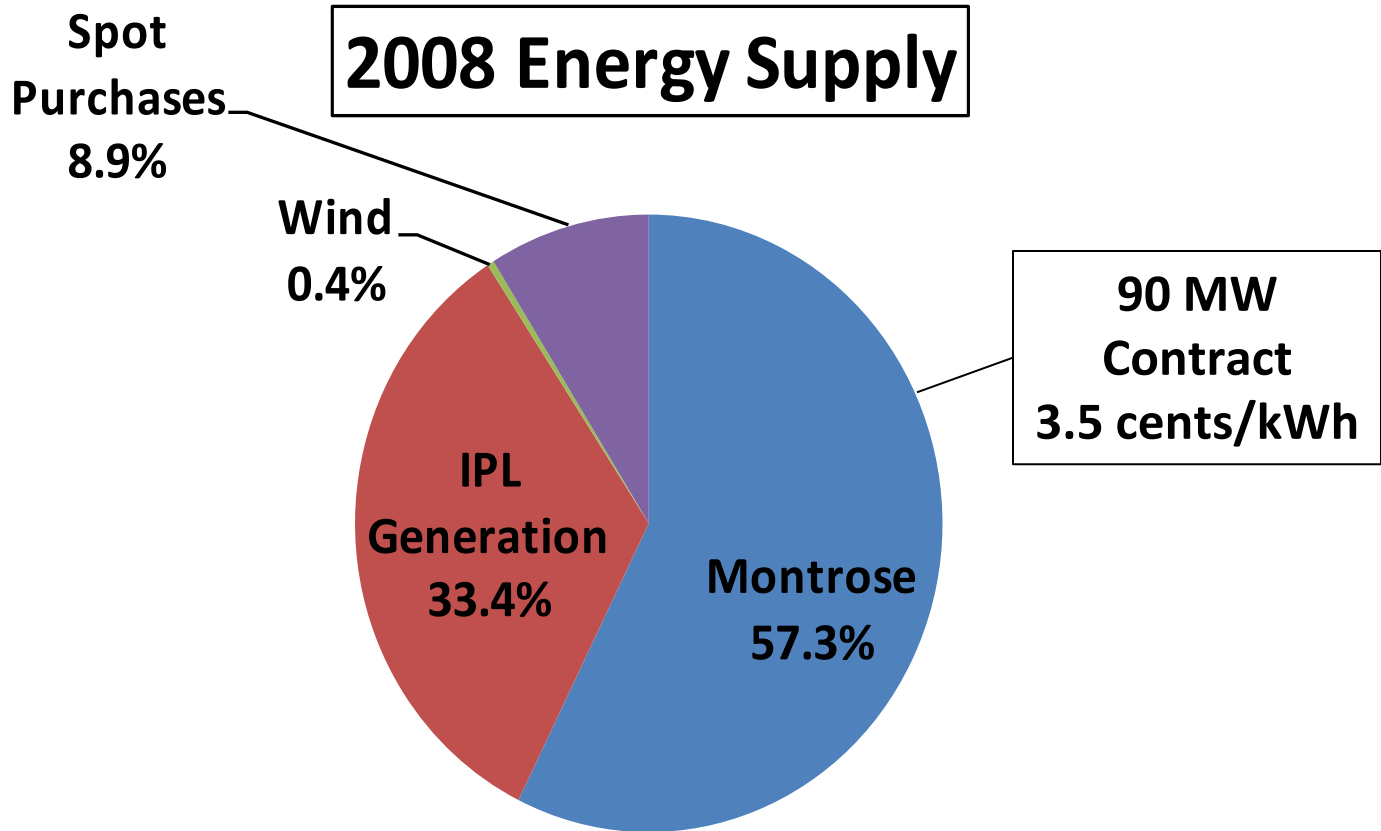


# Electric Supply Planning: IPL Success Story

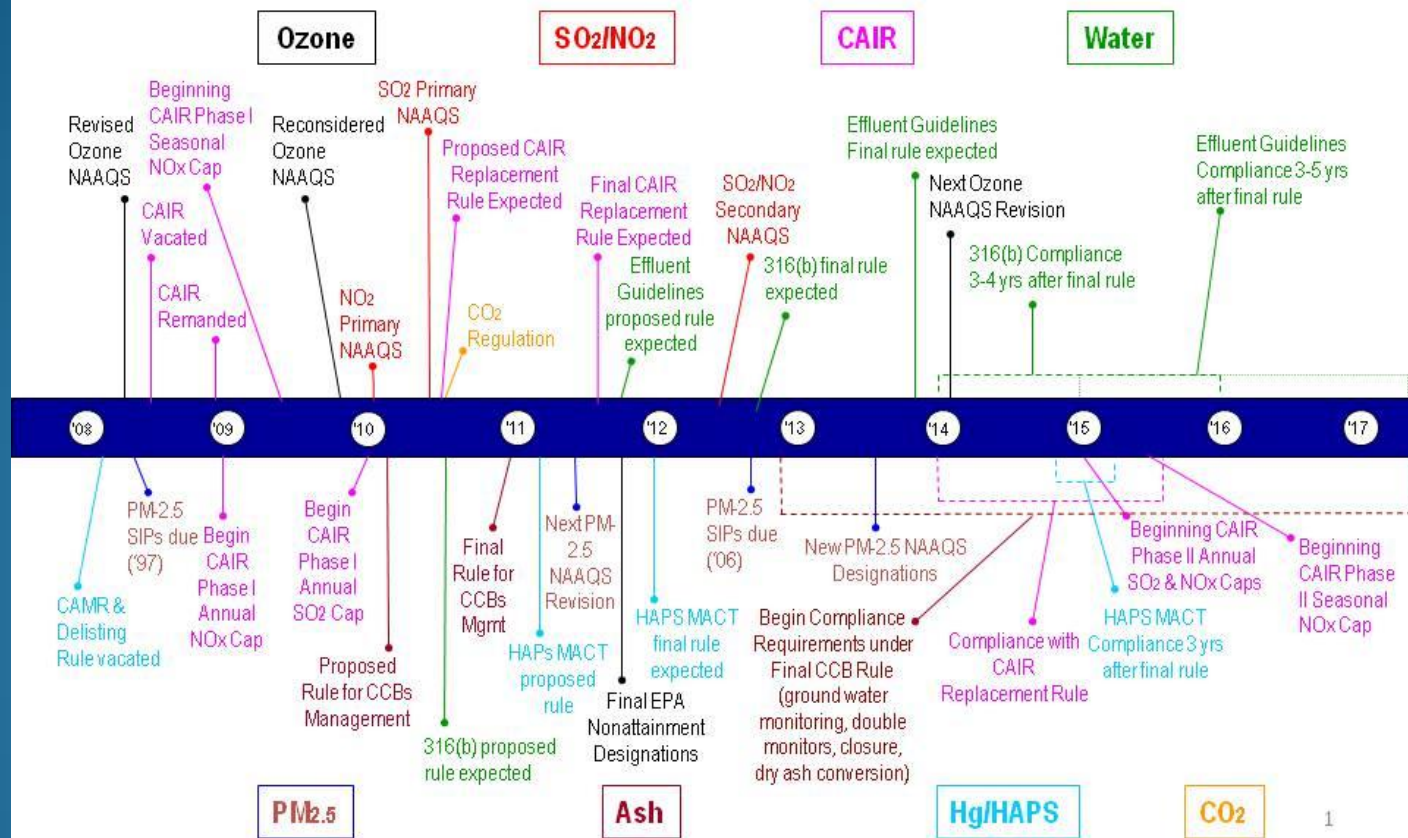


