Environmental justice issues related to energy production and consumption – national perspective and Indiana impact

Presentation for Richard G. Lugar Center for Renewable Energy

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Demographic characteristics of people living near power plants - United States

Demographic characteristics of people living near power plants - Indiana

Rest of talk.

1. Introduce idea of environmental justice and summarize policy history.
2. Explain why it matters.
3. Examine what environmental justice and coal power generation looks like in Indiana.
What is environmental justice?
EPA defines environmental justice as:

the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income, with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies.
What is environmental justice?

Policies to address?

1. U.S. pollution control laws do not directly address equity.

2. President Clinton signed Executive Order in 1994 requiring federal agencies to address environmental justice in their programs, policies, and activities.


Why does it matter?
Why does environmental justice matter?

Pollutant Emissions – Average NO$_2$ exposure (ppb)

Why does environmental justice matter?

Health disparities—Asthma rates among children

Source: American Lung Association, 2017
What does environmental justice and coal power generation look like in Indiana?
Percent minorities living near Indiana coal plants

What does EJ and coal power generation look like in Indiana?
What does EJ and coal power generation look like in Indiana?

Percent low-income living near Indiana coal plants

[Graph showing percent low-income living near Indiana coal plants with various power plants indicated.]
Geographic concentration in southwestern Indiana

Source: Center for Public Integrity, 2016
What does EJ and coal power generation look like in Indiana?

### National ranks for Indiana coal plants by pollutant

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<td>(Compared to power plants)</td>
<td>(Compared to all facilities)</td>
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<td>Rockport (6th)</td>
<td>Petersburg (3rd)</td>
<td>Gibson (4th)</td>
<td>Gibson (24th)</td>
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<td>Gibson (15th)</td>
<td>Rockport (5th)</td>
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<td>Petersburg (29th)</td>
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<td>Petersburg (20th)</td>
<td>Harding (22nd)</td>
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Sources: EPA, eGrid, 2017; EPA Toxics Release Inventory, 2017
What does EJ and coal power generation look like in Indiana?

Particulate matter pollution

Figure 4A-2. Modeled PM2.5 Concentrations Attributable to EGUs in 2016 (Annual Mean, in μg/m³) (Source: BPT TSD)

Ozone pollution

Figure 4A-6. Modeled Average Ozone Concentrations Attributable to EGUs in 2016 (Daily 8-hour maximum, May-September, in ppb)


What does EJ and coal power generation look like in Indiana?
Some other things to think about.

1. Coal ash disposal.
2. Releases of toxics to waterways.
Final points:

1. When thinking about transition to clean energy, costs and benefits not equally distributed.

2. Many environmental justice benefits to be had.
Thank you.

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Percent minority living w/in 3 miles

Why does EJ and power generation look like in Indiana?