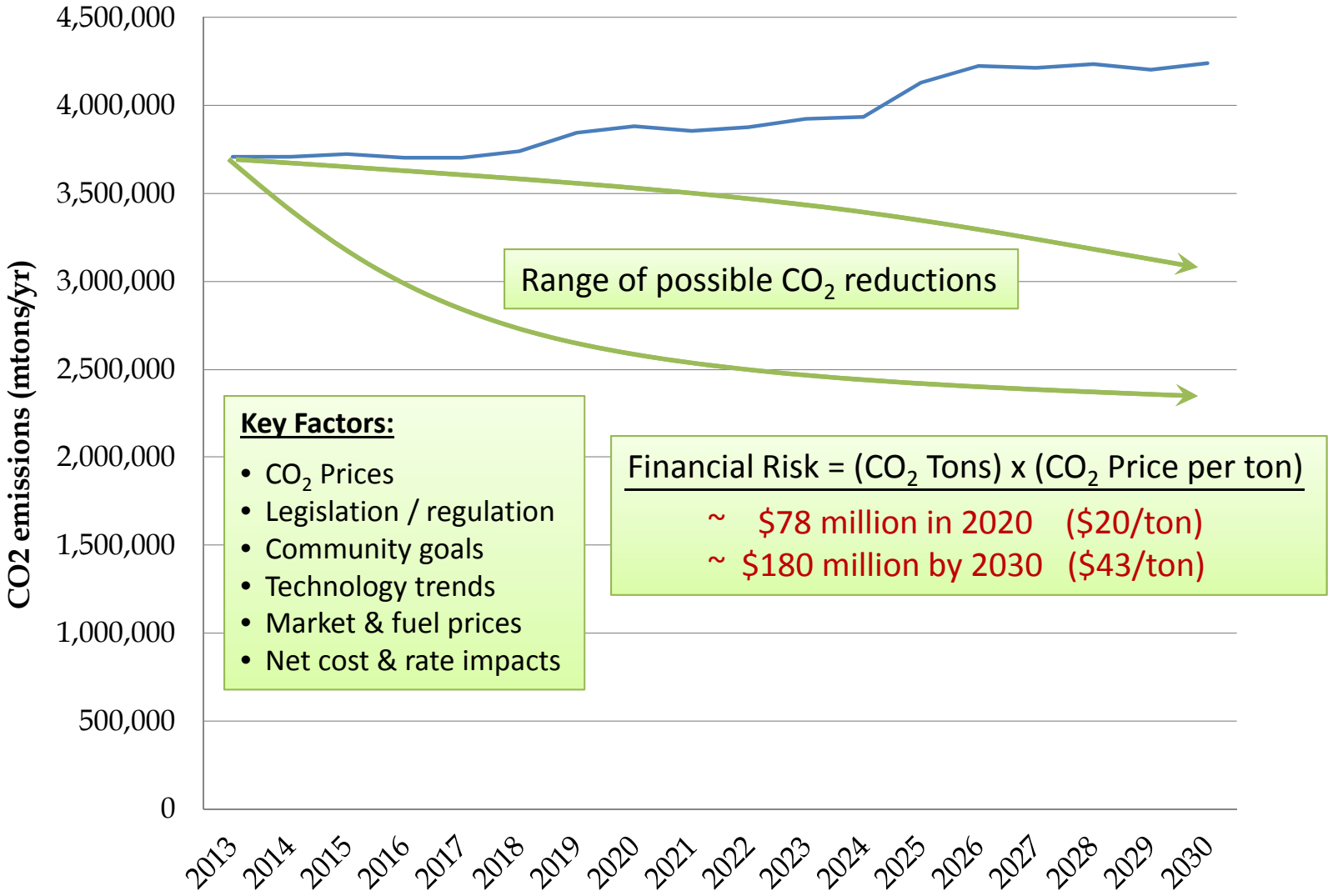
- Legislative & regulatory risks:
  - CO_2 emissions (climate change)
  - SO_2, NO_X, Hg, VOC, air toxics (health)
  - Coal ash, cooling water, etc. (environment)
- Financial risks:
  - Greenhouse gas charges (e.g. carbon tax)
  - Emission control costs
  - Waste / water management costs
  - Credit rating downgrade
- Constrained resource optimization:
  - High base & peaking / no intermediate resource
  - Limited ability to integrate renewables
  - Less flexible resource operations
- Uncertain public confidence:
  - Customer preferences vs. current resources

