



Xcel Energy

NORTHERN STATES POWER

Bay Front Generating Plant

Lighting Up the Ashland
Area for Over 100 Years

History of Plant

- Began operation with one coal-fired boiler in 1916 (founded by Ashland Light and Power and the Street Railway Co).
- Founding companies formed Lake Superior District Power (LSDP) in 1922.
- Improvements over the past 25 years have enabled the plant to burn low-cost fuels such as wood and discarded tires instead of coal.
- Ceased burning coal in December 2020

Fuels

- 1979 – Basic wood handling system installed to assist local mill operators with low-cost waste disposal/landfill avoidance.
- Bay Front was the first investor-owned utility in the country to burn wood for energy.
- Annual consumption of wood averages 240,000 tons.
- Railroad ties have been burned since 1985 (low moisture content = high heating value).

Fuel Usage 2014 - 2023



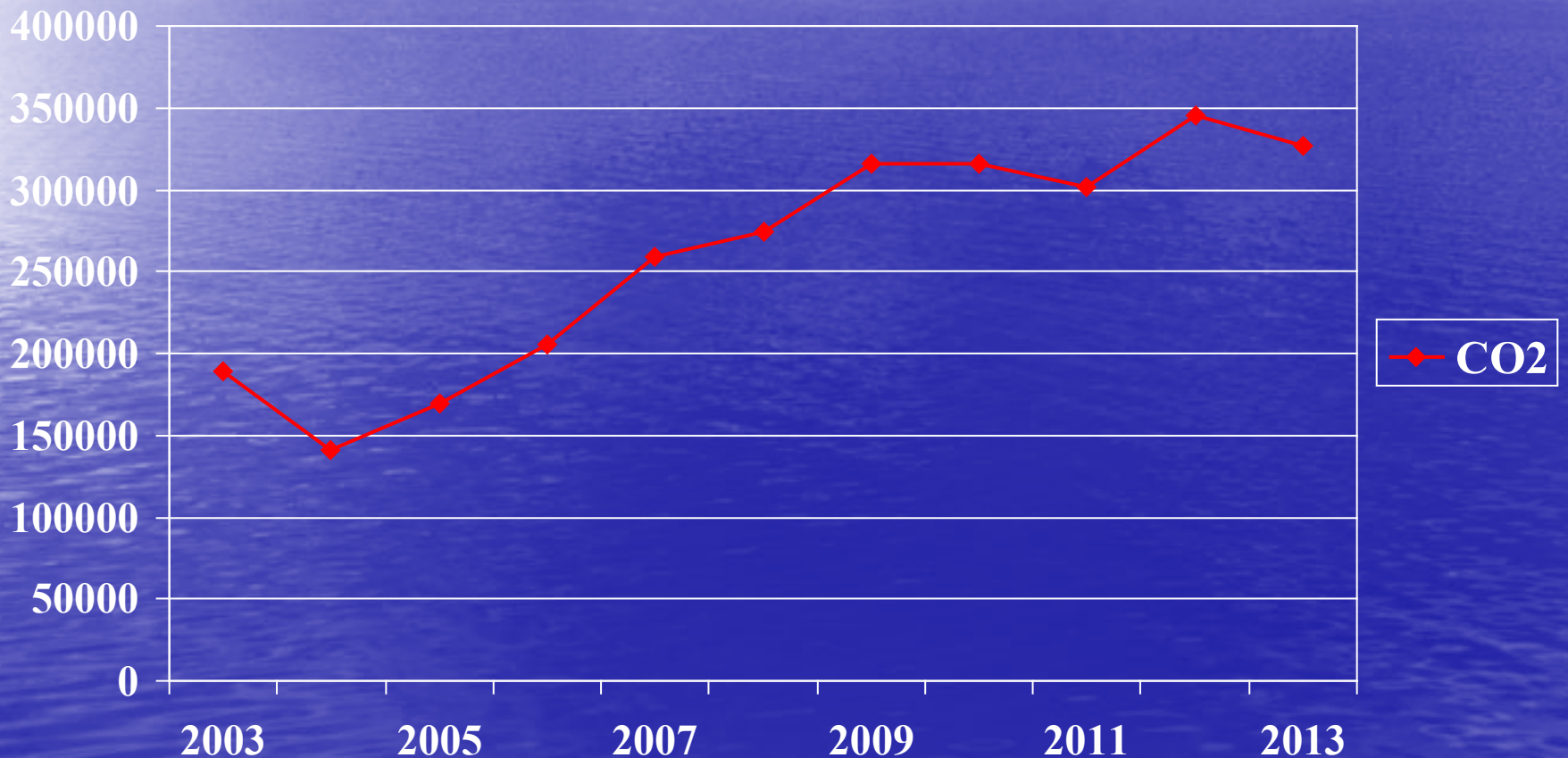
Environmental and Economic Benefits of Biomass

- Wood and railroad ties have a lower ash and sulfur content than most coals.
- Approximately \$7 million is added to northern Wisconsin's economy annually from Xcel Energy's purchase of wood.
- Cost savings for rate payers – approximately \$40 million in fuel costs by burning wood instead of coal from 1983-2005.

