

**UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF MISSOURI**

FEDERAL TRADE COMMISSION

Plaintiff,

v.

PEABODY ENERGY CORPORATION

and

ARCH COAL, INC.,

Defendants.

Case No. 4:20-cv-00317-SEP

REDACTED VERSION

DEFENDANTS' PROPOSED FINDINGS OF FACT AND CONCLUSIONS OF LAW

TABLE OF CONTENTS

	Page
<u>PRELIMINARY STATEMENT</u>	1
<u>PROPOSED FINDINGS OF FACT</u>	2
I. BACKGROUND	2
A. Electricity Generation	2
1. Electricity Generation Overview	2
2. Utilities Participating in ISOs and RTOs	2
3. ISOs/RTOs Determine Electricity Supply and Demand	4
4. Utilities Located Outside of ISOs and RTOs	5
B. Electricity Generation Commercial Realities Have Changed	6
1. Low Cost Natural Gas for Increasingly Efficient Natural Gas Powered EGUs	6
2. Growing Renewable Generation	6
3. Coal EGU Retirements and Declining Coal Generation	7
C. Coal Production, Distribution, and Sale	9
1. Competing Fuel Sources Have Negatively Impacted SPRB Coal Production	9
2. Peabody’s and Arch’s SPRB Production and Sales Have Suffered	10
3. These Trends Are Here to Stay	14
4. The Coal Sales Process	15
a. Coal Prices are Determined by Natural Gas Prices	15
b. SPRB Coal Is Sold to Pursuant to Long Term Agreements Resulting from Confidential RFPs	17
c. SPRB Coal Supply Contracts Increasingly Include Flexibility	20
D. The Joint Venture	21
1. Business Rationale	21

2. Previous Acquisitions in the SPRB Coal Industry Demonstrate that Significant Cost Savings are Achievable.	24
3. Arch’s Competitive Future But For the Joint Venture	26
4. Customer Reaction to the Joint Venture.....	28
II. PRACTICAL INDICIA OF COMPETITION IN THE RELEVANT MARKETS	32
A. Industry and Public Recognition of Interfuel Competition.....	32
1. The U.S. Energy Information Administration	32
2. Customers	34
3. Coal Producers.....	37
4. Industry Reports.....	40
B. SPRB Coal Is Used Interchangeably With Other Fuels to Generate Electricity	41
C. SPRB Coal Customers Are Not “Distinct”	42
D. SPRB Coal Prices Are Closely Related to Other Fuel Prices	43
E. Sensitivity to Price Changes.....	46
III. EXPERT ASSESSMENTS OF THE RELEVANT MARKETS AND THE JOINT VENTURE’S LIKELY EFFECTS ON COMPETITION.....	50
A. Plaintiffs’ Experts	50
1. Dr. Nicholas Hill	50
2. Dr. Mark Zmijewski	51
B. Defendants’ Experts.....	51
1. Professor Julie Carey.....	51
2. Dr. Elizabeth Bailey	51
3. Dr. Mark Israel.....	52
<u>PROPOSED CONCLUSIONS OF LAW</u>	53
I. LEGAL STANDARD	53
II. MARKET DEFINITION	55

A.	Product Market Definition.....	56
1.	Analysis of the <i>Brown Shoe</i> Factors	60
a.	Industry and Public Recognition.....	61
b.	Peculiar Characteristics and Uses	62
c.	Distinct Customers	64
d.	Distinct Prices	66
e.	Sensitivity to Price Changes	66
f.	Specialized Vendors.....	68
g.	The FTC Has Not Shown that the Brown Shoe Factors Support Exclusion of All Other Fuels from the Relevant Market.....	68
2.	The Hypothetical Monopolist Test Does Not Support a Market Limited to SPRB Coal to the Exclusion of Other Fuels.....	69
a.	Dr. Hill’s HMT Leaves Out Important Sources of Dynamic Competition	70
b.	Dr. Hill’s HMT Contradicts Real-World Facts.....	74
c.	Customers Would Resist a Small But Significant Non-Transitory Price Increase by Switching to Other Fuels.....	76
3.	Economic Analyses of Real-World Data Further Undermine the FTC’s Proposed Market Definition	78
4.	The FTC Has Not Established an SPRB Coal Only Market Through RFPs.....	80
III.	THE FTC HAS NOT ESTABLISHED A PRIMA FACIE CASE.....	82
IV.	LIKELIHOOD OF ANTICOMPETITIVE EFFECTS.....	83
A.	The Joint Venture Is Unlikely to Result in Increased Prices.....	83
1.	The Joint Venture Has No Intent, Incentive or Ability to Raise Prices.	83
2.	The FTC’s Statistical Case Fails to Account for Arch’s Diminished Competitiveness in the “But For” World	88
3.	Customers Can Resist Price Increases Through Multiple Competitive Levers.....	89
4.	Competition Among Fuels Will Constrain the Joint Venture	90

5. Competition From Other Coal Producers Will Constrain the Joint Venture.....	90
B. The Joint Venture Will Achieve Significant Efficiencies That are Likely To Enhance Competition	92
1. The Joint Venture Will Generate Significant Efficiencies	93
2. The Efficiencies are Verifiable	94
3. The Efficiencies are Specific to the Joint Venture.....	97
V. BALANCE OF THE EQUITIES	98
<u>CONCLUSION</u>	100

TABLE OF AUTHORITIES

CASES

<i>Brown Shoe, Co v. United States</i> , 370 U.S. 294 (1962).....	<i>passim</i>
<i>Cnty. Publishers, Inc. v. Donrey Corp.</i> , 892 F. Supp. 1146 (W.D. Ark. 1995).....	58
<i>Ctr. for Sustainable Econ. v. Jewell</i> , 779 F.3d 588 (D.C. Cir. 2015).....	61
<i>FTC v. Arch Coal, Inc.</i> 329 F. Supp. 2d 109 (D.D.C. 2004).....	<i>passim</i>
<i>FTC v. Butterworth Health Corp.</i> , 946 F. Supp. 1285 (W.D. Mich. 1996).....	94
<i>FTC v. Cardinal Health, Inc.</i> , 12 F. Supp. 2d 34 (D.D.C. 1998).....	57
<i>FTC v. Exxon Corp.</i> , 636 F.2d 1336 (D.C. Cir. 1980).....	53
<i>FTC v. Freeman Hosp.</i> , 69 F.3d 260 (8th Cir. 1995).....	53, 55
<i>FTC v. Great Lakes Chemical Corp.</i> , 528 F. Supp. 84 (N.D. Ill. 1981).....	60, 61, 71, 91
<i>FTC v. H.J. Heinz Co.</i> , 246 F.3d 708 (D.C. Cir. 2001).....	97, 99
<i>FTC v. Lab. Corp. of Am.</i> , 2011 WL 3100372 (C.D. Cal. Mar. 11, 2011).....	98, 99
<i>FTC v. Nat’l Tea Co.</i> , 603 F.2d 694 (8th Cir. 1979).....	53, 88, 89
<i>FTC v. Owens-Illinois, Inc.</i> , 681 F. Supp. 27 (D.D.C. 1988).....	57
<i>FTC v. Penn State Hershey Med. Ctr.</i> , 838 F.3d 332 (3d Cir. 2016).....	94

<i>FTC v. R.R. Donnelley & Sons Co.</i> , 1990 WL 193674 (D.D.C. Aug. 27, 1990)	56, 64, 65, 77
<i>FTC v. RAG-Stiftung</i> , 436 F. Supp. 3d 278 (D.D.C. 2020)	53, 83, 85, 86, 91
<i>FTC v. Sanford Health</i> , 926 F.3d 959 (8th Cir. 2019)	54, 55, 58
<i>FTC v. Staples, Inc.</i> , 970 F. Supp. 1066 (D.D.C. 1997)	56, 93
<i>FTC v. Tenet Health Care Corp.</i> 186 F.3d 1045 (8th Cir. 1999)	<i>passim</i>
<i>FTC v. Tronox Ltd.</i> , 332 F. Supp. 3d 187 (D.D.C. 2018)	84
<i>FTC v. Weyerhaeuser Co.</i> , 665 F.2d 1072 (D.C. Cir. 1981)	100
<i>FTC v. Wilhelmsen Holding ASA</i> , 341 F. Supp. 3d 27, 63 (D.D.C. 2018)	84
<i>HDC Medical, Inc. v. Minntech Corp.</i> 63411 F. Supp. 2d 1096, 1104 (D. Minn. 2006)	63
<i>HDC Medical, Inc. v. Minntech Corp.</i> 474 F.3d 543 (8th Cir. 2007)	63
<i>H.J., Inc. v. Int’l Tel. & Tel. Corp.</i> , 867 F.2d 1531 (8th Cir. 1989)	56, 58, 64
<i>Howard v. Ferrellgas Partners, L.P.</i> , 2011 WL 3299689 (D. Kan. Aug. 1, 2011)	61
<i>Illinois ex rel Hartigan v. Panhandle E. Pipe Line Co.</i> , 730 F. Supp. 826 (C.D. Ill. 1990)	70
<i>In re Polypore Int’l, Inc.</i> , 150 F.T.C. 586 (2010)	66
<i>Little Rock Cardiology Clinic PA v. Baptist Health</i> , 591 F.3d 591 (8th Cir. 2009)	56
<i>Menasha Corp. v. News Am. Mktg. In-Store, Inc</i> 354 F.3d 661 (7th Cir. 2004)	63, 66

<i>Mo. Portland Cement Co. v. Cargill, Inc.</i> , 498 F.2d 851 (2d Cir. 1974)	53
<i>New York v. Deutsche Telekom</i> 439 F. Supp. 3d 179 (S.D.N.Y. 2020)	<i>passim</i>
<i>New York v. Kraft Gen. Foods</i> , 926 F. Supp. 321 (S.D.N.Y.1995).....	69, 75
<i>Ohio v. Am. Express Co.</i> , 138 S. Ct. 2274 (2018)	63
<i>Process Controls Int’l, Inc. v. Emerson Process Mgmt.</i> , 2011 WL 403121 (E.D. Mo. Feb. 1, 2011).....	56
<i>Rothery Storage & Van Co. v. Atlas Van Lines, Inc.</i> , 792 F.2d 210 (D.C. Cir. 1986)	57
<i>Science Prods Co. v. Chevron Chem. Co.</i> , 384 F. Supp. 793 (N.D. Ill. 1974)	57
<i>Se. Mo. Hosp. v. C.R. Bard, Inc.</i> , 642 F.3d 608 (8th Cir. 2011)	57, 58, 60, 66, 68
<i>Sierra Club v. Clinton</i> , 746 F. Supp. 2d 1025 (D. Minn. 2010)	61
<i>U.S. v. AT&T, Inc.</i> , 310 F. Supp. 3d 161 (D.D.C. 2018)	77
<i>U.S. v. AT&T, Inc.</i> , 916 F.3d 1029 (D.C. Cir. 2019)	88
<i>U.S. v. Baker Hughes Inc.</i> , 908 F.2d 981 (D.C. Cir. 1990)	54, 55, 90
<i>U.S. v. Continental Can Co.</i> , 378 U.S. 441 (1964)	57
<i>U.S. v. Country Lake Foods, Inc.</i> , 754 F. Supp. 669 (D. Minn. 1990)	90
<i>U.S. v. Englehard</i> , 126 F.3d 1302 (11th Cir. 1997).....	78
<i>U.S. v. Gen. Dynamics</i> , 341 F. Supp. 534 (N.D. Ill. 1972)	57, 64, 68, 89, 90

<i>U.S. v. Gen. Dynamics</i> , 415 U.S. 486 (1974)	54, 89
<i>U.S. v. Grinnell Corp.</i> , 384 U.S. 563 (1966)	63
<i>U.S. v. Int’l Harvester Co.</i> , 564 F.2d 769 (7th Cir. 1977)	89
<i>U.S. v. Long Island Jewish Med. Ctr.</i> , 983 F. Supp. 121 (E.D.N.Y. 1997).....	94
<i>U.S. v. Marine Bancorp., Inc.</i> , 418 U.S. 602 (1974)	54
<i>U.S. v. Oracle</i> , 331 F. Supp. 2d 1098 (N.D. Cal. 2004).....	77
<i>U.S. v. Sabre Corp.</i> , 2020 WL 1855433 (D. Del. 2020)	<i>passim</i>
<i>U.S. v. SunGard Data Sys.</i> , 172 F. Supp. 2d 172 (D.D.C. 2001)	56, 59, 60, 64, 77
STATUTES	
15 U.S.C. § 53(b)	53
OTHER AUTHORITIES	
Horizontal Merger Guidelines	<i>passim</i>

Defendants Peabody Energy Corporation (“Peabody”) and Arch Resources, Inc. (formerly Arch Coal, Inc.) (“Arch”), hereby submit these Proposed Findings of Fact (“FOF”) and Conclusions of Law (“COL”) following the hearing conducted from July 14, 2020 through July 24, 2020 (the “Hearing”) regarding the Motion for Preliminary Injunction by Plaintiff Federal Trade Commission (“FTC”), filed on May 29, 2020 (DE 137).

PRELIMINARY STATEMENT

After the nine-day Hearing with twenty-four live witnesses, four witnesses by deposition designation, the admission of more than 2,000 exhibits, depositions of dozens of industry participants, and several hundred pages of briefing by the parties, at least three points are clear.

First, the FTC’s alleged relevant market limited to the sale of Southern Powder River Basin (“SPRB”) coal fails controlling Supreme Court and Eighth Circuit precedent governing relevant market definition. Based on the massive record in this case, nearly all the factors set forth in *Brown Shoe, Co v. United States*, 370 U.S. 294, 325 (1962) reject the FTC’s overly-narrow market definition and support denial of its request for a preliminary injunction, which hinges on that flawed market definition. The FTC’s belated (but telling) effort, starting with its July 8, 2020 Reply Brief (DE 319, at 3-9) (the “Reply Br.”), to deemphasize the importance of *Brown Shoe* in favor of a flawed and unsuitably static “hypothetical monopolist” analysis manufactured by its economic expert cannot justify the extraordinary relief sought.

Second, the FTC’s case, including its proposed narrow market definition, ignores the highly dynamic nature of the energy industry, including imposing constraints from natural gas, low-cost renewable generation, and coal-plant retirements, that will continue to compel the Joint Venture and other coal producers to remain competitive and preserve future coal demand. It is well-settled that Section 7 of the Clayton Act demands a forward-looking analysis to predict the future of competition with and without the Joint Venture. Through this lens, the FTC’s case is not reconcilable with both the facts and the law.

Third, the record is undisputed that Defendants’ sole motivation for the Joint Venture is to cut costs and increase competitiveness against the intensifying headwinds that dominate the

electricity-generation industry both in the short and longer term. Unlike in virtually every merger challenge in the past twenty years, there is not a shred of evidence that a purpose of this transaction is to reduce existing competition between the transacting parties. For good reason. There is simply no opportunity for the Joint Venture to acquire, much less exercise, market power given the competitive conditions that it cannot control. Indeed, throughout the case, the FTC has failed to explain the dramatic decline in SPRB coal producers' prices and margins since at least 2012 despite an unchanging number of SPRB producers and increasing SPRB concentration. Contrary to the FTC's SPRB coal-only "oligopoly" theory, the irrefutable explanation for these price and margin declines is that SPRB coal faces direct and vigorous competition from non-SPRB supply sources, including natural gas and low-cost renewables.

Respectfully, against this backdrop and based on the proposed findings and conclusions set forth below, the Court should deny the request for a preliminary injunction.

PROPOSED FINDINGS OF FACT

I. BACKGROUND

A. ELECTRICITY GENERATION

1. Electricity Generation Overview

1. The electricity ultimately supplied to consumers is generated at power plants with one or more electricity generating units ("EGUs"). Joint Stipulation ("JS") ¶ 5. EGUs use various generating technologies to transform the energy in specific fuels, such as uranium, coal, oil, natural gas, and sunshine, or the force of wind or flowing water, into electricity. *Id.* at ¶ 6.

2. Electricity output is measured in megawatts, which is a standard unit for measuring electrical power which does not depend on the method used. *Id.* at ¶¶ 7-8.

2. Utilities Participating in ISOs and RTOs

3. The majority of U.S.-generated electricity is managed through regional electricity markets known as Independent System Operators ("ISOs") or Regional Transmission Organizations ("RTOs"). JS ¶ 9; DX4005 (Carey Report ¶ 12). These organizations conduct daily auctions to match regional electricity demand as projected by providers (*e.g.*, utility

companies) with electricity supply offers from generators to maintain reliable and cost-effective electricity service in their geographic areas. DX4005 (Carey Report ¶¶ 13, 27-32). To ensure cost-efficiency, ISOs/RTOs employ a system known as “merit order dispatch” (also referred to as “least cost dispatch”) to select the lowest cost electricity available – regardless of how it was generated – to meet anticipated electricity demands. 7/20 PM Tr. 98:21-99:17 (Stuchal); DX4005 (Carey Report ¶ 28). Once the ISO/RTO sets the dispatch price, EGUs offered to the ISO/RTO at or below that price (regardless of fuel type) are “in the money” and “called” to run and that EGU’s electricity is sold to the ISO/RTO at the dispatch price, whereas EGUs offered to the ISO/RTO above that price do not run and are “out of the money.” 7/21 AM Tr. 29:21-30:23 (Carey). The ISO/RTO – not each electricity generator – determines which EGUs run and are dispatched, and which are not, based on least cost dispatch principles. 7/21 AM Tr. 23:24-24:16 (Carey) (“There isn’t a choice. Under least cost economic dispatch, the lowest cost units are called to run”); *see also* 7/15 PM Tr. 31:14-24 (Ruhl) (noting ISOs/RTOs “are the ones really making the call of which of our units are generating at any time”). Merit order dispatch thus forces all EGUs of all fuel types within an ISO/RTO to compete to generate electricity. DX4001 (Bailey Report ¶ 13); 7/16 PM Tr. 40:2-19 (Trushenski); 7/21 AM Tr. 29:20-30:23 (Carey).

