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

Customer Owned Generation: Tools and Transitions

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Customer Owned Generation Topics

- The tools that already exist
- Where Indiana is today
- What might happen tomorrow
- Views of others
- Benefits of Indiana's approach

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Tools in the Tool Box

- Indiana and federal law allow industrial customers to:
  - Install their own generation;
  - Operate that generation;
  - Buy services from utilities
    - Back-up power
    - Stand-by power
    - Maintenance power
  - Sell electricity to the utility

Indiana Law allows energy customers to serve themselves without violating the law.

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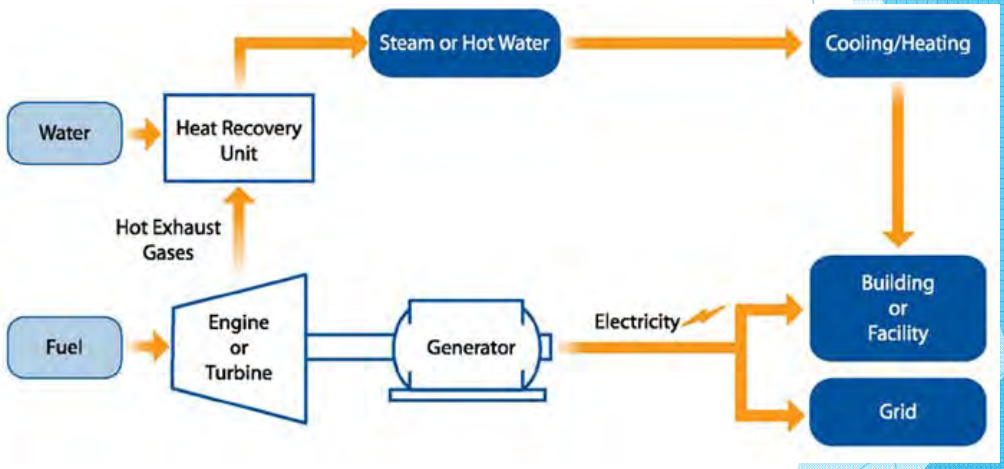
The Tools: Qualifying Facilities

- Established under US law
- A Co-generation facility (also called Combined Heat & Power or CHP)
- Plants that produce both
  - Useful thermal energy (e.g. steam/heat)
  - Electric energy (power)
- Utilities have four obligations:
  - "Must purchase" excess power
  - "Must sell" energy or capacity
  - "Must interconnect" CHP to grid
  - "Must transmit" power to other utilities



Source: U.S. EPA

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The Tools: Qualifying Facilities
Indiana Law

- Indiana has implemented federal law by:
  - Encouraging development of solar, wind, waste management, cogeneration and small hydro and other forms of generation
  - **For plants less than 80MW** [1] **:**
    - Requires that utility sign long term contract to purchase excess electricity or to transmit it to another electric utility
      - Must be done under IURC approved rates
    - Requires that utility provide supplemental and backup power
      - Must be done under IURC approved rates

[1] FYI: 80 MW could serve approximately 58,000 homes.

The Tools: Private Generation

Indiana Law

- In 2014, General Assembly added Private Generation.
  - **For cogeneration plants more than 80MW** [1]
    - Requires that utility interconnect
    - Requires that utility provide back-up, maintenance and supplemental power
      - Must be done under IURC approved rates

- Since 2014 no utility customer has taken advantage of this option.

[1] FYI: 80 MW could serve approximately 58,000 homes.

Customer Owned Generation:

What already exists in Indiana Today?

Typical size of a Utility Scale Power Plant

Coal Fired Power Plant
500 MW

Natural Gas Power Plant
250 MW

Windmill
2.5 MW

Customer Owned Generation installed by large customers:

