Coal in the United States: Recent Developments and Outlook

for

Sabin Center for Climate Change Law

Columbia University

September 8, 2016 | New York, NY

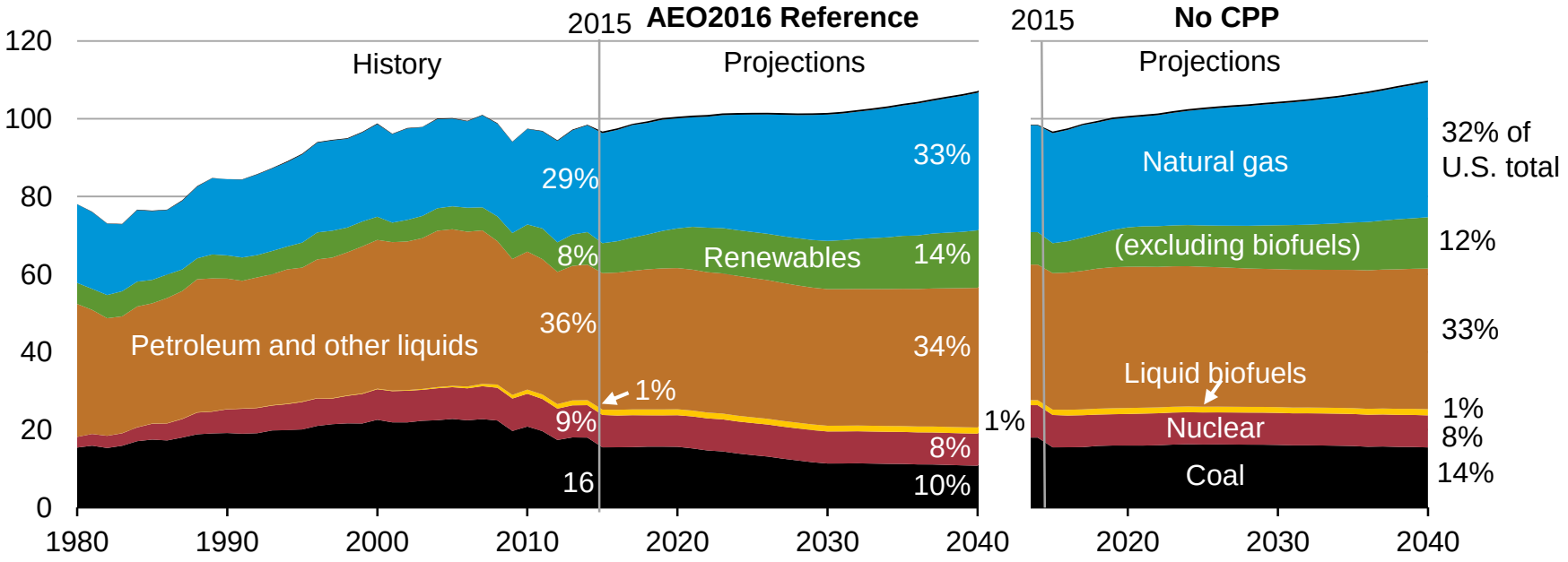
by

Howard Gruenspecht, Deputy Administrator

Recent slow (or no) growth in energy use is projected to persist, with coal's share in the energy mix continuing its recent decline