Environmental Benefits (continued)

- Burning of tires addresses public health issues related to stockpiles of discarded tires (approximately 4 million tires are discarded in Wisconsin annually).
- Burning tires, railroad ties and wood waste conserves landfill space and avoids cost of building new landfills.

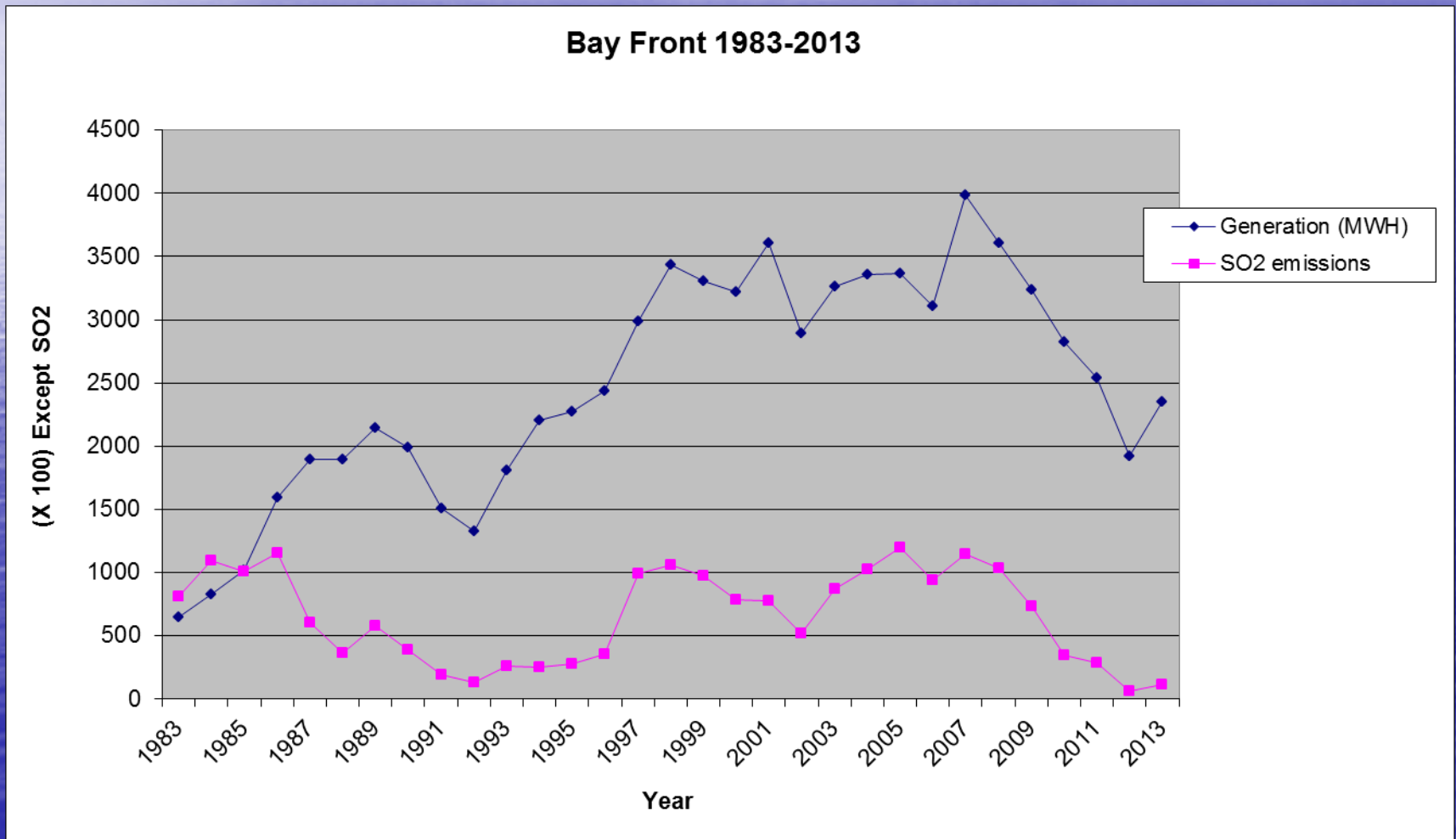
Avoided CO₂ Emissions By Using Wood 2003 - 2013



