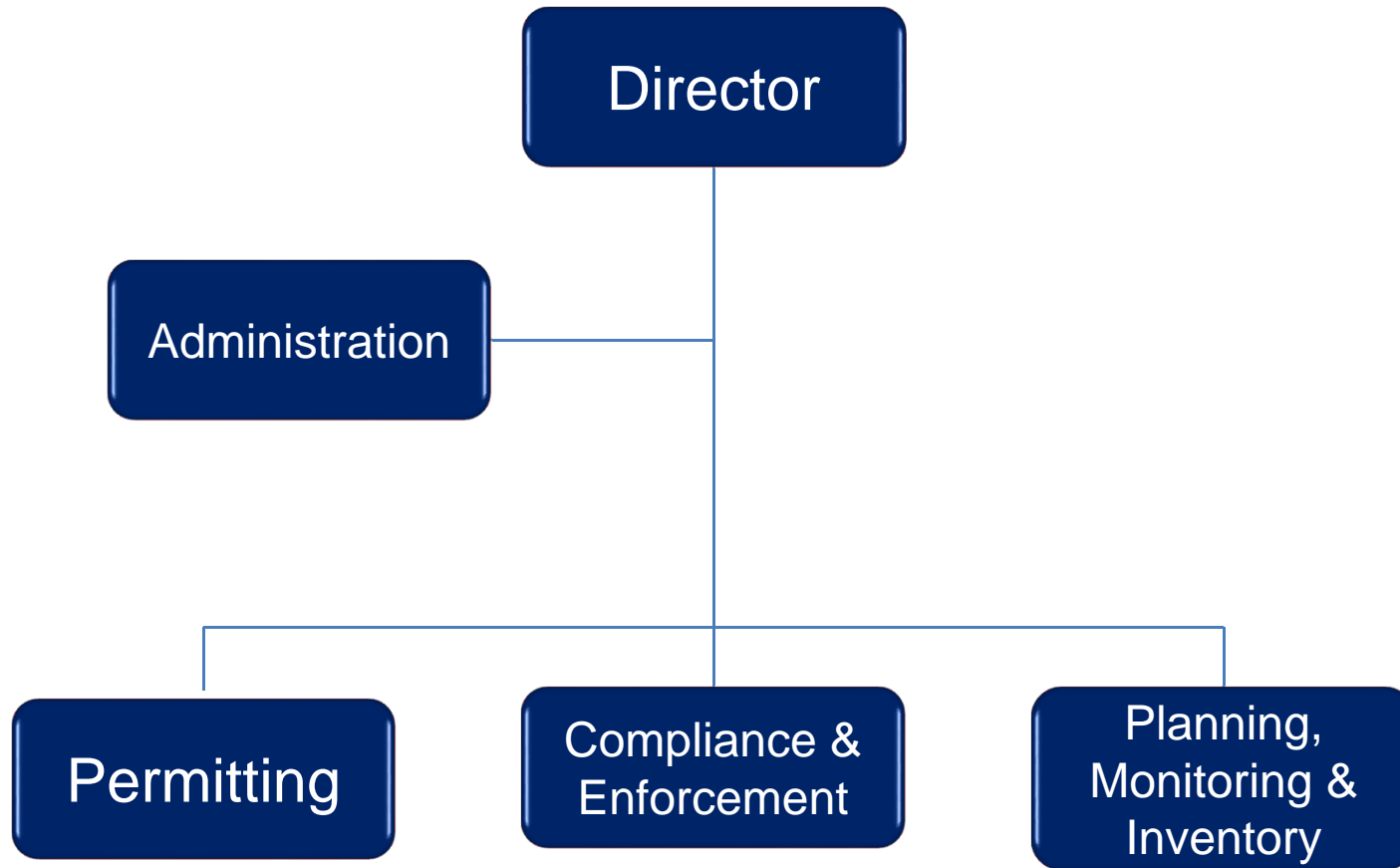


Bureau of Air Overview

Rick Brunetti, Director
Bureau of Air

Kansas Department of Health and Environment

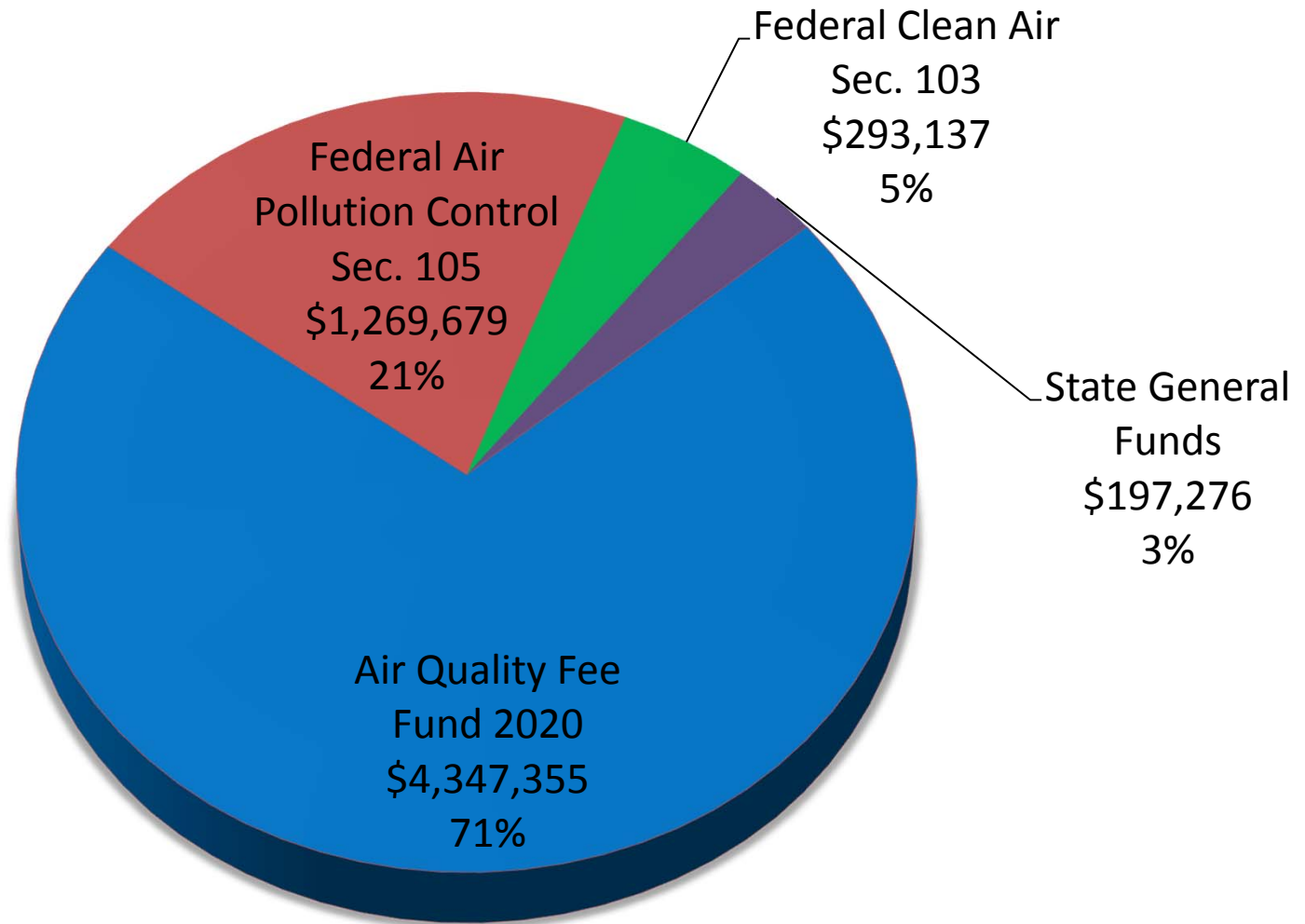
Bureau of Air - 2015



What we do

- ◆ Construction permits
- ◆ Operating permits
- ◆ Compliance and enforcement activities
- ◆ Planning and regulation development
- ◆ Ambient air monitoring
- ◆ Emission inventory development
- ◆ Outreach and education
- ◆ Digitize documents for sources

