Surviving the Perfect Storm – the Future of Coal

The Coal Institute – Summer Trade Seminar July 18, 2016

	Net Capacity Factor (%)	
Date	Cliffside 5	Cliffside 6
2012	24	11
2013	28	67
2014	29	63
2015	20	43
Jan-16	7	17
Feb-16	13	22
Mar-16	0	0
Apr-16	0	0
May-16	0	26

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Safe Harbor Statement

This document includes forward-looking statements within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934. Forward-looking statements are based on management's beliefs and assumptions.

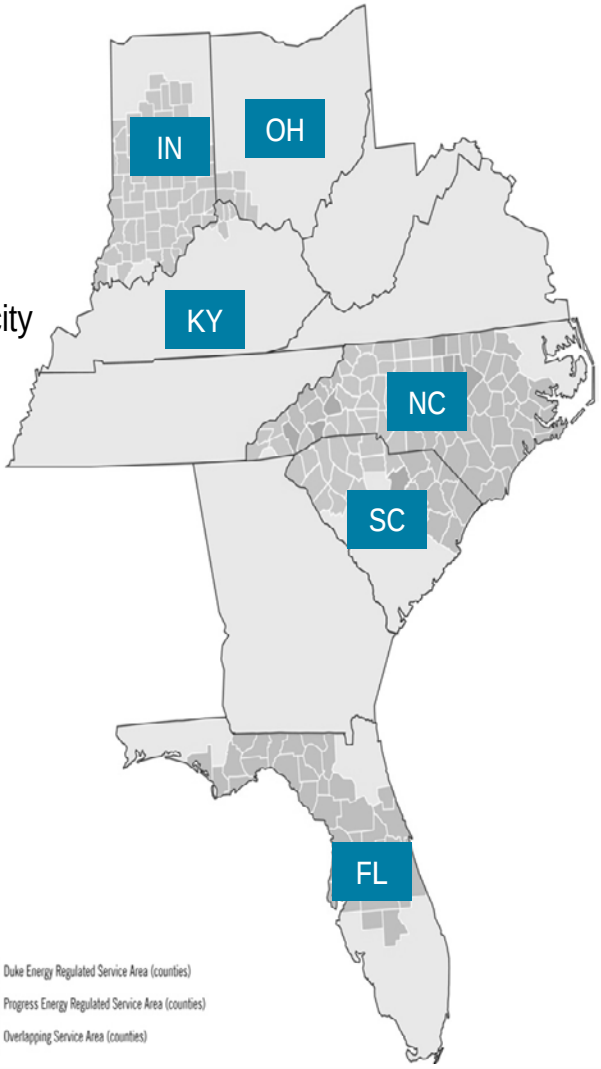
These forward-looking statements are identified by terms and phrases such as "anticipate," "believe," "intend," "estimate," "expect," "continue," "should," "could," "may," "plan," "project," "predict," "will," "potential," "forecast," "target," "guidance," "outlook," and similar expressions. Forward-looking statements involve risks and uncertainties that may cause actual results to be materially different from the results predicted. Factors that could cause actual results to differ materially from those indicated in any forward-looking statement include, but are not limited to: state, federal and foreign legislative and regulatory initiatives, including costs of compliance with existing and future environmental requirements or climate change, as well as rulings that affect cost and investment recovery or have an impact on rate structures or market prices; the extent and timing of the costs and liabilities relating to the Dan River ash basin release and compliance with current regulations and any future regulatory changes related to the management of coal ash; the ability to recover eligible costs, including those associated with future significant weather events, and earn an adequate return on investment through the regulatory process; the costs of decommissioning Crystal River Unit 3 could prove to be more extensive than amounts estimated and all costs may not be fully recoverable through the regulatory process; credit ratings of the company or its subsidiaries may be different from what is expected; costs and effects of legal and administrative proceedings, settlements, investigations and claims; industrial, commercial and residential growth or decline in service territories or customer bases resulting from customer usage patterns, including energy efficiency efforts and use of alternative energy sources including self-generation and distributed generation technologies; additional competition in electric markets and continued industry consolidation; political and regulatory uncertainty in other countries in which Duke Energy conducts business; the influence of weather and other natural phenomena on operations, including the economic, operational and other effects of severe storms, hurricanes, droughts and tornadoes; the ability to successfully operate electric generating facilities and deliver electricity to customers; the impact on facilities and business from a terrorist attack, cybersecurity threats, data security breaches and other catastrophic events; the inherent risks associated with the operation and potential construction of nuclear facilities, including environmental, health, safety, regulatory and financial risks; the timing and extent of changes in commodity prices, interest rates and foreign currency exchange rates and the ability to recover such costs through the regulatory process, where appropriate, and their impact on liquidity positions and the value of underlying assets; the results of financing efforts, including the ability to obtain financing on favorable terms, which can be affected by various factors, including credit ratings and general economic conditions; declines in the market prices of equity and fixed income securities and resultant cash funding requirements for defined benefit pension plans, other post-retirement benefit plans and nuclear decommissioning trust funds; construction and development risks associated with the completion of Duke Energy and its subsidiaries' capital investment projects in existing and new generation facilities, including risks related to financing, obtaining and complying with terms of permits, meeting construction budgets and schedules, and satisfying operating and environmental performance standards, as well as the ability to recover costs from customers in a timely manner or at all; changes in rules for regional transmission organizations, including changes in rate designs and new and evolving capacity markets, and risks related to obligations created by the default of other participants; the ability to control operation and maintenance costs; the level of creditworthiness of counterparties to transactions; employee workforce factors, including the potential inability to attract and retain key personnel; the ability of subsidiaries to pay dividends or distributions to Duke Energy Corporation holding company (the Parent); the performance of projects undertaken by our nonregulated businesses and the success of efforts to invest in and develop new opportunities; the effect of accounting pronouncements issued periodically by accounting standard-setting bodies; the impact of potential goodwill impairments; the ability to reinvest prospective undistributed earnings of foreign subsidiaries or repatriate such earnings on a tax-efficient basis; the expected timing and likelihood of completion of the proposed transaction with Piedmont, including the timing, receipt and terms and conditions of any required governmental and regulatory approvals of the proposed transaction that could reduce anticipated benefits or cause the parties to abandon the transaction, the diversion of management's time and attention from Duke Energy's ongoing business during this time period, the ability to maintain relationships with customers, employees or suppliers as well as the ability to successfully integrate the businesses and realize benefits and the risk that the credit ratings of the combined company or its subsidiaries may be different from what the companies expect; and the ability to successfully complete future merger, acquisition or divestiture plans.

Additional risks and uncertainties are identified and discussed in Duke Energy's and its subsidiaries' reports filed with the SEC and available at the SEC's website at www.sec.gov. In light of these risks, uncertainties and assumptions, the events described in the forward-looking statements might not occur or might occur to a different extent or at a different time than Duke Energy has described. Duke Energy undertakes no obligation to publicly update or revise any forward-looking statements, whether as a result of new information, future events or otherwise.

