



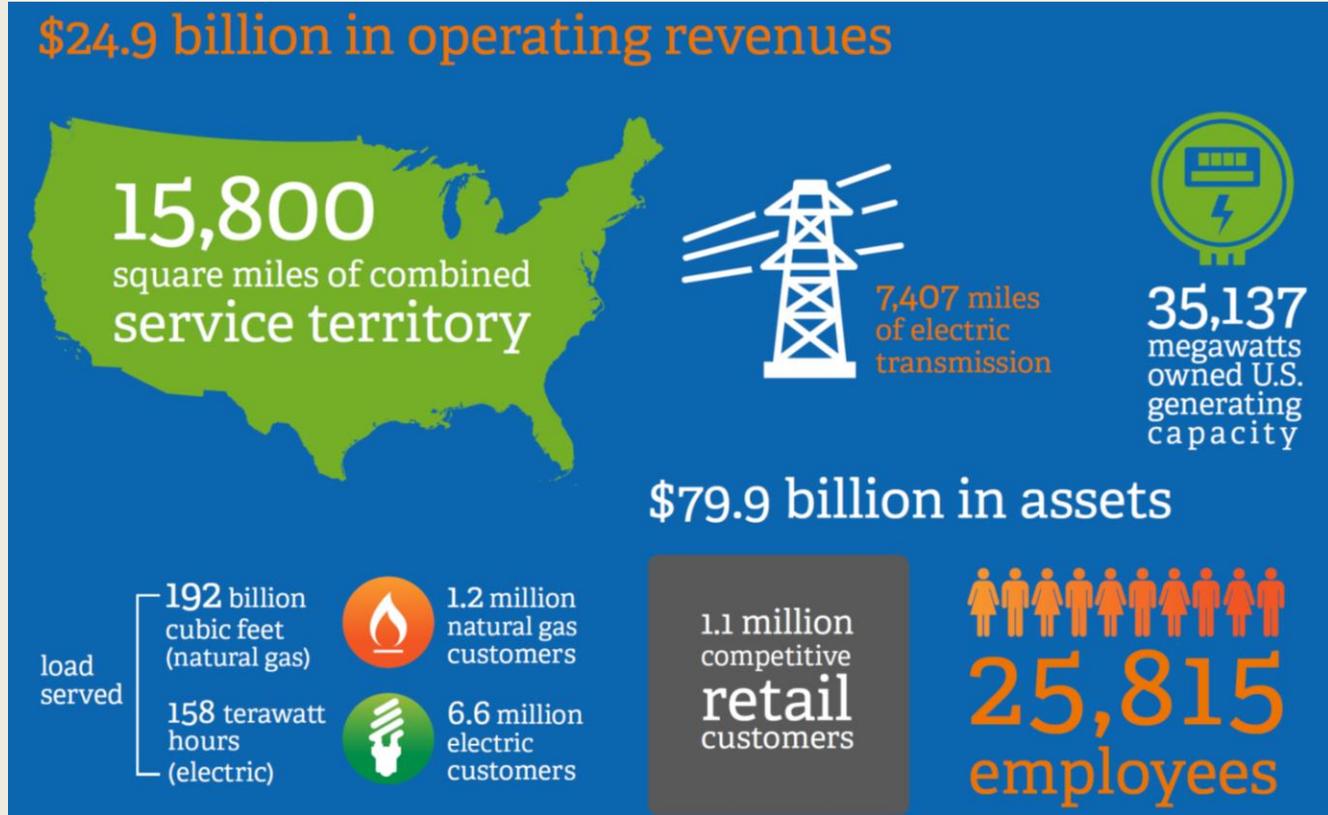
## Global Water Summit

Christopher D. Gould

*Senior Vice President,  
Corporate Strategy &  
Chief Sustainability  
Officer, Exelon  
Corporation*

