

2017 Indiana Renewables Study & Preview of 2017 Forecast

Presented by:

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Presented to:

*Interim Study Committee on Energy, Utilities, and
Telecommunications
Indiana General Assembly*

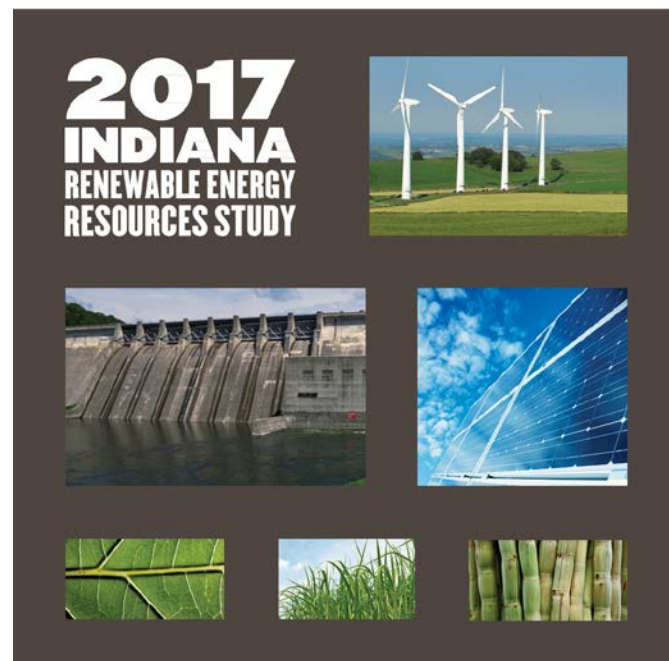
October 19, 2017

2017 Renewable Resources Study

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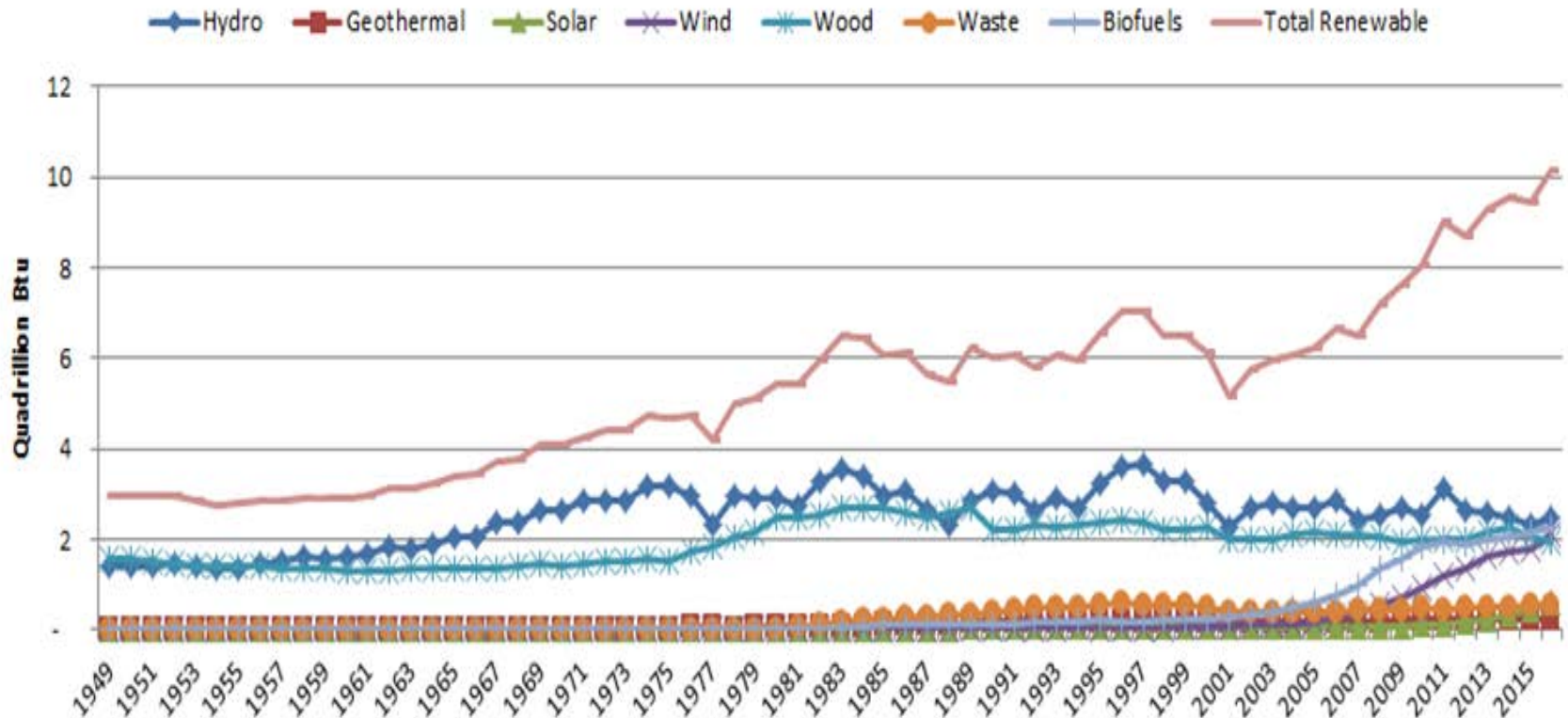
- Renewable energy trends
- Individual renewable resources
 - Wind
 - Energy crops
 - Organic waste
 - Solar/photovoltaics
 - Fuel cells
 - Hydropower
 - Algae