Overview: Regulated Electric Generation and Capacity by Region

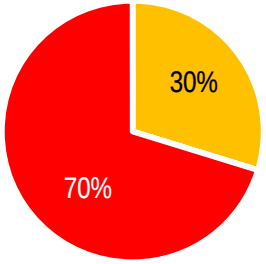
Portfolio Scale (1)

- 6 jurisdictions with regulatory and geographic diversity
- 7.3 million electric retail customers
- 51 GW owned, available summer capacity
- 32,400 miles of transmission
- 262,900 miles of distribution

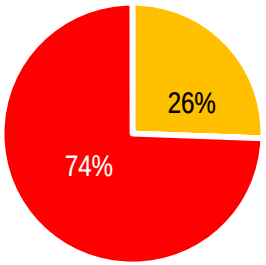


Florida

Generation (GWh)

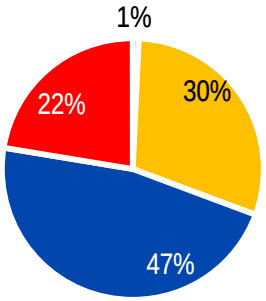


Capacity (Owned MW)

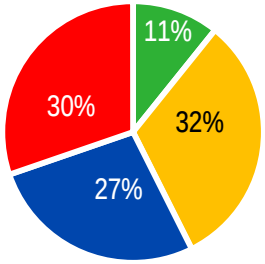


Carolinas

Generation (GWh)

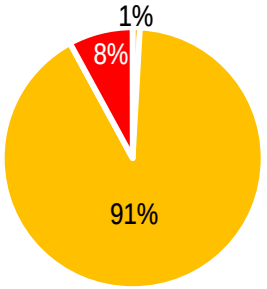


Capacity (Owned MW)

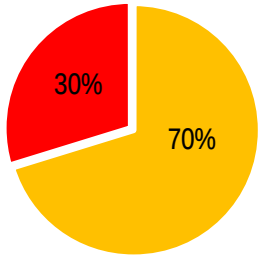


Midwest

Generation (GWh)



Capacity (Owned MW)



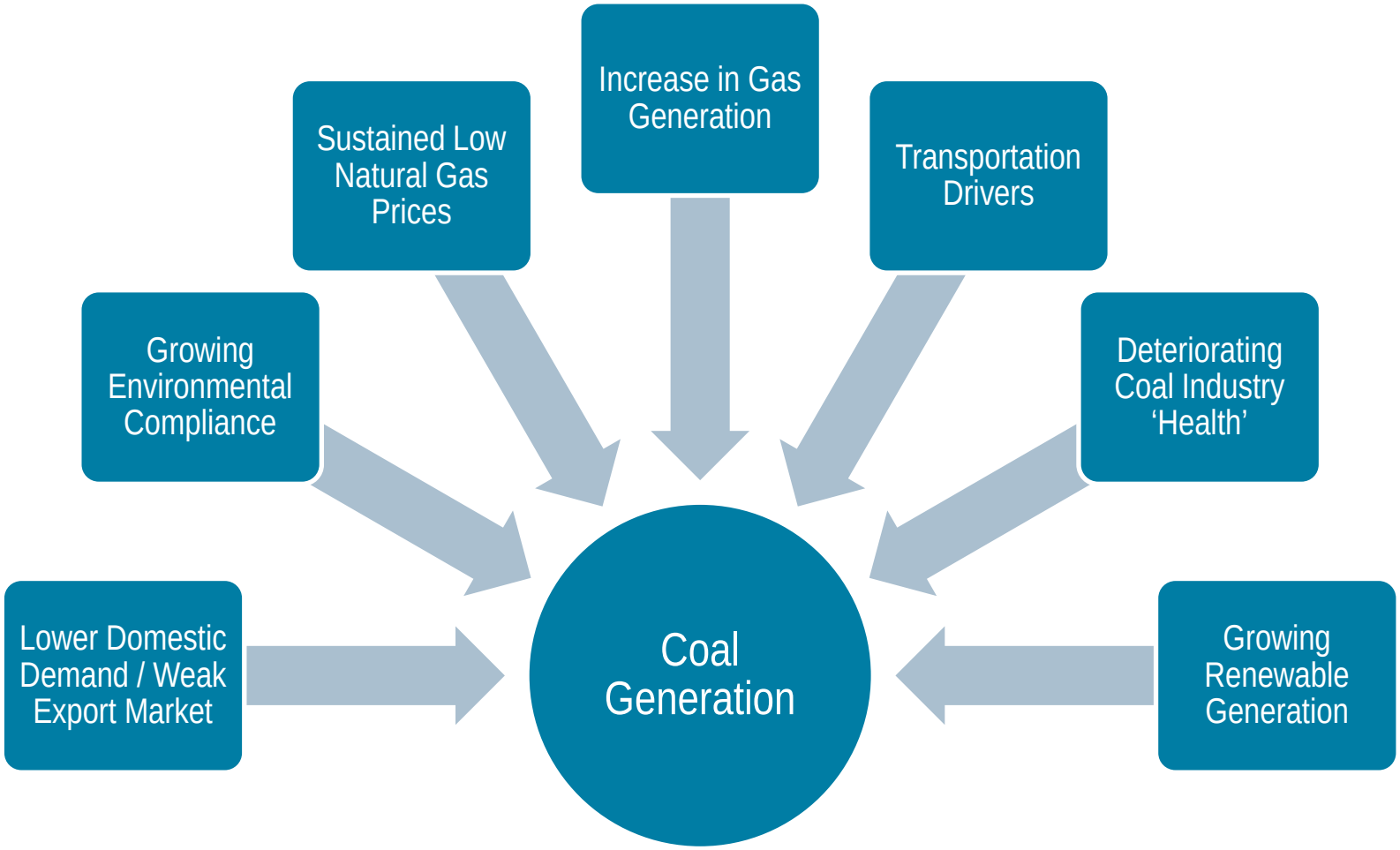
Coal
Gas/Oil
Nuclear
Hydro/Other

(1) Generation energy mix for owned generation only for 2015 as of 9/30/2015. Capacity estimates illustrative of 2015.

