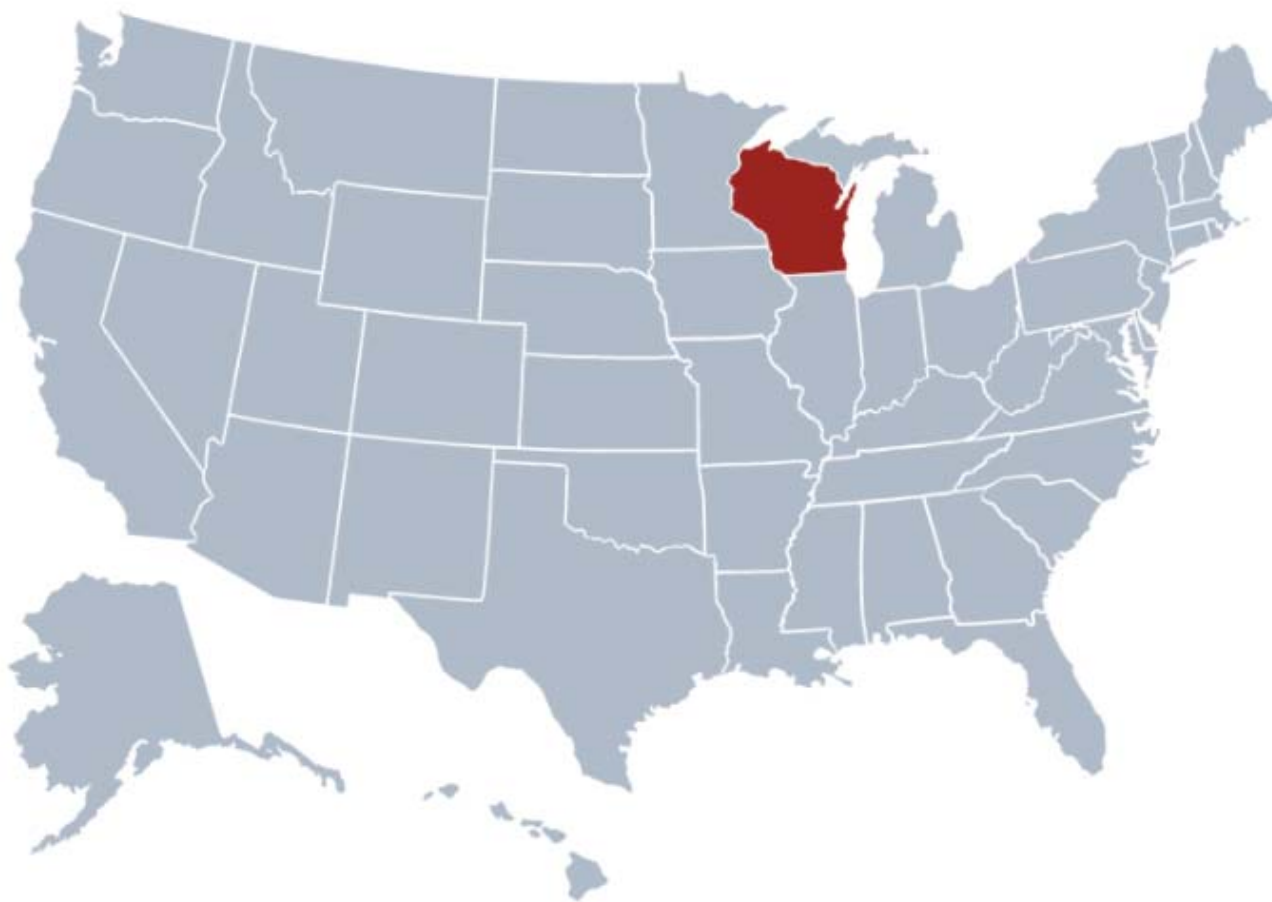




# The Wisconsin Public Service Commission— Jurisdiction and Hot Topics 威斯康辛州公共服务委员会— 管辖范围和热点话题

Ellen Nowak – Chair 主席  
August, 2017



## WISCONSIN EXPORTS TO CHINA

威斯康辛州对中国的出口

Commodity	2015 Exports (millions)	2016 Exports (millions)
<b>Total</b>	\$1,544.13	\$1,424.84
<b>Scientific and Medical Instruments</b>	\$418.67	\$396.87
<b>Industrial Machinery</b>	\$321.31	\$280.13
<b>Electrical Machinery</b>	\$187.29	\$143.59
<b>Articles of Wood</b>	\$38.91	\$66.68
<b>Vehicles and Parts</b>	\$61.16	\$71.66
<b>Other</b>	\$516.79	\$465.90