4. In some circumstances, utilities may bid EGUs into an ISO/RTO as “self-committed” or “must run,” directing the ISO/RTO to operate the unit regardless of its variable costs. 7/15 PM Tr. 116:19-117:4 (Romer). This may be done where the utility wants to ensure the unit remains operational during a period of expected operation, 7/21 AM Tr. 32:2-17 (Carey), and, for coal EGUs, typically involves self-committing only the units’ minimum generation capacity, with the remaining capacity subject to merit order dispatch. 7/14 PM Tr. 116:19-117:4 (Romer); 7/23 AM Tr. 92:25-93:25 (Benham); 7/23 PM Tr. 5:18-6:23 (Benham); [REDACTED]

[REDACTED] In most circumstances, self-committed units dispatch economically, meaning competitive market forces determine the level of dispatch above each unit’s self-committed minimum. PX9191, -001 (“[T]he vast majority of all self-committed coal generation in MISO is actually dispatched economically.”). Uneconomic self-commits are

inconsistent with least cost dispatch and highly discouraged. 7/21 AM Tr. 32:18-33:23 (Carey). ISOs/RTOs, the Federal Energy Regulatory Commission, and various state regulators provide oversight to ensure that any self-commits are done for economic and prudent reasons. *Id.*; *see also* 7/21 AM Tr. 35:22-39:2 (Carey). Regulated utilities are not immune to merit-order dispatch and cannot simply pass uneconomic generation costs onto their rate payers. DX4006 (Carey Rebuttal ¶ 14); 7/21 AM Tr. 38:1-39:2 (Carey); *see also* 7/21 AM Tr. 115:23-117:4 (Galli) (explaining why regulated utilities care about their coal costs).

5. Due to significant investments in improved transmission and distribution infrastructure made in recent years, reliability constraints are not a material limitation to least cost economic dispatch. 7/21 AM Tr. 34:8-35:21 (Carey); DX4006 (Carey Rebuttal ¶ 55).

3. ISOs/RTOs Determine Electricity Supply and Demand

6. Electricity supply and demand is reflected on an electricity dispatch curve, which plots EGUs from lowest to highest cost. DX4005 (Carey Report ¶¶ 103-07); DX4001 (Bailey Report ¶¶ 13-14). Different EGU types occupy different areas of the curve. Units that generate electricity at little or no variable cost, such as wind, solar, and hydroelectric generation, are bid into the market at those low costs, and are first to run when available and needed to fulfill anticipated energy demand. DX4005 (Carey Report ¶¶ 85, 108); DX4001 (Bailey Report ¶ 34). As additional renewable EGUs come online, other EGUs on the dispatch curve shift to the right. DX4005 (Carey Report ¶ 99 n.239). With that shift, units that previously ran all the time run less frequently and other units stop running altogether because they become “out of the money.” 7/21 AM Tr. 46:3-13 (Carey); DX4005 (Carey Report ¶ 99).

7. EGUs that generate electricity from fossil fuels – *e.g.*, coal, natural gas, and oil – have higher variable costs due to their fuel costs (*e.g.*, the price of natural gas, coal, or oil), among other factors. DX4005 (Carey Report ¶¶ 30, 108-112); DX4001 (Bailey Report ¶¶ 28, 33-34). Fossil fuel EGUs typically bid in at their variable costs, appear further up the dispatch curve, and if needed to meet anticipated demand, are called to run in least-cost order. DX4005 (Carey Report ¶¶ 28, 30, 99, 102-107); DX4001 (Bailey Report ¶¶ 28, 33-34). For these EGUs, the shift

to the right caused by the entry of renewables means they face increasingly fierce competition in being called to run. 7/21 AM Tr. 46:14-19 (Carey).

8. Due to now abundant, low-cost natural gas and more efficient combined cycle gas turbines (“CCGTs”), coal EGUs have been displaced by natural gas EGUs on the dispatch curve. DX4005 (Carey Report ¶¶ 108-112); 7/20 PM Tr. 44:24-46:3 (Wagner). As dispatch curves reflect, an EGU’s competitiveness is driven by its costs, primarily fuel cost. DX4005 (Carey Report ¶ 30); DX4001 (Bailey Report ¶¶ 28, 33, 54, 64). Today, very small cost differences between units on much of the dispatch curve, particularly between SPRB and CCGT EGUs, impact whether an individual EGU is at risk of not being called to run. 7/21 AM Tr. 48:24-49:8, 102:11-13 (Carey); DX4005 (Carey Report ¶¶ 104, 107 & Fig. 17). In Midcontinent Independent System Operator (“MISO”), the average difference in the cost between EGUs using Peabody and Arch SPRB coal and the next unit is between 5 and 7 cents depending on the season. 7/21 AM Tr. 51:20-52:4 (Carey). In Southwest Power Pool (“SPP”) it is 13 to 22 cents. *Id.* Small increases in the relative price of coal to other fuels can change the EGU rank order for coal EGUs, increasing their risk of not being dispatched. *Id.* at 102:14-18 (Carey); *see also* DX4005 (Carey Report ¶ 107 & Ex. 11); DX4006 (Carey Rebuttal ¶ 119).

4. Utilities Located Outside of ISOs and RTOs

9. In geographic areas not covered by an ISO/RTO, vertically integrated electrical utilities, such as the Tennessee Valley Authority (“TVA”) and Southern Company, generate, transmit, distribute, and sell electricity. DX4005 (Carey Report ¶ 14); DX4001 (Bailey Report ¶ 14). They function as mini-ISOs, employing similar methods to ensure system reliability and cost-effectiveness, including merit-order dispatch. DX4005 (Carey Report ¶¶ 14-16); DX4001 (Bailey Report ¶ 14). For example, Brian Fuller testified Southern employs a least cost dispatch model that “match[es] up [its] customer demand with [its] resources in a least cost fashion.” 7/22 PM Tr. 9:10-10:10 (Fuller); *see also* DX2054 at -001 [REDACTED]

B. ELECTRICITY GENERATION COMMERCIAL REALITIES HAVE CHANGED

10. The commercial realities have changed significantly in the sixteen years since the FTC last litigated – and the federal courts last adjudicated – a merger challenge in this industry. *See generally* *FTC v. Arch Coal, Inc.*, 329 F. Supp. 2d 109 (D.D.C. 2004).

1. Low Cost Natural Gas for Increasingly Efficient Natural Gas Powered EGUs

11. Due to the shale gas boom and technological advancements like hydraulic fracturing, the cost of producing natural gas has been greatly reduced. DX4001 (Bailey Report ¶ 17); DX4003 (Israel Report ¶¶ 49-50). Since 2008, the price of natural gas has fallen over 75%, from over \$8/mmBTU to less than \$2/mmBTU. DX4001 (Bailey Report ¶ 17 & Ex. 7).

12. The concurrent development of new, highly efficient CCGTs has made natural gas EGUs much more efficient. DX4001 (Bailey Report ¶ 17); 7/21 AM Tr. 112:14-20 (Galli); 7/23 AM Tr. 109:23-110:2 (Benham); 7/21 AM Tr. 39:3-21 (Carey) (explaining CCGTs are “on average about 30 percent more efficient than SPRB coal units”). The combination of cheap natural gas and efficient CCGTs has made natural gas generation more cost-effective, led many utilities to construct and rely heavily on natural gas EGUs which frequently displace less efficient coal EGUs. DX4005 (Carey Report ¶¶ 75-77, 93-94). As a result, coal EGU utilization rates have declined from approximately 70% in 2010 to approaching 40% in 2019, while natural gas EGU utilization rates increased from 30-40% to over 50% in SPP and approaching 60% in MISO and Electric Reliability Counsel of Texas (“ERCOT”) during the same period. DX4005 (Carey Report ¶¶ 93-94 & Figs. 13-14).

2. Growing Renewable Generation

13. Government bodies concerned about pollution and carbon emissions have introduced subsidies and other policies to encourage investment in renewable generation, and electricity generators directed capital investments accordingly. 7/14 PM Tr. 16:13-15 (Meyer) (“We are adding renewables right now . . . to meet compliance with Missouri’s renewable energy standard.”); [REDACTED]. Generation from wind and solar has doubled since 2010. 7/21 AM Tr. 44:19-45:8 (Carey); DX4005 (Carey Report ¶¶ 83, 87-90 & Fig. 11).

14. Although they are intermittent energy sources, meaning they only generate energy when the wind is blowing or the sun is shining, 7/21 AM Tr. 25:11-26:5, 113:5-8 (Carey), renewables have substantially eroded demand and pricing for SPRB coal, and are likely to continue doing so. 7/14 PM Tr. 127:16-128:4, 128:12-22 (Jones); 7/23 AM Tr. 104:12-17 (Benham); 7/23 PM Tr. 16:6-10 (Benham); DX1027, at -0019. Natural gas EGUs are better suited than other EGUs to ensure electricity need is met when renewables are not available given their ability to cycle on and off efficiently. 7/21 PM Tr. 25:11-26:5 (Galli) (“Not only is natural gas extremely competitive [,] . . . it’s relied upon at times, too, because of the intermittency of renewables because it can recover quicker.”); [REDACTED]

[REDACTED]

[REDACTED]

3. Coal EGU Retirements and Declining Coal Generation

15. During the past fifteen years, stringent environmental and regulatory policies have made coal EGUs more difficult and costly to operate and maintain. [REDACTED]; *see also* 7/16 PM Tr. 44:13-45:25 (Trushenski) [REDACTED]

[REDACTED]

[REDACTED]. These developments increased the relative operational costs of coal-fired generation compared with alternative fuel sources, causing electricity generators to shift away from coal by investing in new renewable and natural gas EGUs and idling or permanently retiring their coal EGUs. DX4001 (Bailey Report ¶ 18 & Ex. 8); 7/21 AM Tr. 121:18-122:13 (Galli). Between 2010 and the first quarter of 2019, U.S. power companies announced the retirement of more than 546 coal EGUs totaling about 102 gigawatts of generating capacity, with plans to retire more in the near future. DX8009, at -0001. This trend continues today. DX8008, at -0002-03; DX8707, at -0001. No new coal plants are being built. 7/21 AM Tr. 46:20-25 (Carey); *see also* DX4005 (Carey Report ¶ 79). Many more coal plants are at risk of being retired or relegated to seasonal operations. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

16. These changing conditions have drastically transformed electricity generation and coal production. As one Western Fuels Association (“WFA”) member wrote in its 2019 Annual Report, “[l]ow natural gas prices and an abundance of wind and solar energy have flipped the regional operating model. Until recent years, coal-fired plants ran at high levels, and renewables supplemented that baseload energy. Now low-cost natural gas and renewable generation provide much of the daily base, with coal generation filling in the gaps.” DX2094, at -0006.

17. In 2004, coal was widely considered “baseload,”¹ and was responsible for nearly 50% of all U.S. electricity generation. DX4001 (Bailey Report ¶ 18 & Ex. 8); *see also Arch Coal*, 329 F. Supp. 2d at 117. By 2019, coal’s share of electricity generation had fallen to 24%. DX4001 (Bailey Report ¶¶ 18 & Ex. 8). Coal’s generation share has continued to fall, with share projections for summer 2020 of 17%. DX8010, at -0005. Natural gas and renewables have displaced coal as leading fuels, and together now account for a growing 55% of all U.S. electricity generation. DX4005 (Carey Report ¶¶ 6-7). Generation share of natural gas and renewables is projected to be 63% in summer 2020. DX8010, at -0006. These shifts are not the result of increasing electricity demand, which has remained relatively stable in recent years, but a structural shift away from coal to other fuels. DX4001 (Bailey Report ¶ 18 & Ex. 9).

18. Coal is no longer baseload. A 2018 study commissioned by one SPRB producer lamented, [REDACTED] DX1004, at -0003; [REDACTED] *see also* 7/20 AM Tr. 37:1-9 (Kellow) (“[Renewables] have taken what would traditionally be regarded as base load generation from coal and gas.”).

¹ “Baseload” generation refers to EGUs that run continuously over an extended period of time. DX4001 (Bailey Report ¶ 31); 7/16 PM Tr. 43:13-20 (Trushenski). “Load-following” generation refers to EGUs that are typically operational, but may or may not dispatch depending on day-to-day changes in the ISO/RTO dispatch market. DX4001 (Bailey Report ¶ 31).

Customers confirmed that “[w]e’re at a point where coal is not in a baseload resource by and large across most . . . systems.” 7/22 PM Tr. 20:5-9 (Fuller); *see also id.* at 20:10-14 (“Coal . . . has been a baseload resource[] for the last several decades. That’s not the case any more.”); 7/20 PM Tr. 45:20-46:3 (Wagner); 7/16 PM Tr. 107:6-18 (Sandlin).

C. COAL PRODUCTION, DISTRIBUTION, AND SALE

19. Thermal coal is used mainly to generate electricity. JS ¶ 13. A portion of U.S.-produced thermal coal is mined in the Powder River Basin (“PRB”). JS ¶ 15; 7/22 AM Tr. 26:24-27:5 (Bailey) (“Coal from the Powder River Basin is about 40 percent of all coal.”). Within the U.S., significant thermal coal production occurs in other locations, including the Illinois Basin (“ILB”). 7/14 PM Tr. 63:7-24 (Meyer); 7/15 PM Tr. 21:12-15 (Ruhl); 7/22 AM Tr. 26:24-27:5 (Bailey); PX8001 (Hill Report ¶ 23 & Fig. 1).

20. There are four mines in Montana’s Northern Powder River Basin (“NPRB”): the Decker Mine, Spring Creek, Absaloka Mine, and the Rosebud Mine. JS ¶ 16.

21. There are twelve mines in the SPRB. Arch operates the Black Thunder and Coal Creek mines. JS ¶ 19. Peabody operates the North Antelope Rochelle Mine (“NARM”), Caballo, and Rawhide mines. JS ¶ 20. Five other SPRB coal producers operate seven mines with significant capacity. JS ¶ 21; FOF ¶ 27. These include Eagle Specialty Materials (“Eagle”), an affiliate of FM Coal, which operates the Eagle Butte and Belle Ayr mines, Navajo Transitional Energy Company (“NTEC”), which operates the Antelope and Cordero Rojo mines, Peter Kiewit Sons, Inc. (“Kiewit”), which operates the Buckskin mine, Black Hills, which operates the Wyodak Mine, and WFA, which operates the Dry Fork mine. JS ¶¶ 22-26.

1. Competing Fuel Sources Have Negatively Impacted SPRB Coal Production

22. Due to increasing competition from natural gas, renewables, and other fuel sources, SPRB coal production has declined. Since reaching a peak of 452 mmt in 2008, aggregate SPRB coal production decreased by over 40% to 267 mmt in 2019. DX4001 (Bailey Report ¶ 21 & Ex. 11). It has contracted further in 2020. By the end of June, the 2020 aggregate SPRB coal production was expected “to maybe not even hit 200” mmt. 7/21 AM Tr. 121:1-17

(Galli). Mr. Kellow, Peabody's CEO, explained that the U.S. thermal coal industry is in "secular" (as opposed to cyclical) decline. 7/20 AM Tr. 28:5-7 (Kellow). Mr. Lang, Arch's CEO, likewise testified that thermal coal business is in a "structural decline." 7/20 AM Tr. 72:16-73:1.

2. Peabody's and Arch's SPRB Production and Sales Have Suffered

23. From 2010 through 2019, Peabody's SPRB production declined [REDACTED] DX4001 (Bailey Report ¶ 21 & Exs. 10 & 13). Defendants' key customers significantly reduced their SPRB coal deliveries from 2015 through 2019. *Id.* at ¶ 22 & Exs. 14-16. That trend has continued in 2020. *See, e.g.*, 7/20 AM Tr. 9:25-10:9 (Kellow) (testifying that Peabody's tons sold in Q1 2020 are down one-third compared to Q1 2018).

24. Peabody's SPRB business has struggled in recent years, with sales revenues decreasing by approximately 40% in the past two years due to both lower natural gas prices and lower SPRB coal prices. 7/20 AM Tr. 9:7-10:24 (Kellow). The first half of this year has been particularly difficult. While it is difficult to assess the magnitude of COVID-19's impact, the available evidence indicates that coal generation has been far more severely impacted by the "head-to-head competition" it faces from natural gas and wind. 7/20 AM Tr. 14:15-21 (Kellow). Mr. Kellow explained that although overall electricity generation is down only about 4% in 2020, coal generation has fallen by about 31%, indicating that coal generation's significant decline is due more to record low natural gas prices than COVID-19. 7/20 AM Tr. 12:21-13:13 (Kellow). Peabody's very recently retired Chief Marketing Officer Bryan Galli testified that the business decline this year has been "almost a hundred percent the price of natural gas." 7/21 PM Tr. 35:23-36:6. Ordinary course Peabody documents confirm that this decline is due to competition from natural gas and renewables, which is projected to continue in the future. DX5093 at -0023, -0100, -0106; *see also* 7/20 AM Tr. 36:7-39:21 (Kellow).