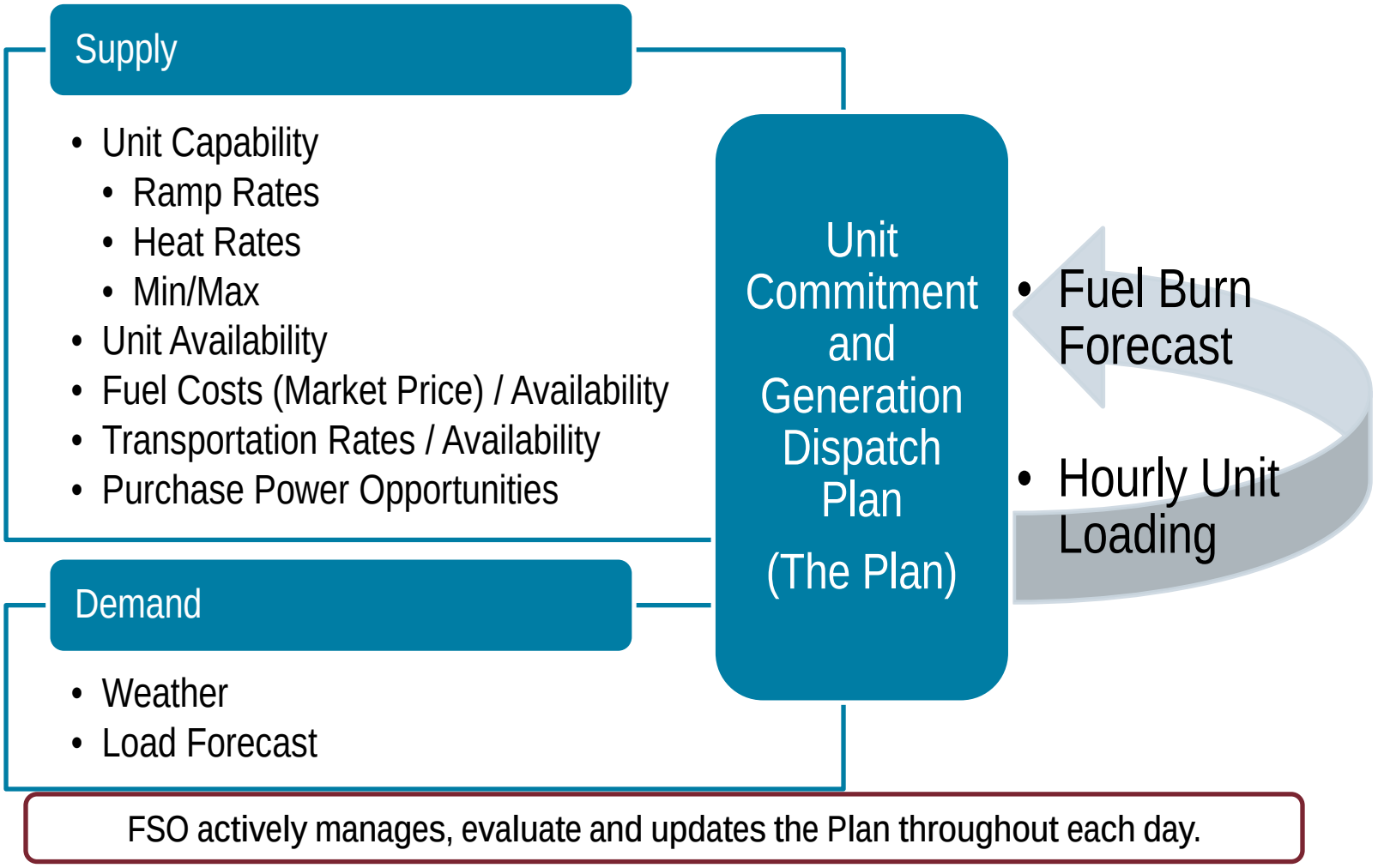
The STORM

Volatility

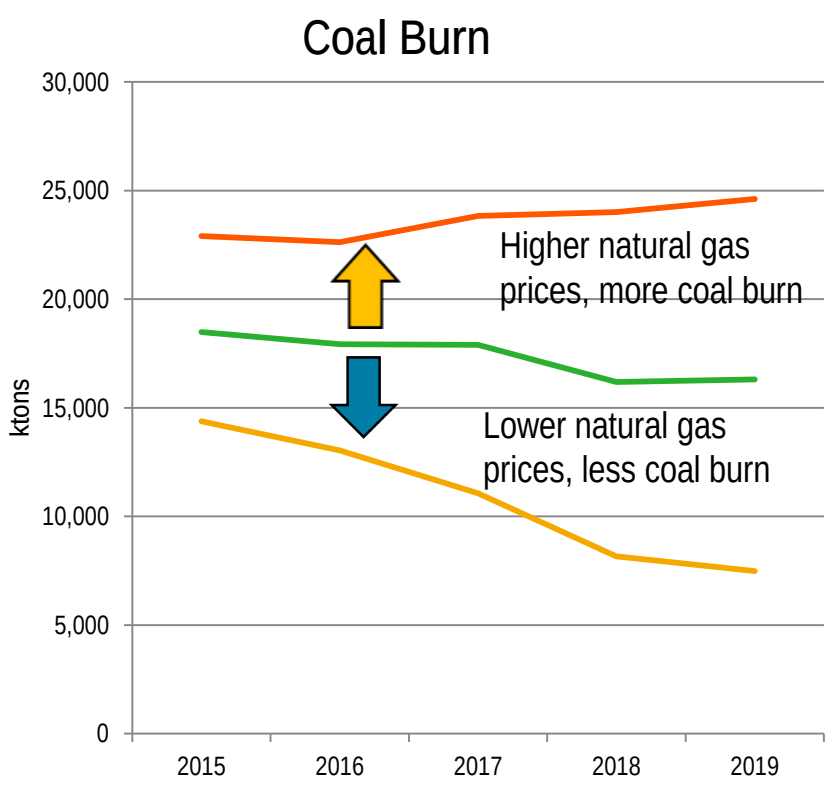
Coal is Facing Enormous Challenges

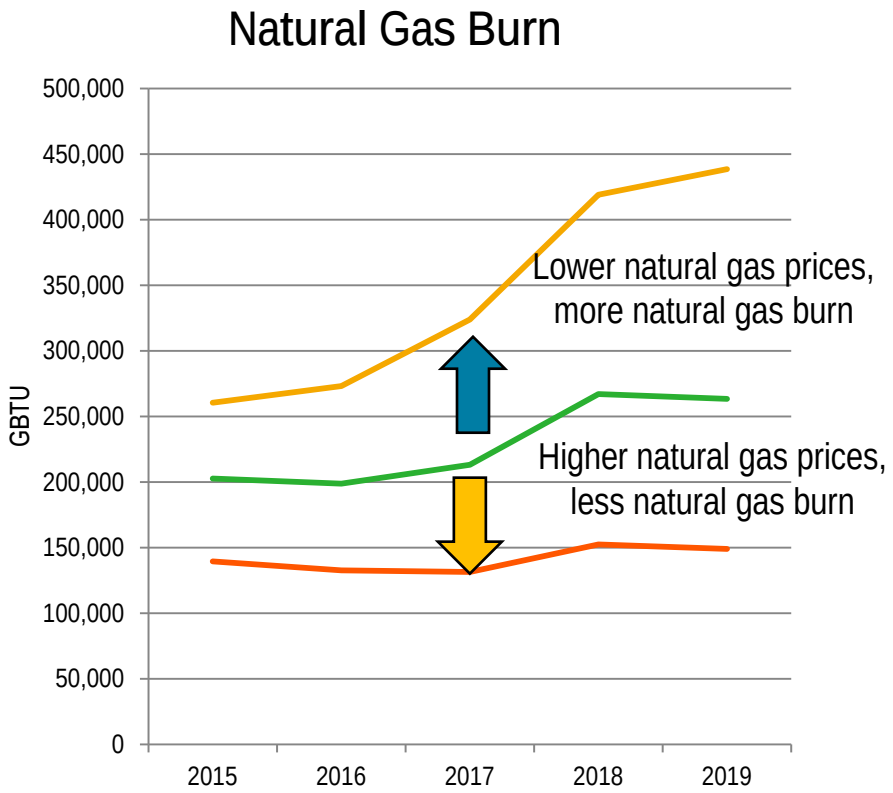


Fuels and Systems Optimization (FSO) - Southeast
Daily Process to Minimize Cost, Optimize and Ensure System Reliability



Supporting Growing Gas Generation – Fuel Contract Flexibility
Dynamic Dispatch and Fuel Forecast – Carolinas Illustrative Example





- Generation is dynamic. Fuel price relationships impact incremental dispatch and capacity factors.
- Flexibility required in contracting for forecasted coal and gas supply and transportation needs.