BOA Funding Sources



Our Mission: To protect and improve the health and environment of all Kansans



Who we regulate

- ◆ Point Sources
- ◆ Non-Point Sources
- ◆ Mobile Sources

Point Sources

- ◆ Large individual sources with permits
 - Refineries
 - Chemical plants
 - Electric generating utilities (EGU)
 - Cement kilns
 - Natural gas compressor stations
 - Landfills
- ◆ Submit annual emission inventory forms
- ◆ Emissions data tends to be most accurate



Non-Point Sources

- ◆ Smaller than a point source
- ◆ Often grouped by sector
 - Dry cleaners
 - CAFOs
 - Household related emissions
 - Solvent cleaning
- ◆ Data is calculated using surrogate information
- ◆ Data not as accurate as point sources

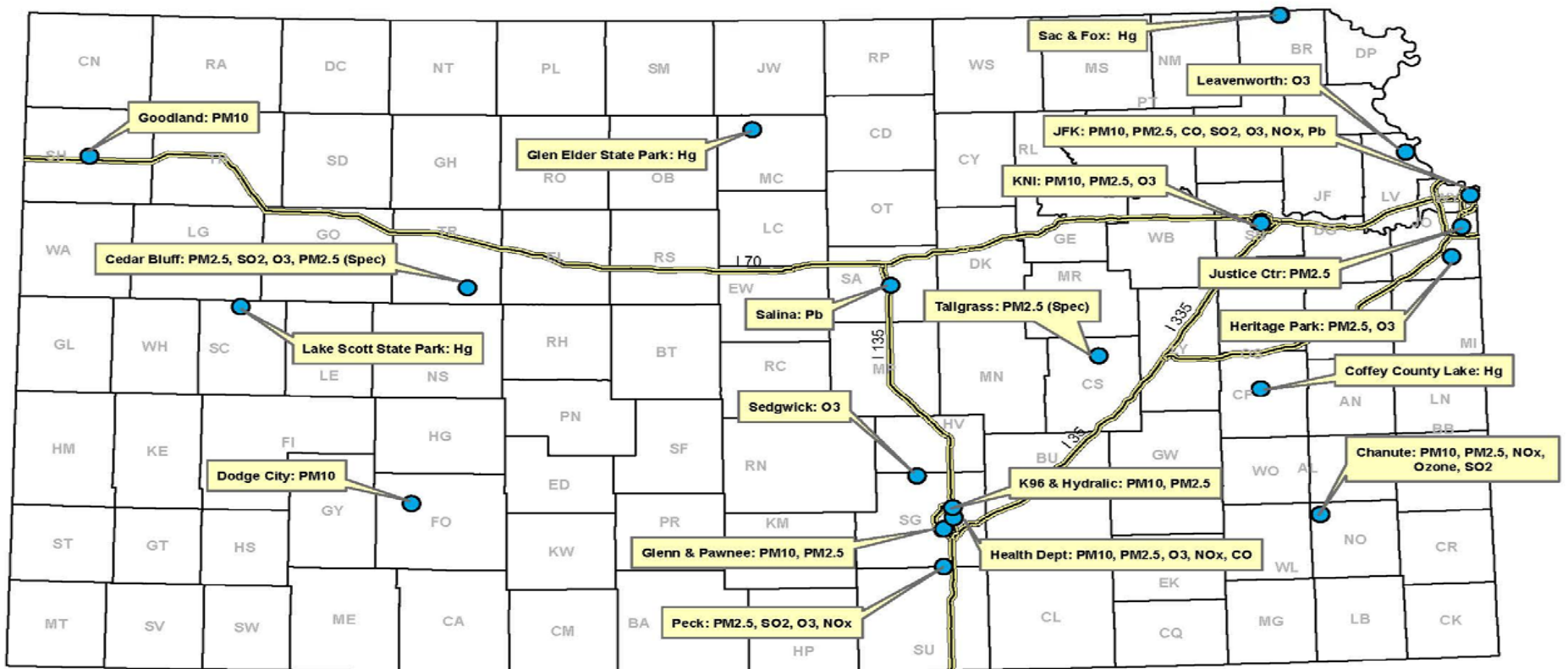


Mobile Sources



- ◆ On-road: Cars, trucks, buses, etc.
 - Fuels: Gasoline, diesel, propane, LNG
- ◆ Non-road: Rail, aircraft, marine vessels, agriculture, construction, etc.
- ◆ Evaporative and tailpipe emissions
- ◆ EPA Computer Models generate data
 - Based on assumptions regarding make up of fleet and Vehicle Miles Traveled (VMT)
 - MOVES model
- ◆ Data quality varies with source category

2015 Kansas Air Monitoring Sites



Current Air Quality Issues

- ◆ 111d (CO₂ from Power Plants)
- ◆ Ozone
- ◆ Flint Hills Smoke Management
- ◆ Cross State Air Pollution Rule (CSAPR)
- ◆ SSM SIP Call
- ◆ 1 Hour SO₂
- ◆ MATS