October 2017

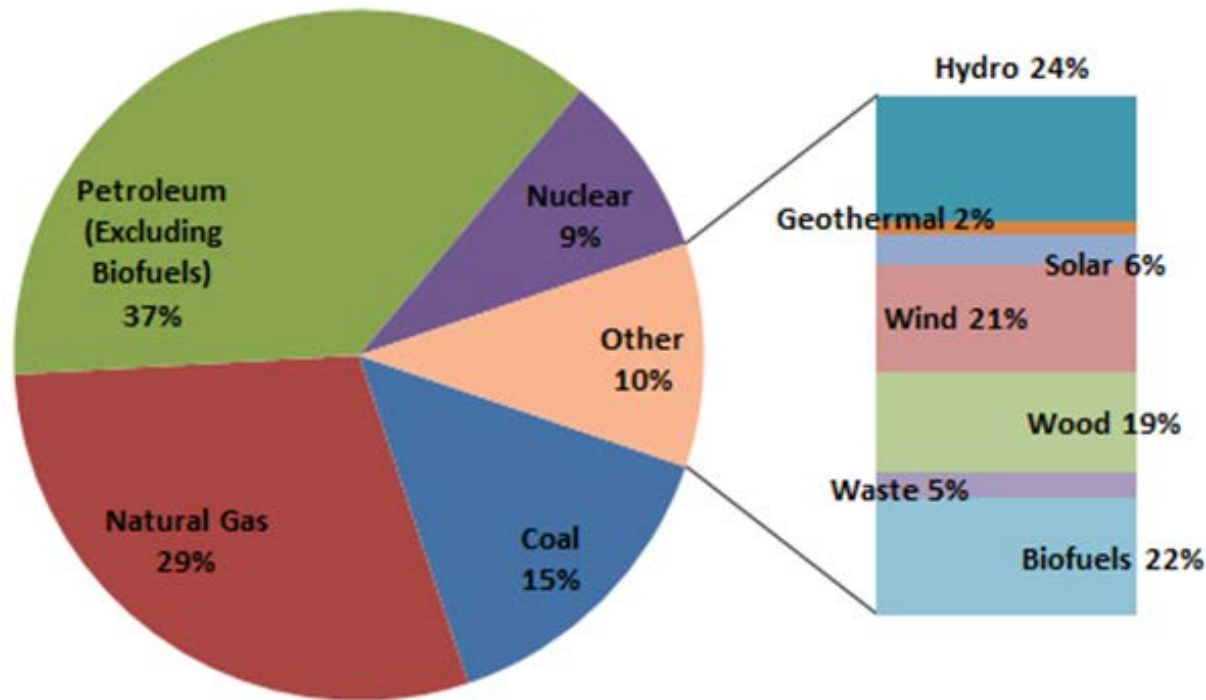


State Utility Forecasting Group | Energy Center at Discovery Park | Purdue University | West Lafayette, Indiana