Note: Numbers in above graph are for illustration purposes only and subject to change.

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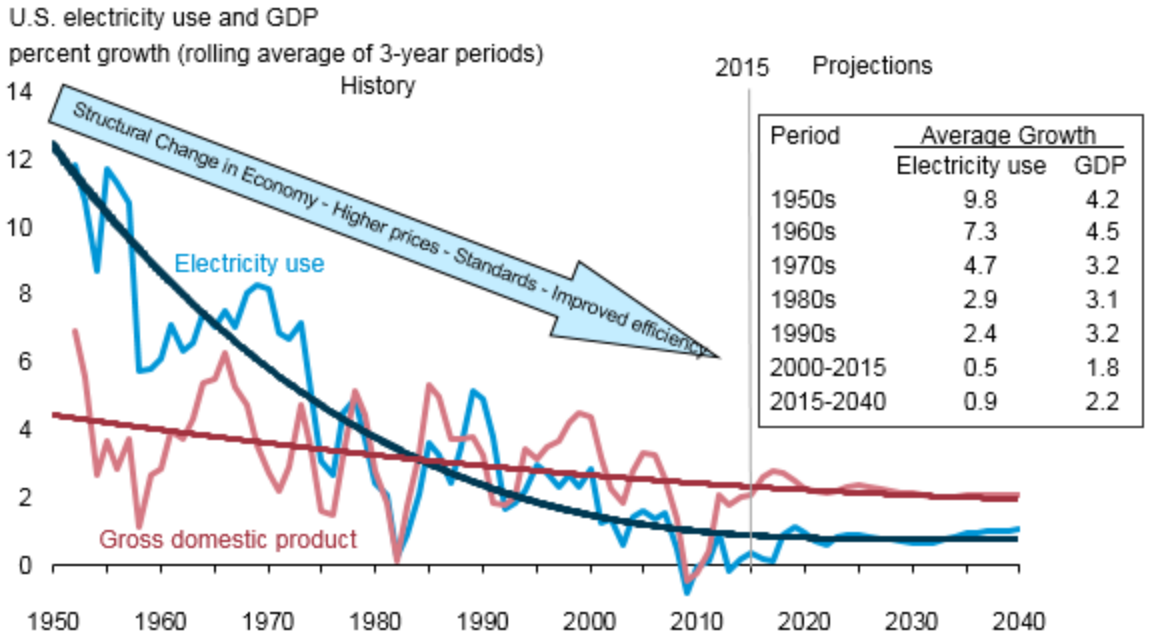
The FUTURE (according to EIA)

Electric use and economic growth



Period	Average Growth	
	Electricity use	GDP
1950s	9.8	4.2
1960s	7.3	4.5
1970s	4.7	3.2
1980s	2.9	3.1
1990s	2.4	3.2
2000-2015	0.5	1.8
2015-2040	0.9	2.2

Source: EIA, Annual Energy Outlook 2016

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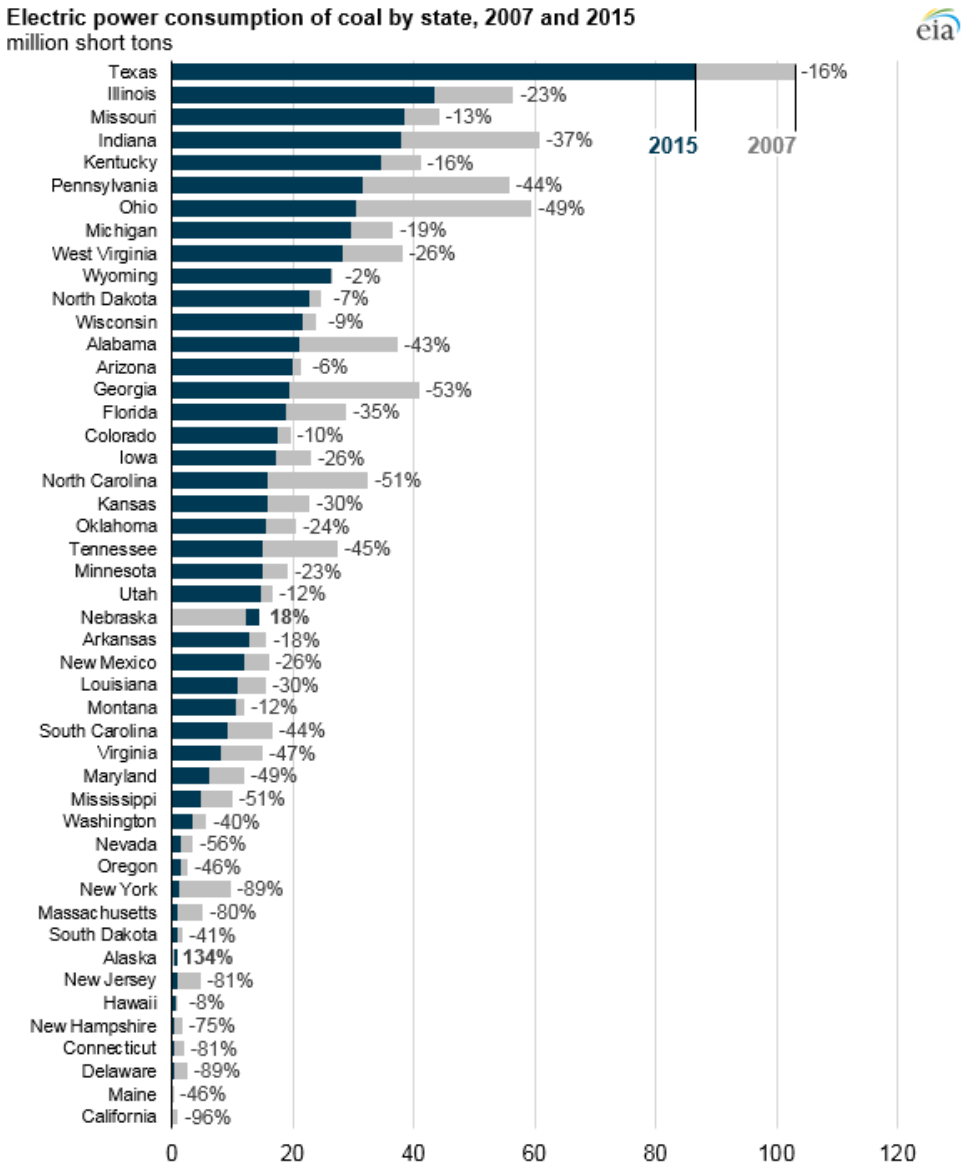
Electric power consumption of coal by state, 2007 and 2015
million short tons
eia
2015
2007
Texas -16%
Illinois -23%
Missouri -13%
Indiana -37%
Kentucky -16%
Pennsylvania -44%
Ohio -49%
Michigan -19%
West Virginia -26%
Wyoming -2%
North Dakota -7%
Wisconsin -9%
Alabama -43%
Arizona -6%
Georgia -53%
Florida -35%
Colorado -10%
Iowa -26%
North Carolina -51%
Kansas -30%
Oklahoma -24%
Tennessee -45%
Minnesota -23%
Utah -12%
Nebraska 18%
Arkansas -18%
New Mexico -26%
Louisiana -30%
Montana -12%
South Carolina -44%
Virginia -47%
Maryland -49%
Mississippi -51%
Washington -40%
Nevada -56%
Oregon -46%
New York -89%
Massachusetts -80%
South Dakota -41%
Alaska 134%
New Jersey -81%
Hawaii -8%
New Hampshire -75%
Connecticut -81%
Delaware -89%
Maine -46%
California -96%
0
20
40
60
80
100
120