25. Coal unit retirements have been and continue to be an increasing threat to all SPRB producers. 7/16 PM Tr. 6:9-9:23 (James) (describing recent and planned retirements or gas conversions of coal EGUs); 7/16 AM Tr. 77:16-78:10 (Smith); [REDACTED] Peabody has tracked forecasted retirements since at least 2013, [REDACTED]

[REDACTED] DX5020, at -0002-18; DX5065, at -0001-02; DX5091, at -0001; DX5112, at -0001-02. [REDACTED] 7/20 AM Tr. 39:1-42:3 (Kellow) [REDACTED]; DX5112, at -0001-02. Retirements are forecasted to continue in the future. DX8008, at -0002-05; DX8009, at -0001-02; DX8743, at -0001-02. As a result, one of Peabody's main strategic initiatives is reducing costs and prolonging the operation of remaining coal EGUs. Specifically, Peabody has an "Advance and Preserve the U.S. Coal Generation Fleet Initiative" which supports customers to try to increase their coal EGU utilization and delay retirements. 7/20 AM Tr. 31:12-25 (Kellow) (discussing DX5093); DX4003 (Israel Report ¶¶ 118-120); DX5093, at -0015. As Mr. Galli explained, "when we find out that a plant is on the block or about ready to be retired, we try to do everything we can with the customers to try to save them." 7/21 PM Tr. 36:7-22 (Galli). Mr. Galli described several examples where Peabody aggressively worked with customers to keep coal plants from retiring, including by offering lower prices on existing coal contracts. 7/21 PM Tr. 42:19-45:3 (Galli) [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]; see also DX4003 (Israel Report ¶123) (collecting examples of Defendants adjusting pricing to forestall coal EGU retirements).

26. Mr. Lang described the circumstances facing Arch's PRB business as a two-sided "vise" of intense competition from natural gas and renewables on the one side, and Arch's escalating cost structure due to the geological realities of its mines on the other. 7/20 AM Tr. 75:9-77:14 (Lang). While Mr. Lang believes COVID-19 reduced overall electricity demand beginning at the end of 1Q 2020, he too attributes the large recent decreases in coal generation to intense competition from other fuels. 7:20 AM Tr. 73:5-16, 83:19-85:3 (Lang).

27. Due to low natural gas prices, declining coal demand, and historically higher production, SPRB coal producers have substantial excess capacity. DX4001 (Bailey Report ¶ 91 & Ex. 60); DX1500, at -0005 [REDACTED]

Report ¶ 91) [REDACTED]; *see also* DX4001 (Bailey

The operator of the Dry Fork Mine acknowledged there is considerable excess capacity. 7/16 PM Tr. 108:14-16 (Sandlin). Defendants' experts estimate that the non-Arch and Peabody SPRB coal producers had [REDACTED] excess capacity in 2019, which approximates the entire production of Black Thunder in 2019. DX4001 (Bailey Report ¶ 91 & Ex. 60).

28. Competition from other fuels has significantly reduced SPRB coal prices and margins. For example, the price of 8800 BTU SPRB coal declined from \$20 per ton in 2006 to approximately \$12 per ton in 2020. 7/16 PM Tr. 101:24-102:12 (Sandlin) (agreeing that drop is “because of a reduction in coal demand and competition due to the very low natural gas prices”);

[REDACTED]; 7/21 PM Tr. 17:11-18:1, 22:3-23:15,
42:19-43:16 (Galli) (describing declines in SPRB coal prices). Meanwhile, Arch's profit margins
for SPRB coal from Black Thunder similarly fell [REDACTED] DX4001
(Bailey Report ¶ 23 & Ex. 17). [REDACTED]

Peabody's profit margins from NARM declined [REDACTED] [REDACTED]. DX4001 (Bailey Report ¶ 23 & Ex. 19). Peabody's overall PRB Q1 2020 margins dropped further, to approximately 10%. 7/20 AM Tr. 32:21-24 (Kellow).

29. The combination of low natural gas prices, coal displacement by natural gas and renewables, declining production, and low margins have strained SPRB coal producers, many of which have declared bankruptcy and undergone restructuring processes, including Peabody, Arch, Cloud Peak Energy Inc. (“Cloud Peak”), and Blackjewel. JS ¶¶ 27-29; [REDACTED]. This instability has at times led to supply disruptions and concern among customers about the long-term reliability of SPRB coal supply. *E.g.*, DX3011 (Gallaway 210:5-8); DX3010 (Fuller 126:9-24).

30. Competition from other fuels has caused significant workforce reductions at all SPRB mines in recent years, particularly in the past few months. DX8698, -0001-02 (noting

“mass layoffs throughout the [PRB] this year” due to “weak market conditions”). These layoffs have affected Defendants at their SPRB mines and across their sales forces. 7/20 AM Tr. 13:14-14:10 (Kellow) (describing recent Peabody layoffs); 7/20 AM Tr. 69:8-12 (Lang) (nothing that in 2011, Arch was “operating 39 coal mines and had over 8,000 employees. . . . [T]oday because of the competition with natural gas, we are down to eight coal mines and have about 3,400 employees.”); 7/16 AM Tr. 47:24-49:18 (Smith). Indeed, Mr. Galli testified at the Hearing that three weeks earlier he had retired early as part of Peabody’s ongoing force reduction efforts. 7/21 AM Tr. 105:16-24 (Galli).

31. Faced with these challenging conditions, the SPRB coal industry faces the possibility of what one customer termed a “never ending death spiral.” DX2150, at -0001; *see also* 7/21 PM Tr. 10:6-17 (Galli) (describing DX2150); DX3011 (Gallaway 40:3-6) (“Because of the reduction in demand, the price of the coal has reduced to a price that’s – that may not be sustainable”); *id.* at 210:3-21 (“[I]t’s becoming increasingly difficult for the suppliers to maintain viability.”). There is widespread recognition among coal customers of the extensive business challenges and risks currently facing SPRB coal producers due to intense competition from other fuels. 7/16 PM Tr. 100:24-101:1 (Sandlin) (agreeing “that competition with natural gas has made it hard for coal”); DX3010 (Fuller 17:22-18:1) (agreeing that “it’s a tough time to be in the coal industry”); [REDACTED]

[REDACTED]

[REDACTED]

32. These challenging conditions make it imperative for coal producers to keep prices competitive with other fuels to ensure coal EGUs dispatch, minimize further retirements, and preserve remaining coal demand. 7/16 PM Tr. 109:12-110:7 (Sandlin); DX3010 (Fuller 47:13-19) (coal producers “are aware of the need to be cost competitive . . . as compared with other fuels such as natural gas”); 7/14 PM Tr. 128:5-15 (Jones); [REDACTED]. As one witness explained, the most important thing Peabody can do to remain competitive is “[t]o keep our coal prices low enough to be able to compete with other sources of generation

including natural gas” 7/16 PM Tr. 26:15-16 (James); *see also* [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] Accordingly, having a low-cost structure with flexibility is a key pillar for future viability and essential to trying to remain competitive with other fuels. DX4003 (Israel Report ¶ 10); [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

3. These Trends Are Here to Stay

33. The trends confronting coal are not expected to abate. Natural gas prices remain low today, at less than \$2 per mmBTU. 7/15 AM Tr. 67:21-68:1 (Peterson) (“[Natural gas prices] have been around \$1.70, \$1.80 per mmBTU [during the last month].”); 7/21 PM Tr. 24:7-10 (Galli) (“[W]e’ve seen gas prices well under \$2 now for the last several months.”). Although some analysts expect natural gas prices to revert from their current historic lows, they are widely projected to remain low and under \$2.50 per mmBTU for the foreseeable future. DX4003 (Israel Report Figure 7); *see also* [REDACTED]; DX3011 (Gallaway 54:5-55:5, 210:17-18); DX4002 (Bailey Rebuttal ¶¶ 70-75) (noting sources relied on by Dr. Hill project future natural gas prices lower than \$2.50 per mmBTU).²

² Dr. Hill incorrectly asserts that “everyone expects that the price of natural gas is going to rise,” particularly compared to 2020. 7/24 PM 89:12-13 (Hill). But 2020 has seen historically low prices. As explained by Professor Carey, projected natural gas prices for 2020-2025 are expected to remain at or below 2019 levels, meaning that natural gas will continue to displace SPRB coal. 7/21 AM Tr. 65:16-22 (Carey); DX4006 (Carey Rebuttal ¶ 72). Moreover, Dr. Israel testified that even a 40% increase in today’s prices would put natural gas in the same place where it has historically constrained SPRB coal. 7/24 AM Tr. 40:17-41:14 (Israel).

34. In the past year, the share of electricity generated by natural gas and renewables has continued to rise, and coal's has continued to fall. DX4001 (Bailey Report ¶ 18). Coal EGU retirements have accelerated and exceeded expectations, and electricity generators continue to invest further in renewable and natural gas generation. DX8010, at -0005 (“[T]he sustained low prices of natural gas have led the industry to retire a significant amount of coal-fired generating capacity and to add more natural gas-fired generating capacity.”); 7/23 AM Tr. 107:7-109:10 (Benham) (describing MP’s investments in renewables and state-of-the art natural gas plant).

35. Industry analysts forecast that “prices for natural gas, perhaps coal’s biggest competitor in North American power generation [will] remain low through the early 2020s” and observe that “[a]dditional shutdowns of coal-fired power plants and persistently low natural gas prices will undercut” future coal demand, and now project thermal coal demand will decrease by an additional 25% this year. DX8694, at -0002.

4. The Coal Sales Process

a. Coal Prices are Determined by Natural Gas Prices

36. Peabody’s price-setting process³ involves two committees: a Market and Pricing Committee (“MPC”), which reviews market dynamics (including natural gas forwards, coal EGU capacity factors, and retirements) and recommends coal price revisions, and a Market and Pricing Steering Committee (“MPSC”), which reviews that recommendation and sets Peabody’s coal prices. 7/21 PM Tr. 14:23-16:10, 20:6-13 (Galli); 7/20 AM Tr. 29:21-30:1 (Kellow);

[REDACTED]

37. The MPC recommends SPRB coal price changes based in large part on the forecasted price of natural gas.⁴ 7/21 PM Tr. 17:6-20, 18:2-14, 19:14-25, 21:12-23:15 (Galli);

³ Peabody expects that “as the operator and majority owner,” the Joint Venture will use Peabody’s pricing process. 7/20 AM Tr. 7:17-21 (Kellow).

⁴ [REDACTED]

7/20 AM Tr. 30:2-5 (Kellow) (Peabody takes natural gas prices into account because “it’s directly relevant for the amount of coal consumed”); 7/24 AM Tr. 29:13-31:16 (Israel)

[REDACTED]

[REDACTED]; *id.* at 40:4-

8 [REDACTED]

[REDACTED]; DX5016 at -0005, -0006, -0010, -0024.

38. The MPSC analyzes natural gas prices and forwards in every meeting. 7/21 PM Tr. 21:22-22:2 (Galli). [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

39. [REDACTED]

[REDACTED] [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

40. [REDACTED]

[REDACTED] Peabody does not charge different prices to regulated utilities. 7/21 AM Tr. 117:6-8 (Galli). As Mr. Galli explained, Peabody tries to provide “all customers with as aggressive pricing that we can possibly offer, and whether they are regulated or non-regulated, it doesn’t

⁵ [REDACTED]

[REDACTED]

matter. They are all bidding into the same ISOs and RTOs and competing [against] each other.” 7/21 AM Tr. 117:9-14 (Galli). Similarly, Peabody does not charge different prices to customers that may be more reliant on coal. As Mr. Kellow testified, “we don’t do that . . . our pricing is based on price determined by the Market Price Committee.” 7/20 AM Tr. 7:7-13 (Kellow). ■■■■■

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b. SPRB Coal Is Sold to Pursuant to Long Term Agreements Resulting from Confidential RFPs

41. Coal historically has been sold pursuant to long-term coal supply contracts. 7/16 PM Tr. 45:19-46:22 (Trushenski); 7/22 PM Tr. 21:8-22:2 (Fuller). These contracts typically are at least one year in duration and are for an agreed quality, volume (or volume range), and price and are frequently a product of a confidential bidding process conducted by large, sophisticated customers through RFPs. ■■■■■ 7/16 PM Tr. 112:24-113:24 (Sandlin); DX3011 (Gallaway 64:21-68:4, 115:7-119:25).

42. SPRB coal suppliers do not know how many suppliers are bidding on a given RFP, and customers typically do not share suppliers’ RFP responses with other bidders. *See, e.g.,* ■■■■■; 7/23 PM Tr. 17:13-19:13 (Benham); ■■■■■
■■■■■

43. Not all coal is purchased pursuant to an RFP process. DX4001 (Bailey Report ¶¶ 77-78). Coal contracts may be purchased directly from a supplier without competition from other producers. 7/17 PM Tr. 33:5-7 (Hill) (agreeing that “some customers purchase SPRB coal

⁶ Dr. Hill did not quantify the benefits that customers derive from individual RFP negotiations. He did no empirical analysis of the effect of the RFP process on coal prices and cannot quantify the benefits to SPRB coal customers. 7/17 PM Tr. 34:23-35:8 (Hill). ■■■■■. ■■■■■. And his model for harm is a Cournot model, which is about concentration, not RFPs. DX4004 (Israel Rebuttal ¶ 8).

without engaging in competitive bidding”); DX2024, at -0001 (“This agreement [between Evergy and Arch] is being entered without competitive bidding. . . .”). SPRB coal may be purchased on the spot market without a long-term contract. 7/22 PM Tr. 21:11-22:2 (Fuller) (explaining that Southern has “historically purchased coal, both on a term and a spot basis,” meaning purchases “a year or less in nature”). Customers also sometimes source coal from a single coal producer. 7/15 AM Tr. 102:11-103:15 (Peterson); 7/16 PM Tr. 113:25-114:1.

44. When RFPs occur, customers do not have to purchase coal and they often accept the most attractive offer without further negotiation.⁷ See 7/16 PM Tr. 113:13-18 (Sandlin) (agreeing that WFA members “are not obligated to buy coal in response to an RFP solicitation”); 7/21 PM Tr. 32:11-23 (Galli) (customers “don’t always have to buy. It’s their option”); DX4001 (Bailey Report ¶ 84); (collecting examples of customers declining to purchase); [REDACTED]

[REDACTED]. While in some cases, RFP processes may involve a period of “pencil sharpening” in which customers negotiate to achieve price reductions, this is not a feature of every or even most RFPs. 7/21 PM Tr. 32:24-33:9 (Galli); DX3011 (Gallaway 123:12-24) (denying that bidders are given “the opportunity to match or improve bids” and explaining that “[w]e don’t go back and forth and do any, I’ll say, horse trading type of things. Basically, we issue an RFP. We get the prices in, and we evaluate based on the first prices received.”); [REDACTED]

[REDACTED]; 7/16 PM Tr. 113:2-10 (Sandlin) (WFA does “[n]ot usually” go back to a bidder and say there is a lower competing offer and WFA “[u]sually” recommends the lowest bid without further negotiations). [REDACTED]

⁷ For some customers, the most attractive bid might not be the one with the lowest price; instead, customers might accept a proposal due to particular characteristics of the coal offered in the proposal. 7/16 PM Tr. 113:18-24 (Sandlin) (agreeing that WFA members do not always select the lowest bid); 7/20 PM Tr. 109:15-20 (Stuchal) (“[I]f it’s a coal quality that is not acceptable to us, then we wouldn’t procure that coal regardless of how low the price is.”).

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] When “pencil sharpening” is a feature of RFPs, the customer often seeks better terms from an SPRB supplier by stating that it needs to be more competitive, including relative to other fuels. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

45. After an RFP, due to competition with natural gas and other factors driving coal demand down, customers do not necessarily take all their contracted coal. 7/21 PM Tr. 34:2-36:6 (Galli); DX4001 (Bailey ¶ 87).

46. Utilities regularly discuss with Arch, Peabody, and other coal producers the need for competitive coal pricing to help keep coal EGUs running and to remain competitive with natural gas generation and other forms of electricity generation. *See, e.g.*, 7/16 AM Tr. 67:20-68:25, 73:18-22, 77:16-78:10 (Smith); DX1039 [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] DX6006, at -0007 [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]; 7/16 AM Tr. 74:16-78:10 (Smith) (similar testimony discussing DX1038, a 2019 pre-RFP presentation by MP to Arch).

47. Relatedly, customers use competition from natural gas and other fuels to extract concessions from coal producers. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

c. SPRB Coal Supply Contracts Increasingly Include Flexibility

48. In response to competition from other fuel sources, coal supply contracts increasingly include terms that provide customers optionality in the form of deferment rights, optional volumes, indexed pricing, requirements clauses or other similar terms to account for challenges posed by interfuel competition and resulting unpredictability of coal burns. 7/21 AM Tr. 117:15-118:10 (Galli) (Peabody had to become “more adaptive to the changing landscape” and “come up with different contract structures” including volume optionality and indexed pricing); [REDACTED]

[REDACTED]; 7/22 PM Tr. 16:17-17:13 (Fuller) (explaining that the utilities, coal producers, and rail providers “have to work together and be flexible to be able to manage this volatility and uncertainty from a burn perspective” and that the coal producers need “to defer and offer optionality”); [REDACTED]

[REDACTED] Gary Stuchal of NPPD made clear that these optional terms are sought due to competition from natural gas, not other SPRB coal producers. 7/20 PM Tr. 102:24-103:21 (Stuchal).

D. THE JOINT VENTURE

1. Business Rationale

49. On June 19, 2019, Peabody and Arch announced the Joint Venture, which will combine Peabody and Arch’s Wyoming and Colorado mining assets. JS ¶ 30. It will be 66.5% owned by Peabody, and 33.5% owned by Arch. *Id.* ¶ 31.

