

2022 RENEWABLE RESOURCES REPORT

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Utilities, and Telecommunications of the Indiana
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Renewable Energy & Electricity Generation

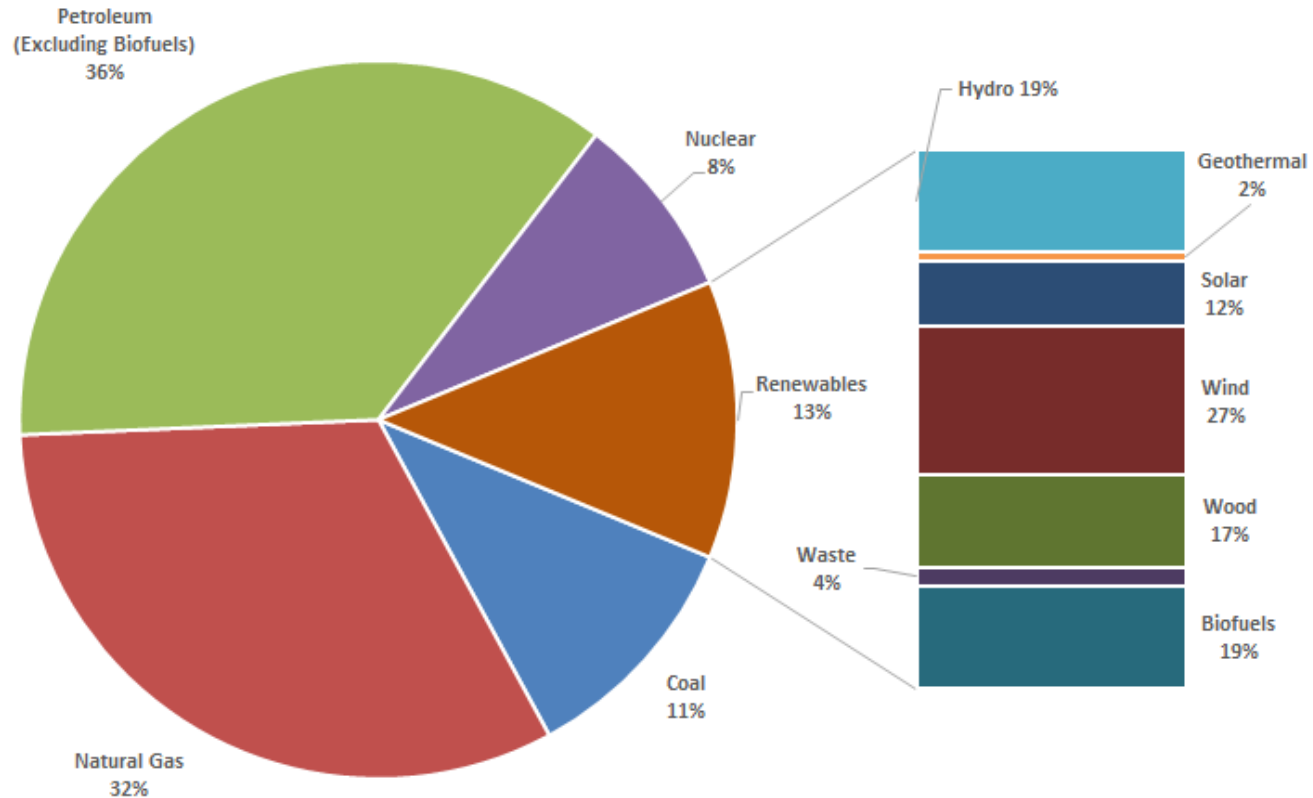
Renewables share of electricity generation is at its highest level

	U.S.	Indiana
Total Energy	13%	7.1%
Electricity Generation	20%	8.2%

- Biomass (including biofuels, wood, and waste to energy) is the largest source of renewable energy locally and nationally
- Wind is the largest source of renewable electricity