# Where We've Been



# Environmental Regulations

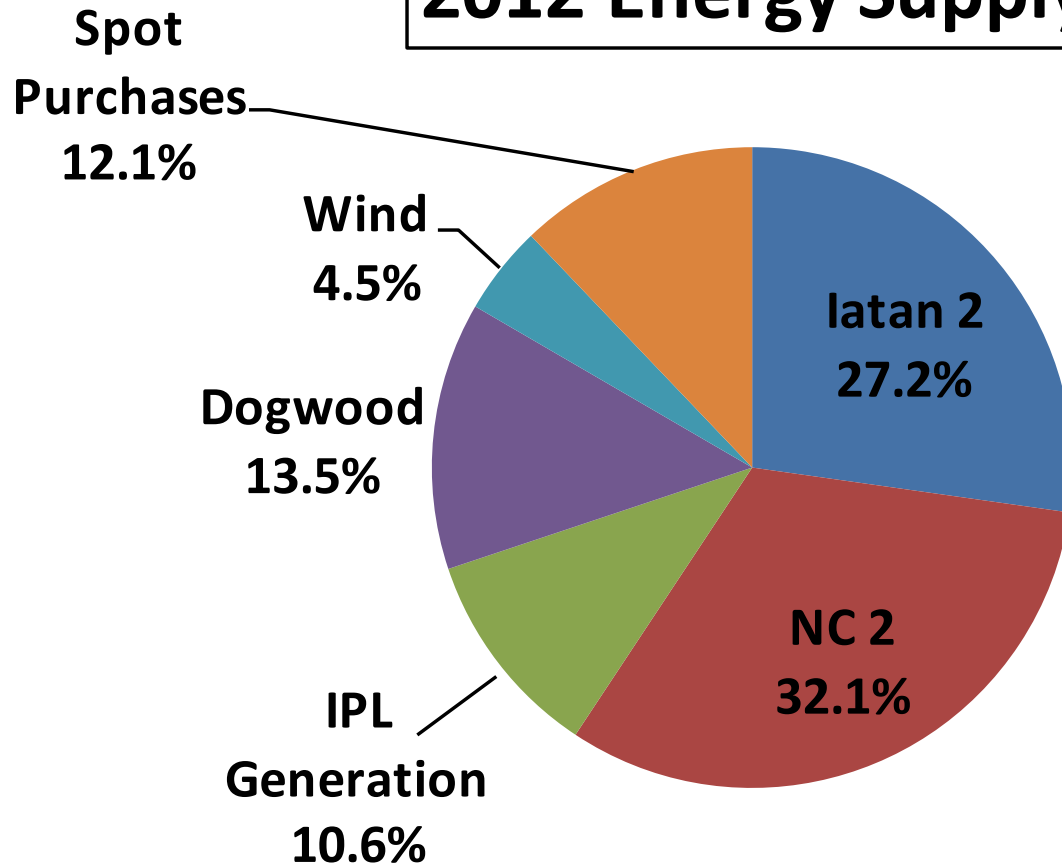
## Environmental Regulatory Timeline for Coal Units