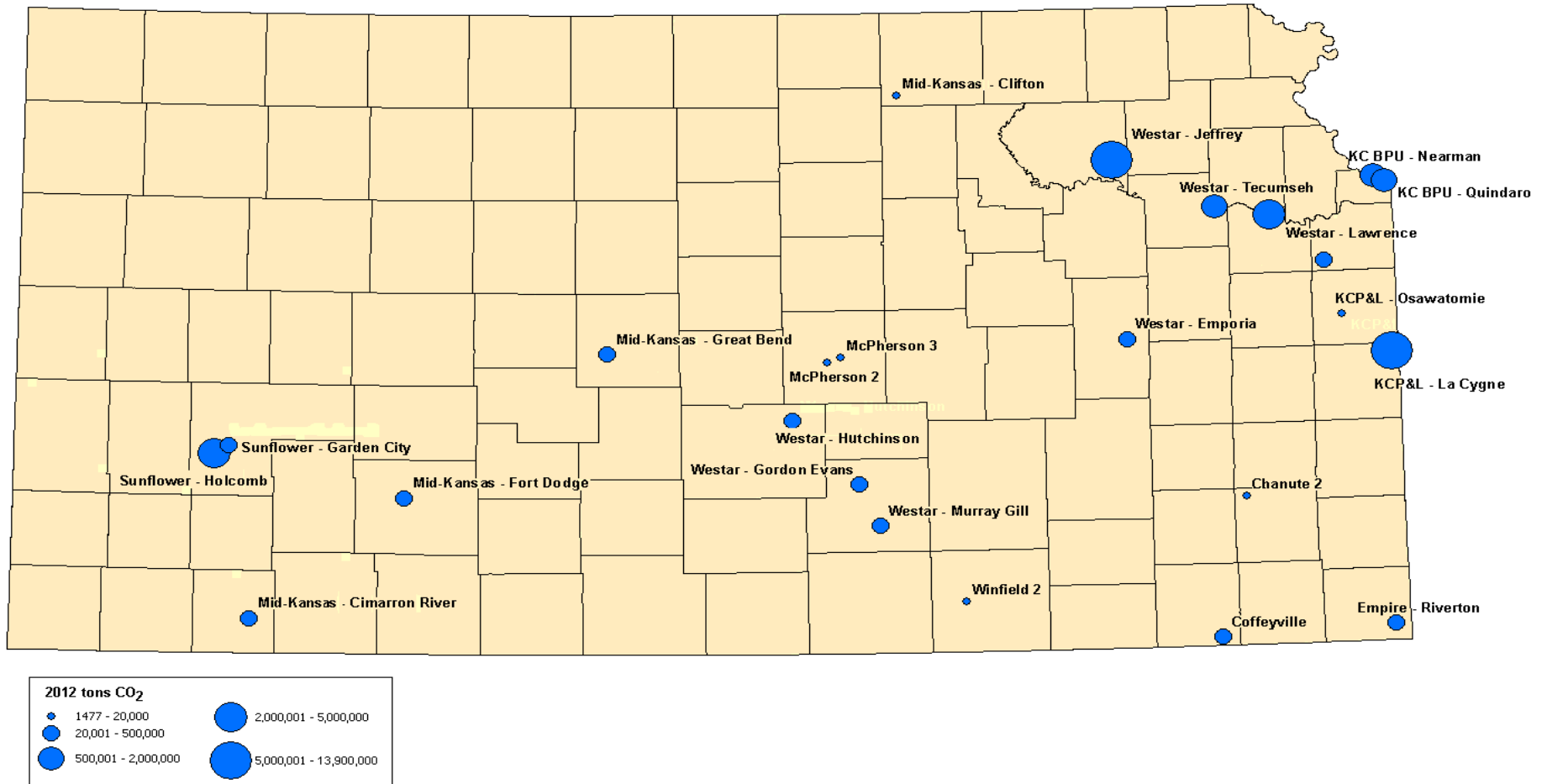
CO₂ Standards for Existing Plants

- June 2014 – Proposed standards issued
- November 2014 – Kansas Submitted Comments
- June 2015 – Final standards due from EPA
- June 2016 – States submit Emission Guideline Plans
- Failure by KDHE to develop emissions guidelines will result in a Federal Implementation Plan

Standards for Existing Plants

- ◆ Kansas will be required to obtain a rate of 1499 lbs. CO₂/MW Hr. electricity produced
- ◆ Current rate for Kansas is 1940 lbs. CO₂/MW Hr.

Kansas EGUs >25 MW: 60 EGUs at 24 Facilities



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

Our Mission: To protect and improve the health and environment of all Kansans



KDHE's Comments to EPA's Proposed 111(d) Rule

Questions exist re: EPA's legal authority to:

- ◆ Regulate pollutants already regulated under CAA section 112
- ◆ Go beyond sources' fencelines

Building block 1 – Heat rate improvement of 6% too high

- ◆ Recommend 2% max

Building block 3 – Zero-emitting generation sources

- ◆ EPA erred re: RES applicability, calcs, and S Central Region's rate
- ◆ KDHE's ultimate corrected 2030 goal = 1,732 lbs. CO₂/MWh

Building block 4 – Energy efficiency (EE)