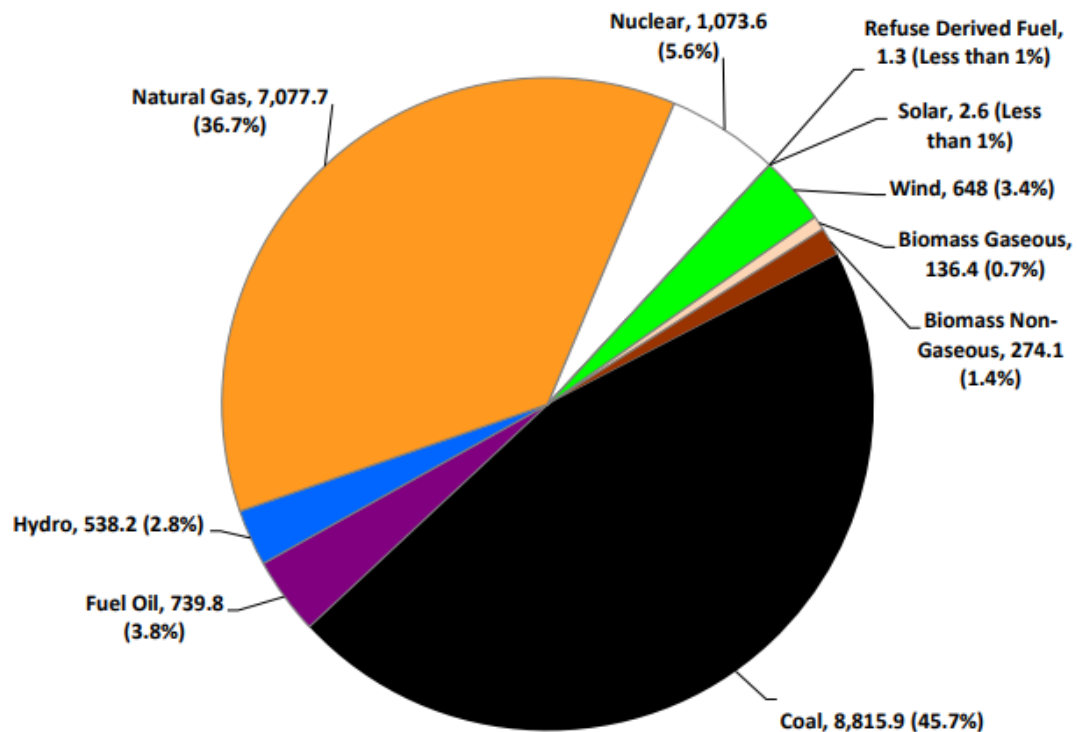


- **Scientific & Medical Instruments**
  - X-ray machines and parts thereof
- **Industrial machinery**
  - Computers, filtration for engines, lawnmowers and parts thereof
- **Electrical Machinery**
  - Ignition equipment for engines, prepackaged software, lighting and signaling equipment
- **Prepared foods**
  - Sausage
- **Dairy products**
  - Cheese and whey products
- **科学和医疗设备**
  - X-线机器和部件
- **工业设备**
  - 计算机，发动机过滤器，割草机和部件
- **电子设备**
  - 发动机点火装置，预先包装的软件，点火和信号装置
- **加工食品**
  - 香肠
- **奶制品**
  - 奶酪和乳清制品

# Wisconsin's Energy Landscape

威斯康辛州的能源概况 发电装机 (按能源品种)

