HOUSE ENERGY AND NATURAL RESOURCES COMMITTEE UPDATE

JANUARY 16, 2014

TOM GROSS, BUREAU OF AIR, KDHE

Kansas
Department of Health and Environment

GHG Regulation History

- **May 2007:** US Supreme Court ruled that GHGs are air pollutants covered by the Clean Air Act
- **December 2009:** EPA issued "Endangerment Finding"
- **April 2010:** EPA issued tailpipe rule establishing GHG emission standards for light-duty vehicles
- **May 2010:** EPA issued "Tailoring Rule," requiring permitting for the largest GHG sources…..(five so far in KS)
- **April 2012:** EPA proposed GHG standards under the New Source Performance Standards for new power plants.
- **June 2013:** President Obama's Climate Action Plan
- **September 2013:** EPA re-proposed New Source Performance Standards for new power plants

The President's Climate Action Plan

- Plan released in June 2013, consisting of three key pillars:

- **Cut carbon pollution in America - 17 percent below 2005 levels by 2020**
  - **Reduce power sector greenhouse gas emissions**
  - Accelerate clean energy leadership
  - Build a 21st century transportation sector
  - Cut energy waste in homes, businesses, factories
  - Reduce other greenhouse gas emissions (e.g., HFCs, methane)

- Prepare the United States for climate change
  - Support sustainability and climate resilience efforts
  - Maintain agricultural productivity

- Lead international efforts to combat global climate change and prepare for its impacts

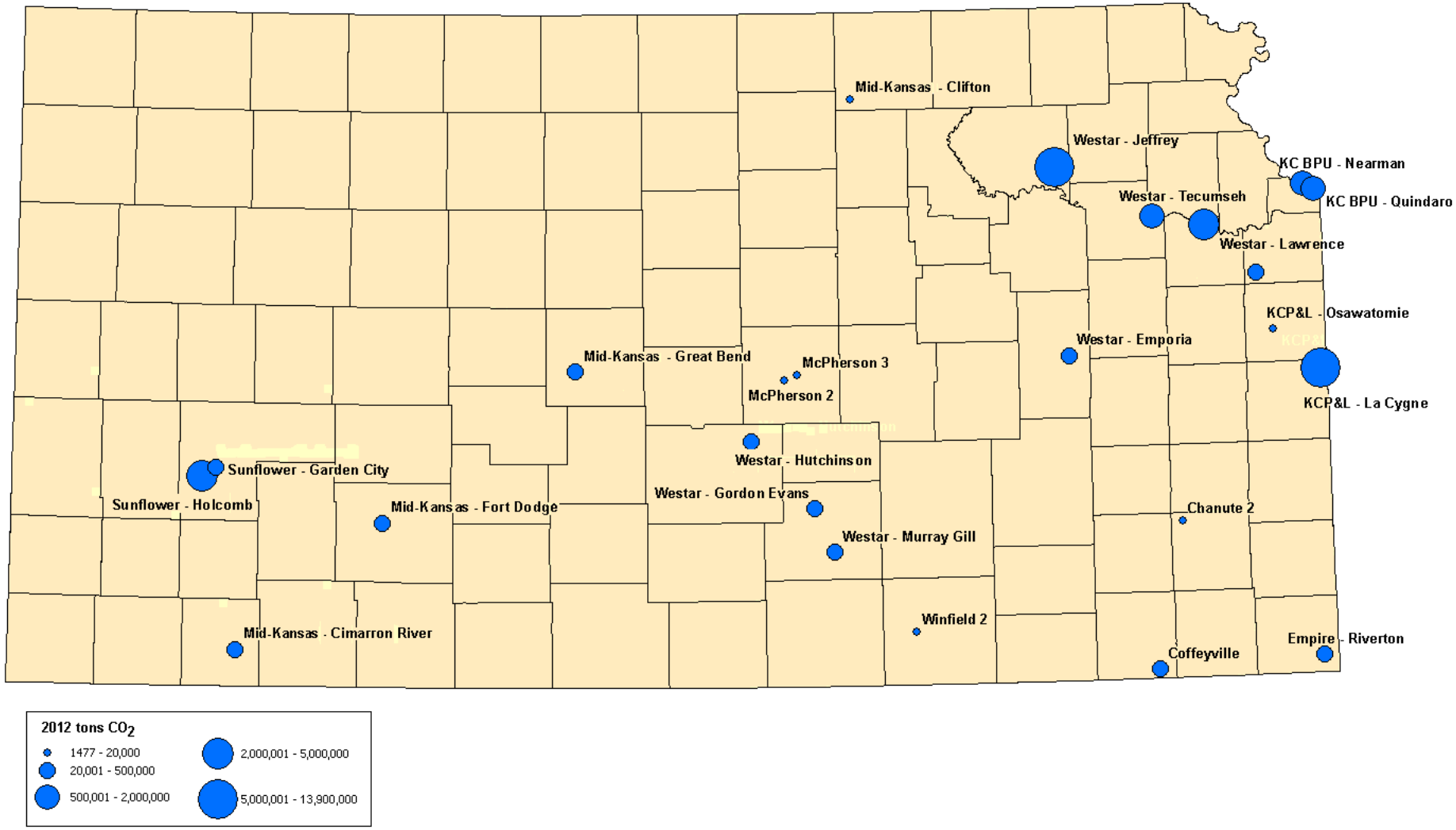
Standards for New Plants

- Original NSPS proposal had emission limit of 1,000 lbs. CO2/MWh
- EPA issued revised proposal for **new** units on September 2013
- Coal fired EGU standard raised to 1,100 lb CO_2/MWh….. would still require carbon capture
- Natural gas EGU standard from 1,000 to 1,100 lb CO_2/MWh depending on size of unit
- EPA proposed rule in federal register last week
- EPA will accept comment on the proposal for 60 days
- Sunflower's proposed plant not clearly defined as existing or new

