

COLOMBIA UNIVERSITY STUDY ON THE CHALLENGES OF THE U.S. COAL INDUSTRY AND LESSONS FOR EUROPE

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UNECE COMMISSIONED A STUDY OF THE U.S. COAL INDUSTRY

- Titled “The challenges of the U.S coal industry and lessons for Europe”, published in May 2016. Available on the UNECE GoE CMM webpage
- Focused on the economic and business drivers that have led to the decline of the coal industry in the U.S
- This study, for use by the GoE on CMM, was intended to provide UNECE member states information on the shifting market landscape
- Research team was directed to determine if CMM could have any role in preventing further erosion of the coal industry’s health

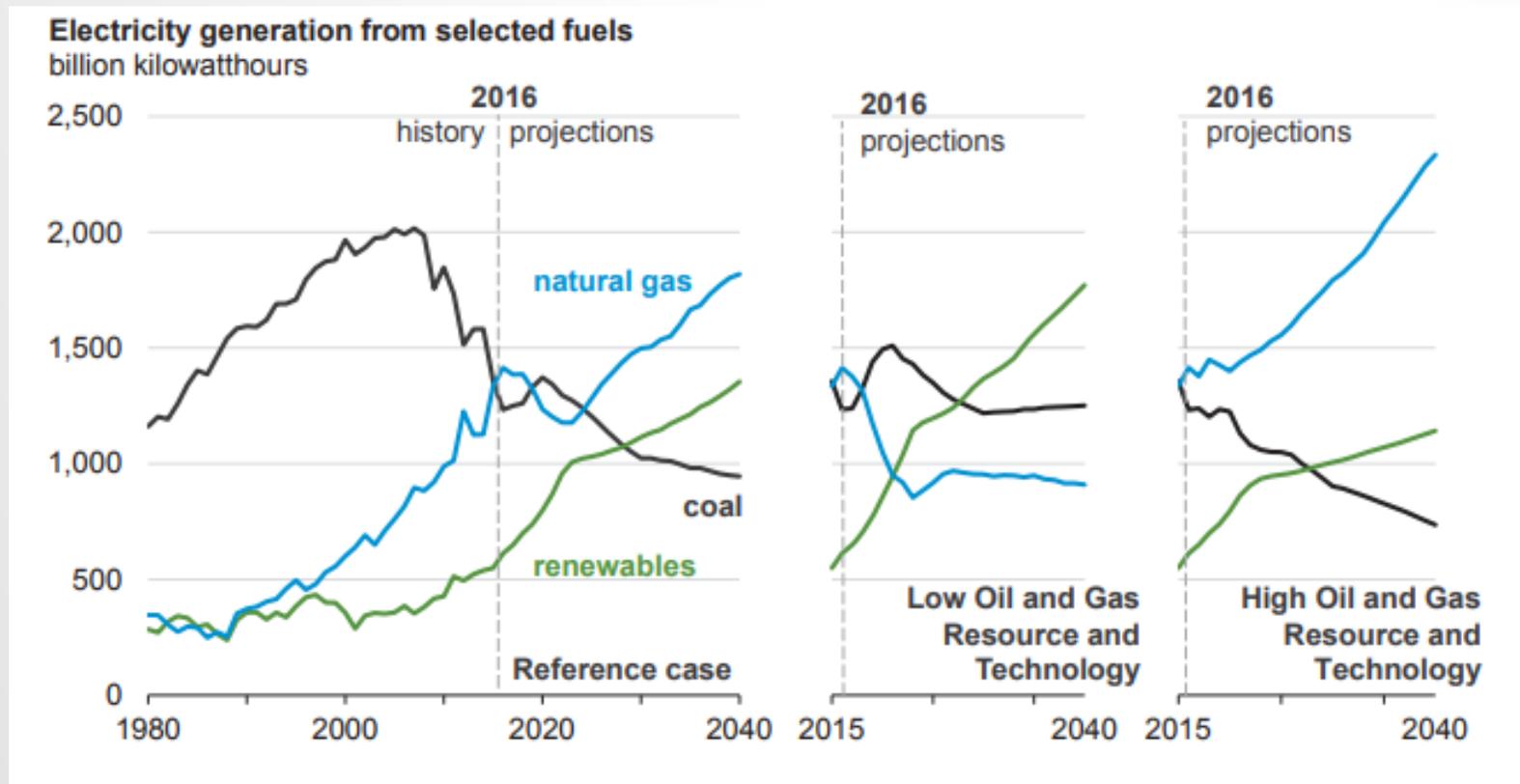
APPROACH TO UNDERSTANDING THE U.S. COAL INDUSTRY LANDSCAPE:

- Analyzed recent trends in US coal production examining the underlying factors– flat electricity demand, weak demand for US coal exports, falling natural gas prices, challenges in the regulatory environment
- Developed case studies of coal companies and highlighted trends of financial diversification away from coal, increasing operational efficiencies
- Studied the effects of coal mining company bankruptcies, the impact on the host communities and the impact on the economy
- Considered the lessons learned in the US and the applicability in the European context

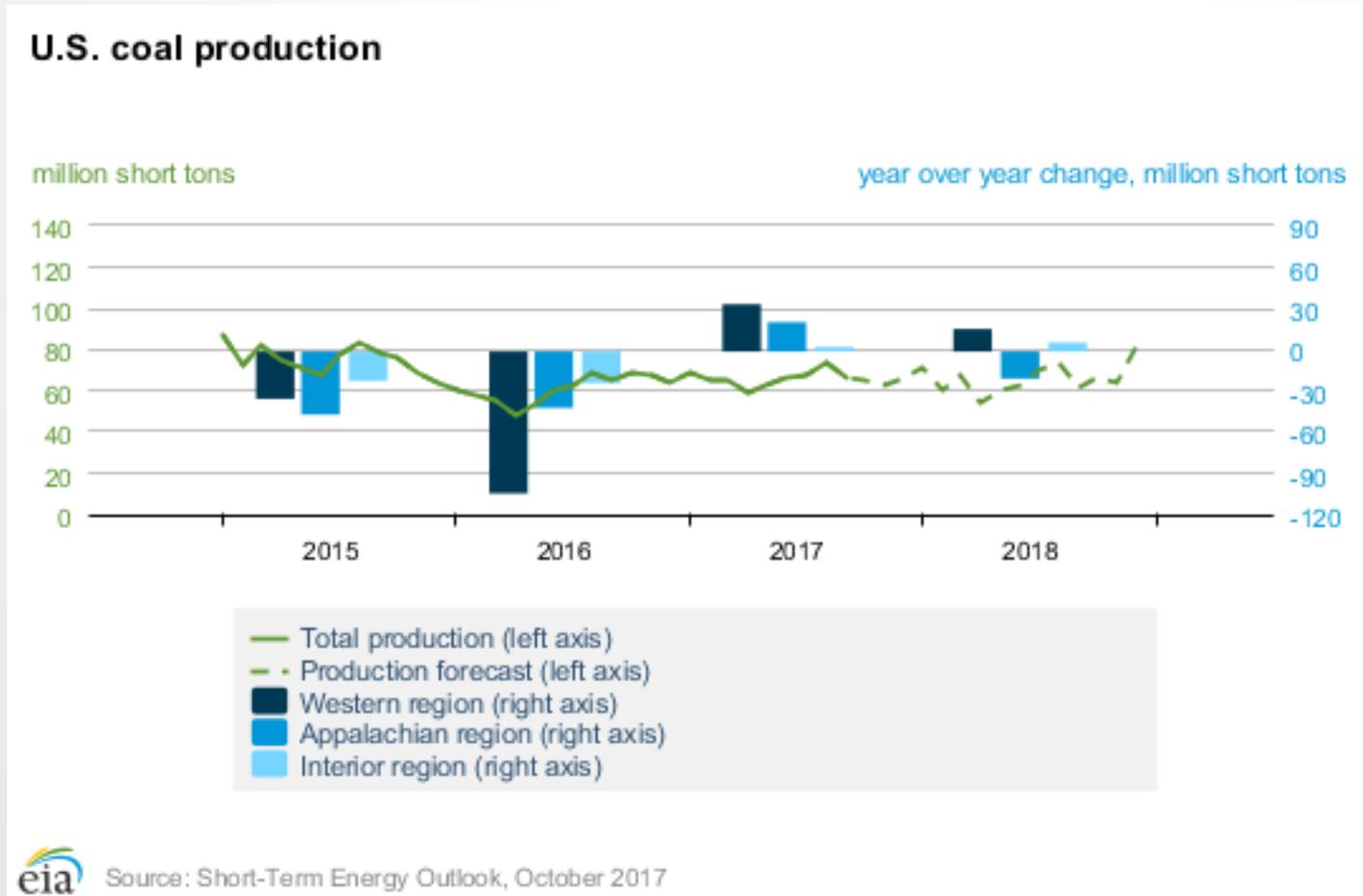
TRENDS WERE REVEALED

- US coal production peaked in 2008 and declining since
- Electricity demand remained flattened since 2010
- Falling global steel demand and imposition of more stringent regulations lowered the market price of coal
- Declining costs have enabled gas and renewables to displace coal
- Coal companies borrowed huge amounts of capital to acquire additional coal assets, expecting robust coal market growth
- Confluence of these factors contributed to major coal company bankruptcies in the coal mining sector