U.S. primary energy consumption

quadrillion Btu



Source: EIA, Annual Energy Outlook 2016

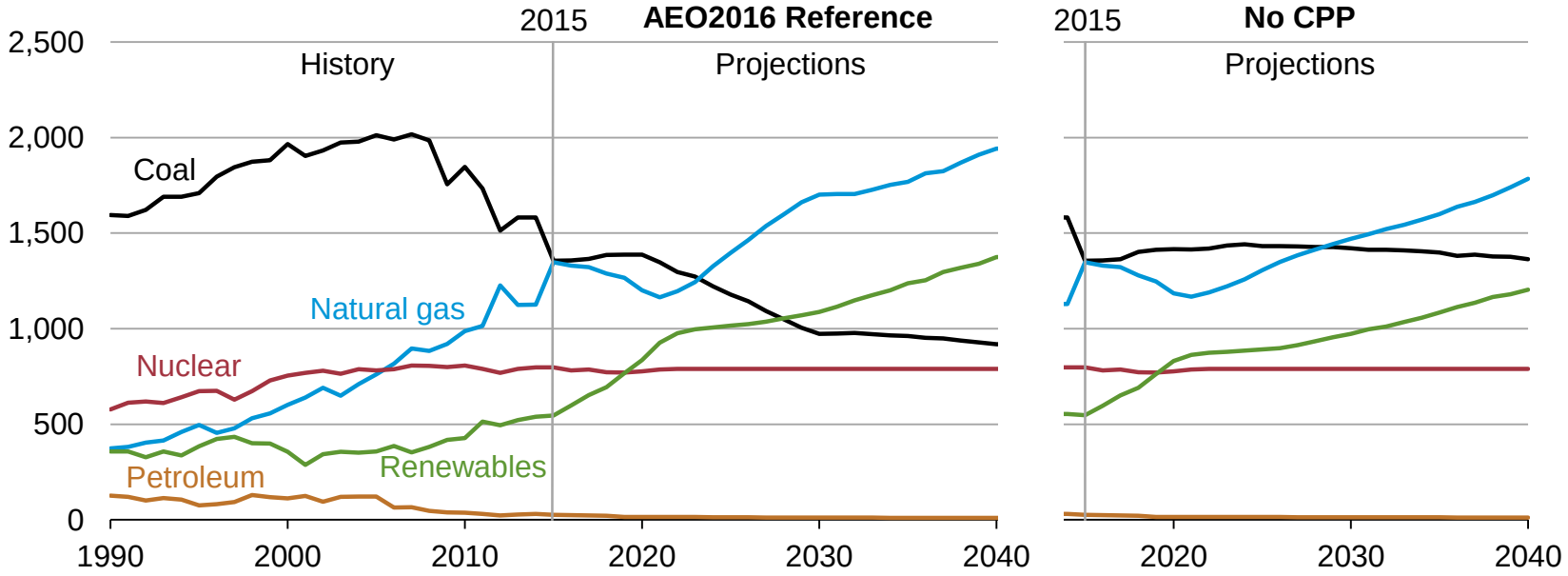
Placing an implicit or explicit value on CO_2 emissions affects the delivered price of coal much more than the delivered prices of oil and natural gas

Fuel	CO_2 content per million Btu	Delivered Price to U.S. consumers in 2014 (all sectors, $ per million Btu)	Impact of $10 per ton CO_2 value		Impact of $50 per ton CO_2 value	
			$	percent	$	percent
Coal	0.094	2.40	0.94	39.2	4.70	196
Oil	0.074	28.09	0.74	2.6	3.70	13.2
Nat. Gas	0.053	6.86	0.53	7.7	2.65	38.6

- Note: The level of delivered fuel prices (but not their order) varies significantly from U.S. pricing across global regions.

Both natural gas and renewable generation surpass coal by 2030 in the Reference case, but only natural gas does so in the No CPP case

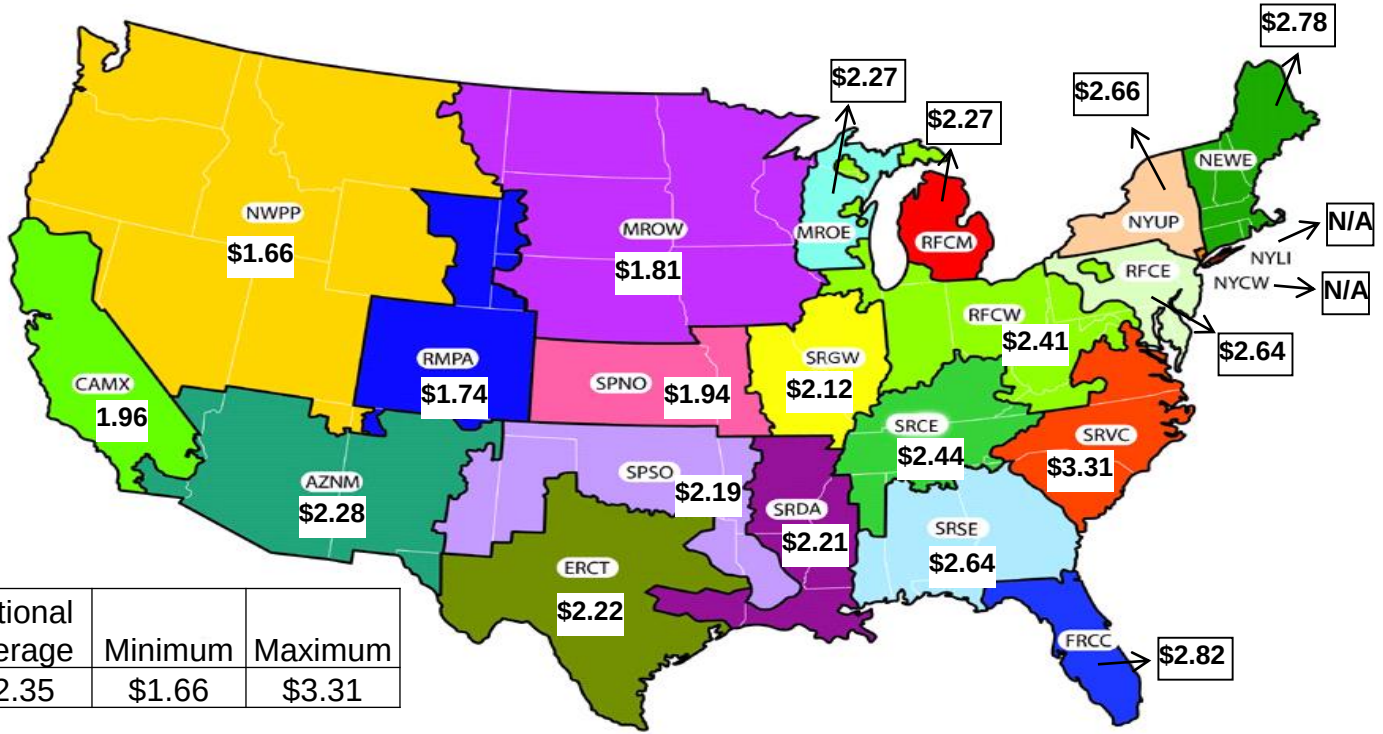
net electricity generation
billion kilowatthours