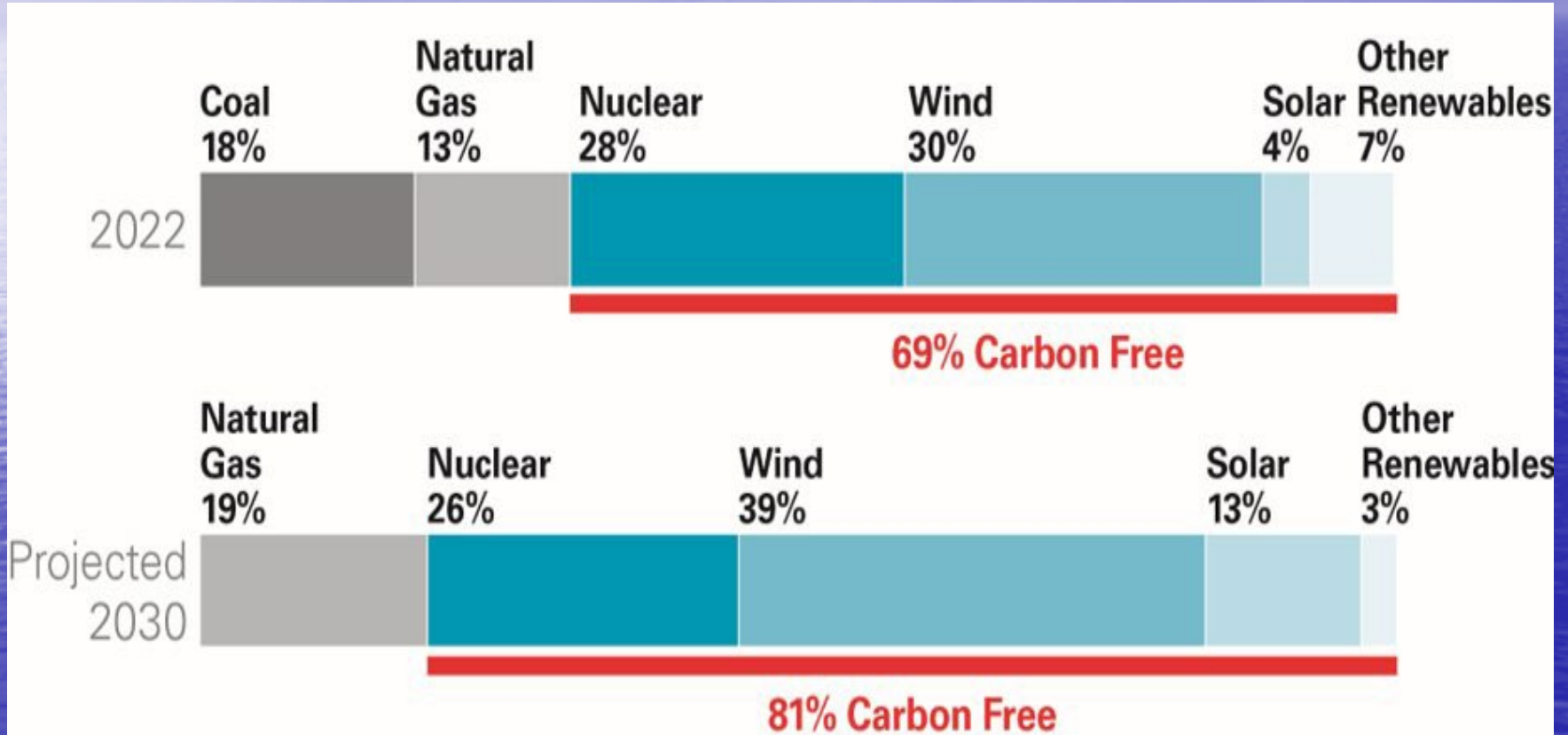
Carbon in Real Terms

- 1,000 pounds of CO₂ is equivalent to:
 - Saving 51 gallons of gasoline
 - Planting 11 trees
 - Saving 326 pounds of trash from a landfill

SO₂ Emissions Decrease as Generation using Wood Increases



Xcel Energy - North Fuel Mix



Questions?