50. The Joint Venture will combine Arch and Peabody’s Colorado and SPRB coal mining assets in a “highly synergistic joint venture aimed at strengthening coal’s competitiveness against natural gas and renewables.” DX8696, at -0001. It will join Peabody’s NARM mine with Arch’s contiguous Black Thunder mine – which shares a seven-mile property line – into a single, lower-cost mining complex. *Id.* at -0002.

51. [REDACTED]

[REDACTED] Mr. Kellow explained that the Joint Venture will be able to achieve “tremendous operational synergies” that will “strengthen the business to compete

against natural gas and renewables.” 7/20 AM Tr. 22:8-25:18 (Kellow). Mr. Lang agreed that the rationale is to join complementary assets and “compete better with natural gas.” 7/20 AM Tr. 71:2-72:8 (Lang).

52. The Joint Venture’s planned business strategy is to enable cost savings to provide lower prices than they could offer on their own, improve coal EGUs’ competitiveness in the dispatch market, and delay coal EGU retirements. As Mr. Kellow explained, “[w]e only succeed when our customers are successful. We only make money when they make money. They have been having a hard time as of late, we have been having a hard time as of late. We see this as about strengthening the chain, not breaking the chain.” 7/20 AM Tr. 28:8-20 (Kellow).

53. Consistent with this strategy, Peabody and Arch committed in February 2020 to reduce prices on pre-existing contracts for all coal deliveries through the end of 2022 by \$0.15/ton, effective as soon as the Joint Venture closes. *See, e.g.*, DX2007; DX2008. Peabody made this commitment to customers for a number of reasons, including the historically low natural gas prices, the continued accelerated trend of coal EGU retirements, and “alarm[] and concern[]” at hearing from the FTC that certain customers had expressed concerns about the Joint Venture. 7/20 AM Tr. 42:7-43:3 (Kellow). The offer’s purpose was to “send a signal to our customers around the benefits of the Joint Venture to them,” because, as Mr. Kellow explained, “the last thing in the world we wanted was to accelerate even further views around long-term planning for those utilities and retirement of coal plants.” 7/20 AM Tr. 42:7-43:3 (Kellow). [REDACTED]

[REDACTED]

[REDACTED] The offer’s benefits are financially meaningful to customers. [REDACTED]

[REDACTED]

7/20 PM Tr. 95:15-23 (Stuchal) (noting discount is worth over \$1 million to NPPD); DX3037 (Sandlin 165:17-66:15) (“The 15 cent a ton multiplied by all the tons we had under contract was a pretty significant sum of money. And we felt like it was a benefit to our members.”). The discount was not conditioned on supporting the Joint Venture or providing testimony at the Hearing. 7/20 PM Tr. 96:20-25 (Stuchal).

54. Because the discount offered by Defendants is contingent on the Joint Venture closing, the gross value of the discount to customers decreases each day the TRO remains in place. DX3010 (Fuller 242:25-43:4); 7/20 PM Tr. 95:15-23 (Stuchal). The Joint Venture anticipates providing further benefits to customers in the future on account of its reduced cost structure. 7/20 AM Tr. 63:24-64:8 (Kellow). If the Joint Venture is enjoined, the value of this discount, in addition to the many other benefits the Joint Venture will offer, will be lost.

55. Customers agree that the Joint Venture's business rationale makes sense. For example, MP's Kathy Benham agreed that, if coal suppliers offer "lower pricing for its coal," it would help MP's "coal-fired units consume more coal," adding "it's good for all of us." 7/23 PM Tr. 7:12-19 (Benham). NIPSCO's John Wagner testified that he agreed that the Joint Venture will be incentivized to pass savings on, stating "if you can cut costs down and produce more coal, that is probably better for the shareholders of Arch and Peabody, but it's also going to benefit customers." 7/20 PM Tr. 60:16-61:3 (Wagner).

56. Customers also value that the Joint Venture will also be a stronger supplier and provide better security of supply in both the short and long-term. 7/20 PM Tr. 94:18-95:14 (Stuchal) (noting benefit of "secure, stable company for future supply"); [REDACTED]

[REDACTED]

[REDACTED]

57. By contrast, there is no evidence the Joint Venture intends to raise prices. Nor is there any factual basis to believe that the transaction will lead to higher prices or less output. *See, e.g.,* [REDACTED]; 7/14 PM Tr. 123:4-123:7 (Jones). To the contrary, Defendants' executives testified that any SPRB coal price increase would cause customers to substitute other fuels for coal, hasten coal EGU retirements, and accelerate coal's decline. 7/16 PM Tr. 28:10-22 (James) ("[I]t makes absolutely no sense to me to raise our prices and have these units burn any less coal than they burn now."); 7/20 AM Tr. 28:8-20 (Kellow) ("I think if we were to raise prices, then the concern would be that we'd lose customers, we'd lose volume

in the short term, we'd lose customers potentially forever."); 7/21 PM Tr. 45:11-17 (Galli) ("If we raise prices the coal just won't get purchased. It won't get consumed. They won't purchase the coal. It's that simple."). [REDACTED]

[REDACTED]

[REDACTED]

58. Customers agree that any price increase would be self-defeating, stating that if the Joint Venture attempted to raised SPRB coal prices, they would simply substitute other fuels or purchase electricity off the grid. 7/20 PM Tr. 60:12-61:3, 62:2-7 (Wagner) (testifying that "if you can't pass lower pricing through" to customers, "you're really not going to move and you're not going to really mine more coal because demand won't increase," and agreeing that the Joint Venture is not likely to enjoy "supplier power" "[i]n this environment"); 7/20 PM Tr. 97:4-98:5 (Stuchal) ("I don't think the [coal] producers have the ability to raise price against an energy market because we will just generate with natural gas or with renewables or we'll buy it [electricity] off the market . . ."); 7/21 PM Tr. 73:19-24 (Clark) ("We believe it's more probable that [the Joint Venture will] actually work to try to gain efficiencies and lower costs. If that's not the case, we'll displace the coal that we burn today with another resource."); DX7015, at -0001 [REDACTED]; *see also* 7/16 PM Tr. 109:23-25 (Sandlin) (agreeing that "[i]f WFA's prices to its members go up, WFA's members may burn less coal").

2. Previous Acquisitions in the SPRB Coal Industry Demonstrate that Significant Cost Savings are Achievable.

59. Arch previously acquired two mines contiguous with Black Thunder. Both are analogous to the combination of the contiguous Black Thunder and NARM mines, although the latter will generate much larger efficiencies given the size of these contiguous mines. In 2004, Arch acquired the North Rochelle mine from Triton, and dissolved more than five miles of common boundary. *See* DX6032, at -0117-22. In 2009, Arch acquired the Jacobs Ranch mine and dissolved a six-mile boundary. 7/20 AM Tr. 115:23-25 (Lang); DX6032, at -0007.

60. In both the North Rochelle (*i.e.*, “Triton”) and Jacobs Ranch acquisitions, Arch projected significant costs saving efficiencies due to removing the common boundaries and integrating the standalone mines. 7/20 AM Tr. 114:9-118:25 (Lang); DX6032, at -0007.

61. Arch exceeded the projected efficiencies in both transactions. 7/20 AM Tr. 115:20-22, 116:11-13 (Lang); *see also* DX8845, at -0019 (noting “Arch has a history of exceeding synergy targets”). [REDACTED]

[REDACTED] DX6029 (Attachment); *see also* 7/20 AM Tr. 117:10-13 (Lang) (explaining that Arch’s actual savings were “much better” than expected).

62. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] The cost savings Arch achieved from this efficiency vastly exceeded its initial projection. *See* DX6029 (Attachment) [REDACTED]

63. Arch’s customers benefitted from both prior transactions. 7/20 PM Tr. 5:2-5 (Lang). Both the North Rochelle and Jacobs Ranch mines were high cost mines, on a downward trajectory, that were struggling as standalone assets. *Id.* at 5:6-6:25. Through the combinations, Arch increased production and lowered costs relative to the prior owners’ standalone plans, which enabled Arch to charge lower prices than customers would have otherwise received. *See id.* at 5:23-6:2 (referring to Triton: “customers got the benefit of the extra production, and it was at a time when the basin was still growing. They got the lower prices, which ultimately ended up – or we had lower costs, which ultimately ended up in lower prices.”); *id.* at 6:18-19 (Lang) (referring to Jacobs Ranch: “We added production, we lowered our costs, and I think we gave a

better price through that to our customers.”); *see also* PX9065, at -002 (“Black Thunder is now achieving production rates approaching approximately 100 million tons annually. That’s 15% higher than the combined output of [Black Thunder and North Rochelle] operating independently a year-ago.”).

3. Arch’s Competitive Future But For the Joint Venture

64. Absent the Joint Venture, Arch will likely continue to scale back production at its SPRB mines to levels that will extend its mines’ lives, thereby deferring reclamation liabilities, but that will make it less competitive in terms of output and price. Arch is one of the highest cost – if not the highest cost – producers in the SPRB. 7/20 AM Tr. 75:22-24 (Lang). [REDACTED]

[REDACTED] *See id.* at 106:25-107:11; *see also* DX6022, at -0001. Even worse, in recent quarters, Arch has had negative margins on its SPRB sales. DX6000, at -0003; 7/20 AM Tr. 82:4-13 (Lang). [REDACTED]

65. Arch has relatively high costs among the SPRB producers because the geology of the Black Thunder mine limits Arch’s ability to use the cheapest strip-mining methods: cast blasting (*i.e.*, explosives) and draglines. *See* 7/20 AM Tr. 75:22-76:3, 108:13-109:24, 110:22-111:17 (Lang).⁸ [REDACTED]

⁸ [REDACTED]

[REDACTED]

66. Arch believes the Joint Venture is the only way for Arch to meaningfully reduce operating costs at Black Thunder. *See* 7/20 AM Tr. 113:8-25 (Lang). Although the Joint Venture will not change the geology of Black Thunder, it will enable \$60 to \$80 million per year in cost savings that Arch could not achieve on its own. *Id.* As a standalone entity, Arch works to streamline operations and find cost savings where it can, but the minimal savings – usually a few million dollars per year – are nowhere near what could be achieved with the Joint Venture. *Id.*

67. Due to Black Thunder's high costs and the continued competitive pressure from natural gas and renewables, Arch has recently operated at a loss in the PRB. In Q1 2020, Arch recorded negative margins of \$0.13 per ton. *See* DX6000, at -0003. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

68. Absent the Joint Venture, Arch is unlikely to reinvest in the PRB and increase or even maintain its current production levels. [REDACTED]

[REDACTED]

69. Customers agree that, given Arch's situation, a likely benefit of the Joint Venture will be "extend[ing] the life of the Black Thunder Mine." 7/16 PM Tr. 89:1-8 (Sandlin); [REDACTED]

[REDACTED]

4. Customer Reaction to the Joint Venture

70. Although the FTC reached out to at least 30 customers during its investigation, the FTC filed declarations from only six customers in support of its Motion for Preliminary Injunction, including [REDACTED]

[REDACTED] Meri Sandlin of WFA (PX7003 and PX7009), [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] Of these customers, only [REDACTED]

appear to actively oppose the Joint Venture. WFA is either neutral or in "soft opposition" to the Joint Venture. 7/16 PM Tr. 88:23-25, 114:2-115:3 (Sandlin). [REDACTED]

[REDACTED] No other customer has expressed opposition.

71. Four of the customers that filed declarations in support of the FTC – [REDACTED] Ms. Sandlin, [REDACTED] – are on the executive board of the Western Coal

Traffic League (“WCTL”), a trade organization consisting of SPRB coal customers, [REDACTED]
[REDACTED] See PX5001; [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

72. [REDACTED] customers speculate that reducing the number of competitors in the SPRB may lead to decreased competition and increased prices. These concerns are not based on any actual analysis. 7/15 AM Tr. 106:7-107:1 (Peterson) (Evergy did no analysis to suggest that the price of coal would actually increase; [REDACTED]
[REDACTED]

[REDACTED] 7/14 PM Tr. 121:22-122:25 (Jones) (Mr. Jones has no factual basis to believe that the Joint Venture would raise SPRB coal prices); 7/23 AM Tr. 100:4-23 (Benham) (testifying “that there’s going to be less competition” and relying on her experience to conclude that “less competition” causes “prices [to] tend to start rising”); [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

73. This lack of analysis stands in stark contrast to the detailed analysis that another customer commissioned to analyze what effect (if any) the Joint Venture may have on SPRB coal prices. After the Joint Venture was announced, DTE Energy (“DTE”) had initial concerns,

but DTE commissioned Doyle Trading Consultants (“DTC”), an “energy market research consultancy” that “provides cutting-edge insight and analysis on U.S. and global coal markets to more than 800 decision-makers from energy companies and financial institutions worldwide,”¹¹ to assess competition facing SPRB coal producers and the potential impact of the Joint Venture. 7/23 AM Tr. 7:23-9:1 (Hicks). [REDACTED]

[REDACTED] David Hicks confirmed that DTE believes that “whether the joint venture comes to fruition” will have “little impact” on SPRB pricing. 7/23 AM Tr. 7:17-22 (Hicks).

74. In a rarity for merger litigations brought by the government, many customers have registered their disagreement with the FTC and expressed support for the Joint Venture. For example, AECI actively supports the Joint Venture because they “believe it’s more probable that they’ll actually work to try to gain efficiencies and lower costs.” 7/21 PM Tr. 73:14-74:8 (Clark). NIPSCO supports the Joint Venture because it “will create benefits for our customers.” 7/20 PM Tr. 58:19-61:3 (Wagner). In a draft letter analyzing the Joint Venture, Mr. Wagner expressed his views, based on over twenty years of experience procuring SPRB coal at two major utilities, that: the Joint Venture is “necessary for these mining assets to compete against natural gas and renewable energy sources”; NIPSCO “expects[] that without the cost savings expected from the proposed JV, PRB coal will struggle to compete against [other] energy sources”; “wholesale electric markets will likely cap prices for PRB coal”; “the proposed JV should allow Arch and

¹¹ <https://www.doyletradingconsultants.com/>

Peabody to compete on cost and maintain coal supply reliability”; and the Joint Venture “may provide benefits to [NIPSCO’s] electric customers from both a cost and reliability perspective.” DX1008, at -0001; *see also* 7/20 PM Tr. 62:18-24 (Wagner). NPPD’s Gary Stuchal testified that he is “in favor of the Joint Venture”; “the first benefit is . . . a secure, stable company for future supply. I think the next benefit is with the lower operating costs they’re going to be able to compete in the energy market.” 7/20 PM Tr. 94:18-95:14 (Stuchal). NRG “does not oppose” the Joint Venture because it believes the Joint Venture will “maintain viable PRB coal supply counterparties in the highly competitive market for the generation of electricity.” PX7000, at -0001. [REDACTED] applauded the Joint Venture in internal analyses, describing the Joint Venture as [REDACTED]

[REDACTED] DX7015, at -0001. [REDACTED] explained that [REDACTED]
[REDACTED]
[REDACTED] *Id.*

75. The majority of customers are neutral.¹² Many neutral customers, however, recognize the potential benefits the Joint Venture offers with respect to efficiencies, lower costs, and security of supply. 7/16 PM Tr. 114:19-25 (Sandlin) (agreeing “a strong supplier like the joint venture can achieve efficiencies, lower its cost, and pass those benefits on to WFA’s members”); 7/15 PM Tr. 17:11-18:25 (Ruhl) (testifying “there are efficiencies that can be gained”); DX3011 (Gallaway 206:4-20, 211:10-15) (testifying Consumers Energy “understand[s] the needs and necessities” for the Joint Venture, the “cost savings,” and that it is important to have a viable supplier); DX3010 (Fuller 126:12-24) (there is a “potential need to strengthen the coal industry . . . that would be a positive in regard to having . . . this joint venture go through, and it would create more stability. We’ve seen many bankruptcies . . . so anything

¹² *E.g.*, 7/16 PM Tr. 58:4-12 (Trushenski) (Entergy does not oppose); 7/15 PM Tr. 17:11-13, 66:25-67:6 (Ruhl) (OPPD is officially “neutral” and he personally is “impartial”); [REDACTED]
[REDACTED]; DX3051 [REDACTED]
[REDACTED]; DX3031 (Newton 12:5-11) (City Utilities of Springfield has no official position); [REDACTED]

that could create stability would be an advantage for us from a coal supply standpoint”); [REDACTED]

[REDACTED]

[REDACTED]

76. Customers specifically cited the fact that Joint Venture will combine adjoining complementary mines as a likely source of significant efficiencies. *See, e.g.*, 7/20 PM Tr. 117:20-25 (Stuchal) (noting “it’s intuitive if you’ve ever been to a mine or involved in -- most mergers have synergies of cost reduction, but in this case, physically, you can actually see it if you do a mine tour”); 7/20 PM Tr. 79:6-14 (Wagner) (“[B]ased on my experience and my knowledge of how PRB mines run, I understand the synergies created by a larger complex like that and the economies of scale. So based on kind of fundamental economics . . . I assume that there should be some benefit by joining those two properties together and operating as a JV.”); 7/21 PM Tr. 73:1-10 (Clark) (noting “if you look at the location of the mining facilities, the outload facilities, it makes sense that there are some synergies that could be gained”).

II. PRACTICAL INDICIA OF COMPETITION IN THE RELEVANT MARKETS

A. INDUSTRY AND PUBLIC RECOGNITION OF INTERFUEL COMPETITION

1. The U.S. Energy Information Administration

77. The U.S. Energy Information Administration (“EIA”) is a division of the U.S. Department of Energy and a sister agency of the FTC. JS ¶ 10. The EIA is the “premier source for energy information” in the United States, and its mission is to “analyze[], and disseminate[] independent and impartial energy information to promote sound policymaking, efficient markets, and public understanding of energy.” *Id.* at ¶ 11. The EIA regularly issues reports on power generation in the U.S. and other energy-related topics. *Id.* at ¶ 12.