CO_2 Price Forecasting



Synapse Energy Economics

CO_2 Emission Forecast – Platte River System



Options for Diversifying Portfolio

- **Expand Energy Efficiency Programs:**
  - Common programs (all four Municipalities)
  - Municipal programs (unique to each)
  - Study recently completed with Nexant Consulting
- **Expand Utility Scale Renewable Sources:**
  - 32 MW of new wind resource (50 MW total by 2014)
  - Current system integration capability limited to ~ 60 MW
  - Need more resources to integrate wind & solar
- **Distributed Resources:**
  - Renewable sources (primarily solar PV)
  - Natural gas fired generation (primarily cogeneration or CHP)
  - Municipal level generation (natural gas engines)
- **Reduce Coal & Increase Natural Gas Generation:**
  - Combined cycle gas
  - Coal to gas conversions
  - More analysis needed

Factors Influencing Direction

Technology trends & timing

Renewable Energy Standards

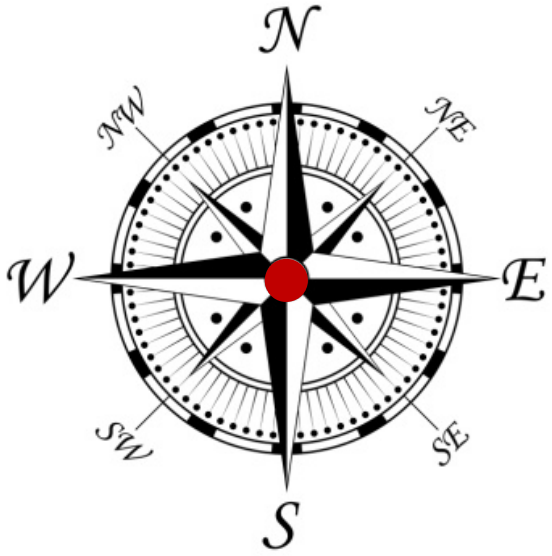
Customer interests

New markets

Water Supply

Waste Management

Lowest Rates



Least Environmental Impact

Economic Development

Regional partnerships

Fuel Trends

Transportation

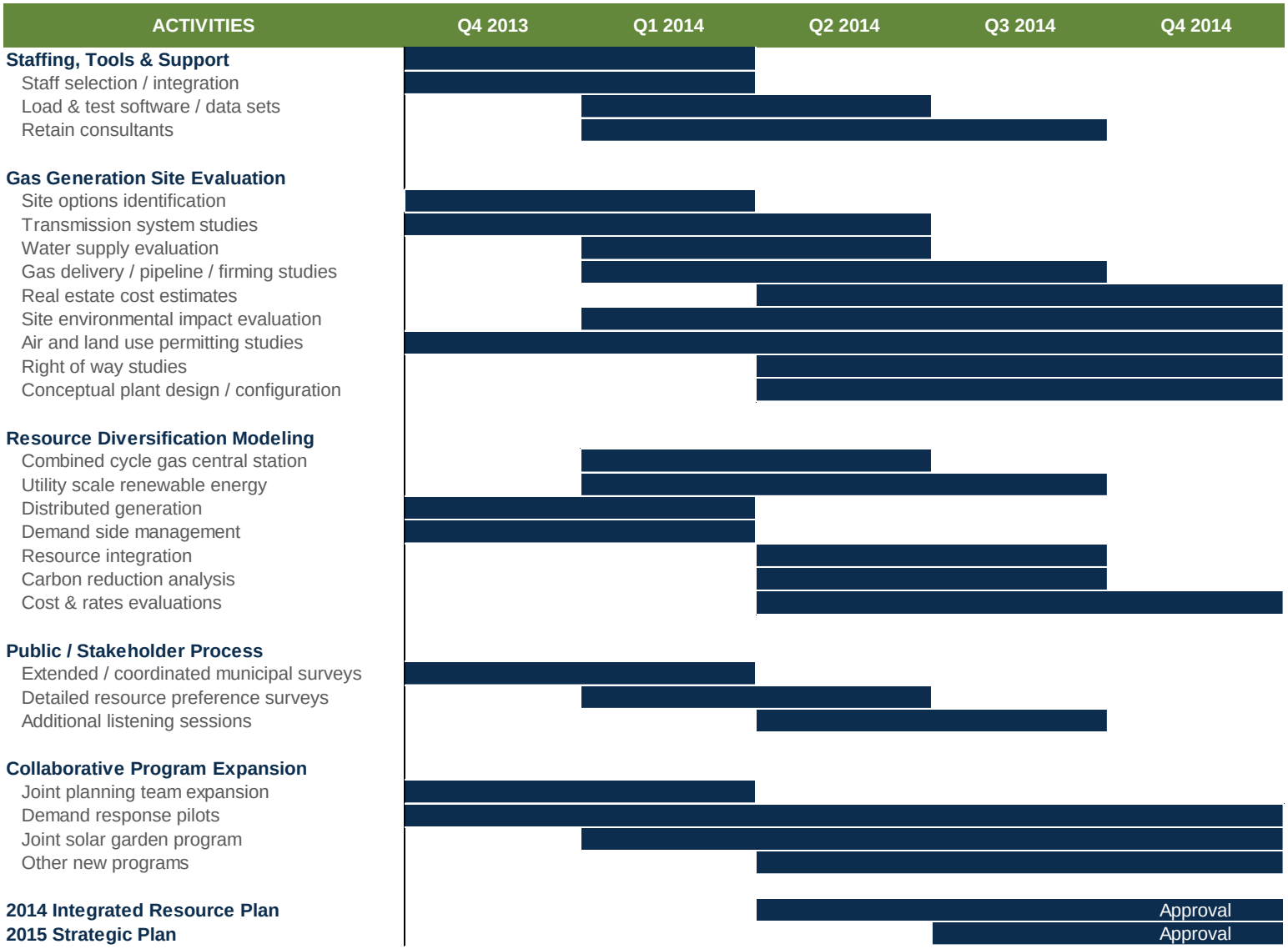
Resource Integration

Municipal planning & community goals