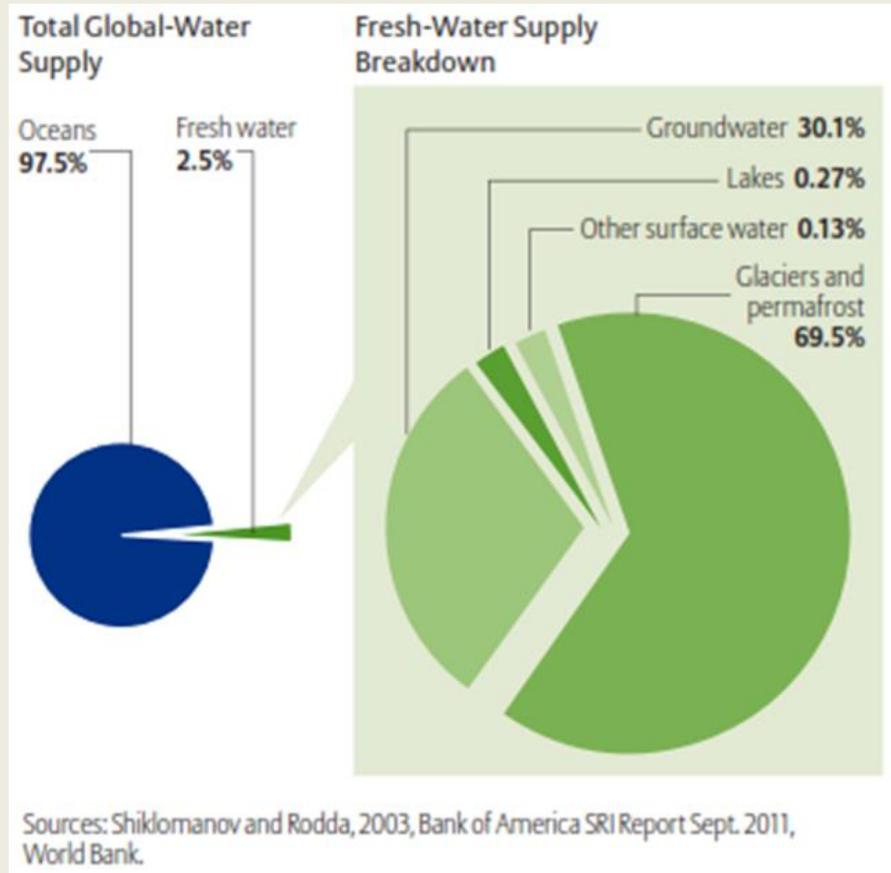


# Exelon Profile (2013)

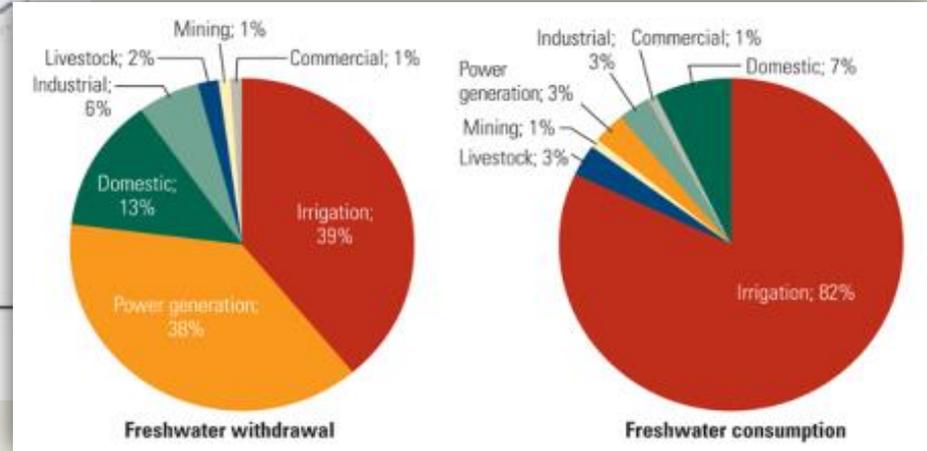