78. In recent years, the EIA has repeatedly recognized competition among fuels used to generate electricity, particularly coal, natural gas, and renewables. It does not recognize SPRB coal as an economic entity insulated from competition from other fuel sources. For example, the EIA has emphasized that coal and natural gas compete to provide fuel to generate electricity, explaining that “[t]he competition of coal and natural gas for electricity generation plays an

important role in setting wholesale electricity prices.” DX8007, at -0002; *see also* DX8746, at -0001 (“The primary driver of [2016] low wholesale electricity prices was the sustained low cost of natural gas, which is the fuel that often determines the marginal generation cost in most power markets.”).

79. In explaining why natural gas “surpass[ed] coal to become the leading generation source,” the EIA pointed to competition between coal and natural gas: “The increase in natural gas generation since 2005 is primarily a result of the continued cost competitiveness of natural gas relative to coal.” DX8007, at -0001. The EIA also reports that the increase in natural gas-fired generation has come “largely at the expense of coal-fired generation.” DX8746, at -0001.

80. More recently, the EIA reported renewable consumption surpassed coal, DX8013, and that U.S. coal-fired generator output fell in 2019 to “the lowest level since 1976.” DX8012, at -0001. The EIA attributed that reduction in coal-fired generation to “increased output from natural gas-fired plants and wind turbines,” “the primary driver” of the fall in coal-fired generation. *Id.* at -0001-02 (“The increased availability of low-priced natural gas has been the biggest factor in decreasing coal-fired generation.”); *see also* DX8743, at -0002 (“Sustained relatively low natural gas prices ha[ve] allowed natural gas-fired generators to become more competitive with coal-fired units, leading to a general decline in using coal-fired capacity.”).

81. That decline in utilization, the EIA has explained, “leads to a decline in revenues at a plant, which generally translates to lower operating margins, less ability to cover costs, and in many cases, retiring that capacity.” *Id.*; *see also* DX8010, at -0004-05 (“Over the long run, the sustained low prices of natural gas have led the industry to retire a significant amount of coal-fired generating capacity and to add more natural gas-fired generating capacity.”); DX8008, at -0003 (“In 2018 and 2019, decreasing wholesale prices, low natural gas prices, and increased participation of renewable energy resources all contributed to coal retirements.”); DX8009, at -0001 (“Coal-fired power plants in the United States remain under significant economic pressure. Many plant owners have retired their coal-fired units because of relatively flat electricity demand growth and increased competition from natural gas and renewables.”). Indeed, in some cases,

competition from natural gas has caused coal-fired plants to retire earlier than their operators had planned. DX8012, at -0002 (“Highly efficient CCGT plants burning relatively low-cost natural gas have reduced the amount of time a coal plant is called on to dispatch power into the grid. This factor has lowered average coal plant utilization rates and pushed some coal plants into early retirement.”). The EIA recognizes that interfuel competition has affected all coal EGUs; capacity utilization factors are down at low and high-cost coal EGUs alike. DX8011, at -0002.

82. Perhaps most importantly, the EIA recognizes this interfuel competition likely will continue: “Because of more competitive natural gas prices, more advanced natural gas combined-cycle generators, and the increasing efficiency of the natural gas generator fleet, the EIA expects more coal-fired generators to retire, especially within the next decade.” DX8743, at -0002; *see also* DX8008, at -0004 (“[R]etirements of coal units are expected to continue into the 2020s.”).

2. Customers

83. Every customer who testified in this matter recognized competition between SPRB coal and other electricity generation sources, instead of SPRB coal as a distinct economic entity insulated from interfuel competition.¹³ For instance, AECI’s Roger Clark testified that “[c]oal generation competes against gas every hour of every day.” 7/21 PM Tr. 79:13-15 (Clark). NPPD’s Gary Stuchal stated that “[t]he decline in coal-fired generation, the decline in coal production, the decline in coal prices have been caused by the energy market, not caused by competition between the coal producers.” 7/20 PM Tr. 97:1-98:5 (Stuchal). NIPSCO’s John

¹³ *See, e.g.*, DX3011 (Gallaway 41:11-20, 42:19-43:4, 44:24-45:5) (agreeing “that competition in the wholesale electric markets for natural gas and renewables will continue to limit the price for SPRB coal”); [REDACTED]

[REDACTED]

Wagner similarly testified the “primary source of competition” facing SPRB coal today is “the overall energy market,” including “lower cost alternatives like wind and natural gas, solar, nuclear and hydro.” 7/20 PM Tr. 57:19-58:18 (Wagner). [REDACTED]

84. FTC customer witnesses also acknowledge interfuel competition. 7/16 PM Tr. 100:24-104:5, 106:16-107:5 (Sandlin) (agreeing that “natural gas prices have become a constraint on coal” and competition from natural gas and renewables has contributed to a decline in SPRB coal prices); 7/14 PM Tr. 50:1-18 (Meyer) (acknowledging Ameren’s coal consumption is driven by competitive market dispatch against other fuels); 7/15 AM Tr. 87:1-88:9 (Peterson) (agreeing Evergy’s coal units “compet[e] with everything within the SPP,” including natural gas units); [REDACTED]

[REDACTED]; 7/15 PM Tr. 121:7-20 (Romer) (“If coal was not the least cost resource, then we would purchase the alternative least cost resource, and the coal consumption would go down as a result of that.”); [REDACTED]

85. Customers also repeatedly testified that interfuel competition is a direct result of merit order dispatch and the criteria ISOs and RTOs use to force competition among all EGUs regardless of fuel type. [REDACTED]

[REDACTED]; DX3031 (Newton 45:15-19) (agreeing that if “low natural gas price generated units bid in at lower than your coal units, then SPP will take the low natural

gas . . . priced units”); [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

86. Customers likewise recognize that interfuel competition driven by ISOs/RTOs has resulted in lower coal capacity factors, driven in turn by low natural gas prices. 7/16 PM Tr. 106:16-107:5 (Sandlin) (agreeing that WFA’s members, including Basin Electric, have a reduced demand because their coal EGUs cannot dispatch the way they used to due to competition with other fuels); DX3011 (Gallaway 40:25-41:3, 51:8-23, 79:20-23); [REDACTED]

[REDACTED].

87. Customers’ ordinary course documents confirm the reality of interfuel competition. For example, NIPSCO’s 2018 Integrated Resource Plan (“IRP”) states:

The market is currently undergoing change as coal capacity retires and the generation mix shifts toward renewables and natural gas. In recent years, low natural gas prices have resulted in efficient natural gas plants displacing coal-fired generation in the dispatch stack. This dynamic has altered energy prices and has negatively impacted the economics of coal plants. DX1012, at -0005.

Likewise, an economic consultant for Southern Company concluded that one of the “key drivers” of its coal demand forecast was “how the relationship between natural gas and coal commodity prices influences fuel-switching between coal and natural gas.” DX2061 at -0009; *see also* 7/22 PM Tr. 28:6-29:3 (Fuller) (discussing DX2061). Presentations to coal suppliers [REDACTED]

[REDACTED], regularly highlight competition among coal, natural gas, and renewables. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

88. Notably, the WCTL routinely received presentations during its biannual meetings that explicitly recognize interfuel competition, including that “[s]ustained low natural gas prices, increased renewables generation and low load growths have resulted in significant reductions in coal burn.” DX1019, at -0002; *see also* DX2130; DX2128.

3. Coal Producers

89. Coal producers also recognize the reality of interfuel competition. [REDACTED]
[REDACTED]
[REDACTED]; 7/16 AM Tr. 58:25-59:9, 67:20-68:25 (Smith).

90. Other Peabody and Arch executives similarly testified about the effect competition from low-priced natural gas and renewables has had on their respective businesses.

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]; 7/20 AM Tr. 14:15-21 (Kellow) (testifying that the biggest driver of Peabody’s decreased Q1 2020 coal sales was “the head to head competition generation we are seeing against natural gas” and wind); [REDACTED]
[REDACTED]

[REDACTED]

91. [REDACTED] agreed with the importance of competition from natural gas and renewables. When asked whether PRB coal producers are constrained by competition from natural gas, [REDACTED]. When asked about a comment appearing in a S&P Global Platts report describing “a cage fight for market share” between coal and natural gas, DX1002, at -0001 (internal quotation marks omitted) [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

92. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] *see also* DX8591, at -0003-04, -0032-33 (recognizing “competition with natural gas, wind, solar, and other non-coal energy resources” and explaining “[i]n addition to competing with other coal producers, we compete generally with producers of other fuels, such as natural gas”).

93. Black Hills’ Mark Lux attested that “coal competes with other energy sources, such as natural gas, wind, solar and hydropower” and that “the growing competitive significance

of natural gas and renewable energy sources has placed considerable downward pressure on the demand and prices for PRB coal.” DX7014 (Lux Decl. ¶¶ 1-6). Similarly, Meri Sandlin, operator of the Dry Fork Mine, testified that she agreed “competition with natural gas has made it hard for coal,” that “natural gas has displaced coal,” “that wind power is displacing coal,” and that “natural gas prices have become a constraint on coal” such that “[w]hen natural gas prices go down, coal prices go down.” 7/16 PM Tr. 100:24-101:12 (Sandlin).

94. Competition with natural gas and other fuels is also reflected *pervasively* in Defendants’ ordinary course documents. *See, e.g.*, DX5004, at -0007 [REDACTED]
[REDACTED]
[REDACTED] DX6023, at -0049 [REDACTED]
[REDACTED]
[REDACTED] DX6089, at
-0020 [REDACTED]
[REDACTED]
[REDACTED] DX6191 [REDACTED]
[REDACTED]
DX6078 [REDACTED]
DX5022 [REDACTED]
[REDACTED]; DX6073 [REDACTED]
[REDACTED]; DX6081 [REDACTED]
[REDACTED]
[REDACTED]; DX1040, at -0001 [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED].

4. Industry Reports

95. Industry reports routinely recognize that other fuels used to generate electricity are a competitive constraint on SPRB coal. In fact, this Court is hard pressed to find an industry report that suggests SPRB coal is a distinct economic market insulated from such constraints.

96. DTE commissioned DTC to assess competition facing SPRB coal producers and potential impact of the Joint Venture. FOF ¶ 73. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] Similarly, DTC reported, “[w]e are seeing a tight relation to coal burn and natgas prices. Even the small pickup in natgas pricing last week resulted in a pickup in coal burn. Therefore, the dismal outlook is very much predicated on natural gas prices. Any lift in natgas prices would temper this, but that does not appear likely.” DX1001, at -0002.

97. IHS Markit has also observed the competition between SPRB coal and natural gas. DX8003; *see also* DX8692, at -0006, -0010-11, -0031 (noting, *inter alia*, “growth in gas-fired generation and renewables will take market share from coal”). Reporting on the Joint Venture, IHS Markit wrote, “Such a move would have been very difficult prior to the shale gas revolution, which fundamentally changed the nature and power of the U.S. energy markets and placed a quasi-governor on U.S. domestic coal prices in the PRB and elsewhere.” DX8003, at -0001. Regarding the possibility of over-consolidation in the Powder River Basin, IHS Markit added, “Given long-term natural gas price curves as low as they are, it is difficult to imagine a PRB producer of any scope could have meaningful price power.” DX8003, at -0003.

98. LEPA, an economic consulting firm, conducted regular reports and forecasts that OPPD used in its “fuel planning and budgeting,” including in determining the volume of coal to purchase. 7/15 PM Tr. 68:25-69:3, 75:3-76:5 (Ruhl). [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] DX1033, at -0004; *see* 7/15 PM

Tr. 79:10-12 (Ruhl). OPPD's Manager of Programs, Gary Ruhl, agreed. 7/15 PM Tr. 80:22-81:5;

99. The record is replete with other industry reports and other public recognition of the strength of interfuel competition. *See, e.g.*, DX8033, at -0005, -0009-10, -0015 (noting, *inter alia*, “[e]xisting coal- and gas-fired power plants are continually competing against each other (both hourly and daily) in the markets for electric power”); DX1002, at -0001 (“While the coal market dynamic has remained largely the same the competition between coal and natural gas has increased over less power generation growth and market share”); DX5146, at -0033 (“Pricing for the Powder River Basin is expected to be driven by domestic demand dynamics, with coal retirements and competitive natural gas restraining demand and prices.”).

100. Others publications that follow the coal industry also recognize the intense competition between coal, natural gas, and renewables, and coal's increasing struggle to successfully compete against those alternatives. For example, in October 2019, the Wall Street Journal recognized that coal, “the one-time king of American energy[,] is fading as it faces competition from cheap natural gas and renewable energy sources while reckoning with the retirement of coal-fired power plants.” DX8699, at -0001; *see also* DX8030, at -0003 (noting “extremely challenging” business conditions due to “ongoing secular decline in [coal] demand”).

B. SPRB COAL IS USED INTERCHANGEABLY WITH OTHER FUELS TO GENERATE ELECTRICITY

101. A megawatt produced by burning coal is identical to one generated by any other fuel and is [REDACTED]; DX3010 (Fuller 20:4-6).

102. Electricity producers generate electricity at the lowest possible cost regardless of fuel type. To do so, they evaluate their generation portfolio and assess generation costs, including fuel costs that are analyzed on standard price per BTU or cost per kilowatt/hour basis

across all fuels. [REDACTED]); *see* DX1090, at -0016 (“A price increase/decrease of one or more fuel sources relative to fuels as well as the addition of renewable resources may result in the decreased/increased use of other fuels.”); DX2170, at -0003.

103. In addition to using other fuels, customers may use other non-SPRB coals, including from the NPRB or ILB. [REDACTED]

[REDACTED]

[REDACTED].

C. SPRB COAL CUSTOMERS ARE NOT “DISTINCT”

104. The FTC has not identified a single customer who generates or sources electricity solely from SPRB coal. To the contrary, the record shows that customers who purchase SPRB coal also procure other fuels used to generate electricity. *See, e.g.*, [REDACTED]; [REDACTED]; DX2013, at -0001 (Evergy’s “diverse energy mix results in affordable, reliable electricity generation”); DX2049, at -0003 (“Southern Company Fuel Diversity: ‘All the Arrows in the Quiver’”).

105. Indeed, most customers embrace a multi-fuels generation approach as a matter of business prudence. For example, WFA believes that “the responsible approach is an all-of-the-above mix of fuels to supply demand for electricity.” DX2092, at -0002; *see also* 7/16 PM Tr. 110:8-111:14 (Sandlin) (agreeing that WFA believes all generation resources are important).

106. SPRB coal customers also have the option to purchase power from electricity markets if more efficient. *E.g.*, 7/15 PM Tr. 85:10-86:2, 86:23-87:11 (Ruhl) (OPPD has purchased power from the market when it was more economic to do so); 7/22 PM Tr. 10:11-25 (Fuller) (Southern purchases electricity on wholesale power market when it is cheaper than to generate it itself); 7/23 AM Tr. 105:15-21 (Benham) (54% of MP’s total electricity needs in 2019 were purchased from MISO and other parties).

D. SPRB COAL PRICES ARE CLOSELY RELATED TO OTHER FUEL PRICES

107. The record shows that, rather than being distinct, SPRB coal prices are closely related to the price of other fuels – and natural gas prices in particular. Market participants recognize that low natural gas prices affect SPRB coal demand and prices.

108. Arch and Peabody’s ordinary course documents confirm the reality that natural gas prices directly constrain SPRB coal prices. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED].¹⁴ [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]. The record is replete with similar evidence from the parties’ files confirming that falling natural gas prices have decreased SPRB coal demand and, accordingly, coal prices. *See, e.g.*, DX8697, at -0024 (“Declines in the price of natural gas, or continued low natural gas prices, could cause demand for coal to decrease and adversely affect the price of coal.”); DX8590, at -0019 (“[N]atural gas pricing has declined significantly in recent years. The decline in the price of natural gas has caused demand for coal to decrease and adversely affected the price of our coal.”).

¹⁴ The FTC suggests that Defendants’ expert, Dr. Bailey, “misconstrues” this email as evidence “that the price of SPRB coal is competitively constrained by the price of natural gas and other fuel sources.” *See* Reply Br. at 6; DX4001 (Bailey Report ¶ 27). [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]. The FTC’s claim that the “actual price” [REDACTED] depended on head-to-head competition between Peabody and Arch simply cannot be true based on the timeline.

109. Other coal producers also testified to the close relationship between natural gas and SPRB coal prices. [REDACTED]

[REDACTED] Black Hills' Mark Lux attested that competition from natural gas and renewables exerts "considerable downward pressure" on PRB coal prices. DX7014 (Lux Decl. ¶4). So too did Meri Sandlin, a coal producer and customer. *See* 7/16 PM Tr. 101:10-12, 102:4-18 (Sandlin) (agreeing that "[w]hen natural gas prices go down, coal prices go down" and that the SPRB coal price decline from 2006 to 2020 was due, in part, to competition from low priced natural gas).