42 separate Generating Plants
2,300 MW

With some under construction currently

Source: INDIEC

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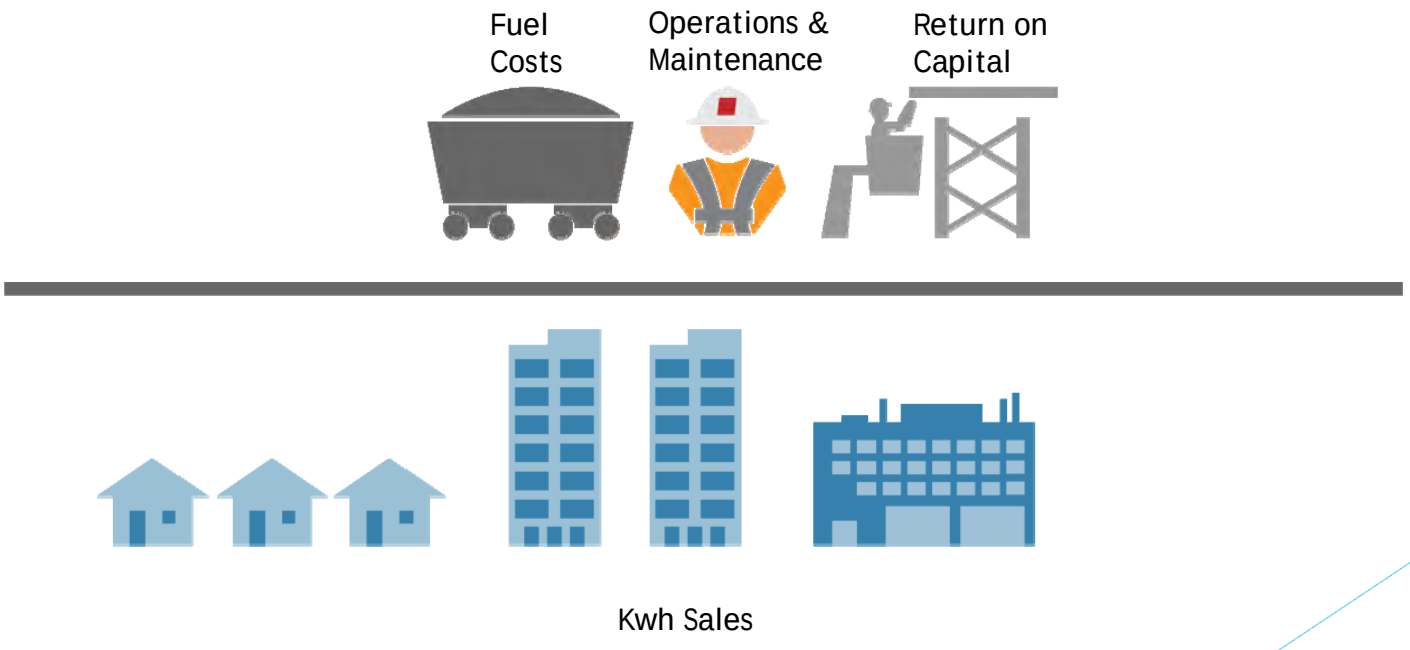
What Happens if Customers Build Their Own Power Plants

How are Rates Set



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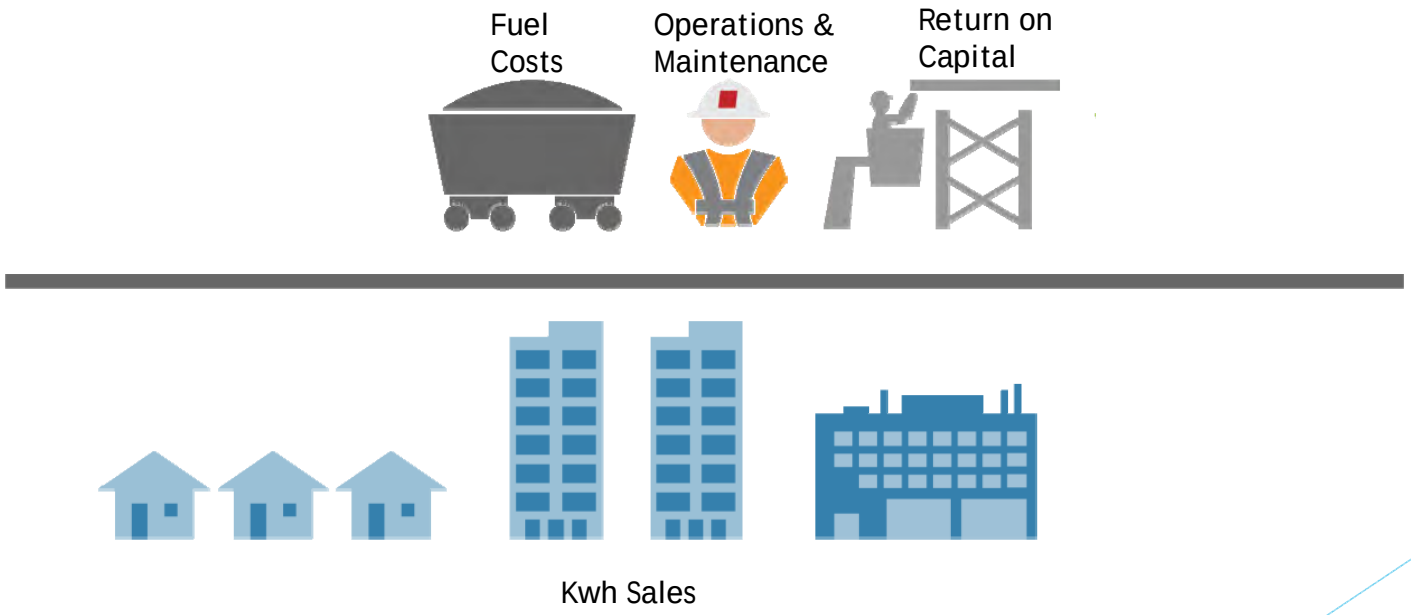
What Happens if Customers Build Their Own Power Plants