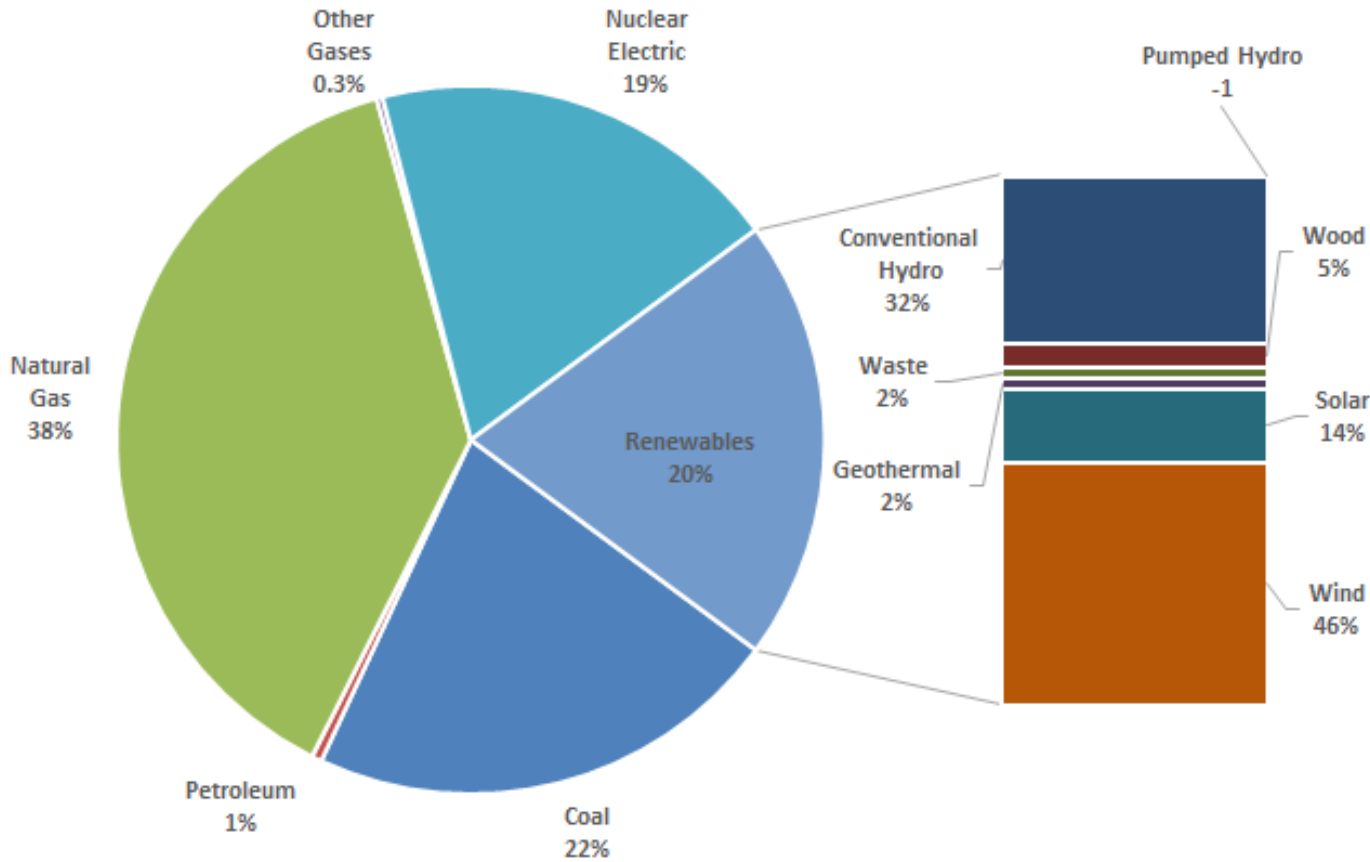
2021 U.S. Energy Consumption by Source

Major renewable contributors: