Flint
Protecting Public Health

Is the right data being collected to know if health is at risk?

If health is at risk, are we acting timely to address it?

Is the data being shared with people who deserve to know?
Available Compliance Options

Additional options:
- Demand-side EE
- New nuclear/upgrades to existing nuclear
- Combined Heat & Power
- Biomass
- Natural gas co-firing/convert to natural gas
- Transmission & distribution improvements
- Energy storage improvements
- Retire older/inefficient power plants
- Trading
### Iowa Leads U.S. in In-state Wind Generation

<table>
<thead>
<tr>
<th>State</th>
<th>Installed Capacity (MW)</th>
<th>Cumulative (end of 2014)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Texas</td>
<td>1,811</td>
<td>Texas 14,098</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>648</td>
<td>California 5,917</td>
</tr>
<tr>
<td>Iowa</td>
<td>511</td>
<td>Iowa 5,688</td>
</tr>
<tr>
<td>Michigan</td>
<td>368</td>
<td>Oklahoma 3,782</td>
</tr>
<tr>
<td>Nebraska</td>
<td>277</td>
<td>Illinois 3,568</td>
</tr>
<tr>
<td>Washington</td>
<td>267</td>
<td>Oregon 3,153</td>
</tr>
<tr>
<td>Colorado</td>
<td>261</td>
<td>Washington 3,075</td>
</tr>
<tr>
<td>North Dakota</td>
<td>205</td>
<td>Minnesota 3,035</td>
</tr>
<tr>
<td>Indiana</td>
<td>201</td>
<td>Kansas 2,967</td>
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<tr>
<td>California</td>
<td>107</td>
<td>Colorado 2,593</td>
</tr>
<tr>
<td>Minnesota</td>
<td>48</td>
<td>North Dakota 1,886</td>
</tr>
<tr>
<td>Maryland</td>
<td>40</td>
<td>New York 1,748</td>
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<tr>
<td>New Mexico</td>
<td>35</td>
<td>Indiana 1,745</td>
</tr>
<tr>
<td>New York</td>
<td>26</td>
<td>Michigan 1,531</td>
</tr>
<tr>
<td>Montana</td>
<td>20</td>
<td>Wyoming 1,410</td>
</tr>
<tr>
<td>South Dakota</td>
<td>20</td>
<td>Pennsylvania 1,340</td>
</tr>
<tr>
<td>Maine</td>
<td>9</td>
<td>Idaho 973</td>
</tr>
<tr>
<td>Ohio</td>
<td>0.9</td>
<td>New Mexico 812</td>
</tr>
<tr>
<td>Massachusetts</td>
<td>0.6</td>
<td>Nebraska 812</td>
</tr>
<tr>
<td>Rest of U.S.</td>
<td>0</td>
<td>South Dakota 803</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>4,854</td>
<td><strong>TOTAL 65,877</strong></td>
</tr>
</tbody>
</table>

*Based on 2014 wind and total generation by state from EIA's Electric Power Monthly.*

#### Nine States Exceed 12% Wind Energy

- Iowa top 3 in 2014 installed capacity
- 23 states had >500 MW of capacity at end of 2014 (16 > 1 GW, 10 > 2 GW)
- 2 states have >25% of total in-state generation from wind (9 states > 12%)
Supreme Court Stays the Clean Power Plan

- On February 9, 2016, the Supreme Court stayed implementation and enforcement of the Clean Power Plan pending judicial review. The Court’s decision was not on the merits of the rule.
- EPA firmly believes the Clean Power Plan will be upheld when the merits are considered because the rule rests on strong scientific and legal foundations.
- For the states that choose to continue to work to cut carbon pollution from power plants and seek the agency’s guidance and assistance, EPA will continue to provide tools and support.
- EPA will make additional information available as necessary.

Key Points

- Implementation and enforcement are on hold.
- Initial submittals not required on September 6, 2016.
- EPA will continue to work with states that want to work with us on a voluntary basis.
CPP Legal Issues - Merits

1. Because EPA regulated air toxics at power plants under Section 112 of CAA ("MATS"), is it permissible to also regulate GHG under Section 111?

2. Is it permissible to include “beyond fenceline” controls as a “best system of emission controls” in a Section 111 rule?
Clean Water Rule Litigation

Three phases:

1. Stay: 6th Circuit has stayed the rule.
   ◦ “Petitioners have demonstrated a substantial possibility of success on the merits”

2. Jurisdiction: 6th Circuit has ruled it has jurisdiction.
   ◦ Next: En banc rehearing? SCOTUS?

3. Merits: ??
Other Rulemaking Issues: Running Through the Tape

112r revisions

CASPR – update to address 2008 standard (rule based on 1997 standard)

MATS - Rulemaking to address S. Ct decision – late spring

Regional Haze - summer

State Authorization for new UST Rules

GHG rule for heavy duty vehicles - summer

NAAQS

- No new NAAQS likely
- SO2 Designationss
- Ozone: New standard being litigated
Bridgeton Landfill called ‘Dirty Bomb,'

BRIDGETON, Mo. (KSDK) - Some environmentalists are now calling it a "dirty bomb." It's at the core of a heated debate in Bridgeton on whether or not a landfill poses a serious radioactive risk to the public.