Standards for Existing Plants

- CAA Section 111(d) contains authority for existing facilities
  - Rarely used section ….. EPA has used only five times
  - Based on same "standard of performance" language
- EPA issues guidance/standards to States
  - Best system of emission reduction
  - Emission limit(s)
  - Compliance horizon
- Schedule for EPA to issue standards
  - *June 2014* - Proposed standards/regulations due
  - *June 2015* - Final standards/regulations due
  - *June 2016* - States submit Emission Guideline Plans

Kansas EGUs >25 MW: 60 EGUs at 24 Facilites



Kansas Coal-Fired Electric Generating Units > 25 MW

Name	Unit Type	Capacity (MW)	2012 tons CO_2	2012 lb CO_2 /MWh
KC BPU - Nearman Unit 1	Coal-fired boiler	256	1,350,099	**2,510**
KC BPU - Quindaro Unit 1	Coal-fired boiler	78	575,375	**2,051**
KC BPU - Quindaro Unit 2	Coal-fired boiler	144	504,306	**2,376**
KCP&L - La Cygne Unit 1	Coal-fired boiler	736	4,373,398	**2,034**
KCP&L - La Cygne Unit 2	Coal-fired boiler	682	5,201,705	**2,097**
Sunflower - Holcomb Unit 1	Coal-fired boiler	349	2,154,747	**2,012**
Westar - Jeffrey Unit 1	Coal-fired boiler	720	4,639,807	**2,269**
Westar - Jeffrey Unit 2	Coal-fired boiler	720	4,936,618	**2,123**
Westar - Jeffrey Unit 3	Coal-fired boiler	720	4,303,364	**2,128**
Westar - Lawrence Unit 3	Coal-fired boiler	61	418,147	**2,279**
Westar - Lawrence Unit 4	Coal-fired boiler	135	617,688	**2,202**
Westar - Lawrence Unit 5	Coal-fired boiler	448	2,455,090	**2,064**
Westar - Tecumseh Unit 7/9	Coal-fired boiler	96	451,204	**2,184**
Westar - Tecumseh Unit 8/10	Coal-fired boiler	176	972,441	**2,121**

Data sources: http://www.ampd.epa.gov/ampd/; http://ghgdata.epa.gov/ghgp/; Kansas Emissions Inventory

Standards for Existing Plants

- States have flexibility within bounds of EPA guidance
- Guidance must outline "best system of emissions reductions" that has been "adequately demonstrated"
- State emission standards can be based on most cost-effective option
- Can take into account remaining life of facility
- Standards for existing coal units historically based on measures "inside the fence"
- EPA is looking at approaches that are "outside the fence"
- Failure by KDHE to develop emissions guidelines will result in a Federal Implementation Plan

Potential Emission Guidelines

- Unit CO_2 emission limit based on boiler and/or fuel type
- Market or trading approaches
  - Multi-state regional cap and trade program
  - Kansas cap and trade program
  - Corporate-level trading
  - Source-level emissions sharing program
- Range of strategies potentially included in the footprint?
  - Energy efficiency improvements for boilers or turbines
  - Demand side management programs
  - Wind, solar, other renewables
  - Nuclear
  - Transmission system improvements
- The larger the footprint, the more complex the regulatory program and the more time needed to implement

Technical / Legal Issues

- Does EPA have authority to regulate off the footprint of the plant?
- Does EPA have authority to allow trading or offsets?
- Is CCS achievable and cost-effective?
- How prescriptive will the EPA guidance be?
- Limits as emission rates, tons or technology?
- What base year(s) will be used ….. 2005?
  - Kansas has seen significant reductions since 2005
- Receive credit for emission reductions in place?

KDHE Comments to EPA

- CCS is not a demonstrated CO2 control option
- Provide the flexibility in the rule so Kansas can develop a least cost option
- Allow us to take into consideration the remaining useful life of existing plants
- Recognize the potential impact that next day dispatch by the SPP may have on CO2 emissions from Kansas EGUs
- Provide sufficient time to develop and implement state plans
- Express CO2 limits in net output from plant, not gross output
- President's time frame is too short
- KDHE is coordinating with KCC on comments

Next Steps

- Continue discussions with EGUs to better understand their positions
- Exchange ideas with other states
- Coordinate with KCC, AG, and other stakeholders
- Research past, current, and projected emissions data to aid in policy development
- Develop comments on NSPS proposal and on emission guideline concepts
- Develop framework for future 111(d) State plan

Other Air Issues

- Ozone
  - New proposed standard delayed
- Flint Hills burning impacts
- One-hour Sulfur Dioxide standard
- Cross State Air Pollution Rule
- Mercury and Air Toxics Rule

Questions?

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