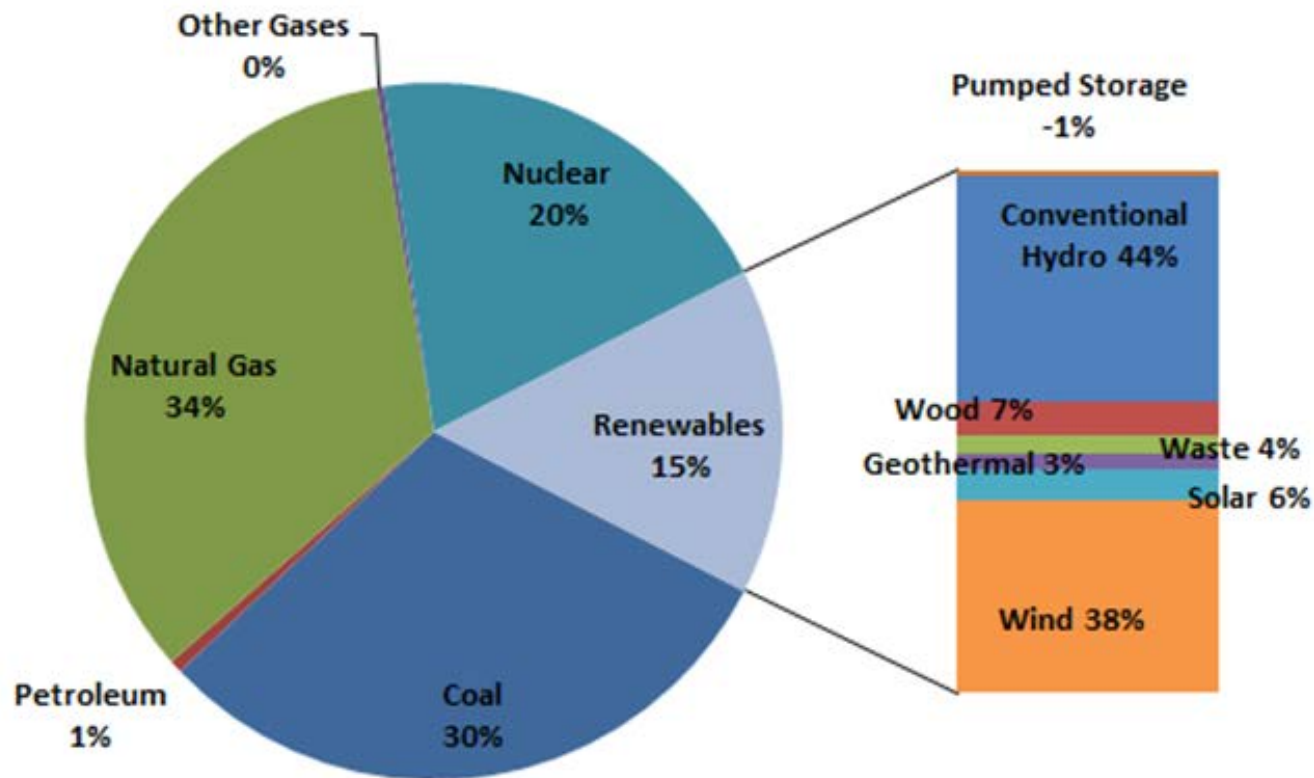
Historical Renewable Energy in the U.S.