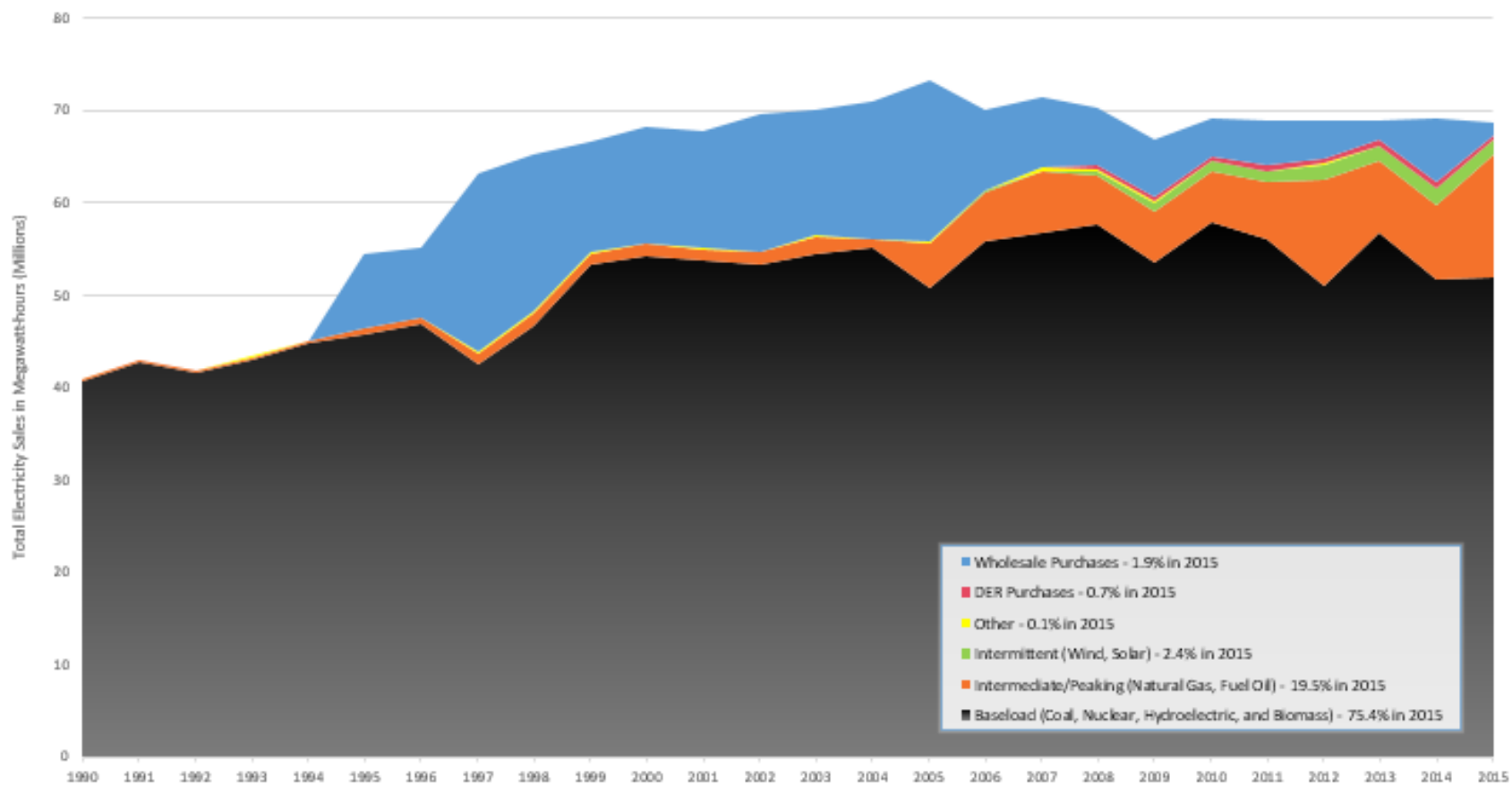
Generation Capacity- by fuel source



# Wisconsin's Energy Landscape

威斯康辛州的能源概况 电力销售 (按能源品种)

Wisconsin Electricity Sales by Source Type



## Hot Topics 热点话题

- Technology
  - Impacts on utilities and rate design
- Utility Resource Diversification
- Changing customer preferences
  - Type of resource for generation
  - Choice billing and cost controls
  - How do utilities and regulators respond?
- 技术
  - 对公用事业公司和费率设计的影响
- 公用事业公司能源品种多样化
- 用户选择倾向的变化
  - 发电能源的类型
  - 选择计费 and 成本控制
  - 公用事业公司和监管机构应如何应对？

## Hot Topics cont'd- Billing Options

- Residential time of use rate (Rg-5)
  - Summer and winter on-peak periods
  - No on-peak times in spring and fall
  - 11pm-6am year round off-peak period
- Residential demand rate (Rd-1)
  - Combines 3-tier TOU rate with on-peak demand charge
  - Lower energy rates
  - No ratcheted demand charge
- Fixed bill (FA-1)
  - Estimates annual usage based on previous 12-month actuals
  - Customers pay annual bill in 12 equal monthly installments
  - 12-month contract with option to cancel at 1-year