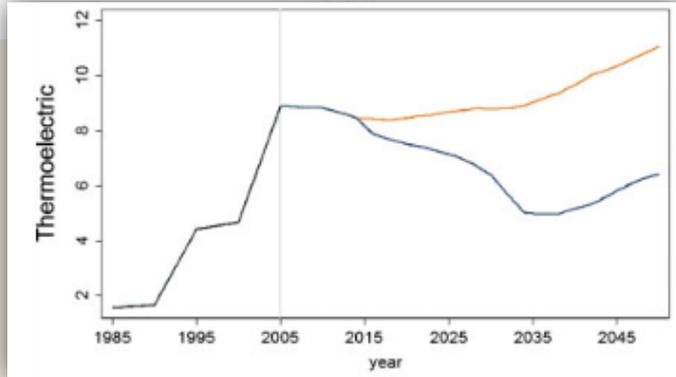
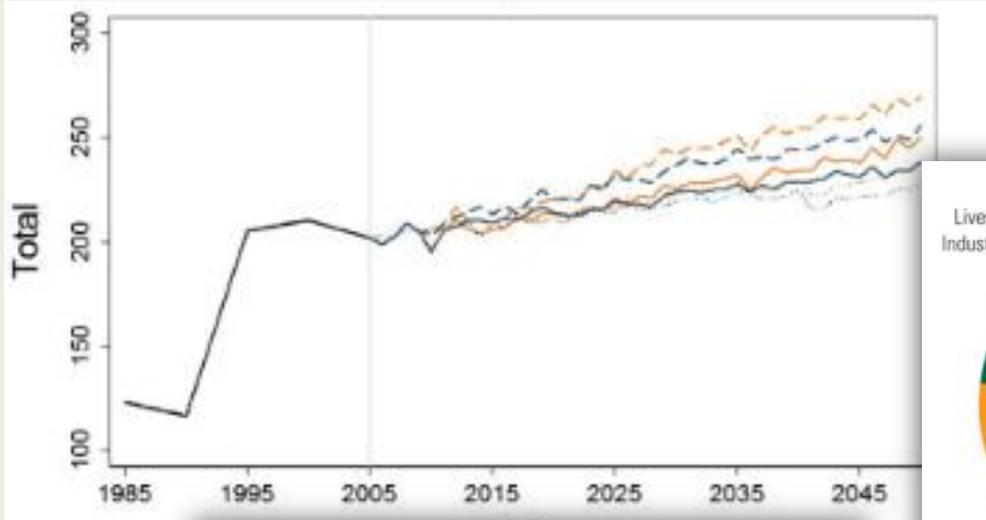