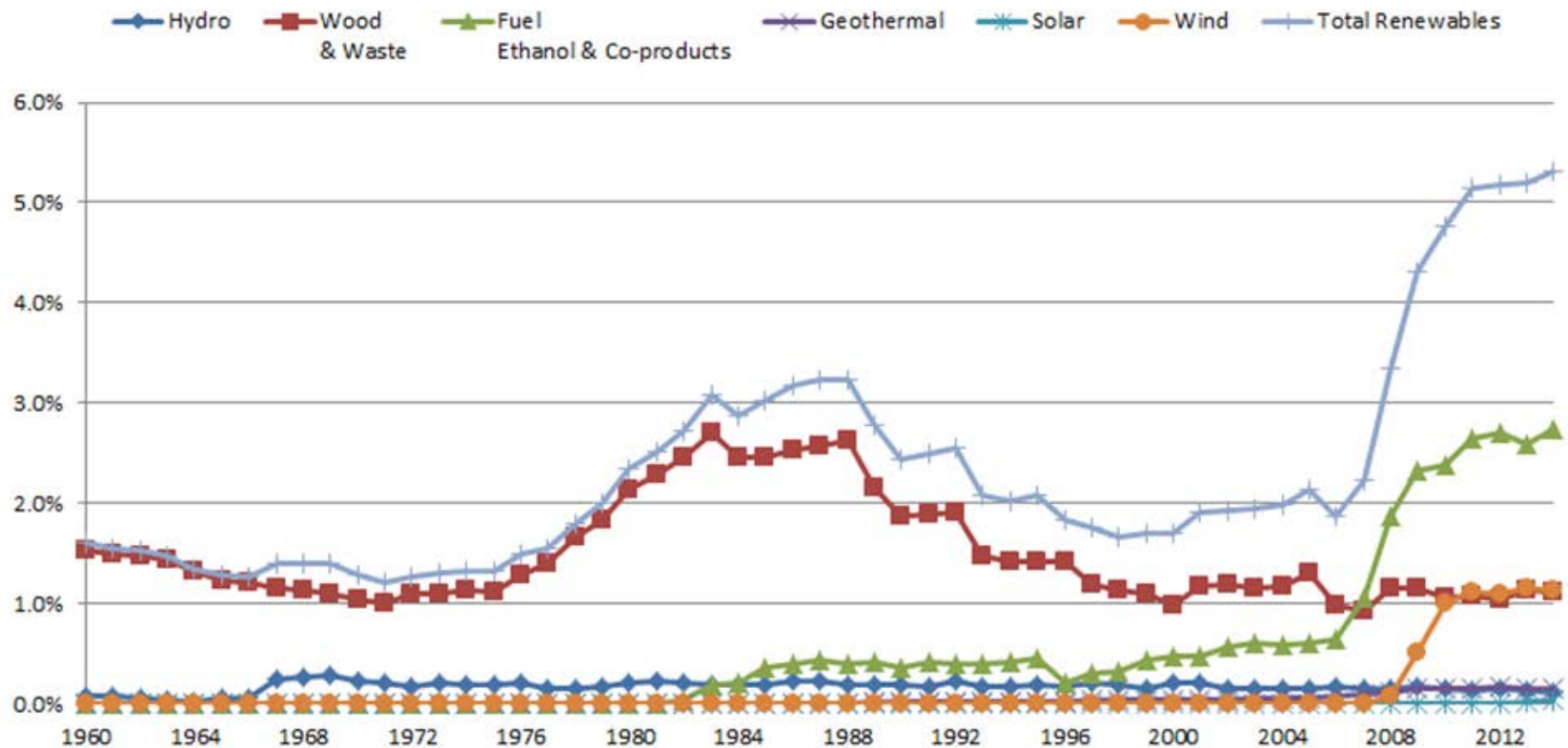
2016 U.S. Energy Consumption by Source