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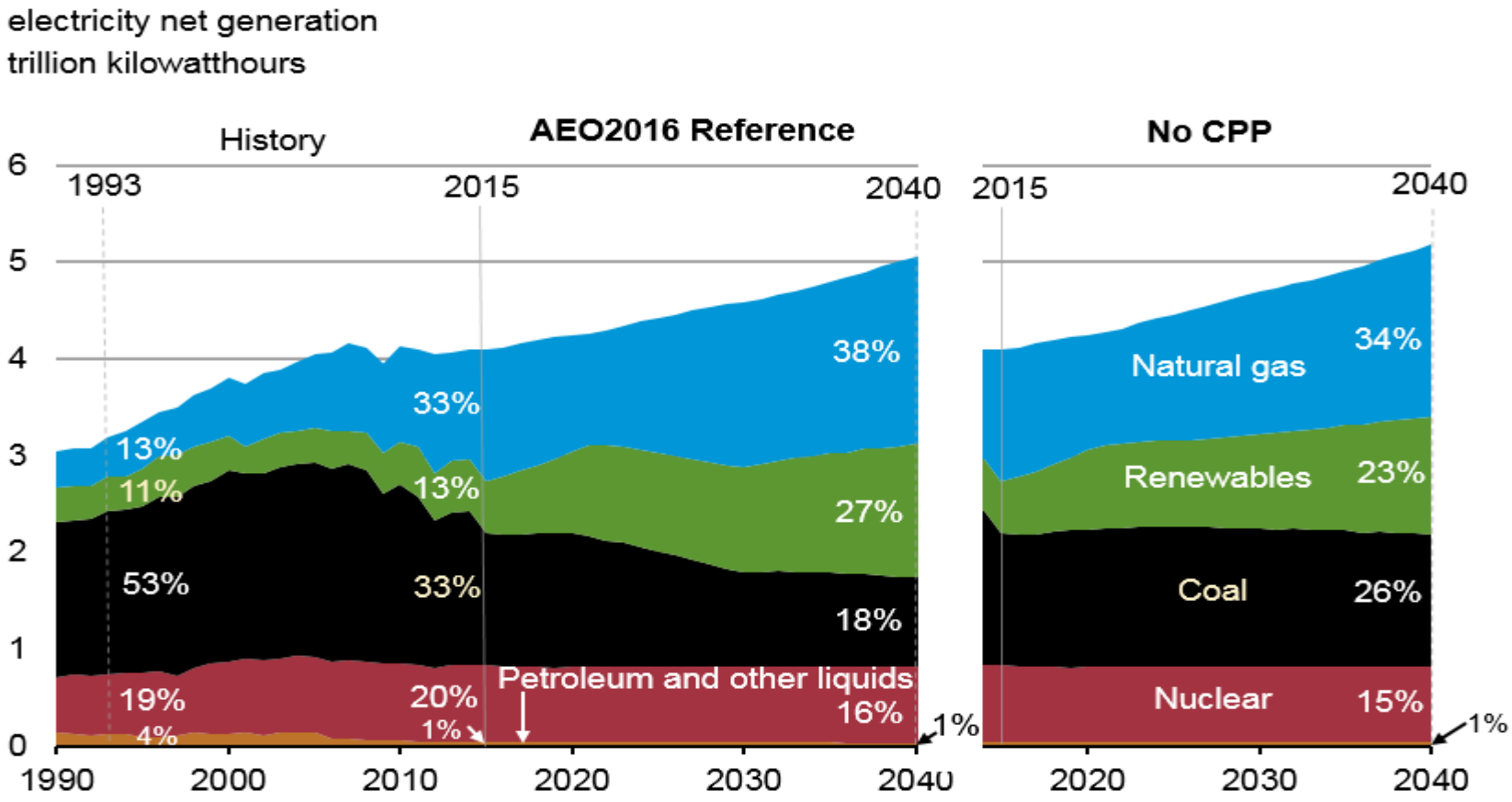
Electricity Generation by Source Type



Source: EIA, Annual Energy Outlook 2016

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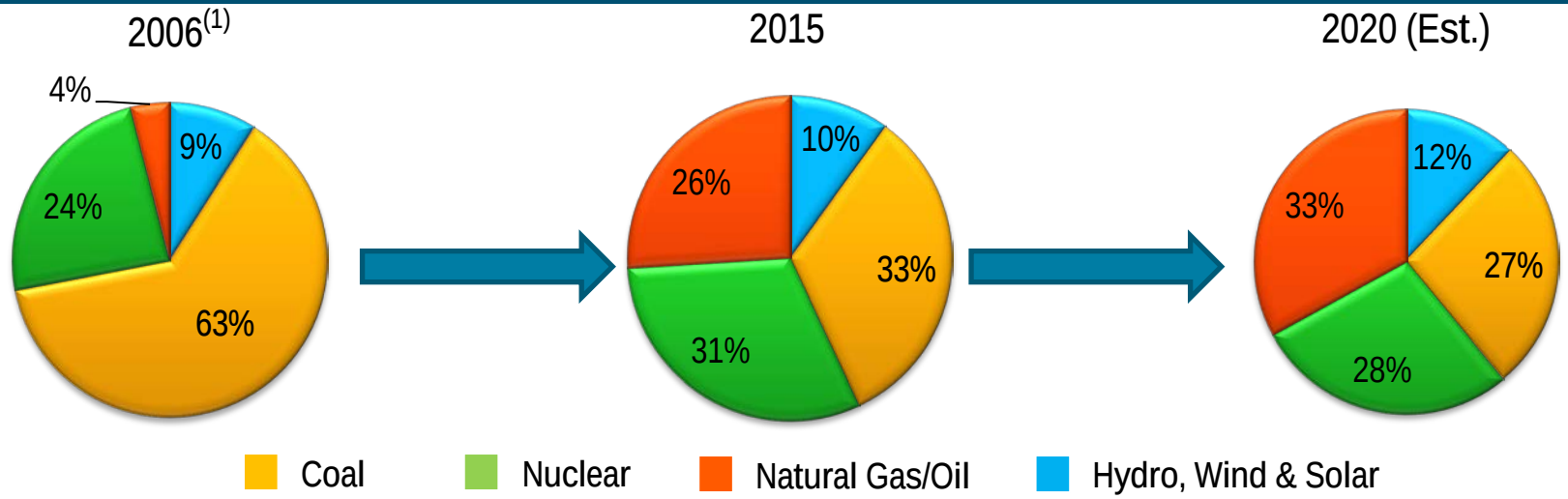
Moving toward a lower carbon footprint and increased fuel diversity