-- adapted from Wegman (EPA 2003)

# Where We Are

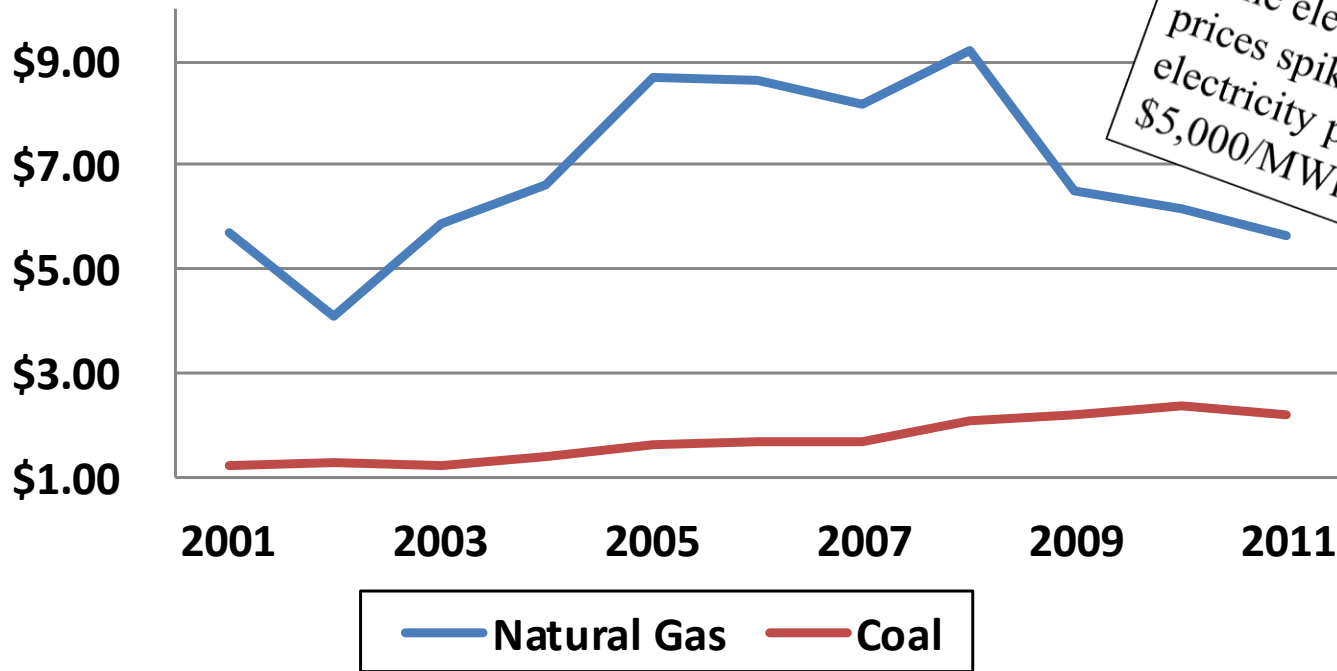
## 2012 Energy Supply



**Iatan and NC-2:**  
110 MW "Life of Unit" Contracts  
5.5 Cents/kWh

# Where We Are: Diverse Power Supply

## Historic Fuel Prices in \$/MMBtu



*January 2014:  
New Jersey gas prices hit \$90/MMBtu! In Texas, natural gas provides 64% of the electricity. Gas prices spiked sending electricity prices to \$5,000/MWh!*

# Where we Are: Efficiency/Renewables



## Independence is first U.S. city to switch on LED lights

Independence, MO is the first city in the country with a population of more than 100,000 to make a 100-percent switch from high-pressure sodium lights to LED fixtures. LED lighting provides a natural white light, improving visibility while using only half the energy of other fixtures.