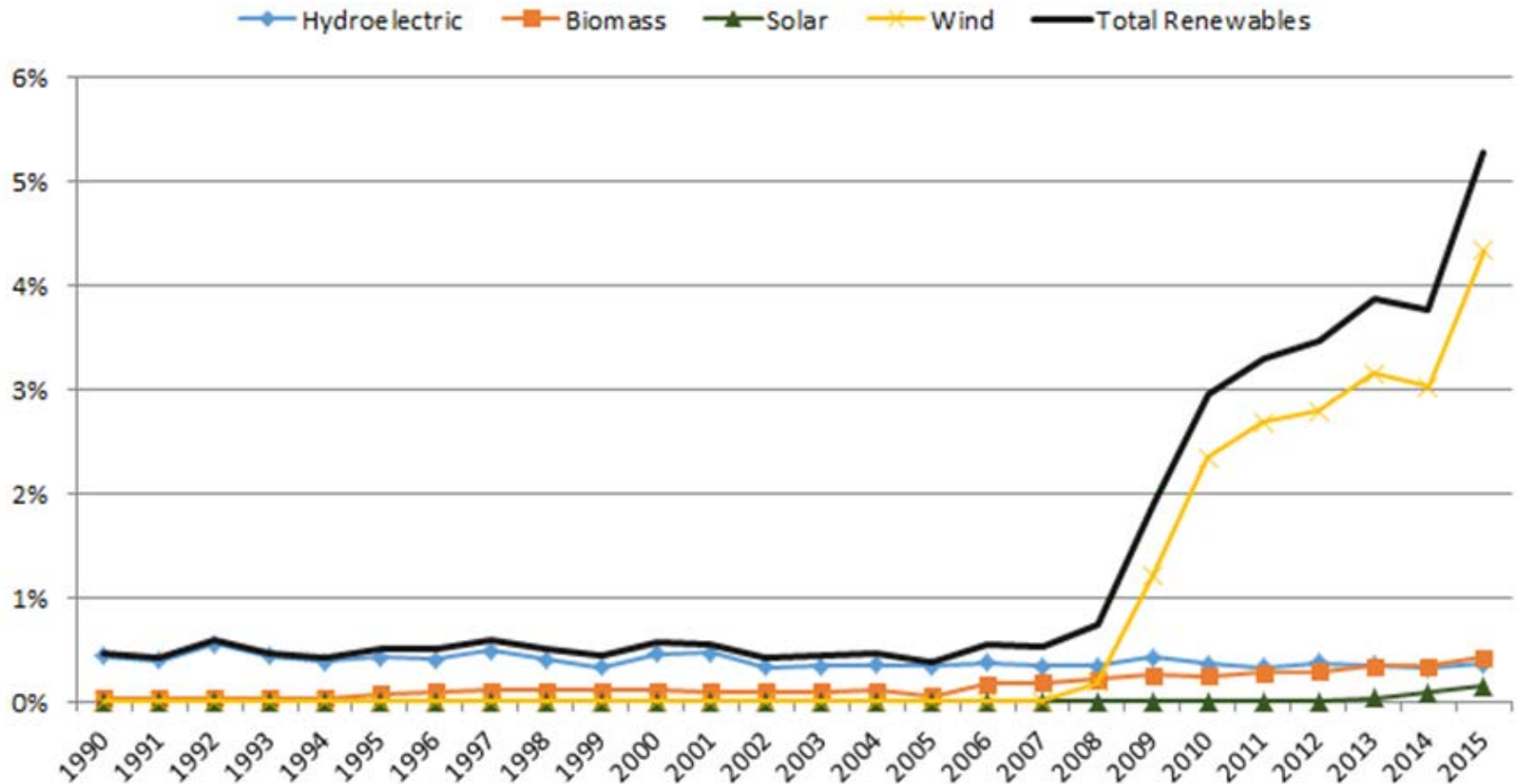
2016 U.S. Electricity Generation by Energy Source