The Bridgeton Landfill is emitting underground heat and giving off a nasty, permanent stench in the area. The risk may be that it sits right next to the West Lake Landfill, a known storage site to radioactive materials from the early 1970s.
Contaminated Sites: Vapor Intrusion
Nutrients

Iowa NPDES Withdrawal Petition

MO Nutrient Criteria

Iowa Tile Drain Case
Future National Enforcement Initiatives: 2017-19

Existing NEIs that Continue:

- NSR/PSD: coal, glass, acid plants, cement
- Natural Gas Energy Extraction
- CAFOs
- Raw Sewage (CSOs/SSOs)
Interstate/Alliant Settlement

- Company’s coal-fired power plants to invest $620 million to reduce SO2 and NOx emissions by 32,000 tons per year.
Mitigation projects

UTILITY-SCALE PHOTOVOLTAIC ARRAY

ANAEROBIC MANURE DIGESTION

BACON HILLS FARMS IN NEBRASKA - PHOTO BY DEAN HOUGHTON
Ameren Litigation
Expanded NEI: Cutting Toxic Air Pollution

Approximately 30 inspections in FY 16:

- Styrene and TCE/PCE emitters
- VOC emitters in high population areas
- Tank farms
- Landfills
- Sources contributing to Ozone, SO2, and Lead attainment concerns
- Electric arc furnaces
- Glass manufacturing
New NEI: Industrial Wastewater Dischargers

Reduce sources of water body impairment: nutrients, metals, organic enrichment

Focus on five sectors:

- Chemical Manufacturing - 139 facilities
- Food Processing – 198 facilities
- Mining – 229 facilities
- Primary Metal Manufacturing - 16 facilities
Level Playing Field and Deterrence: 

*U.S. v STABL*

- Pretreatment case involving Lexington, NE meatpacker
- District Court: $1.15M economic benefit, $1.15M gravity
- “Stabl’s violations were serious . . . the Court concludes that a civil penalty in an amount twice Stabl’s economic benefit will serve the interests of justice and help deter others from engaging in similar non-compliance
- *8th Circuit affirmed, August 27, 2015*
New NEI: 112r and General Duty Clause

Reduce risk of accidental releases at Industrial and Chemical Facilities
Focus on high-risk facilities in five sectors:

◦ Refineries
◦ Chemical Manufacturing
◦ Ammonia Refrigeration
◦ Fertilizer Distribution
◦ Gas Processing Plants
Barton Solvents Settlement
Core Enforcement: Reduce Stormwater Runoff Pollution

- Scrapyards/recyclers
- Railyards
- Sand and gravel
- DOTs
Stormwater Settlement Example: Auto Salvage Facility in Northwest Iowa

- Construct wall between facility and park to stop runoff/debris from getting into park

- Reconfigure facility to move most operations and materials under roofs

- Enlarge stormwater retention pond, pipe stormwater away from park area

- $120,000 penalty

- Mitigation: Clean debris from the park and the banks of the pond, followed by laying sod in park.
Core Enforcement:  SPCC and FRP

Bulk storage facility in Willow Springs, Missouri

Violations:
- No Facility Response Plan
- Inadequate secondary containment
- Stormwater violations

Settlement:
- Five foot berm
- $25k cash penalty
- $180k of SEPs
  - Leak detection w/remote notification
  - Emergency response equipment for locals
Core Enforcement:
TSCA Pb Paint Rule Enforcement
Core Enforcement: RCRA

In FY 2015, EPA conducted 183 RCRA inspections:

- About 50% of those in Iowa
- 75% of those inspections (138) documented RCRA violations
- 12 penalty actions
- Total Penalties: Approx $350,000

Vast majority of facilities found to be in violation returned to compliance without formal enforcement or penalty
RCRA Enforcement Priorities

Under-reporters/non-filers

Large TRI Reporters

Facilities subject to Subparts BB/CC (RCRA Tanks)

Pesticide Mfg. & Formulators
SEPs in lieu of Cash Penalties

Penalty offset depends on project quality

Most common projects:
  Conservation land
  Stream restoration
  Green infrastructure
  Energy Efficiency
  Emergency Response Equipment

Some limitations
Next Generation Compliance

THE ROAD AHEAD
Compliance Challenges

- Pollution
- Noncompliance
- Information gaps
- Single facility inspection model
- Larger universe
- Budgets declining
Real Time Data + Transparency

= 

Changed Behavior
Next Gen Enforcement Tools

- Advanced Monitoring
- E-Reporting
- Transparency
- Third Part Verification
Welcome to the Village Green Project

a research effort to discover new ways of measuring air quality and weather conditions in community environments.

- Measuring and communicating on the spot air quality and weather conditions for research and awareness
- Developing small and rugged data collection systems that can be powered by the wind and sun
- Partnering with communities to pilot test the new technology in outdoor community spaces

Most Recent Observations

KANSAS CITY, KS

43 Ozone

89.1 °F

72.3%

3 PM2.5

4.3 mph SE

observed: 8:32 am EDT

Explore Kansas City, KS
Advanced Monitoring

An example from flaring enforcement

U.S. Environmental Protection Agency
Incorporating Next Gen in Settlements

*Example* - CAA settlement with BP Whiting (Indiana)

- Fence line monitors located in consultation with EPA and community
- Data reported weekly on public web site
  - Next slide)
- Facility must review data with community at their request
The air monitoring network is shown in the map below. There are four air quality and meteorological monitoring stations shown in white lettering. These stations (which are referred to as “fixed stations”) monitor the air for sulfur dioxide, hydrogen sulfide, total reduced sulfur (TRS) compounds, benzene, toluene, pentane, and hexane along with local weather conditions. In addition, adjacent to the fixed stations are four “open path” monitors. Open path monitors send ultra-violet light beams along a path. Chemical compounds are measured over the distance the path covers. The open path monitors are shown in red on the map. The open path monitors measure benzene, toluene, xylene, carbon disulfide, carbonyl sulfide, and ozone.

Click here for larger image.
EPA Rule for Petroleum Refineries

- Refineries must conduct ambient fenceline monitoring
- Data available to public
- Action level exceedances require corrective measures
Coal Ash Rule

- Transparency
- Third Party Certifications