Aging infrastructure

Risk Management

Preliminary Planning Schedule



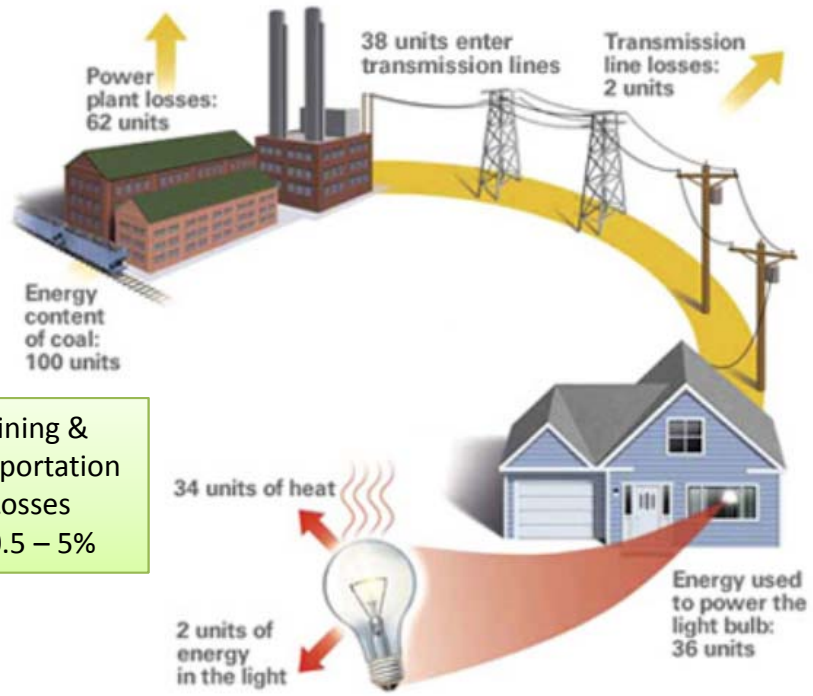
Key Points / Next Steps

- Planning process is in the early stages
- Strong historical foundation exists
- Bolster existing strengths:
  - *Safety*
  - *Customer service*
  - *Operational excellence*
  - *Compliance assurance*
  - *Financial stability*
  - *Employee engagement*
- Embrace new initiatives:
  - *Evaluate new options to reduce CO_2 emissions*
  - *Improve collaboration and communications*
  - *Increase focus on technology and innovation*
- This is the first draft:
  - Final 2014 plan to be presented to Board of Directors in December
- Much more detail planned for 2015 Strategic Plan (with new IRP)

QUESTIONS / DISCUSSION

Forbes

The Shaheen-Portman Energy Savings Act: It's The Economy, Stupid



Mining & Transportation Losses
~ 0.5 – 5%

Platte River/Municipal system (coal):

Plant losses – 66 units (34% efficiency)
Transmission losses – 2 units (2% loss)
Distribution losses – 3 units (3% loss)

29% of original energy delivered (coal)

~ 50% with best combined cycle gas

End use efficiencies:

Incandescent lighting	~ 2-6%
New lighting	~ 8-15%
Motors	~ 80-95%
Pumps	~ 60-80%
Refrigeration	~ 300-500%