hydro, wind, wood, biofuels



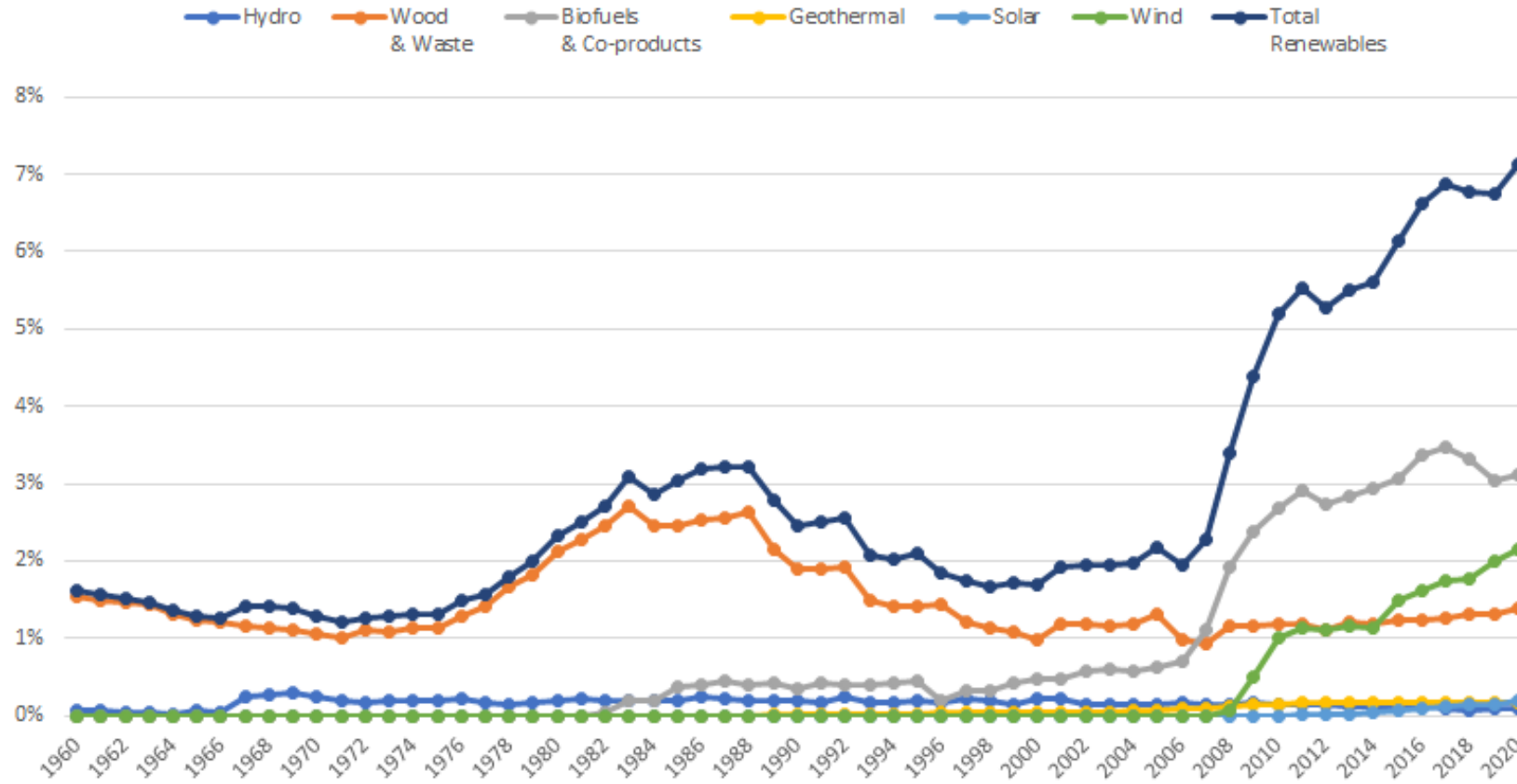
2021 U.S. Electricity Generation by Energy Source

