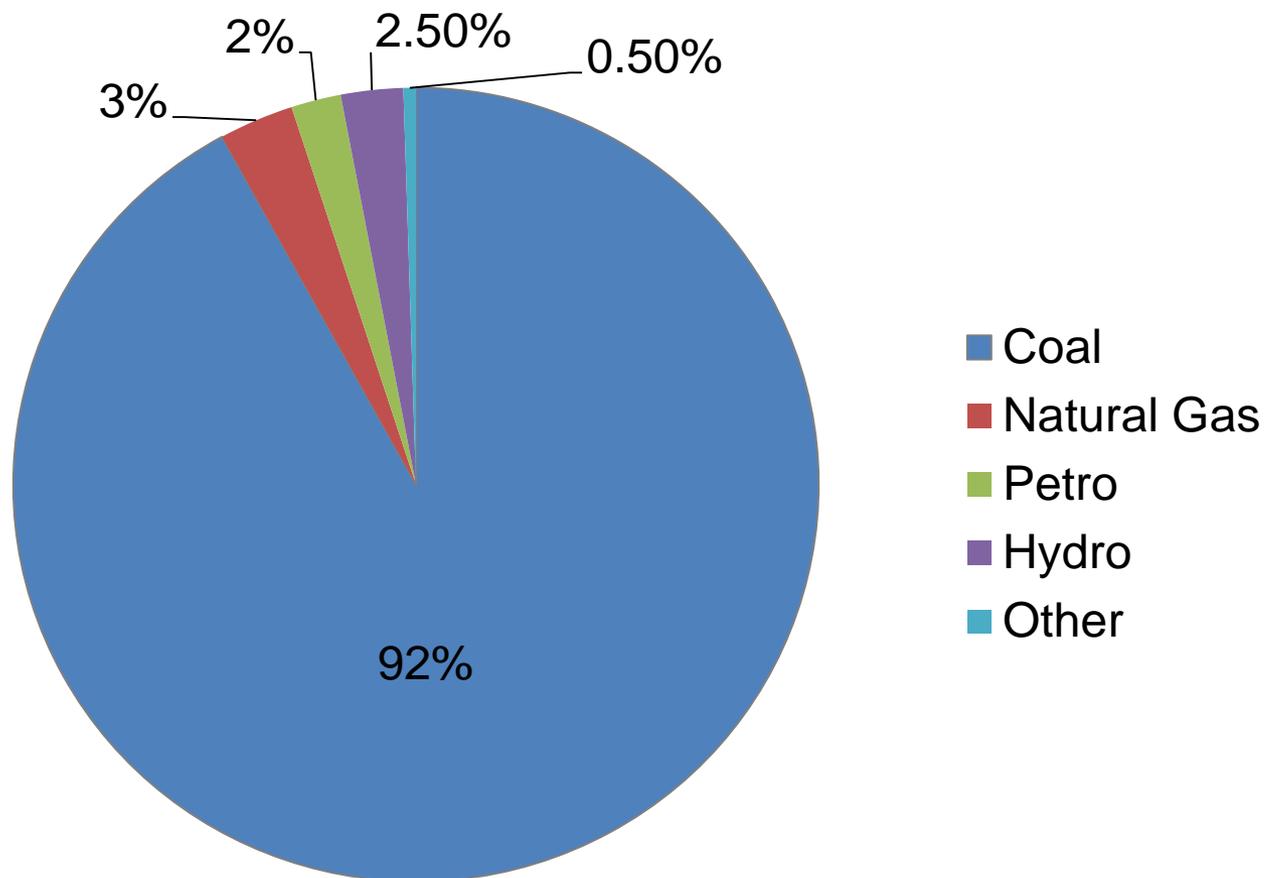


GHG REGULATIONS UNDER 111(d) POLICY CONSIDERATIONS FOR KENTUCKY

Presented by
John S. Lyons
Kentucky Energy and Environment Cabinet

Kentucky's 2012 Electricity Generation



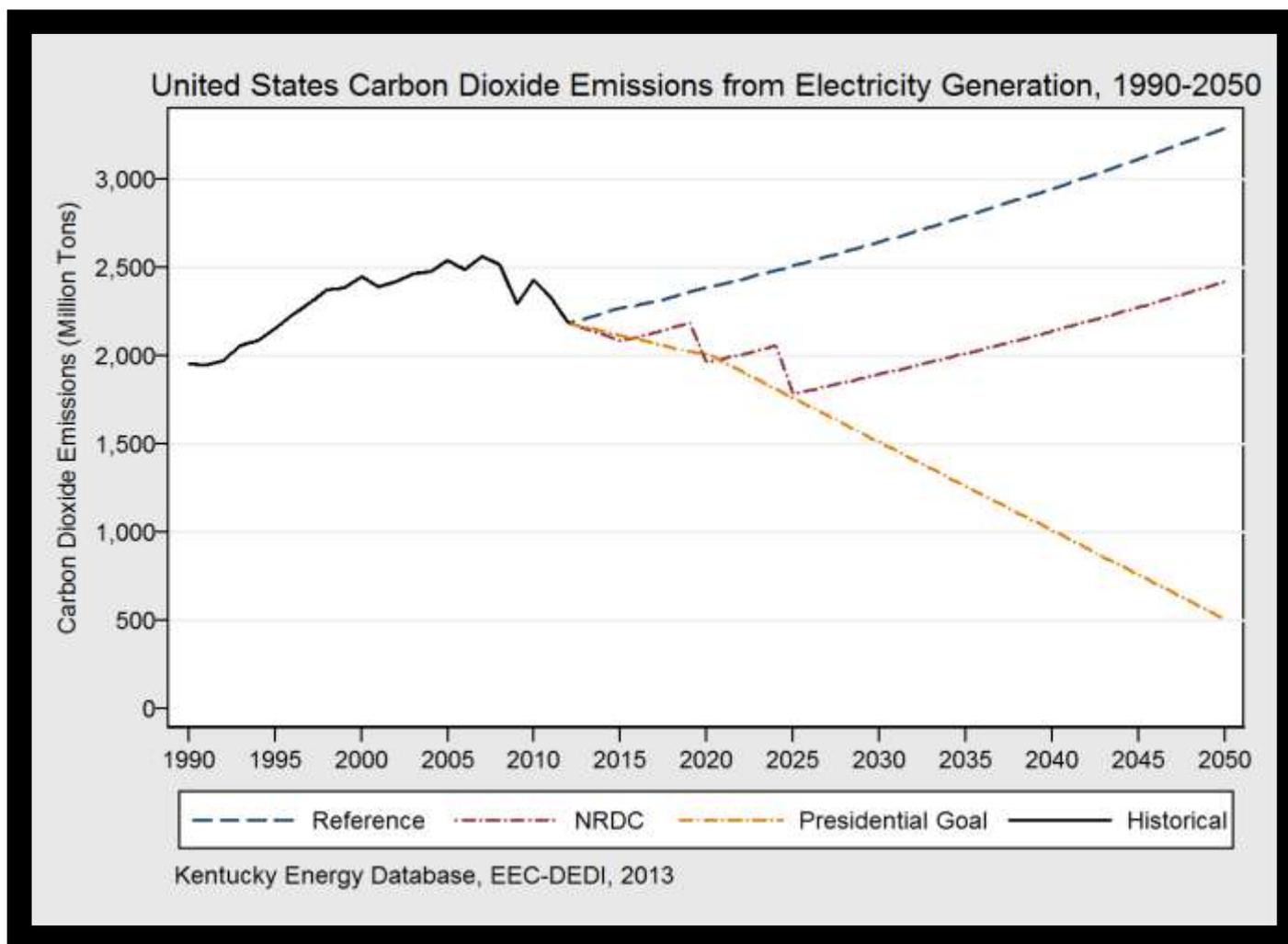
Important Dates

- **Sept. 20, 2013** – issue **revised NSPS** proposed rule
- **June 1, 2014** – issue proposed rules for existing sources (under Clean Air Act Sections 111(d)) and modified sources (under 111(b))
- **June 1, 2015** – issue final rules for existing and new sources
- **June 30, 2016** – Deadline for states to submit section 111(d) implementation plans for existing sources