Source: EIA, Annual Energy Outlook 2016

The average delivered price of coal to electricity generators varies widely across U.S. regions – transport costs are a key reason

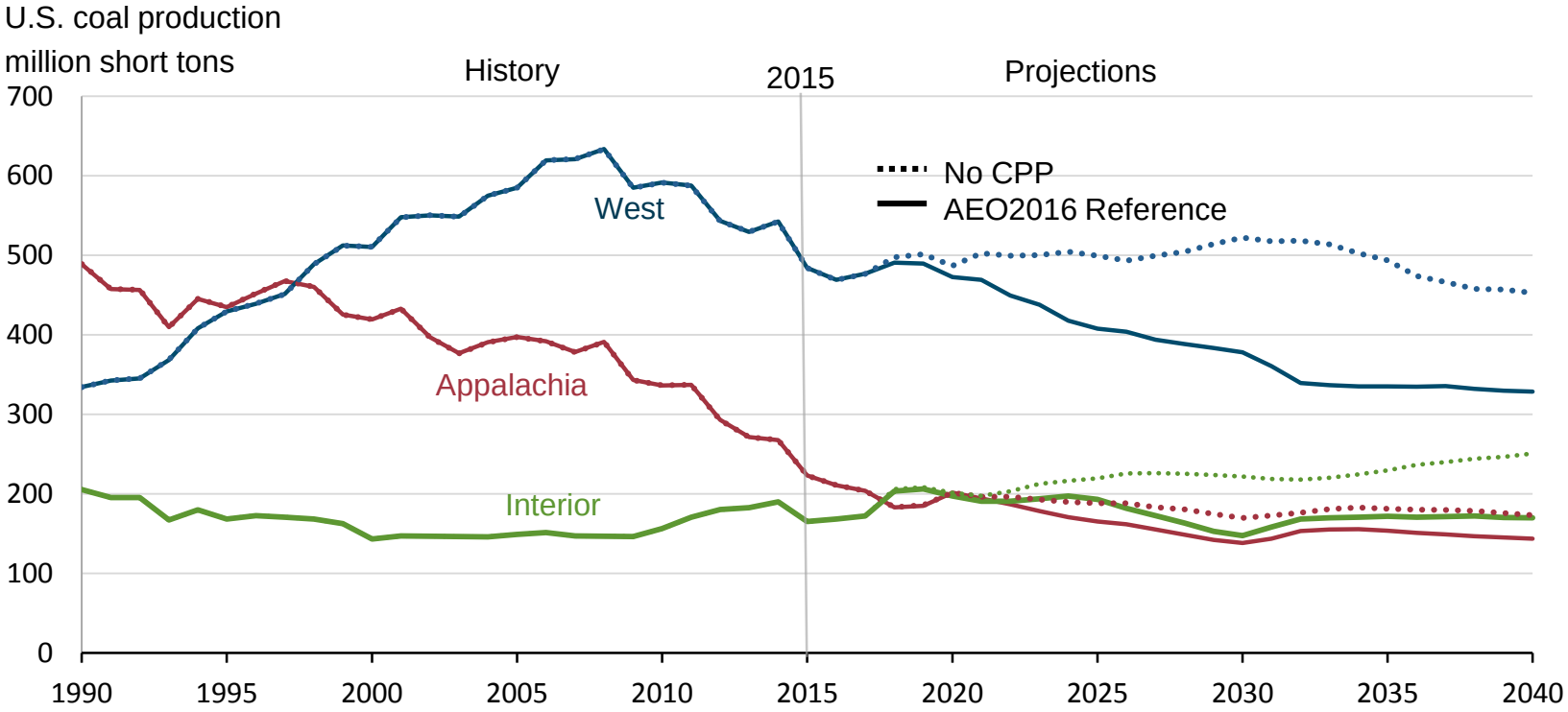
2014 delivered coal prices, nominal $ per million Btu