# Global Water Supplies

- Compared with the world's total supply of water, fresh water is a relatively rare resource at only 2.5% of the total
- Only the fresh water in lakes, groundwater and surface supplies is available for residential, agricultural and industrial use
- Of the 2.5% available freshwater, only about 0.007% is safe for consumption without processing (World Health Organization)



# U.S. Water Withdrawals Versus Consumption

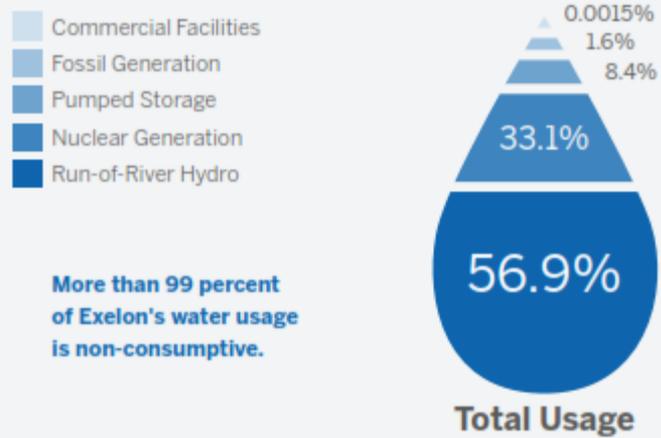


Source: MIT Global Change Forum

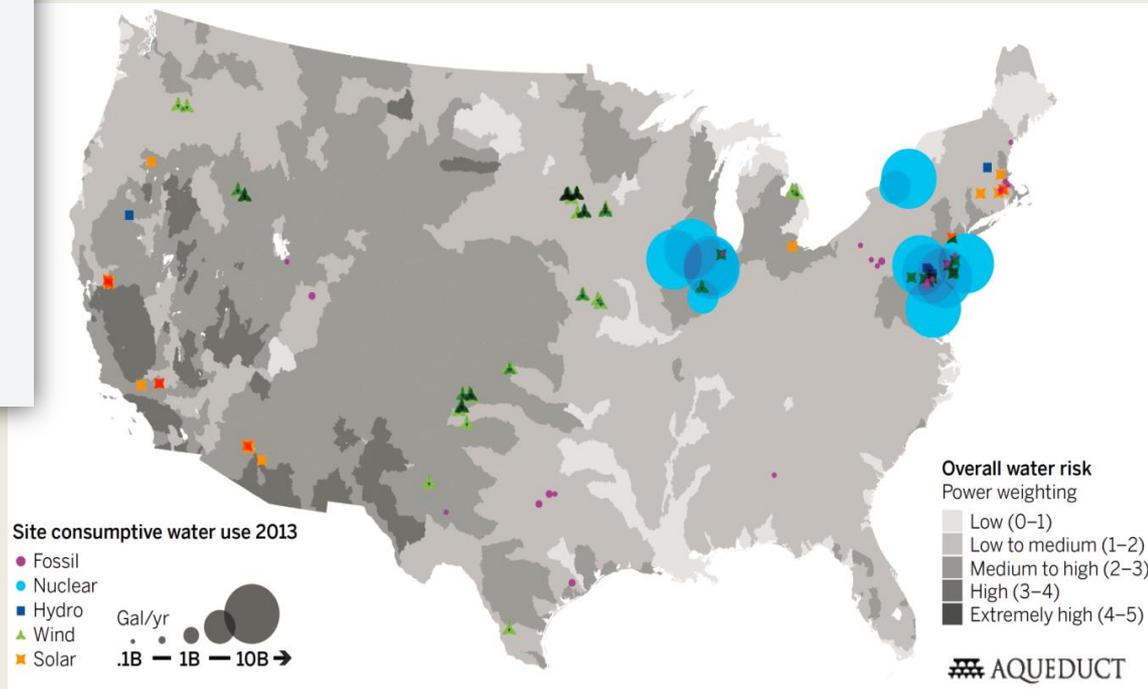


# Exelon 2013 Water Consumption and Risk

## 2013 Water Usage by Operational Activity



2013 Total Water Use: 12.49 trillion gal/yr  
 Non-consumptive Use: ~99.3% or 12.4 trillion gal/yr  
 Consumptive Use: ~0.6% or 69 billion gal/yr



Source: Exelon 2013 Sustainability Report and WRI Aqueduct

# The Importance of Partnerships and Collective Actions

Exelon continues to pursue cutting-edge research to better understand potential climate and water impacts and to help push the current limits of the state-of-the-art modeling in the most efficient and effective manner by accessing both public and private institutions:

- MIT Joint Program on the Science and Policy of Global Change
- U.S. Department of Energy Voluntary Partnership for Energy Sector Climate Resilience
- Electric Power Research Institute (EPRI)
- World Resources Institute Aqueduct
- IPCC Assessment Reports and climate models
- NOAA climate modeling and assessment reports
- National Climate Assessments
- USGS environmental data and climate assessments
- NGO forums...and others.