110. Numerous customers also agreed that coal prices are interrelated with prices charged for other fuels which have a limiting effect on coal prices. *See, e.g.*, DX3010 (Fuller 192:22-93:9) ("[W]e came to the conclusion that low gas prices will tend to keep the [coal] prices disciplined because of what all is being competed against here."); *see also* [REDACTED] DX3037 (Sandlin 37:11-16); [REDACTED] DX3011 (Gallaway 41:21-42:4, 42:24-43:4, 51:8-20) (agreeing that natural gas and renewables will continue to limit the price of SPRB coal); [REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

111. The fact that coal prices are closely related to natural gas prices is further reflected in market participants' commercial practices. As explained above, natural gas prices are a key input in setting coal SPRB prices, drive Peabody to significantly drop its approved coal prices across the board, and Defendants' executives testified they consider natural gas prices when determining what prices to bid in response to an RFP, and take care to ensure that the price they offer will be consistent with natural gas and other fuels. FOF ¶¶ 36-38. In addition, both Peabody and Arch offer SPRB coal pricing that is indexed to natural gas or energy prices in

further recognition of the interrelationship between SPRB and natural gas. [REDACTED]
[REDACTED] DX3020 (James 169:3-13); 7/21 PM Tr. 70:3-18 (Galli) (describing natural gas index pricing with [REDACTED] and discussions with other customers); DX3040 (Smith 130:9-32:2); [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED] DX4001 (Bailey Report ¶ 85).

112. Customers' commercial practices also reflect the interrelationship between coal and other fuels, including natural gas in particular. Customers consider natural gas prices when determining how much coal to purchase and when to issue a coal RFP. *See* 7/15 AM Tr. 45:7-47:21, 98:11-19 (Peterson) (testifying that natural gas prices are an input into the model Evergy uses to forecast its coal needs); 7/15 PM Tr. 107:20-108:10, 112:2-15 (Romer) (testifying that Xcel's coal burn forecasts includes the forecasted natural gas prices); [REDACTED]
[REDACTED]

[REDACTED] 7/16 PM Tr. 111:25-12:18 (Sandlin) (testifying that WFA's members' coal burn forecasts are based on market conditions, including the price of other fuels such as natural gas, and that WFA prefers to solicit bids when coal prices are "soft"); 7/22 PM Tr. 22:3-23:3 (Fuller) (testifying that the price of natural gas is "a piece" of Southern's coal burn forecasts "because it has a direct impact on how much coal we would project to burn"); *see also* 7/14 PM Tr. 32:25-33:20 (Meyer) (testifying that Ameren's coal burn forecasts are based on a comparison of Ameren's operation costs to forecasted electricity prices); 7/21 PM Tr. 80:23-81:2 (Clark) (AECI's coal burn is modeled as a function of projected Henry Hub gas prices); [REDACTED]
[REDACTED]

[REDACTED]; DX6080, at -0001 [REDACTED]
[REDACTED]; DX6087, at -0001
[REDACTED]
[REDACTED]

113. Customers and suppliers alike also evaluate coal costs by analyzing coal prices on a dollar per megawatt hour basis and similar measures that can be used to directly compare them to natural gas prices and inform fuel purchasing decisions and resource planning. [REDACTED]

E. SENSITIVITY TO PRICE CHANGES

114. The evidence reflects that SPRB coal customers are highly sensitive to changes in price. Before customers initiate a coal RFP process, they prepare a burn forecast to determine how much coal to request – based, in part, on actual and forecasted natural gas prices, often as an input into a model that determines how the customers’ coal EGUs are expected to perform in the broader wholesale energy market. Customers continue to reevaluate their anticipated coal needs throughout the purchasing process. [REDACTED]

[REDACTED] Earlier this year, customer [REDACTED] notified its coal suppliers that, because of low natural gas prices, it would be reducing its SPRB coal needs. DX1550, at -0002 [REDACTED]

[REDACTED]; DX1552, at -0001 [REDACTED]

115. This price sensitivity between coal and other fuels is apparent at both the ISO/RTO level and in individual customers’ short- and long-term fuel purchasing and resource planning. As relative fuel prices change, ISOs/RTOs force substitution among fuels to ensure least cost electricity generation. For example, due to low natural gas prices, coal EGUs have had increased difficulty dispatching, and thus have not been chosen to “run” by the ISOs/RTOs, with natural gas, renewables, and nuclear EGUs running instead. DX4001 (Bailey Report ¶¶ 28-35);

██████████ ISOs/RTOs' generation mixes demonstrate that substitution among fuels is occurring, and that coal generation – and, correspondingly, the amount of SPRB coal procured – is declining as ISOs/RTOs select lower-priced renewable and natural gas EGUs to dispatch instead of coal. DX4001 (Bailey Report ¶ 19); DX4005 (Carey Report ¶¶ 87-88 & Ex. 9); DX4003 (Israel Report ¶ 47 & Table 1). The same is true for vertically integrated utilities. *Compare* DX2052, at -0002 ██████████ with DX2054, at -0001 ██████████; *see also* DX2049, at -0005 (Southern's SPRB coal purchases cut by a third between 2008 and 2018).

116. Customers confirm this fact. WFA's Meri Sandlin agreed that her members' coal demand is down because their coal-fired plants "are unable to dispatch into the market like they used to" since "other fuels such as natural gas and renewables are generating electricity more economically" than SPRB coal. 7/16 PM Tr. 106:8-07:5 (Sandlin). ██████████
██████████
██████████

117. Individual electricity generators also substitute among fuels in response to relative price changes. ██████████; DX3011 (Gallaway 41:21-42:4) (at \$2 per million BTU, natural gas is more economic than PRB coal for Consumers, which factors into their fuel purchasing decisions). In the short term, if coal EGUs cannot regularly dispatch, these customers burn less coal, defer their coal deliveries, and procure less coal in RFPs. *See* DX4001 (Bailey Report ¶¶ 81-84, 87); 7/16 PM Tr. 106:8-24 (Sandlin); ██████████
██████████; DX2046, at -0001; DX1041, at -0001 ██████████
██████████
██████████
██████████; 7/15 PM Tr. 86:23-87:11 (Ruhl) (confirming that ██████████
██████████, "after looking at the energy market prices" OPPD "bought [energy] off the market" instead of purchasing Black Thunder coal from Arch); DX3011 (Gallaway 37:10-

38:2) (agreeing that “Consumers purchases energy from the MISO market if that energy is more economical for its customers,” which is “an alternative to burning coal”), *id.* at 214:16-21 (agreeing that “[I]f the price of SPRB coal sustained a price increase, Consumers has the option of purchasing more power on the market.”).

118. As [REDACTED] explained its reduced coal deliveries to Peabody in April 2020: [REDACTED]
[REDACTED]
[REDACTED] DX5055, at -0001. Peabody’s David James explained that [REDACTED] reduced coal deliveries were the result of [REDACTED] and that similar messages [REDACTED] were like “Groundhog Day” because he was “hearing the same thing day after day, that natural gas and wind generation was eating into the coal generation and we’re not going to be able to take our tons.” 7/16 PM Tr. 12:11-14:18 (James); DX2069; [REDACTED]
[REDACTED]
[REDACTED]

119. Market participants confirmed that competition among fuels directly contributes to coal EGU retirements, and that coal EGU retirements pose a major competitive threat to coal producers. 7/16 PM Tr. 103:23-104:5 (Sandlin) (agreeing that coal plants are retiring early in part because they “are unable to dispatch against the other fuels”); [REDACTED]
[REDACTED]; DX1086, at -0050 (“The abundance of low-cost natural gas, the near doubling of renewable generating capacity in the U.S., and a decade of research and technical innovation have hastened the retirement of coal-fired generation.”); DX3011 (Gallaway 44:9-18, 45:6-13); DX2020 at -0014 (in an evidentiary hearing, Evergy’s expert testified that one cause of “retirement[s] of coal plants generally and [Evergy’s] Sibley units in particular” was that coal plants have become “too expensive to operate as the price of renewable generation resources has fallen and the price of natural gas has remained low.”).

120. SPRB coal customers are sensitive to relative changes in fuel price changes, and low natural gas prices drive customers to substitute natural gas for coal or retire coal units entirely when they become uneconomical relative to natural gas. As Brian Fuller explained, Southern retired coal EGUs and replaced them with natural gas EGUs because “the economic evaluation showed that replacing those coal units with gas would be more cost-effective” due to low natural gas prices. DX3010 (Fuller 106:18–07:16). Brian Gallaway testified that Consumers conducted a detailed analysis using a range of natural gas price sensitivities when deciding whether to retire certain coal units, and the retirement decisions with respect to four of Consumers’ coal-generating units were directly impacted by the price of natural gas. DX3011 (Gallaway 44:9-18). Presentations delivered to the WCTL likewise describe how low natural gas prices and cost effective renewable energy have displaced coal generation. *See* DX2128, at -0008 (“Wind Displacement of PRB Coal”); *id.* at -0010 (“NG Displacement of PRB Coal”); *id.* at -0012 (“Low NG prices started to displace significant amounts of coal in early generation in early 2009 during the Great Recession.”); DX2130 at -0029 (“Continued low natural gas prices will limit the use of existing coal generation assets. Increases in renewable energy productivity will allow for more cost effective production and further displacement of coal.”). Market participants testified that additional coal unit retirements may accelerate if the continued low natural gas prices make coal uneconomical. DX3011 (Gallaway 45:6-13); *see also* DX1048, at -0010 (Consumers’ 2018 IRP showing plans to substitute away from coal to renewables).

121. Defendants are particularly concerned with coal EGU retirements because they result in a permanent loss of coal demand that, given the lack of investment in new coal EGUs, will be lost forever. FOF ¶ 25; *see also* [REDACTED] DX3010 (Fuller 117:15-18:16) (agreeing that domestic “coal burn is capped at installed capacity” and that “once gone, coal plants are not coming back.”); DX3037 (Sandlin 48:5-9) (“Once they’re announced [to retire], that’s usually the end.”); [REDACTED]

██████████ DX6062, at -0001 ██████████
██████████.

122. Indeed, coal producers make substantial efforts to work with customers to limit, prevent or delay coal EGUs' retirements through various types of concessions, including pricing concessions, designed to provide customers additional flexibility, and improve the ability of their coal EGUs to dispatch against other fuels. *See* FOF ¶ 25.

III. EXPERT ASSESSMENTS OF THE RELEVANT MARKETS AND THE JOINT VENTURE'S LIKELY EFFECTS ON COMPETITION

A. PLAINTIFFS' EXPERTS

1. Dr. Nicholas Hill

123. Dr. Nicholas Hill presents various theoretical and economic analyses in support of the FTC's case. Although an experienced economist, Dr. Hill had no prior experience assessing coal, mining, or electricity generation. 7/17 AM Tr. 101:17-103:12 (Hill).

124. Although Dr. Hill recognizes SPRB coal competes with other fuels, he opined that customers of SPRB coal would not switch to other fuels and eliminated other fuels from his relevant market. 7/24 AM Tr. 48:9-49:21 (Hill).

125. Ignoring competition from other fuels, and using SPRB coal only as a relevant market, Dr. Hill calculated market shares and concentration and determined an SPRB coal only market would be highly concentrated. Dr. Hill therefore opined that the Joint Venture would presumptively be likely to reduce competition. 7/24 AM Tr. 62:15-63:11 (Hill).

126. Dr. Hill did not analyze how SPRB coal prices are affected by the RFP process. 7/17 PM Tr. 32:6-8 (Hill). He did not analyze how often Peabody was the runner-up when Arch won an RFP, nor how often Arch was the runner-up when Peabody won, an important fact that he used in his analysis in another merger litigation. 7/17 PM Tr. 34:7-22 (Hill). And Dr. Hill did not quantify the benefits that customers derive from individual RFP negotiations. He did no empirical analysis of the effect of the RFP process on coal prices and cannot quantify the

benefits to SPRB coal customers. 7/17 PM Tr. 34:23-35:8 (Hill). [REDACTED]

[REDACTED]

2. Dr. Mark Zmijewski

127. The FTC also presented expert testimony provided by Dr. Mark Zmijewski, who presented criticisms of Defendants' projections of efficiencies. Notably, Dr. Zmijewski is a finance professor who has no training or experience in mining and did not consult with anyone with mining experience. 7/24 PM Tr. 116:1-2, 199:24-200:5 (Zmijewski).

B. DEFENDANTS' EXPERTS

1. Professor Julie Carey

128. Defendants presented the expert testimony of Professor Julie Carey, a Managing Director at NERA Economic Consulting and adjunct professor at Georgetown University with over twenty-five years experience analyzing competition in the wholesale electricity markets.

129. Professor Carey testified about the operation of the electricity industry, competition among electricity generators, and how that competition impacts SPRB coal producers. Professor Carey presented opinions that least cost dispatch pits all types of EGUs against each other to run, coal EGUs face increasing and substantial competition from natural gas and renewable EGUs that will continue to grow, that coal EGUs are thus less likely to run and more likely to be retired, and that any SPRB coal producer that increases its prices increases the risk of coal customers purchasing less coal, retiring their coal EGUs, and ultimately not needing coal anymore. 7/21 AM Tr. 21:13-22:1 (Carey). Professor Carey also critiqued Dr. Hill's opinions, explaining how his analyses were inconsistent with the commercial realities of the electricity industry.

2. Dr. Elizabeth Bailey

130. Defendants also presented the testimony of Dr. Elizabeth M. Bailey a Lecturer in Finance at the Wharton School of Business and former Executive Director of the Energy Institute at the Haas School of Business. Dr. Bailey also has extensive experience in the energy sector.

131. Dr. Bailey testified regarding the dynamic nature of competition in the electricity generation industry, as well as natural experiments she observed demonstrating that SPRB coal is not an appropriately drawn product market. She also presented critiques of Dr. Hill's analyses.

132. Dr. Bailey concludes that (1) the Joint Venture will not substantially lessen competition in any relevant market; (2) the FTC's proposed SPRB coal only market is too narrow and is inconsistent with real-world facts; and (3) competition from natural gas, renewables, and other fuel sources – not coal-on-coal competition among SPRB coal suppliers – is the most important competitive constraint on SPRB coal. 7/22/20 AM Tr. 25:8-22 (Bailey).

3. Dr. Mark Israel

133. Defendants also presented the testimony of Dr. Mark Israel, a Senior Managing Director at Compass Lexecon and specialist in industrial organization and applied econometrics.

134. Dr. Israel demonstrated the FTC's proposed SPRB coal market is inconsistent with real-world observations, including low and declining margins on SPRB coal sales notwithstanding increasing market concentration. Dr. Israel also demonstrated empirically that SPRB coal pricing is in large part determined by natural gas, and that natural gas imposes a constraint on coal prices equal or higher to the constraint imposed by other SPRB producers.

135. Dr. Israel testified that Dr. Hill's competitive effects model is inconsistent with real world observations, and predicts margins that are significantly higher than observed margins, demonstrating that Dr. Hill's understates competition. 7/24 AM Tr. 53:13-54:4, 76:15-80:17 (Israel). Dr. Israel demonstrated that introducing dynamic effects to the extent necessary to match the FTC's model of competition with observed margins leads to an economic conclusion of "no harm." 7/24 AM Tr. 81:15-84:7 (Israel); DX4004 (Israel Rebuttal ¶¶ 63-75).

136. Dr. Israel also assessed Defendants' efficiency projections, concluding the Joint Venture will result in sizeable variable cost efficiencies that are both verifiable and specific to the Joint Venture, which will create incentives to lower price. 7/24 AM Tr. 84:15-86:23, 96:3-98:4 (Israel); DX4003 (Israel Report ¶¶ 134-239).

PROPOSED CONCLUSIONS OF LAW

I. LEGAL STANDARD

137. When the FTC seeks to enjoin a transaction, “the issuance of a preliminary injunction prior to a full trial on the merits is an extraordinary and drastic remedy,” because it “may prevent the transaction from ever being consummated.” *FTC v. Exxon Corp.*, 636 F.2d 1336, 1343 (D.C. Cir. 1980) (quotations omitted); *see also Mo. Portland Cement Co. v. Cargill, Inc.*, 498 F.2d 851, 870 (2d Cir. 1974) (an injunction likely “spell[s] the doom of an agreed merger”). Given the significant stakes, the FTC bears a significant burden to prove it is entitled to the extraordinary relief sought. *Arch Coal*, 329 F. Supp. 2d at 116. The Eighth Circuit applies a “stringent standard” when reviewing preliminary injunction applications under the Clayton Act. *FTC v. Freeman Hosp.*, 69 F.3d 260, 267 (8th Cir. 1995). The FTC must show that “weighing the equities and considering the Commission’s likelihood of ultimate success, such action would be in the public interest.” *FTC v. Tenet Health Care Corp.*, 186 F.3d 1045, 1051 (8th Cir. 1999) (quoting 15 U.S.C. § 53(b)). “A showing of a fair or tenable chance of success on the merits will not suffice for injunctive relief[,]” because that would be “contrary to congressional intent and reduce[] the judicial function to a mere ‘rubber stamp’ of the FTC’s decisions.” *Id.*; *Freeman Hosp.*, 69 F.3d at 267. In assessing the FTC’s case, the Court cannot defer to the FTC, but instead must “exercise [its] independent judgment” based on the evidence before it. *FTC v. Nat’l Tea Co.*, 603 F.2d 694, 698 (8th Cir. 1979). And the Court must base its decision on the facts before it, not on “antitrust theory and speculation.” *FTC v. RAG-Stiftung*, 436 F. Supp. 3d 278, 291 (D.D.C. 2020) (*quoting Arch Coal*, 329 F. Supp. 2d at 116-17).

138. Likelihood of ultimate success is the touchstone: “absent a likelihood of success on the merits, equities alone will not justify an injunction.” *Arch Coal*, 329 F. Supp. 2d at 116. To show a “likelihood of success” on the merits of its Section 7 claim, the FTC must show that the Joint Venture’s probable effect will be a “substantial lessening of competition” in a relevant antitrust market. *RAG-Stiftung*, 436 F. Supp. 3d at 290. The “mere possibility” that competition

may be impaired is insufficient and cannot justify an injunction. *New York v. Deutsche Telekom*, 439 F. Supp. 3d 179, 198 (S.D.N.Y. 2020); *see also U.S. v. Marine Bancorp., Inc.*, 418 U.S. 602, 622–23 n.22 (1974) (noting merger review “deals in probabilities, not ephemeral possibilities” and that a “substantial lessening of competition” must be “sufficiently probable and imminent”) (quotations omitted). In practice, this means that the FTC must show that the Joint Venture will likely have anticompetitive effects, *i.e.* increased prices.