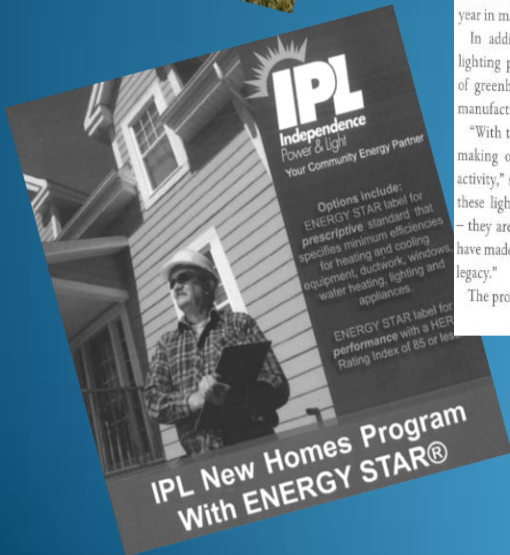
In August 2010, the city began a pilot project to evaluate the feasibility of replacing traditional street lighting fixtures with LED lights. Independence Power & Light (IPL) installed LED fixtures on a small number of city streets to test their effectiveness. As part of the process, residents and area businesses were given an opportunity to share their observations, and they noted that the lights provide a uniform, quality white light.

IPL estimated that completely changing to the new LED lighting could save the city more than 5 million kilowatt (kW) hours, for an annual savings of \$350,000. The new lights require less maintenance, which the city estimates will save \$150,000 a year in maintenance costs alone.

In addition to the long-term financial benefits, the LED lighting program will remove more than 31,000 metric tons of greenhouse gases from the atmosphere, according to the manufacturer.

"With these new LED street lights, we can improve visibility, making our residents feel safer, and encourage more social activity," said Independence Mayor Don Reimal. "Not only are these lights more cost-effective, using 50 percent less energy – they are more sustainable, giving us the satisfaction that we have made a positive impact on our city and left another positive legacy."

The project was slated for completion in December 2013.





# Where We're Going: Power Supply

- Missouri City retirement: January 2016
  - No additional resources needed to replace Missouri City
- Blue Valley Burns 100% natural gas: January 2016
  - No added capital expense required
  - Continued operation of the plant avoids the need to add 93 MWs of new capacity and serves as a hedge against market-price volatility
- Seek to double renewable energy supply by 2018
  - Wind, solar, and biomass
- Continue energy efficiency efforts

# Where We're Going: Rates

- Rates have Increased over last 5 years
  - Replaced 60% Energy Supply from Low-Cost Resource
  - Increased Environmental Regulations
- Rates Should Remain Stable
  - No Need for Investment: Replace Missouri City
  - No Need for Investment : 100% Natural Gas Blue Valley
- Other Utility Still to Address Environmental Regulations



# IPL

## Planning Success

- Replaced Montrose Contract with 2 new resources
  - Long-term stable supply that will meet 60% of supply
  - Meets all new and pending environmental rules
- Plan to meet EPA regulations with no Capital \$\$
  - Retire Missouri City in Jan 2016
  - Blue Valley 100% Natural Gas in Jan 2016
- Diversified Power Supply
  - Combination of coal, gas, renewables and energy efficiency programs
- Rates to Remain Stable
  - Power Supply Set for Long-Term

# Where We Are: Planning Compliments

**Letter to the Editor: Independence Examiner**

**Independence goes green, saves money**

**By Roger Hershey**

Dec 17, 2013 at 5:17 PM

To the editor:

The Independence Power and Light Department is wrapping up the complete replacement of the city's old high-pressure sodium street lights with state-of-the-art LED fixtures. Independence is the first city of more than 100,000 to switch to LEDs.

IPL has calculated that because LEDs use only half the energy of the old lights, the change could reduce the required electricity by more than 5 million kilowatt hours, at a savings of \$650,000 a year. LEDs require less maintenance, which will bring another \$300,000 in savings.

According to the manufacturer, the new lights could remove up to 31,000 metric tons of greenhouse gases from the atmosphere, making Independence air safer to breathe. The new fixtures produce a natural white light that increases visibility and makes streets and neighborhoods safer.

**Since at least 2007, IPL has been engaged in extended, master-planning efforts that have resulted in a detailed plan of action to increase energy efficiency, improve the transmission system, and most importantly, address the city's long-term power supply needs. IPL is to be commended for its forward-looking commitment to energy efficiency, and encouraged to continue its economically and environmentally responsible approach as it implements its power supply resource plans.**