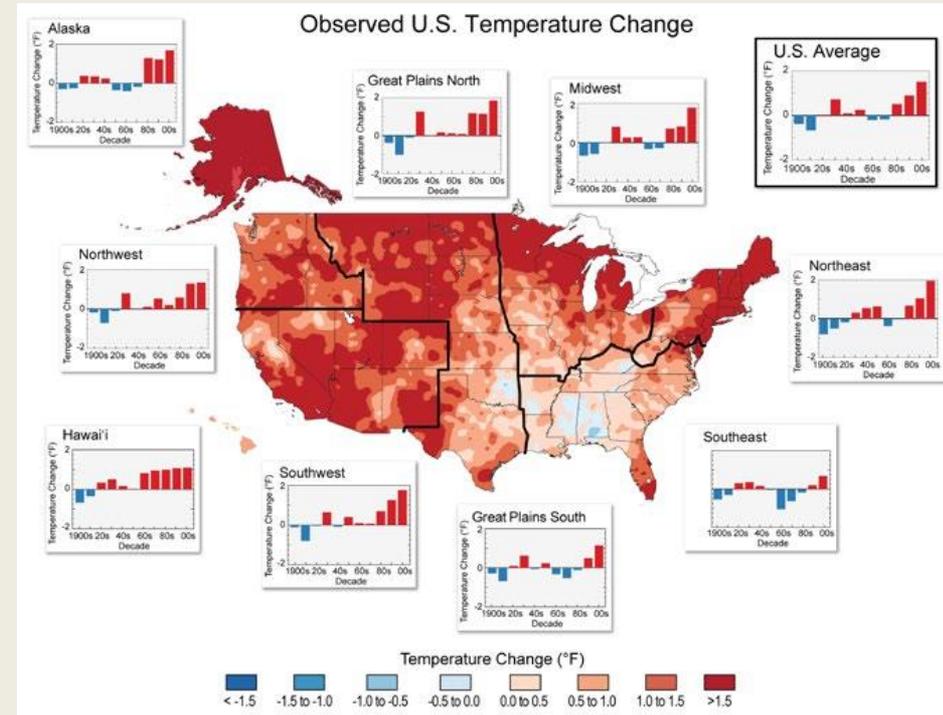
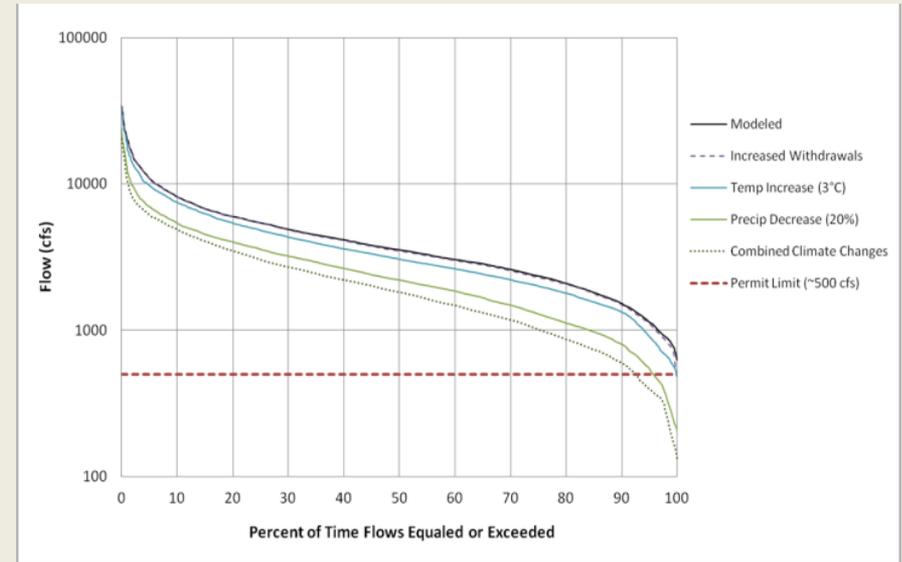
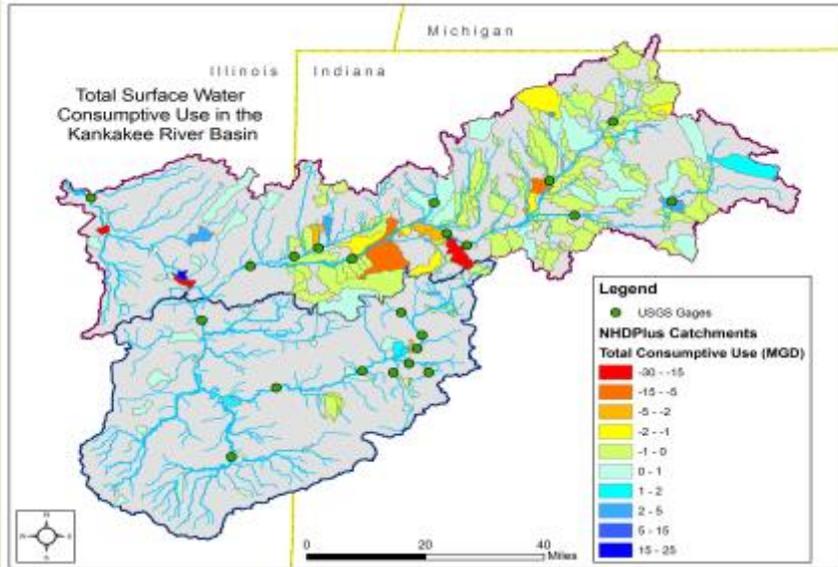


Figure source: National Climate Assessment

# Exelon Assessing Water Resource Changes

## Braidwood Hydrologic Study

- Developed watershed model to replicate observed flows in order to better predict future behavior over a 5,000 square mile watershed
- Piloted experimental forecast by coupling hydrologic and climate change models
- Conclusions:
  - Future water availability can be impacted by increased population density and upstream use
  - Ability to predict the effects of climate change and other factors on long-term water availability at the local level by downscaling climate models has limitations