Wind and hydro combined produce 80% of renewable electricity



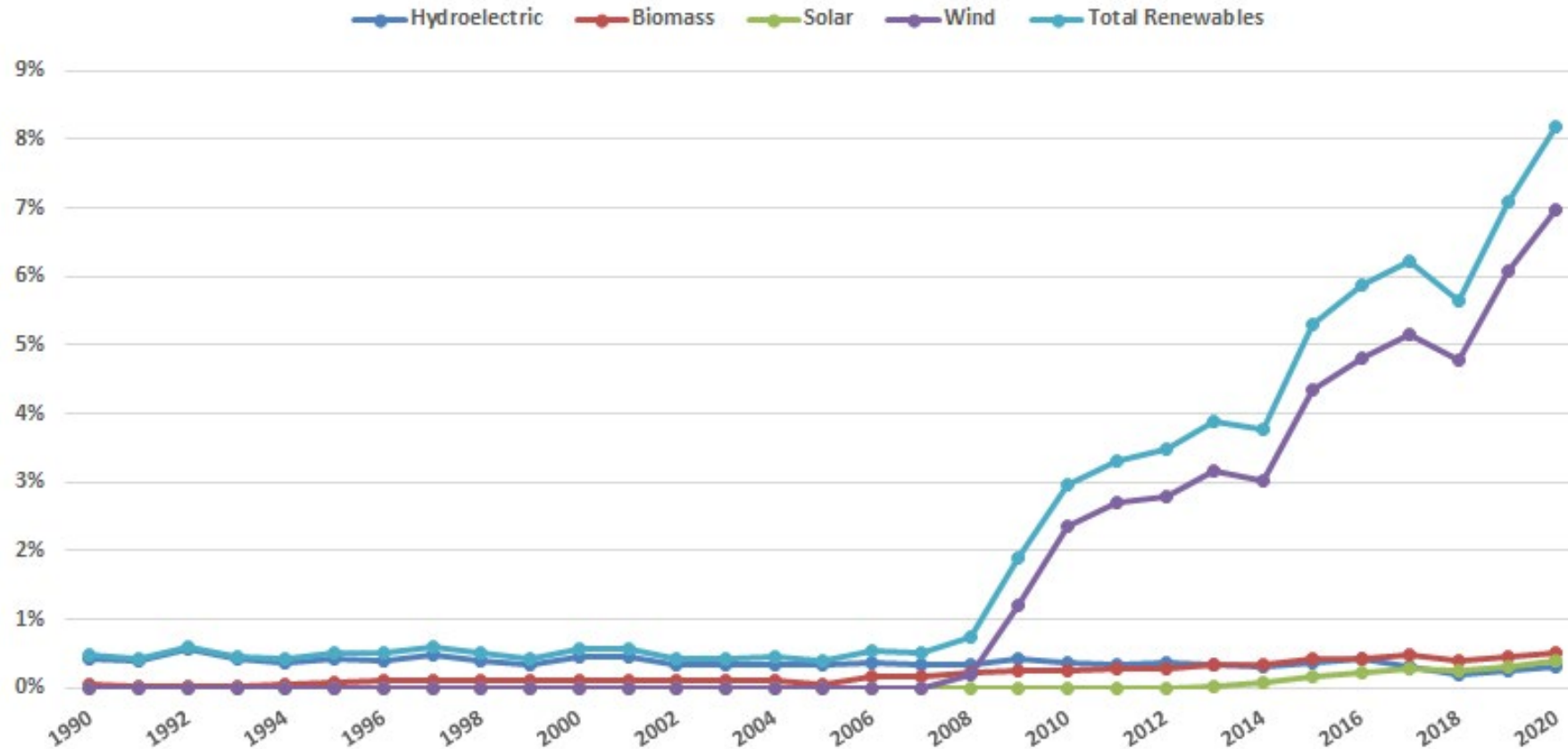
Renewables Share of Indiana Energy

Biofuels represent 44% of renewable energy in Indiana



Renewables Share of Indiana Electricity Generation

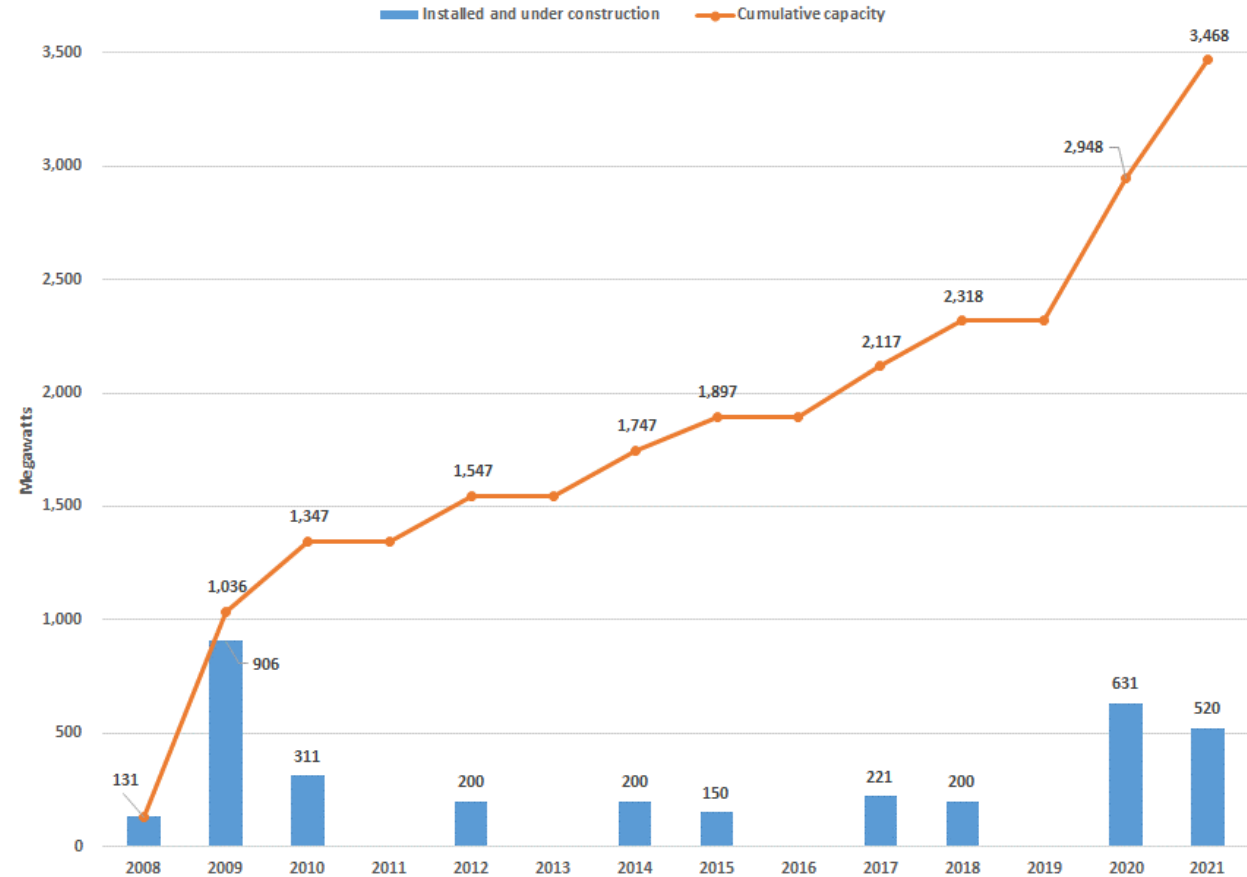
Wind provides 85% of renewable electricity in Indiana



Indiana Wind Generating Capacity

Indiana ranks 12th in the country for wind capacity

- Over 3.4 GW of capacity online by the end of the year
- Indiana utilities have purchased power agreements (PPAs) for about 2.1 GW of wind
- Amazon, Facebook and Walmart have 349 MW of virtual PPAs in Indiana



