







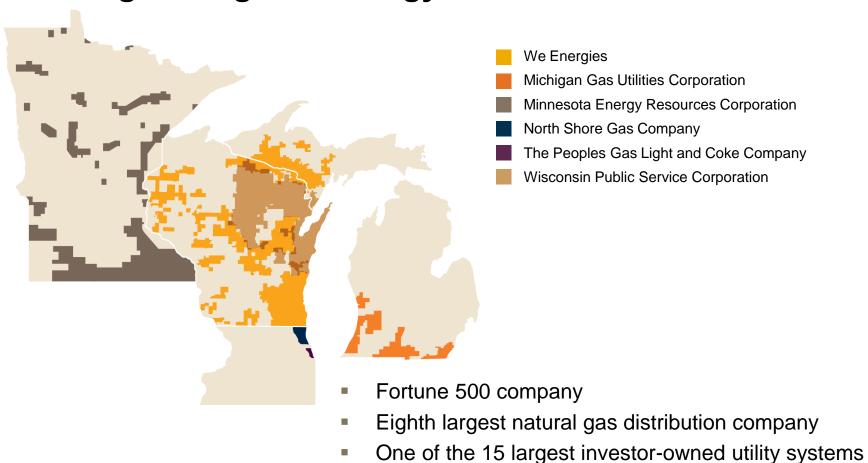






Paul J. Spicer, PE Vice President - Gas and Renewable Generation

## WEC Energy Group Serving the region's energy needs







Approximately 8,500 employees

## **Wisconsin Energy Policy**



- Energy Priorities: Act 414 (1993)
  - Planning priority for energy efficiency and renewable generation
- Wisconsin Focus on Energy
  - 1.2% of utility revenues dedicated to energy efficiency
- Renewable Portfolio Standard
  - Act 9 (1999)
  - Act 141 (2005)
  - 10% by 2015

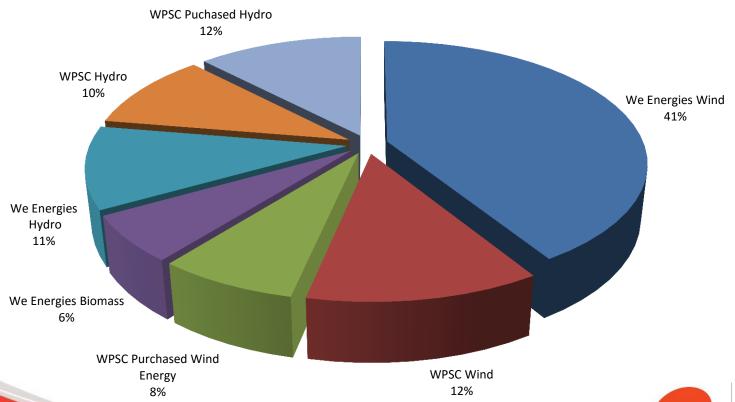




#### Renewable Portfolio Standard

 Both WPSC and We Energies successfully comply with the rule with diverse sources.

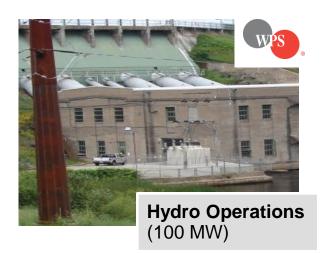
#### **Major WEC Renewable Sources**







## **Major WEC Zero Carbon Assets**













Rothschild Biomass Cogeneration Facility (50 MW)





## **Major Zero Carbon Energy Purchases**













#### **EPA's Clean Power Plan**

#### **Potential Compliance Options**

- Approximately 42% Reduction from 2012 Levels
- Building-block related
  - Improve power plant efficiency
  - Increase natural gas combined-cycle capacity factors
  - Build new wind or solar in Wisconsin or other states
  - Build new or uprate hydro, including Canadian hydro

#### Other options

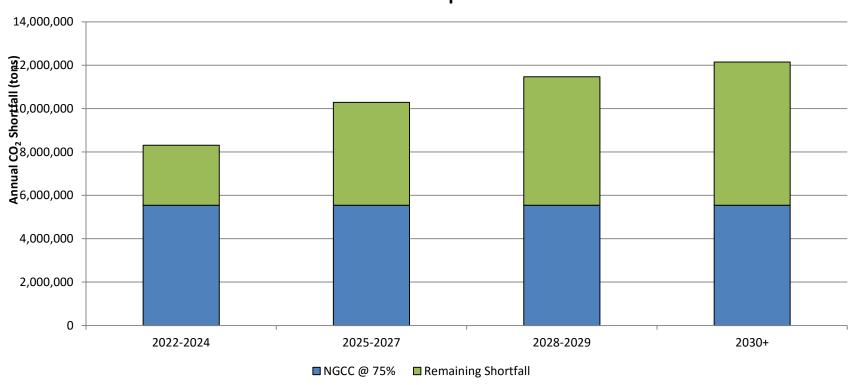
- Switch from coal to natural gas (e.g., Valley) or co-fire natural gas with coal
- Reduce use of or retire coal power plants
- Buy credits/allowances
- Build new natural gas combined-cycle
- Invest in new demand-side energy efficiency
- Improve energy delivery system efficiency
- Build new or uprate existing nuclear





## **Estimate of Compliance Shortfall**

#### WEC Energy Group - <u>Wisconsin</u> Clean Power Plan Compliance Position



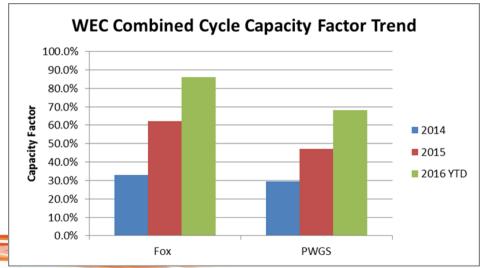




### Modern, efficient combined cycle natural gas plants











# Plants that ceased coal operations and instead use natural gas









#### Conclusion

- WEC has a robust portfolio of conventional and renewable power generation resources.
- Our employees that operate and maintain these assets are committed to....
  - Safety
  - Integrity
  - Diversity
  - Inclusion
  - Customer focus
  - Sense of urgency
  - Financial discipline
  - Personal responsibility for results