Total Company Fuel Diversity Estimates (MWh output)



Reduction of U.S. Generation Emissions From 2005 - 2015(2)

CO_2 ↓ 28% SO_2 ↓ 90% NO_X ↓ 68%

Reductions in emissions due to the following actions:

- Additions of pollution control systems
- Decreased coal generation
- Retirement of higher-emitting plants
- Increased natural gas generation

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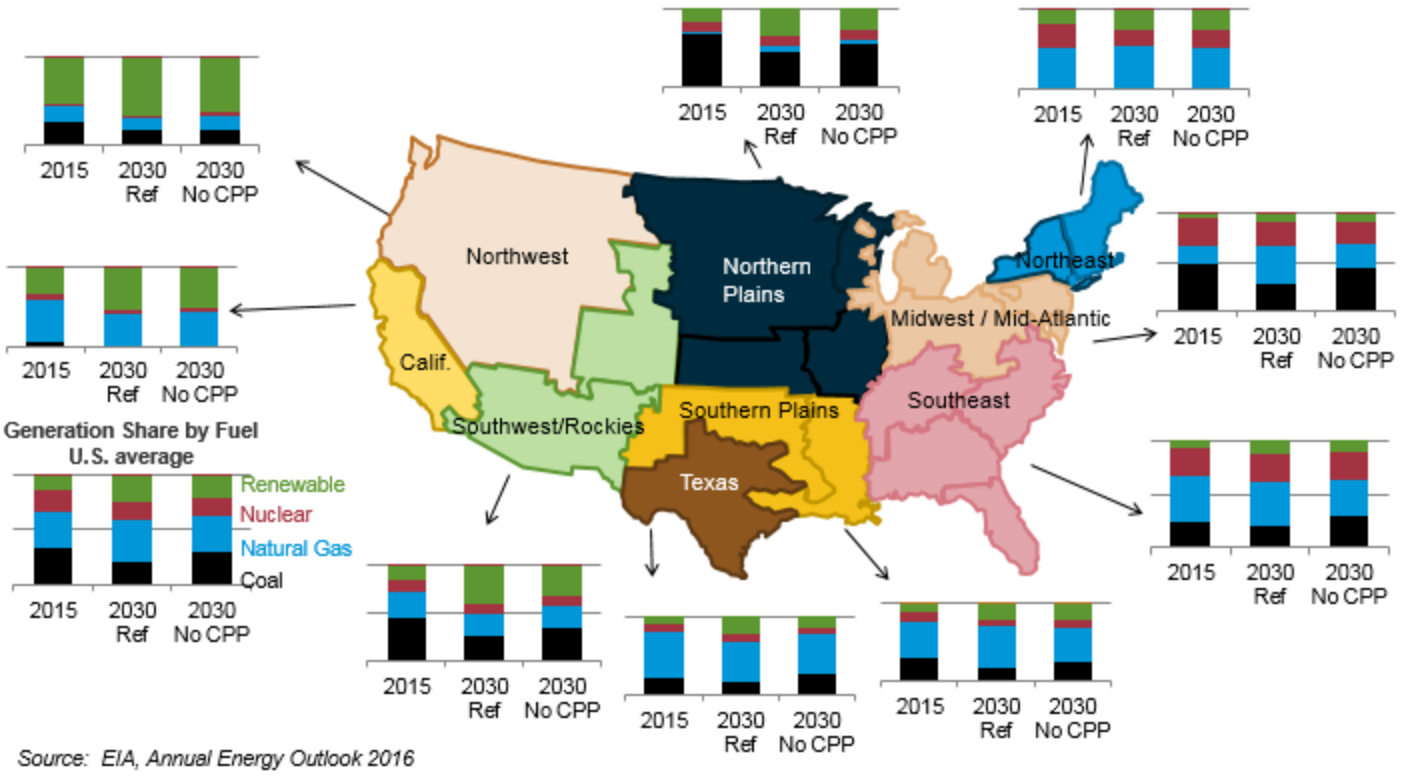
(1) 2006 data does not include Progress Energy .
(2) Data based on Duke Energy's ownership share of generating assets as of the end of each calendar year. The data exclude emissions from the commercial Midwest generation assets sold in April 2015, and include emissions from the NCEMPA generation assets (partial ownership interest in several Duke Energy Progress plants) purchased in August 2015.

The electricity generation mix varies widely across U.S. regions, which is likely to affect both compliance choices and costs