- ◆ EPA used inflated EE numbers

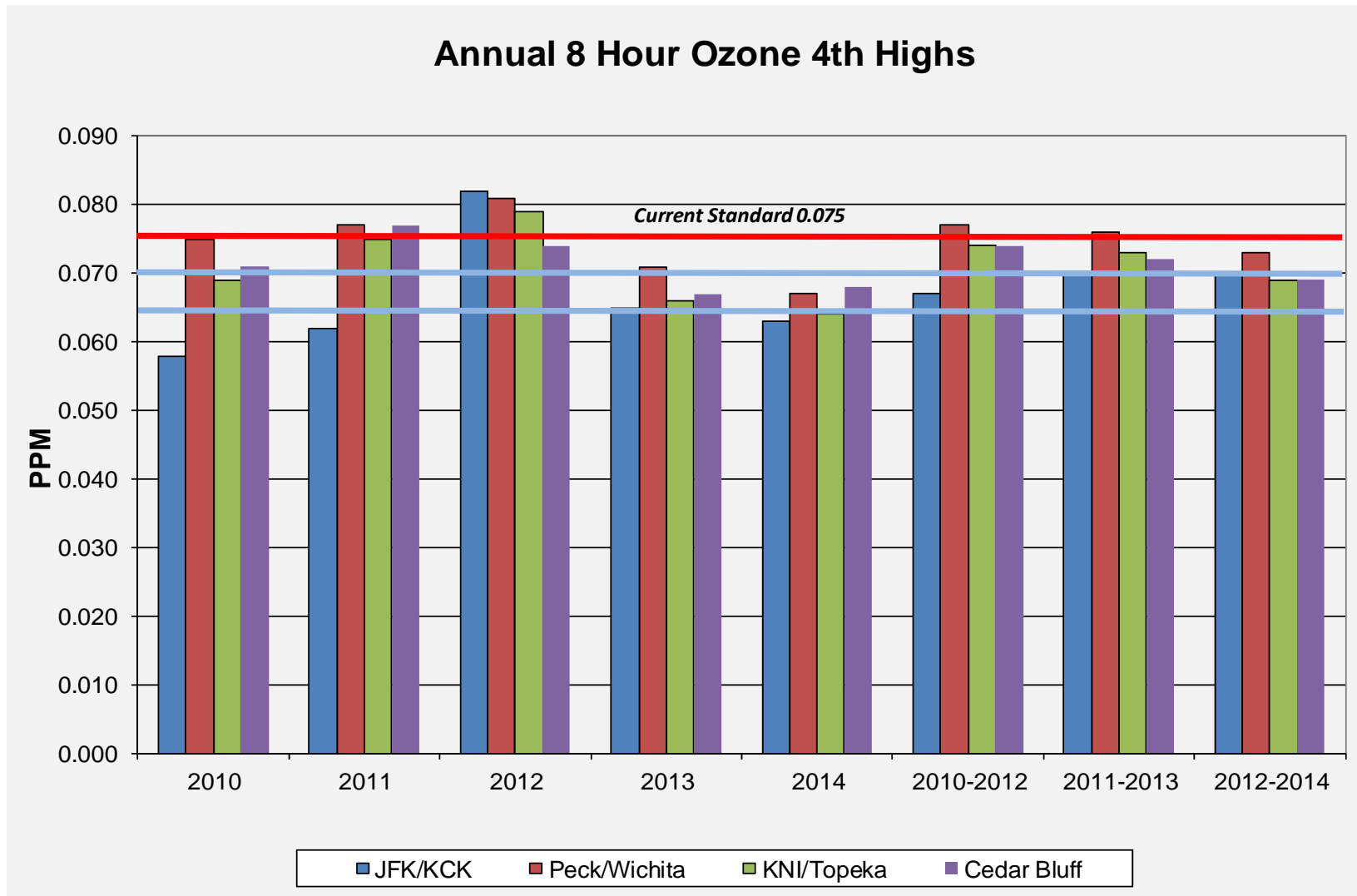
Additional concerns with proposed rule

- ◆ Goal calculation errors, goal setting/compliance inconsistency
- ◆ Interim goal too aggressive
- ◆ Potential stranded investments
- ◆ Exportation of wind resources

OZONE PROPOSAL

- Proposal on November 25, 2014
- 90-day comment period
 - Narrow scope of comments requested
- EPA proposed a 65-70 ppb standard
- Attainment problems widespread in Kansas across proposed range

Why are we concerned?



What if the standards are not met?

- ◆ State Implementation Plan (SIP) preparation
 - New rules to reduce NO_x and VOCs emissions
 - Must be approved by EPA
 - Federally enforceable
- ◆ Transportation plan conformity with SIP
- ◆ Curtails economic development
- ◆ Potential loss of federal highway funds if transportation plan does not conform with air quality plan
- ◆ Increased costs to consumers

Smoke from Flint Hills Fires



- ◆ Total of 2.5 MM acres burned in 2014
- ◆ Three PM_{2.5} violations in Nebraska
- ◆ Two PM_{2.5} violations in Wichita

Lincoln, Nebraska Smoke Impacts



Key points

- ◆ KDHE recognizes the need to burn the tall grass prairie to maintain the ecosystem
- ◆ Smoke causing exceedences in cities can have serious economic impacts
- ◆ We are committed to working with the ag community to strike a balance
- ◆ Implementation of the plan will be a long-term process
- ◆ Plan was a collaborative effort among many groups