National Average	Minimum	Maximum
$2.35	$1.66	$3.31

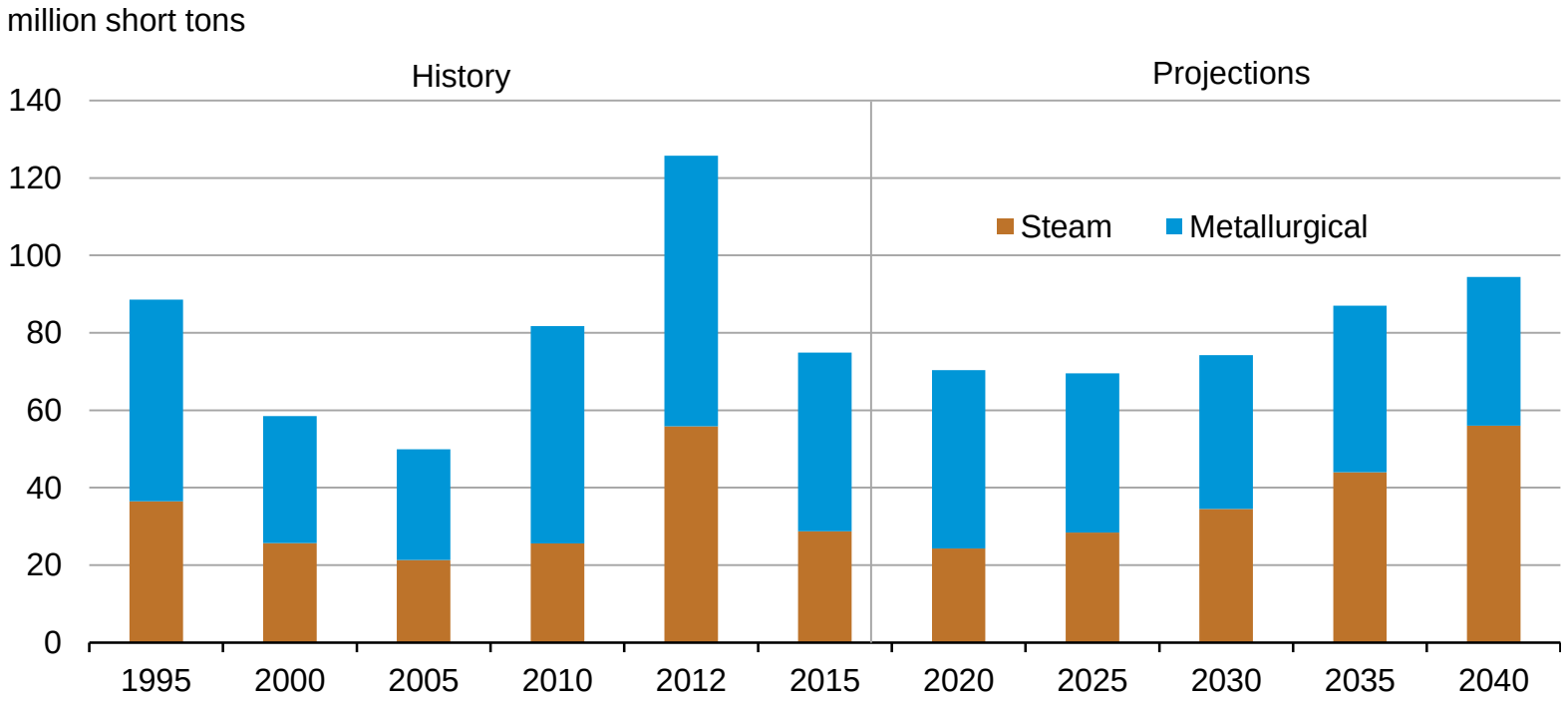
Source: EIA, Annual Energy Outlook 2016

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

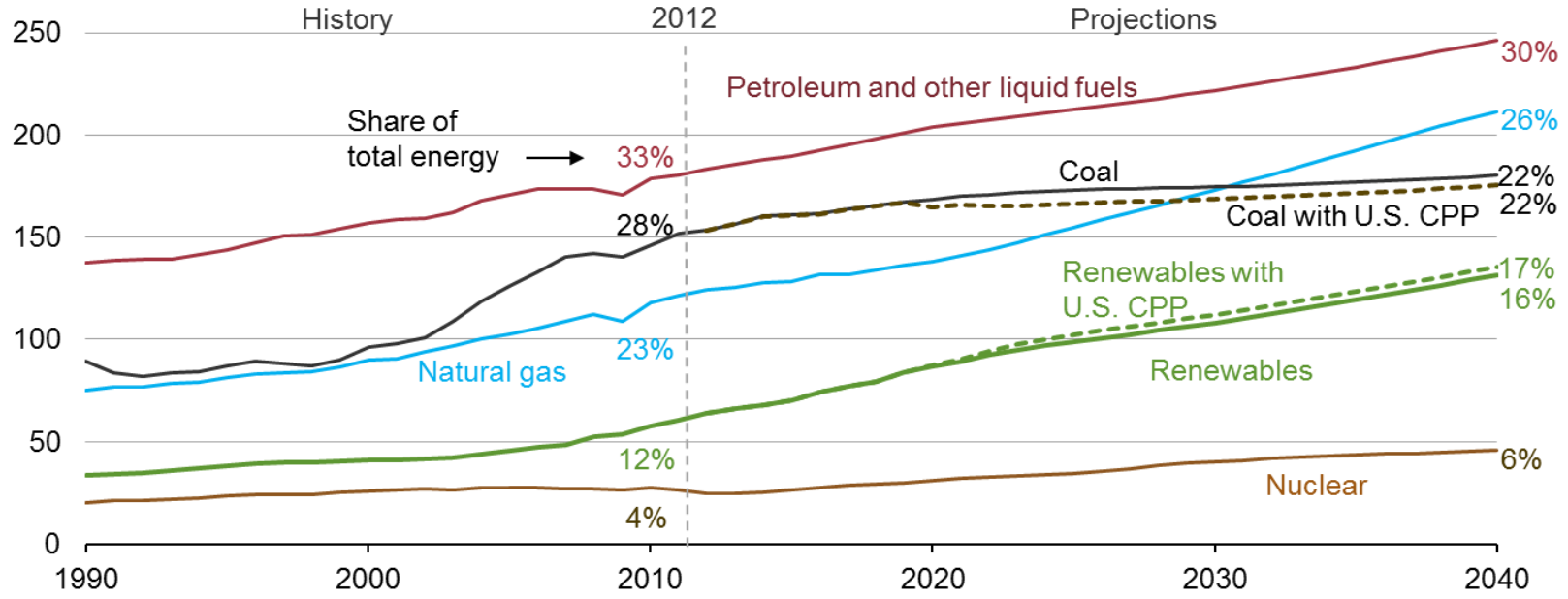
Coal exports do not appear to represent a significant market opportunity for U.S. coal producers



Sources: History: EIA, Quarterly Coal Report; Projections: EIA, Annual Energy Outlook 2016

EIA's International Energy Outlook 2016, which does not include all INDCs or assume reductions to limit warming to 2°C, projects a plateau in global coal use

world energy consumption
quadrillion Btu



Source: EIA, International Energy Outlook 2016 and EIA, Analysis of the Impacts of the Clean Power Plan (May 2015)

For more information

U.S. Energy Information Administration home page | www.eia.gov

Annual Energy Outlook | www.eia.gov/forecasts/aeo

International Energy Outlook | www.eia.gov/forecasts/ieo

Short-Term Energy Outlook | www.eia.gov/forecasts/steo

Today In Energy | www.eia.gov/todayinenergy

Monthly Energy Review | www.eia.gov/totalenergy/data/monthly