Source: EIA, Annual Energy Outlook 2016

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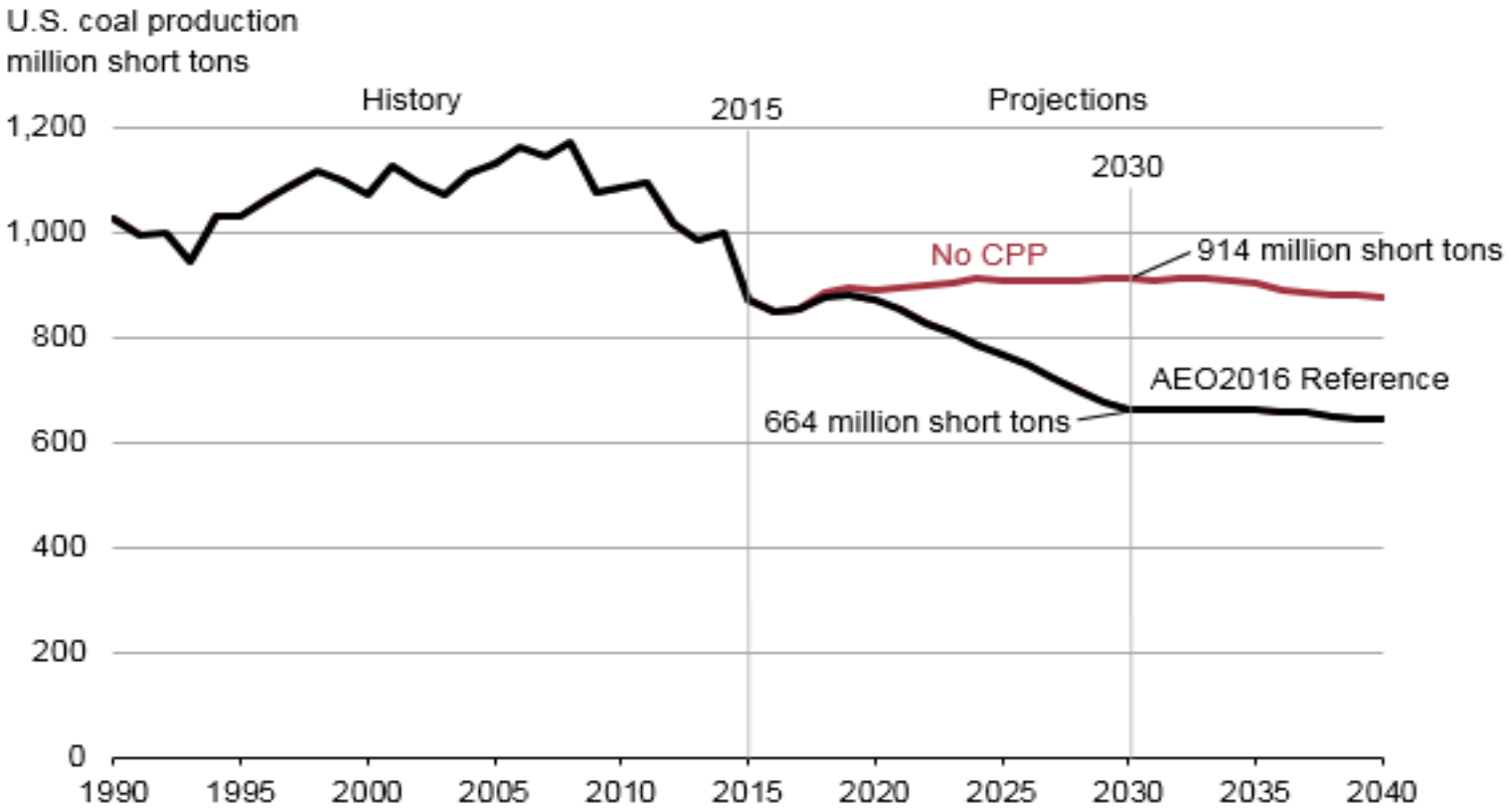
Reference case U.S. coal production in 2030 is 27% below its level in the No CPP case



Source: EIA, Annual Energy Outlook 2016

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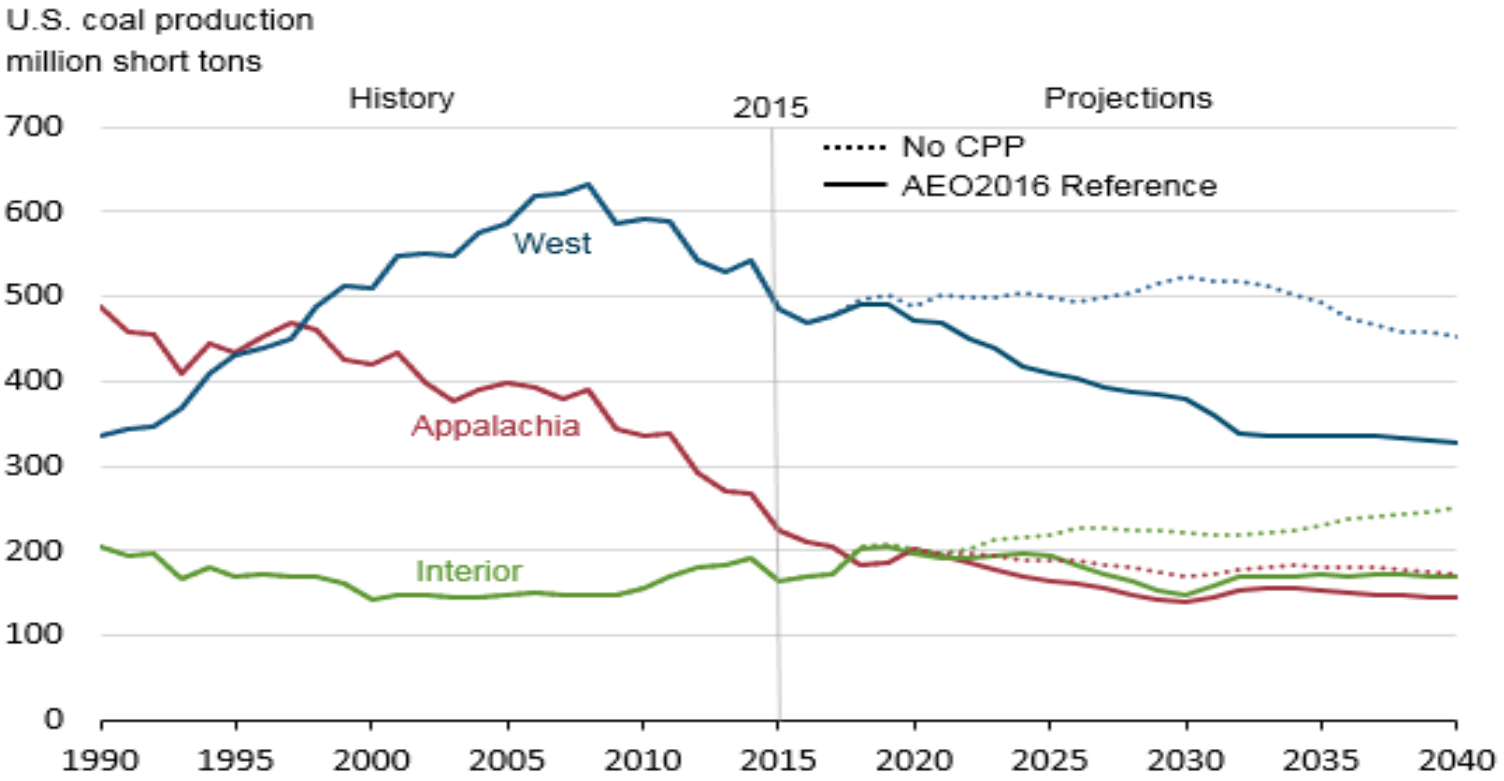
Regional coal production is 17%-32% lower in the Reference case by 2040 than in the No CPP case