## 热点话题（续）—计费选择

- 居民分时费率(Rg-5)
  - 夏季和冬季高峰时段
  - 春季和秋季非高峰时段
  - 全年晚11时-早6时非高峰时段
- 居民需求费率 (Rd-1)
  - 包括3级分时费率和高峰需求费
  - 降低能源费率
  - 没有“加强需求”收费
- 固定账单(FA-1)
  - 根据前12个月的用电实际估计年用电量
  - 用户通过12个月度等额分期付款的形式支付年账单
  - 12个月的合同一年后可选择取消

## Hot Topics cont'd 热点话题 (续)

- Innovative tariffs
  - Economic development rates
  - New load market pricing
  - Contract-based rates for large industrial customers
- Transmission siting
  - New projects/rebuilds over last 10 years - \$2.48 billion – 4,452 miles
  - Pending:
    - Cardinal-Hickory Creek (100 miles, \$500 million)
    - Riverside Interconnect (5 miles/rebuild, \$41 million)
    - Nemadji (1 mile, \$16 million)
- 税费创新
  - 经济发展费率
  - 新负荷市场定价
  - 面向大工业用户的基于合同的费率
- 输电工程选址
  - 过去10年间的新建/重建项目 - 24.8 亿美元 – 4,452英里
  - 待定工程:
    - Cardinal-Hickory Creek (100英里, 5亿美元)
    - Riverside Interconnect (5英里/重建, 4100万美元)
    - Nemadji (1英里, 1600万美元)





# Infrastructure Challenges 基础设施挑战

Workshop on Energy Regulatory Policy  
Beijing Arbitration Commission

Ellen Nowak – Chair  
Public Service Commission of Wisconsin  
August, 2017

## Infrastructure Challenges 基础设施挑战

- Overview of regulation: state and federal
- Incentivize investment in new gas pipelines
- Siting and authorizing new gas pipelines and electric transmission lines when pitted against local and environmental opposition
- 监管概述：州和联邦层面
- 对新天然气管道的投资进行激励
- 遇到当地和环境组织反对时，确定新天然气管道、输电工程的选址和批准

## Incentivizing investment in new gas pipelines

### 对新天然气管道的投资进行激励

- FERC
  - Attractive Return on Equity
- NARUC Resolutions regarding encouraging investment
- NARUC Committees
  - States with Innovative Infrastructure Cost Recovery Mechanisms
  - Natural Gas Access and Expansion Task Force
- FERC
  - 有吸引力的股本回报
- NARUC关于鼓励投资的决议
- NARUC委员会
  - 拥有创新基础设施成本回收机制的州
  - 天然气接入和拓展专门工作组

## Siting Concerns 选址担忧

- Increase in organized participation and public demonstrations
- Need to encourage constructive engagement early
- Greater need to provide resources to the public, media and commissions
- NARUC Resolutions to address siting concerns
- 有组织的参与和公共示威的增加
- 需要鼓励在早期进行有建设性的介入
- 对公众、媒体和委员会，需要提供更多的信息
- NARUC关于解决选址担忧的决议



# Grid Modernization 电网现代化

Workshop on Energy Regulatory Policy  
Beijing Arbitration Commission

Ellen Nowak – Chair  
Public Service Commission of Wisconsin  
August, 2017

## Grid Modernization 电网现代化

- Increased penetration of distributed generation
  - Future of utility regulation under an increasingly decentralized, technology driven business model, prompting calls to revisit the incumbent utility business model
  - Balance between supporting traditional utilities while encouraging innovation through competitive markets.
  - Meeting a diverse customer set of needs: some customers want more choice and control over generation and use.
- 分布式能源的增加
  - 随着持续增加的去中心化、科技驱动的商业模式的发展，未来的公用事业监管要对现存的公用事业商业模式进行重新审视
  - 在通过竞争性市场鼓励创新的同时支持传统公用事业公司，二者之间需要进行平衡
  - 满足用户多样化的需求：有些用户想要更多选择并控制能源的生产和使用

## The Regulator's Challenge: Balance traditional models while encouraging innovation and keep the lights on!

### 监管机构的挑战：在传统模式和鼓励创新之间寻求平衡并继续前行

- Don't lose sight of our core responsibility: a reliable, affordable and safe supply of energy.
- How to achieve?
  - Robust stakeholder process
  - Pilot programs
  - Gradualism
  - Define the regulator's role
- 不要忘记我们的核心责任：一个可靠、可承受和安全的能源供给
- 怎样完成？
  - 稳健的利益相关者程序
  - 示范项目
  - 循序渐进
  - 明确监管机构的角色

Questions? 问题