Same costs, but fewer kw/h Sales – Rates rise for all remaining customers



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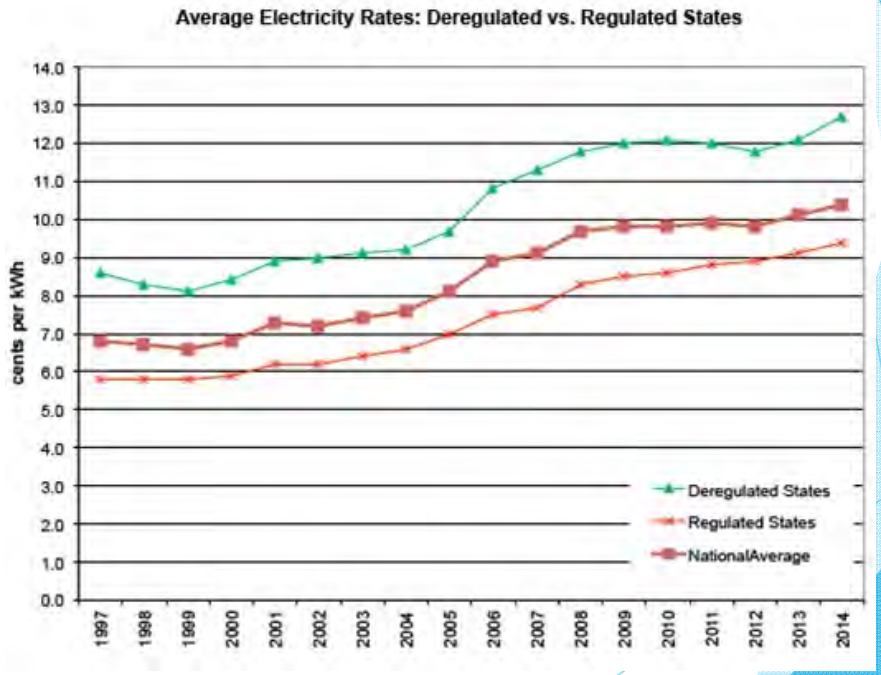
Why?

- Unanswered questions:
  - Must the utility still invest in generation to serve the industrial customer if the customer's generation facility does not operate?
  - Who pays for investments made by the utility to serve an industrial customer that stops paying for service before the investments have been fully paid for?
  - Can industrial customers "game" the system by building their own generation and switching back to the utility if the economics change?
  - How can a utility ensure it will have adequate generation for existing customers and economic development opportunities if other industrial customers can switch between utility service and customer owned generation?
  - What is the utility's obligation if there is a shortage of power?

Indiana has a good approach to Utility Regulation

- Other states tried deregulation
  - But they considered all the questions as a part of their move to deregulation
  - But not all approaches proved adequate – in fact 11 states have backed away from deregulation
- No state has adopted deregulation in the last 15 years
- 11 of the 24 who did adopt deregulation have retracted from deregulation
- Indiana prices for electricity are lower than deregulated states in almost all cases.



Source: US Energy Information Administration

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Comments:

Ohio Governor John Kasich said:

The ideological effort to deregulate, I'm not so sure it's the smartest thing we've done in the state of Ohio, but we are where we are, and we can't go backwards now. So it's onward in a deregulated environment, and we've got to figure it out.

Indiana has a good approach to Utility Oversight

Exclusive service areas

Duty to serve all

Cost of service pricing

Resource planning process/Reliability

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Indiana's approach to Utility Oversight supports innovation in serving customers

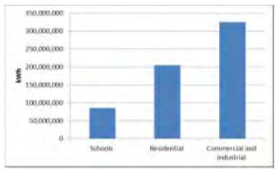
Built or purchased over 900 MW of wind generation

Building transmission for reliability and power delivery

Built or purchased solar power for over 4,000 homes

Utility scale battery storage

Implementing new technologies to replace or upgrade



Energy efficiency savings programs are reducing energy usage

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Customer Owned Generation

- Customers have many options today.
  - Some customers are using those options right now.
- Some of these options are very new.
- There are risks to expanding the regulatory framework
  - Small customers are often hurt by higher prices
- No need to expand ways for some industrial customers to leave a utility.

Thank You

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