Source: EIA, Annual Energy Outlook 2016

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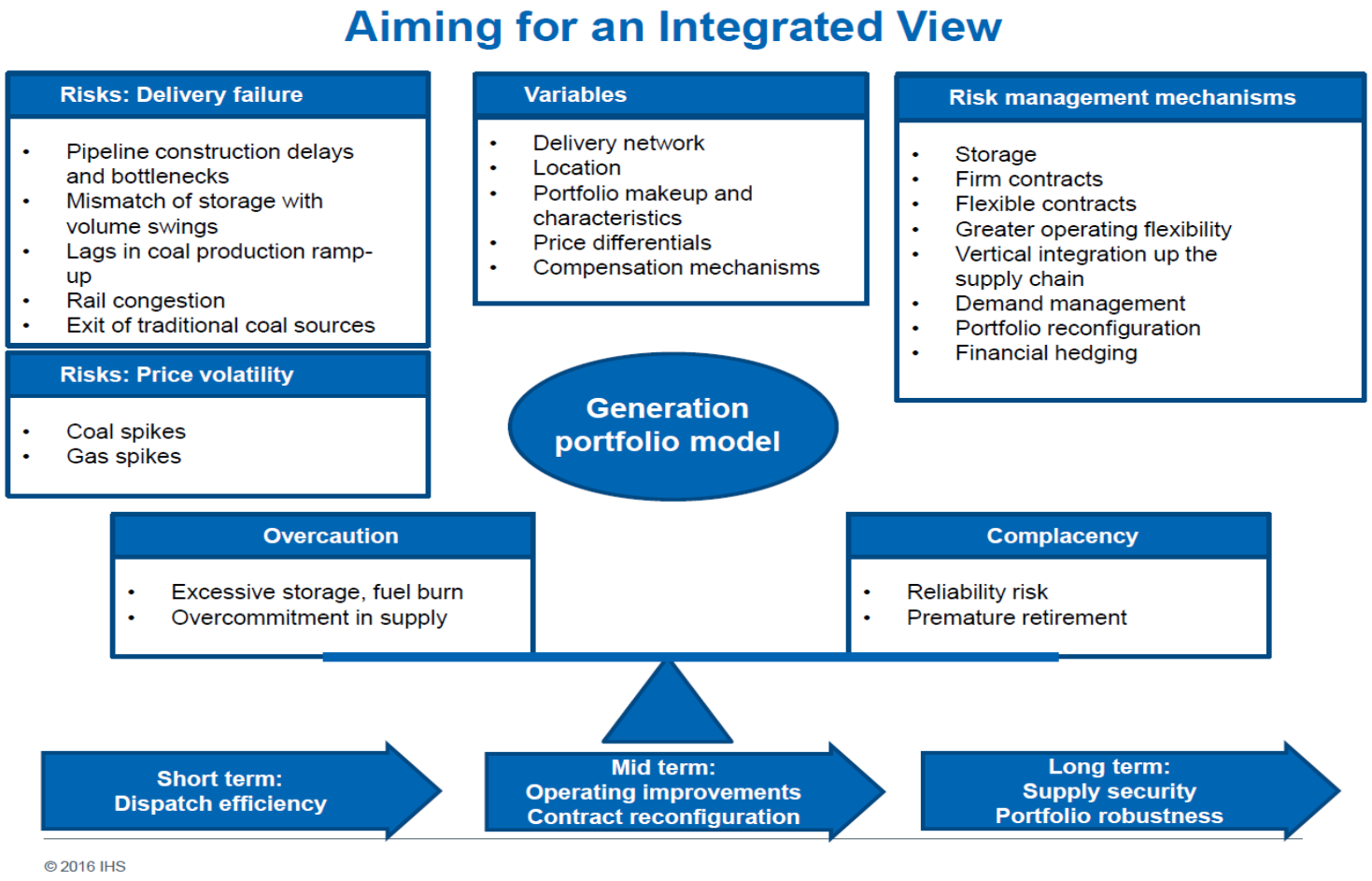
The APPROACH

Integrated Fuel Procurement Strategy



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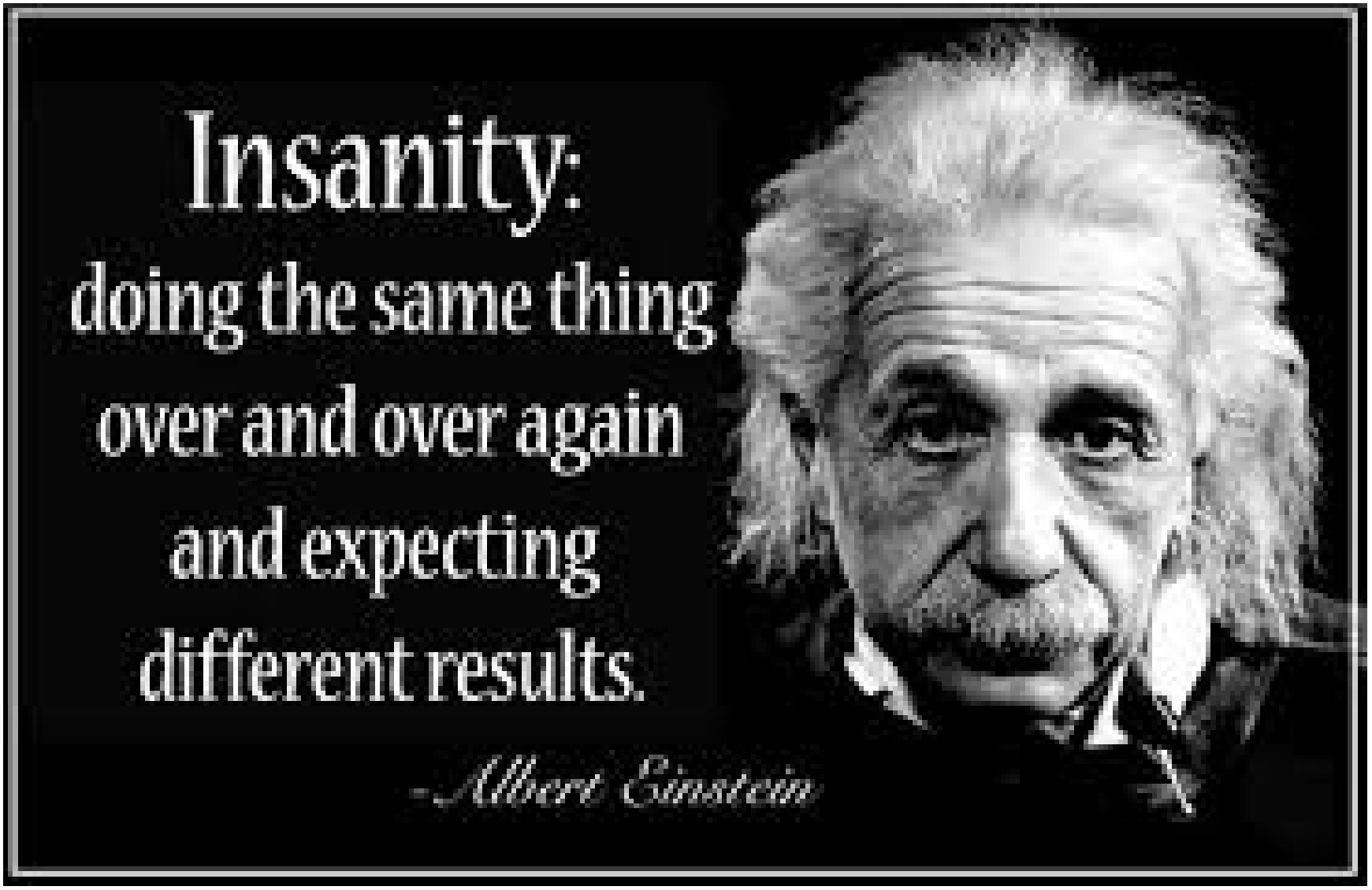
Insanity:
doing the same thing
over and over again
and expecting
different results.
-Albert Einstein

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Questions?