Renewables Share of Indiana Total Energy Consumption

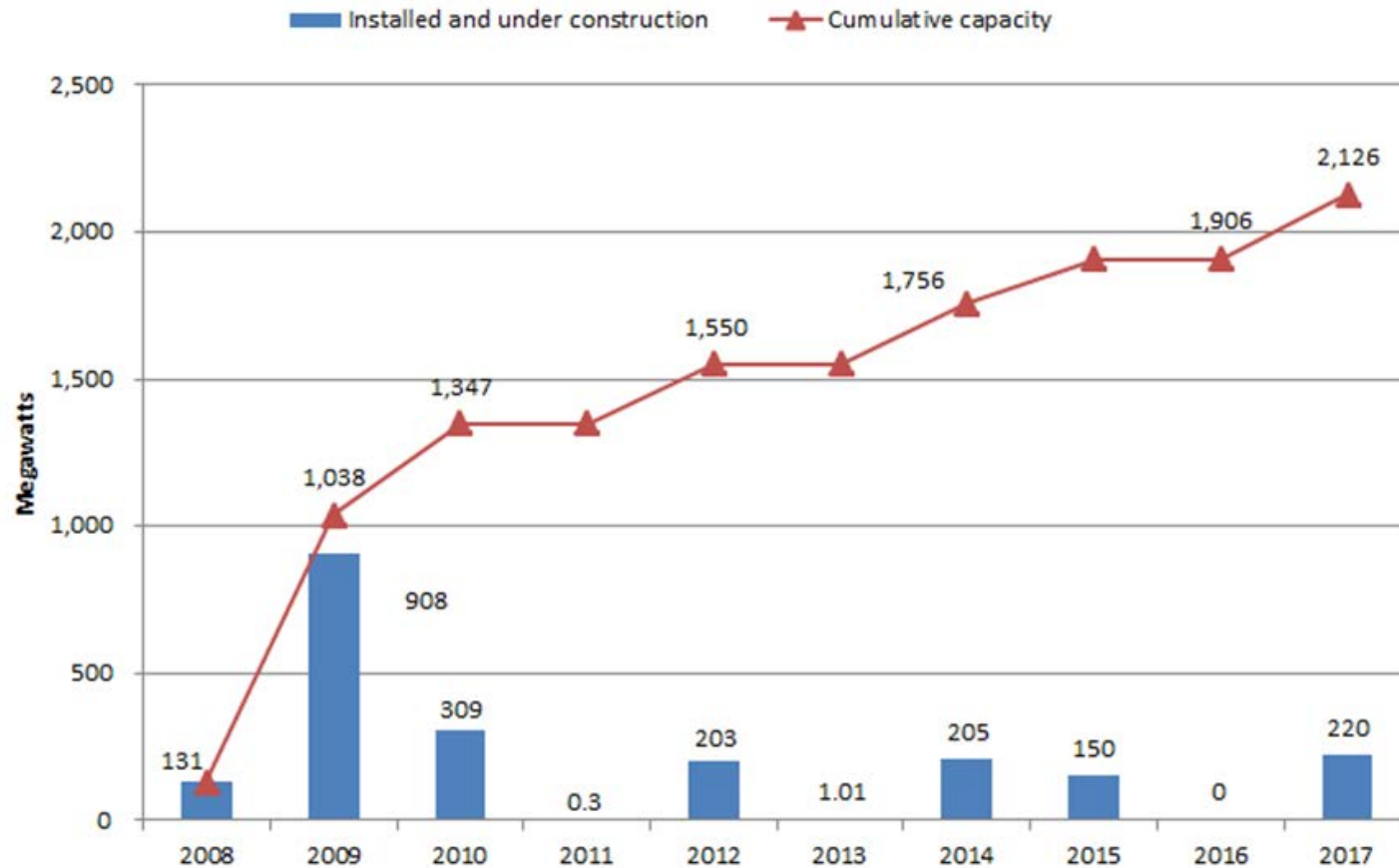


Renewables Share of Indiana Electricity Generation



Source: EIA

Wind Capacity



Sources: IURC, EIA

Wind

- 1,894 MW of utility scale wind in Indiana
- 220 MW under construction
- 198 MW proposed but not started
- Indiana utilities have agreements to purchase 1,281 MW of wind power
 - 866 MW from in-state
 - 415 MW from out-of-state

Organic Waste Biomass

- Until the recent increase in ethanol production, this resource was the largest source of renewable energy in Indiana
 - Primarily due to the use of wood waste
- It is the 2nd largest source of renewable electricity generation in the state
 - Landfill gas (79 MW)
 - Animal waste biogas (17 MW)
 - Wastewater treatment (195 kW)

Photovoltaics

- As of July, there was an estimated 213 MW of PV capacity in Indiana, almost all of it installed in the last five years
- Continued growth of utility scale PV is indicated
- Potential import tariffs from U.S. International Trade Commission ruling could impact future growth

Hydroelectric Power

- Until expansion of wind energy beginning in 2008, hydroelectricity was the largest source of renewable electricity in Indiana
- The 88 MW project at the Cannelton Locks on the Ohio River was completed in 2016
 - Most of the output will go to utilities outside Indiana

2017 Forecast Preview

- Our 2017 forecast has not been completed
 - expect to have a draft forecast later this month
- We do not expect to show a need for new resources until 2020
- In the long run, resource needs will be up somewhat from the 2015 forecast
 - planned retirements of existing units
 - higher reserve requirements from MISO and PJM

Further Information

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