2017 Indiana Renewables Study & Preview of 2017 Forecast

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2017 Renewable Resources Study

- Renewable energy trends
- Individual renewable resources
  - Wind
  - Energy crops
  - Organic waste
  - Solar/photovoltaics
  - Fuel cells
  - Hydropower
  - Algae
Historical Renewable Energy in the U.S.

Source: EIA
2016 U.S. Energy Consumption by Source

Source: EIA
2016 U.S. Electricity Generation by Energy Source

Source: EIA
Renewables Share of Indiana Total Energy Consumption

Source: EIA
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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