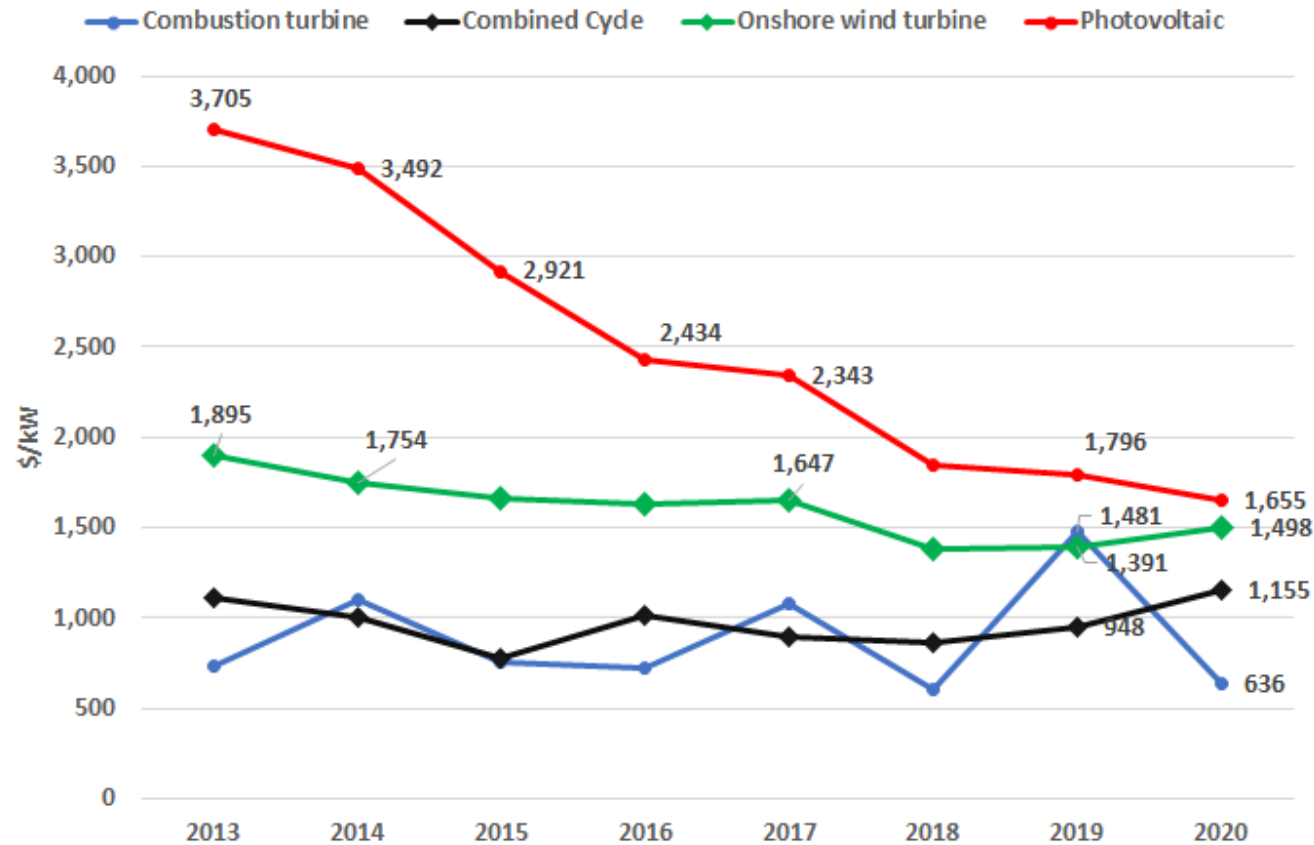
Indiana Photovoltaics Generating Capacity

PV is expected to grow substantially

- SUFG is aware of 682 MW of currently installed PV in Indiana
- 5 utility-scale solar farms totaling over 1.5 GW are under construction
- 25 additional projects totaling over 5.6 GW have received some form of IURC approval but have not commenced construction
 - Certificate of need or approval of PPA for Indiana utilities, waived jurisdiction for merchant facilities
- 6 merchant projects totaling 800 MW have pending cases before the IURC

Average Construction Costs on New Generation

Wind and solar costs continue to decrease



Organic Waste Biomass in Indiana

2nd largest source of renewable electricity

- Landfill gas
 - 20 landfills can generate about 70 MW

- Animal waste biogas
 - 6 digesters produce about 120,000 MWh annually
 - 5 digesters produce compressed natural gas for transportation use