139. The Court must examine the likelihood of substantial impairment of competition in the context of the “structure, history, and probable future” of the relevant market. *U.S. v. Gen. Dynamics*, 415 U.S. 486, 498 (1974) (quotation omitted). Accordingly, the Court must consider the Joint Venture’s potential effects on competition based not only on the commercial realities of the relevant markets as they exist today, but also on those that likely will exist in the future. Put another way, the competitive impact of the Joint Venture must be judged against the “but for” world in which the Joint Venture does *not* occur. If, for instance, prices are likely to increase or output is likely to fall even without the Joint Venture, the Court must consider that when determining whether the Joint Venture is likely to substantially impair competition.

140. In assessing a Section 7 claim, courts employ a burden-shifting approach. To establish a *prima facie* case, the FTC must demonstrate that the Joint Venture will result in undue market concentration in a relevant antitrust market. *FTC v. Sanford Health*, 926 F.3d 959, 962–63 (8th Cir. 2019). As detailed below, to meet this burden the FTC must show that the market is limited to SPRB coal; its failure to do so “is fatal to its motion for injunctive relief.” *Tenet Health*, 186 F.3d at 1051-53. Only if the FTC satisfies this threshold burden is it entitled to a rebuttable presumption that the Joint Venture will substantially lessen competition and should be enjoined. *Sanford Health*, 926 F.3d at 962-63. However, that rebuttable presumption “does not negate the breadth of th[e] analysis [and] . . . simply provides a convenient starting point for a broader inquiry into future competitiveness.” *U.S. v. Baker Hughes Inc.*, 908 F.2d 981, 984 (D.C. Cir. 1990). Defendants may rebut the presumption, and the Court must undertake “a broad analysis of the market to determine any effects on competition.” *Arch Coal*, 329 F. Supp. 2d at

130. For example, the presumption may be rebutted by showing the FTC’s market share analysis presents an “inaccurate account of [the] probable effects on competition,” *id.* at 116; where customers can resist a price increase, *Baker Hughes*, 908 F.2d at 986; where particular characteristics of the market make price increases unlikely, *Arch Coal*, 329 F. Supp. 2d at 158; or where the merger will produce pro-competitive efficiencies; *Tenet Health*, 186 F.3d at 1054.

141. The FTC bears the “ultimate burden of persuasion” to prove the Joint Venture is likely to substantially lessen competition in a relevant antitrust market, *Sanford Health*, 926 F.3d at 962-63, and “a failure of proof in any respect will mean the transaction should not be enjoined,” *Arch Coal*, 329 F. Supp. 2d at 116.

II. MARKET DEFINITION

142. A relevant antitrust market has two components – a product market and a geographic market – and “is a necessary predicate to the finding of an antitrust violation.” *Tenet Health*, 186 F.3d at 1051. “Without a well-defined relevant market, a merger’s effect on competition cannot be evaluated. It is thus essential that the FTC identify a credible relevant market before a preliminary injunction may properly issue.” *Id.* (citation omitted); *see also Freeman Hosp.*, 69 F.3d at 268 (stating that, “[w]ithout a well-defined relevant market, an examination of a transaction’s competitive effects is without context or meaning”).

143. The FTC has not met its burden to prove that the relevant antitrust market is limited to SPRB coal only.¹⁵ The FTC’s failure to prove its alleged relevant market “is fatal to its motion for injunctive relief.” *Tenet Health*, 186 F.3d 1053.

¹⁵ The evidence must be judged against the FTC’s asserted product market, which is the production and sale of all SPRB coal to *all SPRB customers*, not the sale of SPRB coal to specific customers (or a price discrimination market). As a result, emphasis on a few customers, such as Ameren or Evergy, is insufficient proof of the relevant product market, particularly when so many customers are differently situated and recognize competition from other fuels. *See also* 7/24 AM Tr. 55:3-60:22 (Israel) (explaining that systematic analysis of the parties’ prices demonstrates not only that they do not price discriminate but that RFPs do not drive pricing, and what happens to marginal customers).

A. PRODUCT MARKET DEFINITION

144. “[T]he relevant product market includes all reasonably interchangeable products.” *Process Controls Int’l, Inc. v. Emerson Process Mgmt.*, 2011 WL 403121, at *2 (E.D. Mo. Feb. 1, 2011). A properly-defined product market therefore must include all functionally similar products to which customers could turn if the Joint Venture attempted to, post-closing, impose a price increase. *See, e.g., Little Rock Cardiology Clinic PA v. Baptist Health*, 591 F.3d 591, 596 (8th Cir. 2009) (noting focus is whether “consumers will shift from one product to the other in response to changes in their relative costs”); *FTC v. R.R. Donnelley & Sons Co.*, 1990 WL 193674, at *2 (D.D.C. Aug. 27, 1990) (“If customers are able to substitute one product or service in response to a nontrivial increase in the price of another, these products or services must fall within the same product market.”). The relevant question is “whether two products can be used for the same purpose, and if so, whether and to what extent purchasers are willing to substitute one for the other.” *FTC v. Staples, Inc.*, 970 F. Supp. 1066, 1074 (D.D.C. 1997) (quotation omitted). As the Eighth Circuit has explained, “[t]he definition of relevant market depends upon economic restraints which prevent sellers from raising prices above competitive levels,” *H.J., Inc. v. Int’l Tel. & Tel. Corp.*, 867 F.2d 1531, 1537 (8th Cir. 1989), which include substitutes for the parties’ products, *see id.*, and should take into account the “influence of downstream competition faced by customers” (here, electricity generating utilities) in their downstream markets. *See* Horizontal Merger Guidelines (“HMG”) § 4.1.3.

145. “The proper market definition can be determined only after a factual inquiry into the *commercial realities* faced by consumers.” *Tenet Health*, 186 F.3d at 1052 (emphasis added). In assessing these “commercial realities” in a “rapidly-changing” market, the Court should evaluate how “evolving market forces” may be constraining prices. *Id.* at 1055; *see also R.R. Donnelley*, 1990 WL 193674, at *4 (competitive pressure from products outside the FTC’s proposed product market “will be enhanced in the future because of further technological and market developments”); *U.S. v. SunGard Data Sys.*, 172 F. Supp. 2d 172, 188-89 (D.D.C. 2001) (because “decreasing cost and changing nature of the technology” made alternative solutions

increasingly competitive, those alternatives must be included in the relevant market). If competition cuts across product or industry lines, the product market must be drawn broadly to include competition as it exists.” *Science Prods Co. v. Chevron Chem. Co.*, 384 F. Supp. 793, 795 (N.D. Ill. 1974); *see also FTC v. Owens-Illinois, Inc.*, 681 F. Supp. 27, 34-36, 54-55 (D.D.C. 1988) (denying FTC preliminary injunction motion and rejecting narrow market definition that ignored competition between glass, plastic, metal, and paper) (citing *U.S. v. Continental Can Co.*, 378 U.S. 441 (1964)); *U.S. v. Gen. Dynamics*, 341 F. Supp. 534, 555-56 (N.D. Ill. 1972) (rejecting challenge to coal company merger and holding relevant market “must encompass interfuel competition” based on less compelling facts than present here).

146. In evaluating whether two products are “reasonabl[y] interchangeab[le],” the Supreme Court has instructed that courts may consider certain “practical indicia,” which include “industry or public recognition of the [relevant market] as a separate economic entity, the product’s peculiar characteristics and uses, unique production facilities, distinct consumers, distinct prices, sensitivity to price changes, and specialized vendors.” *Brown Shoe*, 370 U.S. at 325. As “practical indicia,” these factors are not criteria to be rigidly applied. *See Se. Mo. Hosp. v. C.R. Bard, Inc.*, 642 F.3d 608, 614 (8th Cir. 2011) (stressing that “the presence of some [factors], and absence of others, is not dispositive”). But industry and public recognition are particularly important “because we assume that economic actors usually have accurate perceptions of economic realities.” *Rothery Storage & Van Co. v. Atlas Van Lines, Inc.*, 792 F.2d 210, 218 n.4 (D.C. Cir. 1986). At the end of the day, “the determination of the relevant market ... is a matter of business reality – [] of how the market is perceived by those who strive for profit in it.” *FTC v. Cardinal Health, Inc.*, 12 F. Supp. 2d 34, 46 (D.D.C. 1998) (quotation omitted).

147. Contrary to the FTC’s assertion that the *Brown Shoe* factors are relevant only to show whether a narrower “submarket” exists (Reply Br. at 3-4), the Eighth Circuit has explained that the “practical indicia identified in *Brown Shoe*” serve as “evidentiary proxies for direct proof of substitutability,” and that “the *same proof which establishes the existence of a relevant*

product market also shows (or in this case, fails to show) the existence of a product submarket.” H.J., Inc., 867 F.2d at 1540 (emphasis added, citations and quotation marks omitted); *accord Cmty. Publishers, Inc. v. Donrey Corp.*, 892 F. Supp. 1146, 1154 n.9 (W.D. Ark. 1995), *aff’d sub nom. Cmty. Publishers, Inc. v. DR Partners*, 139 F.3d 1180 (8th Cir. 1998).

148. In evaluating whether the government’s proposed market includes all reasonably interchangeable alternatives, courts may also consider assessments of the HMT outlined in the HMG. *See Sanford Health*, 926 F.3d at 963; HMG § 4.1. But the HMT, like any other tool that courts may use to assess market definition, cannot provide a reliable basis to support the FTC’s proposed market definition if it ignores important competitive realities. *See, e.g., U.S. v. Sabre Corp.*, 2020 WL 1855433, at *40 (D. Del. 2020) (government expert’s market concentration statistics “cannot be relied on because it ignores industry realities,” including by leaving out competition from other an alternative product that the expert’s own testimony “showed . . . exerts competitive pressure” on the merging parties); *see also Brown Shoe*, 370 U.S. at 336-37 (because Congress “prescribed a pragmatic, factual approach to the definition of the relevant market and not a formal, legalistic one,” the relevant market “must, therefore, . . . correspond to the commercial realities of the industry”).

149. Courts may also consider other economic analyses to assist in market definition, including estimates of cross-elasticity of demand (*i.e.*, the degree that buyers of one product switch to the other in response to price changes). *See Se. Mo. Hosp.*, 642 F.3d at 613.

150. The FTC alleges that the relevant product market is limited to SPRB coal, excluding natural gas, renewable energy, and other competing fuel sources. Compl. (DE 1) ¶ 18; FTC Br. (DE 154) at 1, 17, 39. Defendants acknowledge the competition among SPRB coal producers, but this uncontested fact does not mean that other competing fuel sources should be excluded from the relevant market.¹⁶ The FTC relies heavily on the “narrowest market principle”

¹⁶ The uncontroversial fact that SPRB coal suppliers compete does not establish that the relevant market is limited to SPRB coal or that the joint venture is likely to harm competition. In *Sabre*, for example, the court appropriately evaluated evidence that the merging parties considered each other to be a “competitive threat” within the context of the overall evidentiary record. 2020 WL 1855433, at *41.

see Reply Br. at 3 (citing *Arch Coal*, 329 F. Supp. 2d at 121), which simply refers to the process through which the HMT can be used to evaluate the proposed market definition. But this does not relieve the FTC of its burden to show that the narrow SPRB coal-only market comports with competitive realities. Indeed, in *Arch Coal*, Judge Bates *rejected* the FTC's proposed narrow market limited to 8800 BTU coal, focusing on the actual "purchasing practices of utilities," which "can and do purchase and consume both 8800 and 8400 coal," and which "benefit from the competition between 8800 and 8400 Btu coal." 329 F. Supp. 2d at 121-22. Importantly, Judge Bates recognized that, "in determining interchangeability, . . . the court must consider the degree to which buyers treat the products as interchangeable, but need not find that *all* buyers will substitute one commodity for another." *Id.* at 122; see also *SunGard*, 172 F. Supp. 2d at 188-90 (noting that evidence on whether customers would switch to alternatives outside the government's proposed product market should examine "the entire client base for the product" and citing evidence that increasing numbers of customers have "switched" or "threatened to switch" to alternative products).

151. The FTC has failed to meet its burden to prove that the relevant antitrust market is limited to SPRB coal. To the contrary, the record indicates that SPRB coal is reasonably interchangeable and in direct competition with other fuels, particularly natural gas and renewables; these fuels pose (and increasingly will pose) a major competitive threat to Defendants' businesses. The Court's analysis of the practical indicia of competition identified in *Brown Shoe*, including nearly universal industry recognition of the strong competition that exists between coal and other fuels, confirms this finding. As explained further below, and particularly in light of the outcome dictated by analysis of the *Brown Shoe* factors, the HMT analysis offered by the FTC and Dr. Hill is not sufficient to meet the FTC's burden to prove that all other fuels are properly excluded from the relevant market for one basic reason – Dr. Hill's analysis simply

Notwithstanding evidence of competition between the merging parties, the court concluded that the government had failed to show that the transaction was aimed at eliminating that competition, emphasizing countervailing evidence that the transaction was intended to better serve customers, including a commitment to honor existing arrangements at "their current or better prices." *Id.* at *42.

is not consistent with the realities of competition. The FTC and Dr. Hill focus on theoretical short-term static competition, ignoring the longer-term dynamic competition that is having a dramatic and undeniable impact on thermal coal. The FTC and Dr. Hill's antitrust theories and speculation "cannot trump facts." *Arch Coal*, 329 F. Supp. 2d at 116-17.

1. Analysis of the *Brown Shoe* Factors

152. To reject the FTC's proposed market definition, the Court need not conclude that every *Brown Shoe* factor supports a broader market. *See Se. Mo. Hosp.*, 642 F.3d at 614. The court in *Sungard*, for example, focused on two *Brown Shoe* factors in particular, "industry recognition" and "the peculiar characteristics and uses of the product." 172 F. Supp. 2d at 188-89. In rejecting the government's "attempt[] to classify the product market as an oligopoly," the court cited evidence that increasing numbers of customers had switched, or threatened to switch, to alternative solutions, and the merging parties considered those alternative solutions to be "their main competitive threat." *Id.*

153. *FTC v. Great Lakes Chemical Corp.*, 528 F. Supp. 84 (N.D. Ill. 1981) provides a useful example of how the *Brown Shoe* factors can be applied. In that case, the FTC alleged that the relevant market was limited to flame retardants made from a specific chemical (bromine), known as brominated flame retardants. Applying the *Brown Shoe* factors, the court concluded that "brominated and non-brominated flame retardants must be included in a single market." *Id.* at 87. Just as different fuel sources can generate electricity, the court in *Great Lakes Chemical* explained that other chemical flame retardants competed directly with brominated flame retardants: "Regardless of the chemical from which it is derived, a flame retardant has but one purpose. All flame retardants perform the same function of increasing the ignition temperatures of the product to which they have been added and slowing down the flame spread across the face of the product." *Id.* at 88. The court also emphasized "widespread industry recognition of a single, overall flame retardant market," similar to the widespread recognition that SPRB coal competes within a broader "energy market." *Id.*

a. Industry and Public Recognition

154. The first and often most important *Brown Shoe* factor evaluates how industry participants recognize competitive realities. *See, e.g., Sabre*, 2020 WL 1855433, at *36-37 (finding industry recognition of competition undercut government’s product market); *Great Lakes Chem.*, 528 F. Supp. at 88 (“widespread industry recognition of a single, overall flame retardant market” undermined government’s proposed narrow market). In this case, the Court was presented with extensive evidence reflecting industry assessments of competition among fuels in the energy market.

155. Notably, the FTC’s sister agency, the EIA, repeatedly has recognized that coal is in vigorous head-to-head competition with other fuels, and ISOs/RTOs force customers to switch between fuels in both the short and long term. FOF ¶¶ 77-82. Federal courts, including in this circuit, routinely rely on the EIA’s views as instructive. *Sierra Club v. Clinton*, 746 F. Supp. 2d 1025, 1034 (D. Minn. 2010) (holding EIA reports and analysis “provide ample evidence” to support conclusion that U.S. demand for crude oil will decrease); *see also Ctr. for Sustainable Econ. v. Jewell*, 779 F.3d 588, 608 (D.C. Cir. 2015) (citing EIA report to support proposition that “[t]he weight of the evidence is American crude oil demand will primarily reflect domestic demand for finished petroleum products over the next half century”); *Howard v. Ferrellgas Partners, L.P.*, 2011 WL 3299689, at *3 (D. Kan. Aug. 1, 2011) (relying on EIA price reports to assess plausibility of claims). The fact that the federal agency charged with preparing unbiased assessments of the energy sector has repeatedly recognized that coal faces dynamic, head-to-head competition from other fuels is compelling evidence that the proposed market must encompass that competition.¹⁷

¹⁷ While the FTC has suggested that overall trends affecting the coal industry generally are not applicable to SPRB coal, this claim is not credible, including in the Court’s assessment of the *Brown Shoe* factors. Even putting aside the data, documents, customer testimony, and economic analyses that show the impact of other fuels on SPRB coal, the fact that SPRB coal is a substantial portion of coal consumption means that trends affecting all coal necessarily speak to effects on SPRB coal.