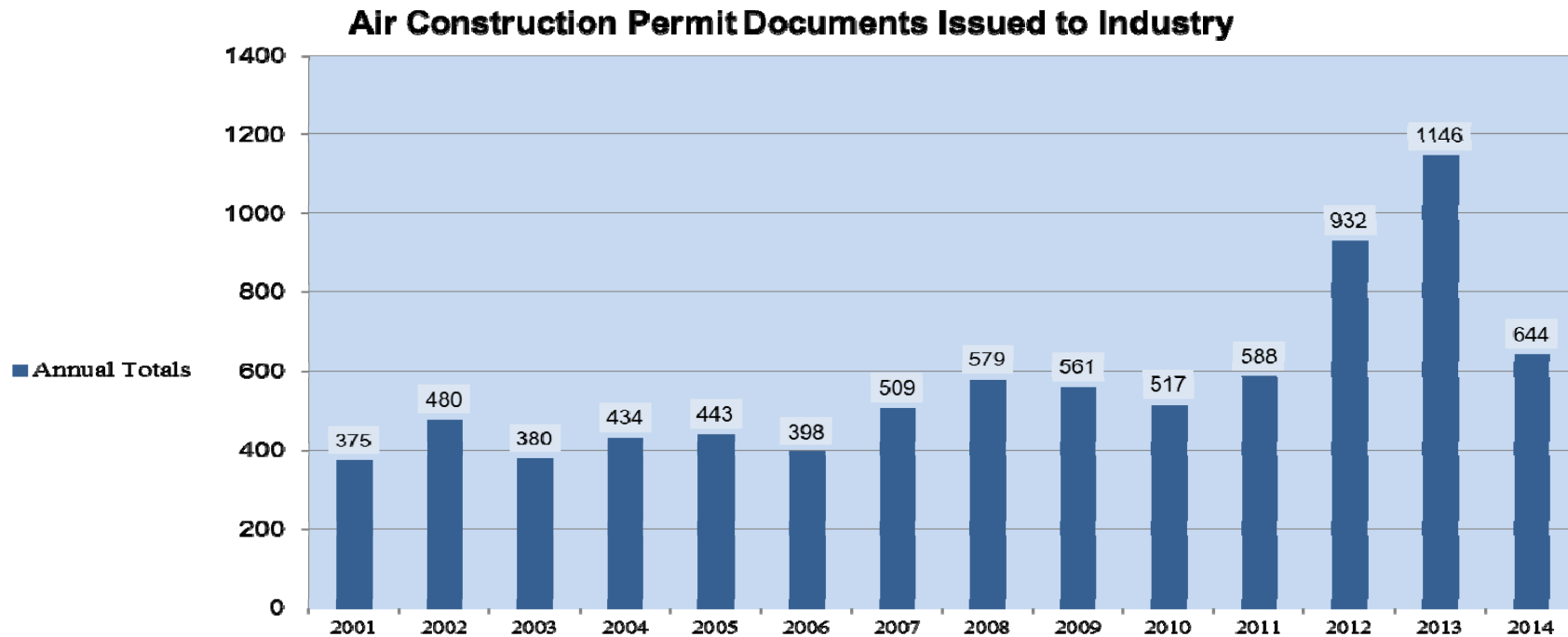
Cross-State Air Pollution Rule Update

- ◆ Final Rule signed on July 6, 2011.
- ◆ Affected power plant emissions that contribute to ozone and/or fine particle pollution in downwind states.
- ◆ Covers NO_x and SO₂.
- ◆ Modified cap and trade program.
- ◆ KDHE worked with affected utilities to develop cost data, time problems and other issues.
- ◆ Kansas, other states and utilities petitioned for reconsideration.
- ◆ Stay of Rule granted December 2011 pending judicial review.
- ◆ CSAPR vacated and remanded to EPA by DC Appeals Court panel.
- ◆ EPA appealed to Supreme Court and won.
- ◆ Kansas was ultimately successful in buying time.

Additional Current Air Quality Issues

- ◆ SSM SIP Call
- ◆ 1 Hour SO₂
- ◆ MATS
- ◆ Horizontal Drilling/Air Permits

Construction Permit Documents 2004 -2014



Some good news.....KS Point Source Emission Trends