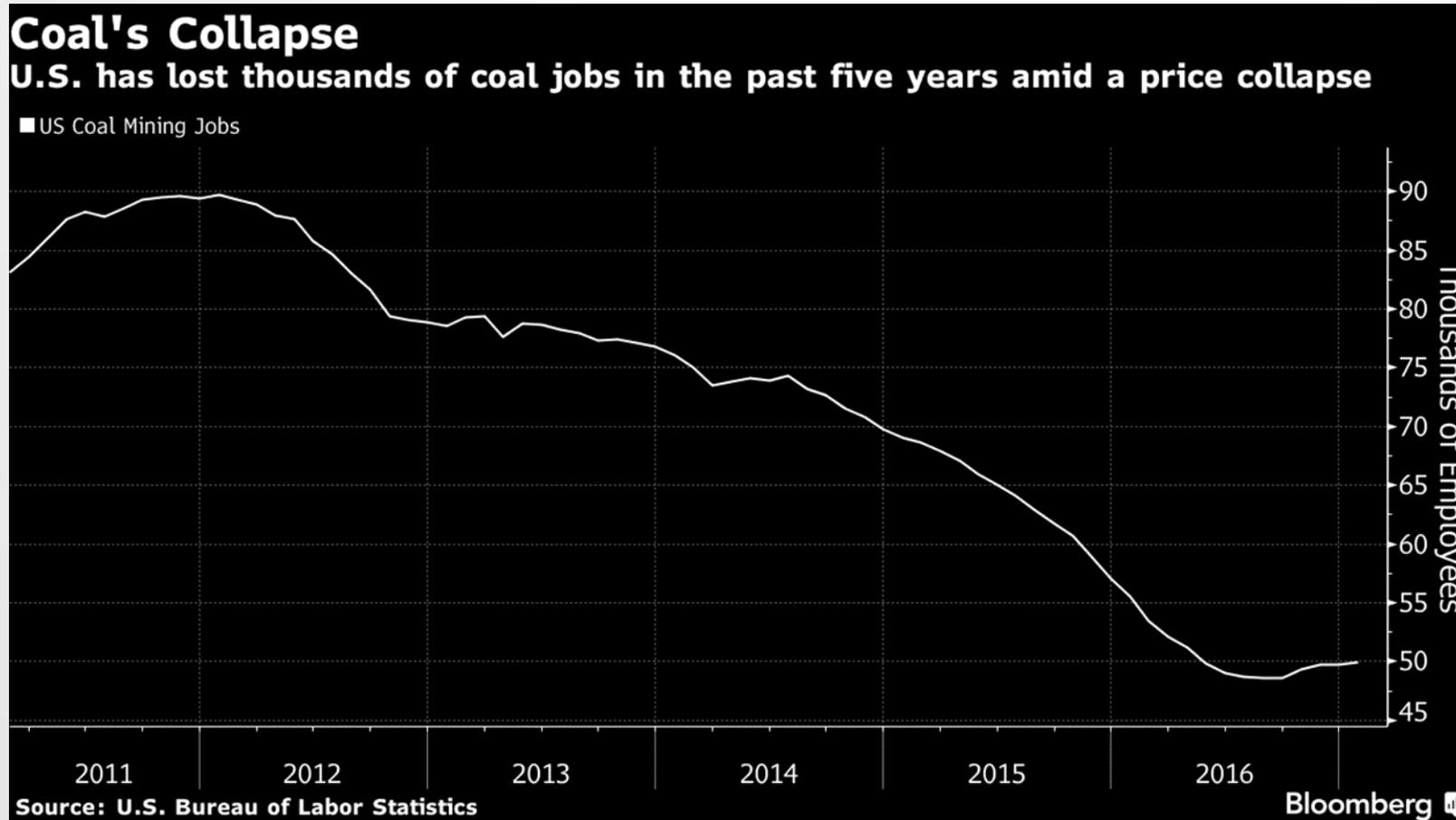
EXISTING TRENDS VERSUS ALTERNATE FUEL PRODUCTION SCENARIOS



U.S COAL PRODUCTION CHANGES BY REGION



U. S COAL JOBS



U.S. COAL UPDATE 2017

- Open cast mines have opened in central Appalachia in early 2017, but underground mines have closed or been idled in the Illinois basin
- Natural gas prices are moving upward slowly, but undrilled reserves are likely to keep prices relatively low
- Many coal-fired power plants are scheduled for closure over the next several years
- CMM projects have played no important role in delaying mine closures

APPLICABILITY TO THE EUROPEAN SITUATION

- Shifts from coal to sustainable energy sources created growing energy sector that create new jobs while meeting European emissions targets
- In many cases, coal has become less significant to domestic energy generation
- Eastern European countries contend with energy security challenges and to some extent have loss energy independence
- Attention to most valuable coal assets in Europe is essential, but there needs to be streamlining and end to coal subsidies
- More diversified sources of imported natural gas have sources have driven the cost downward

THANK YOU!

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