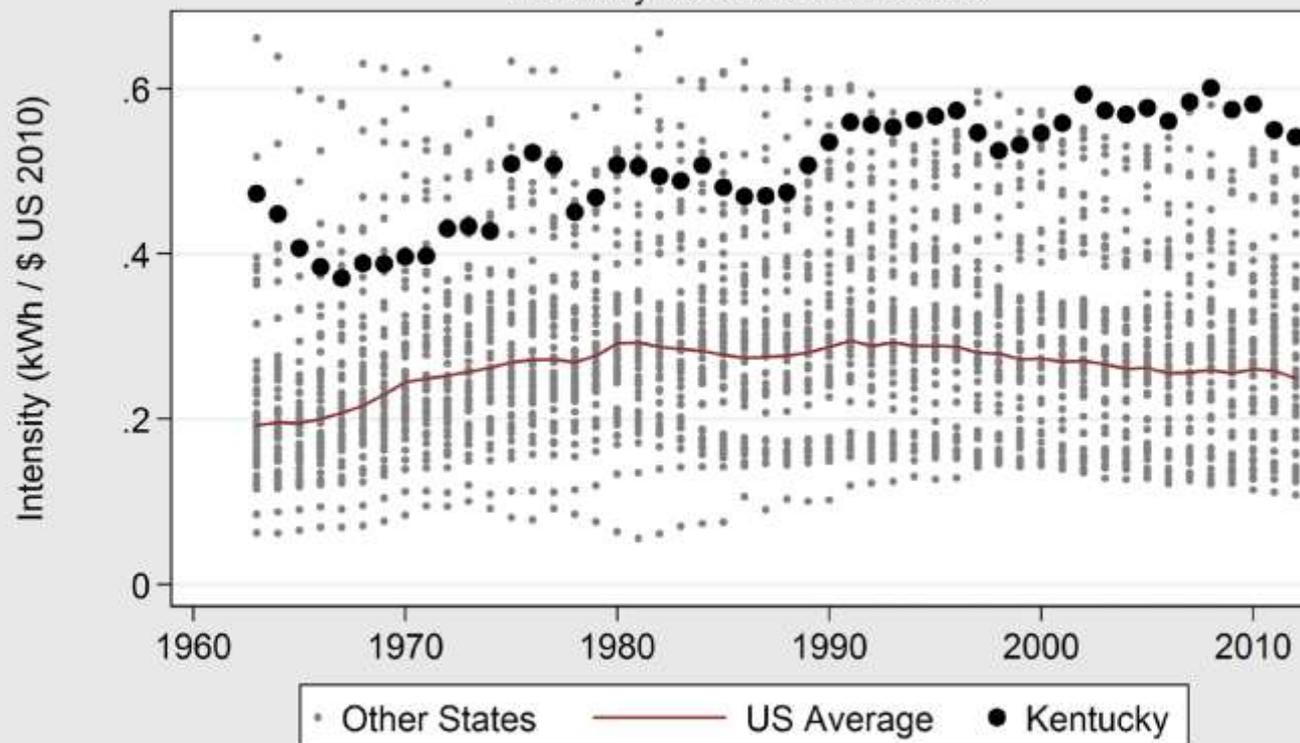
EEC 111 (d) Whitepaper

- Issued on October 22, 2013
- Compares two divergent approaches to an emissions reduction program:
 - **Rate-based approach** - an emissions target as a measure of power plant output (lbs/MWh).
 - **Mass-emissions approach** - a reduction target in percentage terms based on a baseline level (President's goal – 17% by 2020 & 80% by 2050).
- Demonstrates that a rate-based approach is finite in emission reductions and only promotes market driven least cost fuel - natural gas.
- Promotes maximum flexibility and a variety of options for emission reductions.

A mass emission reduction standard achieves sustainable reductions for the future, is not disproportionate among states, and can offer the tools for the development of state-specific programs considering state resources and economic conditions.



Electricity Consumption per State GDP Dollar, 1963-2012 Kentucky vs. the United States