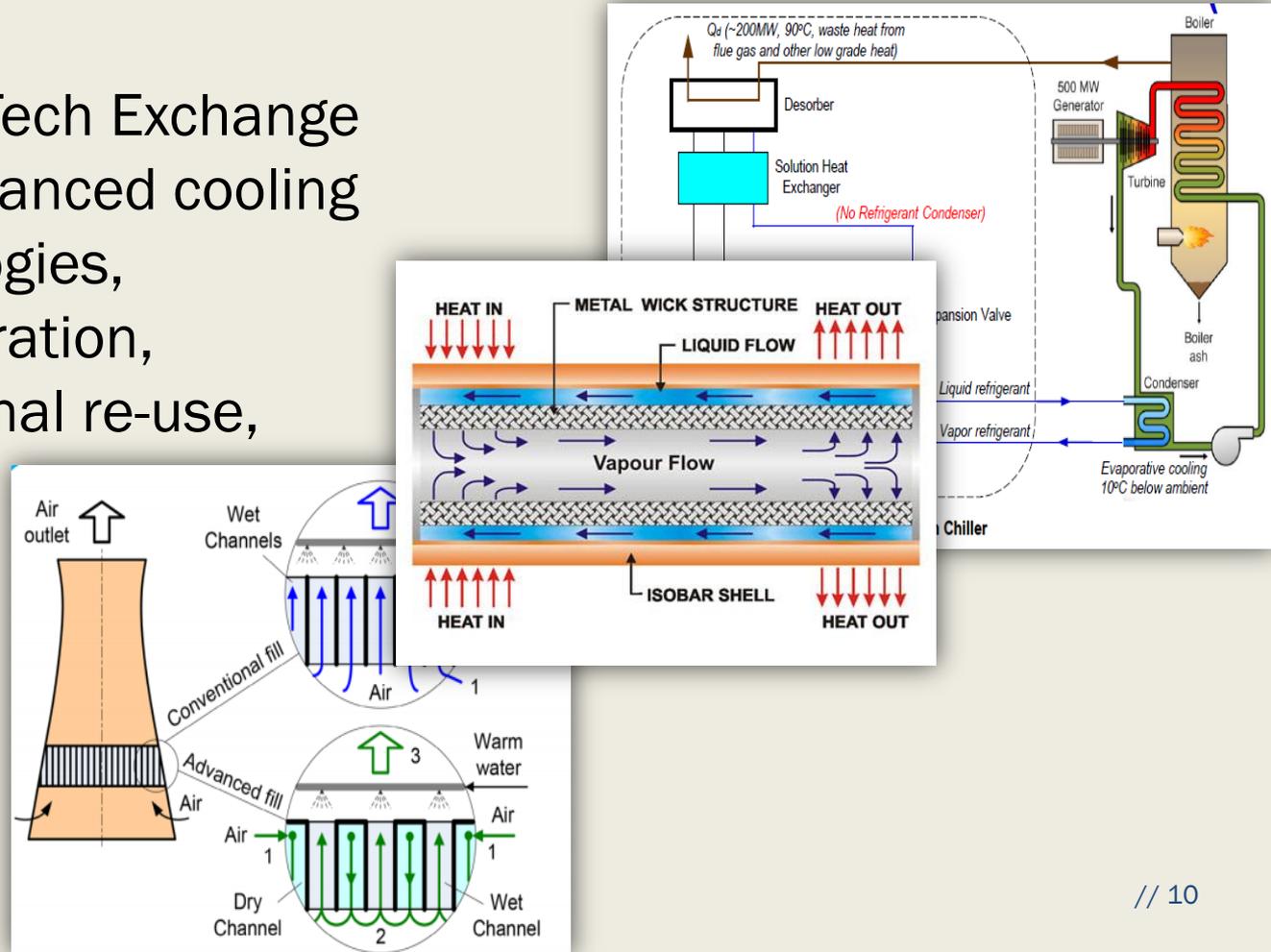


# Innovative Approaches for the Future

- Exelon Generation will build two new natural gas-fired generating units in Texas (~2,000 megawatts) cooled with air instead of water.
  - Water consumption savings of ~2.4 billion gallons/year
- Improved water chemistry monitoring has enabled withdrawal reductions by increasing cooling water cycles (reuse) at Exelon generation facilities.

# Innovative Approaches for the Future

- Exelon Water Tech Exchange evaluating advanced cooling water technologies, membrane filtration, non-conventional re-use, and others...





# Questions?