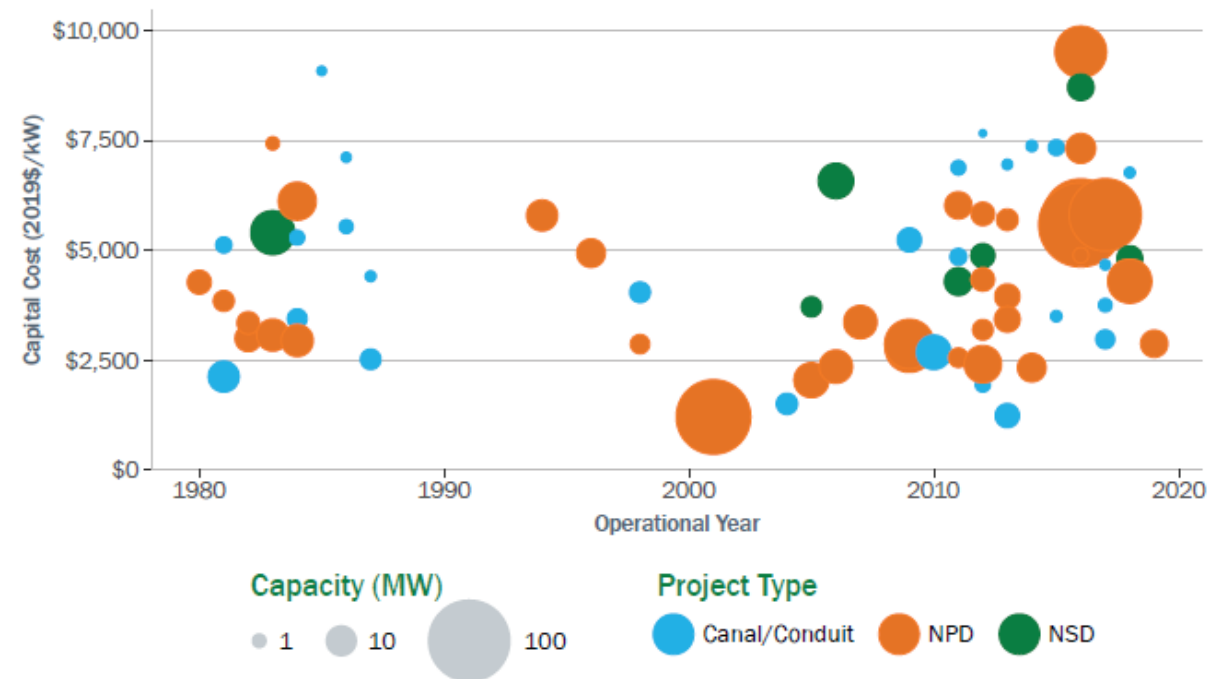
- Wastewater treatment
 - Cities of West Lafayette and Jasper

- Wood and wood waste

Hydroelectricity

Capital intensive; cost is very site specific

- 62 MW of existing hydropower in Indiana
- DOE estimates there is the potential for 454 MW of additional capacity at existing dams
 - 2/3 of that is at the Myers and Newburgh locks on the Ohio River



NPD = Non-powered dam; NSD = New stream-reach development

Underground Pumped Storage

Underground storage has been added per SEA 147 (2022)

- Underground pumped storage is an energy storage method that uses an upper and a lower reservoir, where one or both are located below ground
 - Capacity is generally a function of head (vertical distance between reservoirs) and flow rate
 - Energy stored is generally a function of head and volume of water
- SUFG is not aware of any operating underground pumped storage facilities in the world
- A number of feasibility studies have been performed that indicate that underground storage may be technically and economically feasible
- The Indiana Department of Natural Resources (DNR) indicates that there are 701 inactive underground mines and 388 inactive surface mines in Indiana

Inflation Reduction Act of 2022

The Inflation Reduction Act may have significant impacts on renewable and clean energy development

- Extension through 2024 of the production tax credit (PTC) and investment tax credit (ITC) and expansion to other technologies (storage, nuclear)
- Clean energy production tax credit (CEPTC) and clean energy investment tax credit (CEITC) beginning in 2025
- Projects that do not meet the prevailing wage and apprenticeship program requirements ineligible for full credit
- Bonus credits available for domestic content, energy community, environmental justice community, and low income economic development
- Incentives for electric/hydrogen-fueled vehicles, charging stations, hydrogen production, carbon capture & sequestration, domestic manufacturing, clean fuel production

THANK YOU

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