Kentucky Energy Database, EEC-DEDI, 2013

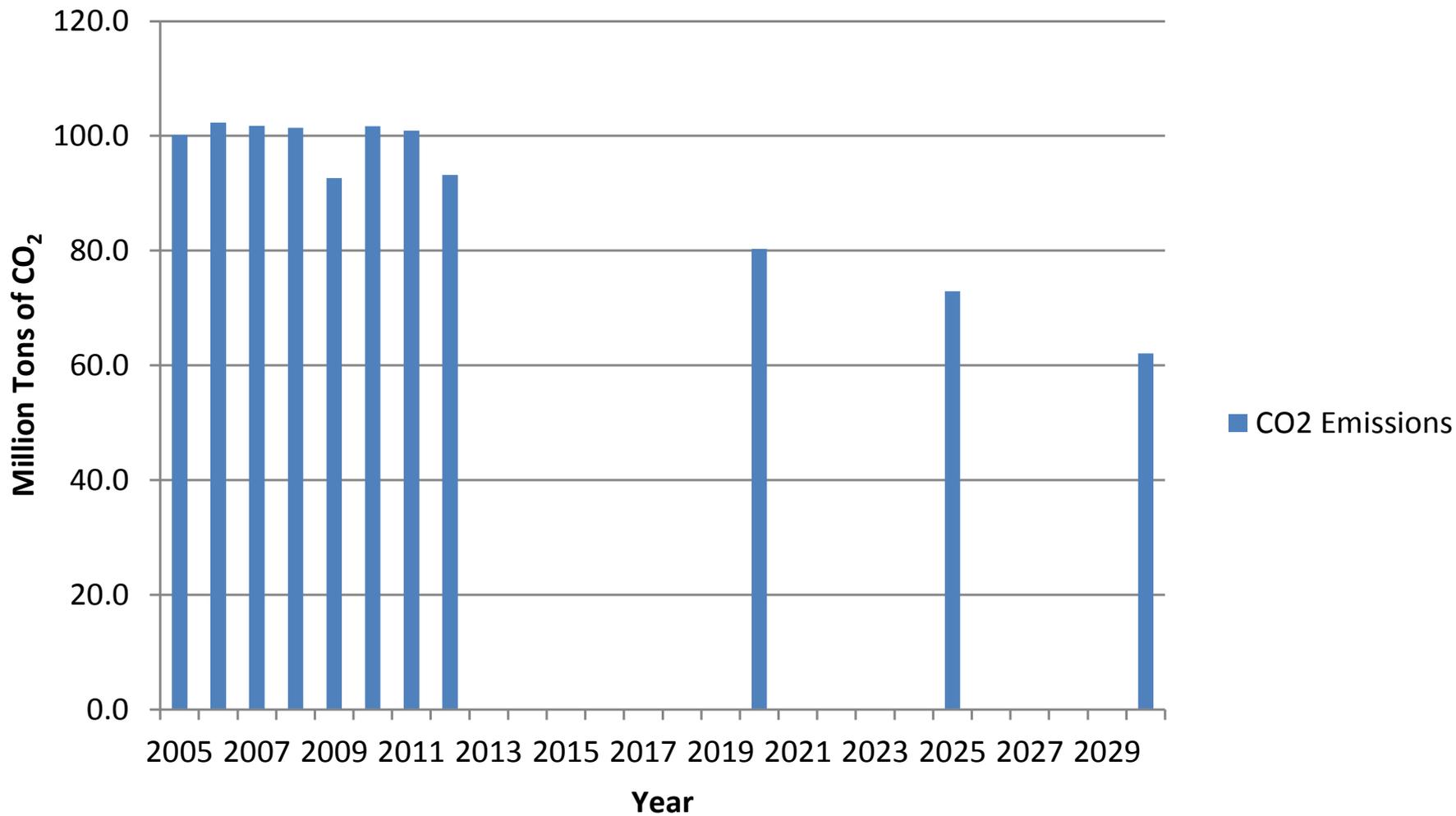
Data Source: EIA Forms 861 & 826 & BEA GDP by State

Electricity Intensity by State, 2012

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Rank	State	Electricity Intensity kWh of Electricity Consumption per Real GDP	Rank	State	Electricity Intensity kWh of Electricity Consumption per Real GDP
1	Kentucky	0.541	27	Nevada	0.277
2	Mississippi	0.503	28	Texas	0.274
3	Alabama	0.496	29	Michigan	0.274
4	West Virginia	0.468	30	Washington	0.260
5	South Carolina	0.467	31	Virginia	0.259
6	Wyoming	0.465	32	Pennsylvania	0.253
7	Arkansas	0.449	33	United States	0.249
8	Idaho	0.424	34	Oregon	0.247
9	Oklahoma	0.386	35	Minnesota	0.240
10	Indiana	0.368	36	Utah	0.240
11	Tennessee	0.368	37	Maine	0.227
12	Louisiana	0.366	38	Illinois	0.216
13	Montana	0.359	39	Vermont	0.212
14	Missouri	0.336	40	Colorado	0.207
15	North Dakota	0.334	41	Maryland	0.205
16	Georgia	0.320	42	Delaware	0.185
17	Nebraska	0.318	43	New Hampshire	0.177
18	Iowa	0.316	44	Rhode Island	0.159
19	Ohio	0.314	45	New Jersey	0.157
20	New Mexico	0.304	46	Massachusetts	0.142
21	Kansas	0.304	47	Hawaii	0.140
22	Florida	0.296	48	California	0.136
23	North Carolina	0.296	49	Connecticut	0.135
24	Arizona	0.296	50	Alaska	0.130
25	South Dakota	0.294	51	New York	0.124
26	Wisconsin	0.277	52	District of Columbia	0.108

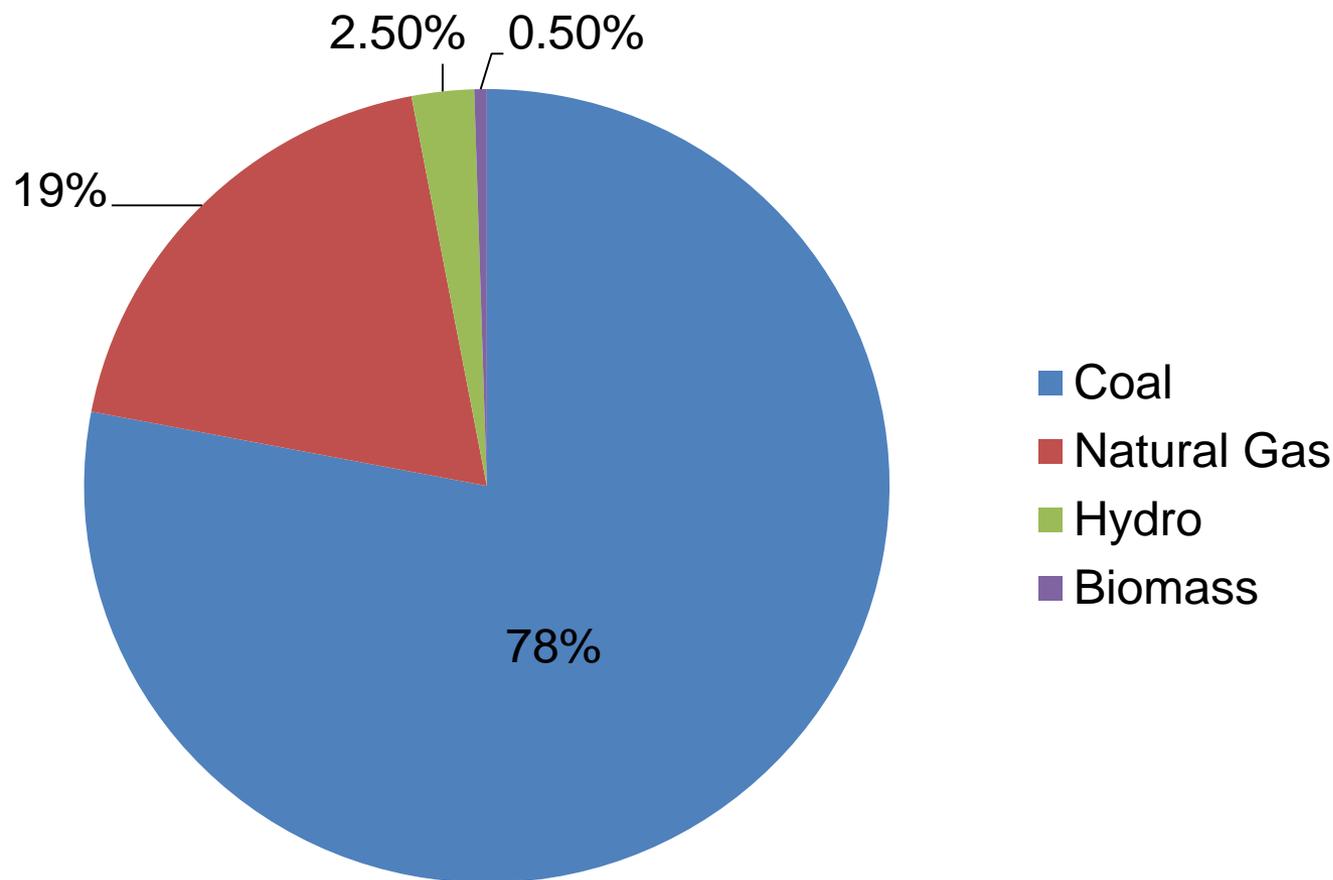
KY CO₂ Trends and Anticipated Reductions



Kentucky's Current and Future Estimates of Fossil Fleet CO₂ Mass Emission Reductions

	2005	2012	Scenario #1* 2020	Scenario #2* 2025	Scenario #3** 2030
Million Tons of CO ₂ Emission data from CAMD Acid Rain Database	100	93	80	72	62
% Reduction from 2005		7%	20%	27%	38%

Kentucky's 2020 Projected Electricity Generation



Conclusions

- Engage EPA and **actively participate** in stakeholder events.
- Push for **flexibility** afforded under CAA 111(d) to ensure reasonable standards are proposed.
- Advocate a **mass emissions** reduction plan rather than a standard of performance specific to a particular unit.
- Urge EPA to consider a **system-wide** (generation, transmission and consumption) approach to emissions reduction as opposed to reductions only at the plant.
- Insist that EPA find a way to give **full credit** for energy efficiency measures and plant shut downs/fuel switching occurring due to other rules.