156. Customer after customer has recognized that competition from other fuels, renewables and natural gas in particular, is a key constraint on and a major competitive threat to SPRB coal producers. FOF ¶¶ 83-88. Indeed, Professor Carey compiled 86 pages of customer statements recognizing inter-fuel competition, including statements about how SPRB customers can, and often do, switch from coal to other fuels to meet generating needs. DX4005 (Carey Report Ex. 8). Dr. Bailey likewise illustrated in her Rebuttal that every customer subpoenaed by the parties provided evidence that SPRB coal competes with other fuel sources. DX4002 (Bailey Rebuttal ¶ 36 & Ex. 7).

157. Peabody and Arch executives, as well as other SPRB coal producers, also testified that coal is in direct, head-to-head competition with other fuels. This reality was confirmed again and again in coal producers' ordinary course business documents. FOF ¶¶ 89-94.

158. A wide range of industry analysts, on whom both SPRB coal producers and customers rely for information to guide their business planning, also recognize interfuel competition and substitution among fuels. FOF ¶¶ 95-100.

159. In response to the voluminous industry recognition of interfuel competition evidence cited by Defendants, the FTC asserts that market participants also recognize a specific SPRB coal "market," suggesting there is also "plenty of that" in the record. Reply Br. at 5. But while the FTC has cited certain references that suggest market recognition of competition among SPRB coal producers specifically (which is not in dispute), these examples do not rebut the extensive evidence presented by Defendants of industry recognition of vigorous, head-to-head competition between SPRB coal and other fuels.

160. Accordingly, the critical industry and public recognition factor strongly contradicts the FTC's theory that the relevant market is limited to SPRB coal.

b. Peculiar Characteristics and Uses

161. Courts applying the second *Brown Shoe* factor, peculiar characteristics and uses, generally focus on whether alternative products are used interchangeably with the product sold by the parties. The Supreme Court has explained that, where the "commercial realities" of an

industry indicate that multiple, distinguishable products or services compete with each other to provide the same “basic service,” those products or services “must be compared” with other products or services that provide the same commercial function. *U.S. v. Grinnell Corp.*, 384 U.S. 563, 571–72 (1966); accord *Ohio v. Am. Express Co.*, 138 S. Ct. 2274, 2285 (2018) (“courts should ‘combin[e]’ different products or services into ‘a single market’ when ‘that combination reflects commercial realities.’”) (quoting *Grinnell*, 384 U.S. at 572).

162. In *HDC Medical, Inc. v. Minntech Corp.*, for example, the court rejected an attempt to artificially limit the proposed product market to a particular type of dialysis equipment, emphasizing that a “precipitous” decline in an alternative type of dialysis equipment had already caused some customers to switch to this alternative. 411 F. Supp. 2d 1096, 1104 (D. Minn. 2006), *aff’d* 474 F.3d 543 (8th Cir. 2007). “[G]iven the price and use characteristics” of the two alternative types of dialysis equipment, “the only reasonable conclusion regarding the relevant market is that both types of dialyzers constitute the relevant market.” *Id.* In affirming the district court, the Eighth Circuit applied the *Brown Shoe* factors, focusing in particular on the fact that the two types of dialysis equipment were used for the same “end uses.” 474 F.3d at 548.

163. The FTC focuses almost entirely on the SPRB coal’s physical properties, emphasizing the uncontroversial fact that an individual coal plant cannot literally utilize alternative fuels.¹⁸ But courts have rejected this focus on the physical traits of a product where competitive realities indicate that customers can and do utilize other products interchangeably. For example, in *Menasha Corp. v. News Am. Mktg. In-Store, Inc.*, the Seventh Circuit noted that the plaintiff “had an uphill battle to show” that a particular product was “a distinct market” on the basis of physical differences among the products. 354 F.3d 661, 664 (7th Cir. 2004) (Easterbrook, J.). The court explained that even where a product is “*physically* distinct” from others, “that differs from creating separate economic markets.” *Id.* (emphasis in original).

¹⁸ But see 7/15 AM Tr. 76:2-4 (Peterson) (Evergy has an EGU that can co-fire coal and natural gas).

164. There is nothing unique about electricity generated by SPRB coal. FOF ¶ 101. The evidence shows that SPRB coal's physical characteristics have little bearing on its demand, which is shaped by the demand for low-cost electricity, and that electricity generators can and do utilize other fuels, including natural gas, uranium, wind, solar, and hydro-power to generate electricity cost-effectively and compete for dispatch. FOF ¶¶ 102, 104-105. In addition, coal supplied from other regions, including the NPRB and the ILB, serves to supplement the fuel options for a number of utilities either as a substitute for SPRB coal or as part of a coal blend. FOF ¶ 103; *see also infra* note 30. Moreover, rapidly evolving technology, including the proliferation of CCGTs and rapid advancement in renewable energy further undermine any claim that SPRB coal is functionally distinct from other competing fuel sources. FOF ¶¶ 6-8, 12-14; *see R.R. Donnelley*, 1990 WL 193674, at *4 (competitive pressure from products outside the FTC's proposed product market "will be enhanced in the future because of further technological and market developments"); *SunGard*, 172 F. Supp. 2d at 188-89 (because "decreasing cost and changing nature of the technology" made alternative solutions increasingly competitive, those alternatives must be included in the relevant market).

165. Because SPRB coal is one of many fuels that customers use for the very same purpose, *i.e.*, to generate identical megawatts of electricity, this factor further undercuts the FTC's SPRB coal-only product market. *See H.J., Inc.*, 867 F.2d at 1538 (equipment with different physical qualities in the same market because they perform the "same basic function"); *U.S. v. Gen. Dynamics*, 341 F. Supp. at 555 (recognizing coal, natural gas, and other fuels have the same use to produce electricity, and rejecting market limited to coal).

c. Distinct Customers

166. The FTC alleges a market consisting of all SPRB coal customers rather than a subset of customers with specific characteristics. Regardless, the FTC cannot show that its proposed market consists of a meaningful percentage of "distinct" customers that purchase SPRB coal to the exclusion of other fuels used to generate electricity.

167. The Court is not aware of any SPRB coal customer that purchases only SPRB coal to the exclusion of other fuels. Instead, the record shows that individual customers have varied strategies to meet their electricity generation requirements, but in all cases use a variety of generation resources. FOF ¶¶ 104-05. In addition, all SPRB coal customers have the ability to, and often do, purchase electricity when it is cheaper than generating it themselves. FOF ¶ 106. Although the FTC presented certain customer witnesses who utilize a greater share of coal-fired generation and thus portray themselves as more dependent on SPRB coal than most utilities, each has a portfolio of generating assets that is not limited to coal, much less SPRB coal, and some use coal only for a minority of their generation. For example, in 2019, only 29.6% of MP's electricity generation was from coal (down from 56% in 2014), and only a portion of that from SPRB coal. 7/23 AM Tr. 105:10-13 (Benham). MP expects to generate 50% from renewables by next year (DX1024-0002); has already retired, idled, or converted 7 of its 9 coal EGUs, replacing those coal units with renewables, natural gas and market purchases (7/23 AM Tr. 104:5-105:4); and is constructing a large-scale baseload natural gas EGU. *Id.* at 109:3-10; *see also* FOF ¶¶ 104-106. Moreover, witnesses the FTC points to as purportedly more dependent on coal readily acknowledge that they are not "representative" of other utilities in the United States. *See* 7/15 PM Tr. 67:23-68:20 (Ruhl) (testifying that OPPD's "unique" and "exceptional access" to the Powder River basin including definitive railroad access keeps its coal costs down relative to other areas of the country); [REDACTED]

[REDACTED] And, SPRB coal customers have been reducing their coal burn, and all currently plan to continue reducing coal generation in favor of other fuels in the future. *See* FOF ¶¶ 15, 22, 83-84.

168. More fundamentally, the FTC cannot meet its burden on market definition through evidence that some customers, even if they exist, may not have alternative generation resources within their current portfolios. *See, e.g., R.R. Donnelley*, 1990 WL 193674, at *2 ("Isolated segments with isolated customers do not make for a separate product market.").

d. Distinct Prices

169. In considering whether SPRB coal prices are distinct from other fuel prices, the appropriate focus is on whether prices of alternative fuels constrain the price of SPRB coal. *See In re Polypore Int'l, Inc.*, 150 F.T.C. 586 (2010) (“[C]ourts have not hesitated to assign products to the same market despite price differences when the products, in fact, constrained each other’s price levels.”), *aff’d sub nom. Polypore Int’l, Inc. v. FTC*, 686 F.3d 1208 (11th Cir. 2012). The record shows that, rather than being entirely distinct, coal prices are closely and directly related to other fuel prices – and natural gas prices in particular. FOF ¶¶ 107-113. Indeed, electricity markets generally compare the cost of all available energy sources on a common cost per megawatt hour, and SPRB coal units are generally interspersed on the dispatch curve with natural gas units. *E.g.*, 7/21 AM Tr. 30:6-19, 34:2-7, 42:13-20 (Carey); 7/22 AM Tr. 37:10-17 (Bailey) (describing how SPRB coal and CCGT units are “sandwiched” together on the flat portion of the dispatch curve, meaning that if “an SPRB coal plant were displaced, it would be kicked down and most likely displaced by a natural gas plant”); DX4005 (Carey Report ¶¶ 28, 104 & Fig. 16); DX4001 (Bailey Report ¶¶ 13-15); FOF ¶¶ 3, 6-8.

170. Given the evidence indicates that there is a relationship between SPRB coal prices and the price of natural gas in particular, this factor also weighs against the FTC’s alleged SPRB coal-only market to the exclusion of natural gas and other fuels. *See Menasha*, 354 F.3d at 664 (stressing that if the prices of shelf coupon dispensers change when the prices of other couponing systems change “then they are probably in the same market”).

e. Sensitivity to Price Changes

171. “Evidence that consumers will substitute one product for another in response to a slight decrease in price, *strongly indicates* those products compete in the same product market.” *See Mo. Hosp.*, 642 F.3d at 613 (emphasis added). The record shows that customers regularly formulate their decisions about how much, if any, SPRB coal to purchase, when to make that purchase, and whether to switch from coal to other fuels based on changes in relative fuel prices. FOF ¶ 114; *see also id.* at ¶¶ 83-88.

172. This price sensitivity between coal and other fuels is apparent at both the ISO/RTO level and in individual customers' short- and long-term fuel purchasing and resource planning. Customers confirm this in their testimony. FOF ¶¶ 115-16.

173. Customers also substitute among fuels in response to relative price changes. In the short term, if coal EGUs cannot regularly dispatch, they burn less coal, defer coal deliveries, and procure less coal in RFPs. *See* DX4001 (Bailey Report ¶¶ 28, 87); FOF ¶¶ 117-18. In the longer term, customers shift their generation fleets in response to changing market conditions by retiring their coal EGUs in favor of investments in renewables and natural gas, a reality that Professor Carey extensively documented for dozens of customers. DX4005 (Carey Report Ex. 8). This is confirmed by analyses demonstrating that coal's share of electricity has dramatically decreased in favor of natural gas and renewable generation. *E.g.*, DX4001 (Bailey Report ¶ 18 & Ex. 8).

174. In addition, market participants confirmed that competition among fuels directly contributes to coal EGU retirements, and that coal EGU retirements in favor of alternative generation pose a major competitive threat to coal producers. FOF ¶ 119. Customers are sensitive to relative changes in fuel prices, and low natural gas prices drive customers to substitute natural gas for coal or retire coal units when they become uneconomical. FOF ¶ 120.

175. Defendants are particularly concerned with coal EGU retirements because they result in a permanent loss of coal demand that will be lost forever and never recovered. FOF ¶ 121. Indeed, coal producers make substantial efforts to work with customers to limit, prevent or delay retirements through various types of concessions, including pricing concessions, designed to provide customers additional flexibility, and improve the ability of their coal EGUs to dispatch against other fuels. FOF ¶ 122; *see also* DX4003 (Israel Report ¶¶ 118-120) [REDACTED]

[REDACTED] *id.* at ¶ 123 [REDACTED]

176. The fact that ISOs/RTOs and individual electricity generators base their decisions about which EGUs to dispatch, how much, if any, SPRB coal to purchase and whether to switch between fuels in response to changing relative fuel prices and other market conditions further

contradicts the FTC's SPRB coal-only market definition. *Se. Mo. Hosp.*, 642 F.3d at 613; *Sabre*, 2020 WL 1855433, at *37 (evidence of customers switching between travel booking platforms and airline websites confirms reasonable interchangeability); *Gen. Dynamics*, 341 F. Supp. at 539-40, 545-47 (rejecting coal-only product market where record showed utilities increasingly substitute between coal and other fuels).

f. Specialized Vendors

177. The FTC has not shown that Arch and Peabody are specialized vendors that only produce SPRB coal. To the contrary, most of Arch and Peabody's revenues derive from operating other kinds of mines, both metallurgical and thermal coal, in other regions throughout the country and (for Peabody) the world. 7/20 AM Tr. 8:15-25 (Kellow) (describing Peabody's global coal mining operations). This is increasingly so in the case of Arch, which has focused its future growth on metallurgical coal production and no longer reinvesting in its thermal coal business. 7/20 AM Tr. 68:22-69:25, 71:2-72:8, 80:24-81:11 (Lang).

178. Other SPRB producers have similarly non-specialized businesses. NTEC, for example, operates other non-SPRB mines as well as renewable energy supply businesses.

████████████████████ Similarly, Black Hills operates a large electrical and natural gas utility business and generates power for sale to other utilities. DX7014 (Lux Decl. ¶ 2).

g. The FTC Has Not Shown that the Brown Shoe Factors Support Exclusion of All Other Fuels from the Relevant Market.

179. Here, the factors in favor of a broader market, including the critical industry and public recognition factor, swamp those that might provide some support for the FTC's SPRB coal-only market. Based on the Court's analysis of these practical indicia of competition, the Court concludes that the FTC has not met its burden to show that the relevant market is confined to SPRB coal. While the Court's assessment of the *Brown Shoe* factors is sufficient to conclude that the FTC has failed to meet its burden to prove the relevant antitrust market excludes all other fuels used to generate electricity, the Court will also consider the FTC's proposed market under

the HMT as well. *See Sabre*, 2020 WL 1855433, at *35-37 (rejecting government’s proposed market based on evaluation of *Brown Shoe* factors).

2. The Hypothetical Monopolist Test Does Not Support a Market Limited to SPRB Coal to the Exclusion of Other Fuels.

180. The FTC principally argues that SPRB coal is a relevant antitrust market based on an economic analysis prepared by Dr. Hill in which he claims to show that a hypothetical monopolist of an SPRB coal market could profitably impose a small but significant non-transitory increase in price (“SSNIP”).

181. The HMT’s objective is to “test” whether the government’s proposed product market is “sufficiently broad” to constitute a relevant market and to identify products that are “reasonably interchangeable” with the products sold by the parties. HMG § 4.1.1. The Court need not follow any particular methodology, such as the “critical elasticity” approach Dr. Hill employed. Thus, to evaluate whether Dr. Hill’s efforts to implement the HMT supports the FTC’s proposed SPRB coal-only market, the Court must consider all “reasonably available and reliable evidence,” including “the influence of downstream competition faced by customers.” HMG § 4.1.3.

182. The electricity generation marketplace is uniquely complex and subject to multiple levels of dynamic competition. 7/21 AM Tr. 23:24-24:16 (Carey) (“[T]here is no industry like the electricity industry.”); *id.* at 73:25-74:9 (Carey) (“In the real world, the sale of electricity and the competition that exists is highly complicated.”). While the economic analyses typically used to execute the HMT are complicated enough in more straightforward markets, they are extremely difficult to conduct in the complex, dynamic markets at issue here. *See New York v. Kraft Gen. Foods*, 926 F. Supp. 321, 335 (S.D.N.Y.1995) (noting any analysis of market demand that does not account for “dynamic aspects of changing demand[]” may produce

“misleading results”). A simplified mathematical model like Dr. Hill’s HMT cannot provide useful and reliable guidance if the underlying assumptions do not match real-world facts.¹⁹

183. Defendants’ experts identified important analytical flaws in Dr. Hill’s analysis and significant inconsistencies between his HMT analysis and the commercial realities of electricity generation. In addition, many customers, most of which already are decreasing their SPRB coal purchases even at current prices, would resist a SSNIP by switching to other fuels. Critically, as Defendants’ executives and other witnesses explained and Dr. Israel confirmed, given dynamic competition and the ever-present risk of coal EGU retirements and resulting permanent loss of SPRB coal demand, it would not be profitable – and, indeed, irrational – for a hypothetical SPRB coal monopolist to increase SPRB coal prices and thereby permanently reduce future coal demand.

184. As detailed below, Dr. Hill’s attempt to implement the HMT suffers from several important shortcomings that render his ultimate conclusion unreliable and insufficient to support the FTC’s burden on market definition.

a. Dr. Hill’s HMT Leaves Out Important Sources of Dynamic Competition

185. Dr. Hill’s attempt to implement the HMT ignores important dimensions of competition. A small SPRB coal price increase would cause both static and dynamic substitution away from coal toward other energy sources. A hypothetical SPRB coal monopolist considering a price increase must account not just for short-term potential lost sales volume to other fuels, but also for the coal demand that will be lost due to longer-term changes in generation strategies, including the permanent loss of demand when coal EGUs are retired. *Illinois ex rel Hartigan v. Panhandle E. Pipe Line Co.*, 730 F. Supp. 826, 845 (C.D. Ill. 1990) (gas producer did not want customers “to switch to an alternate fuel” because “the loss might be permanent”); *Great Lakes*

¹⁹ As Dr. Bailey explained, a theoretical model like Dr. Hill’s HMT resembles a French recipe: “[T]he point that I make to my students is that the implementation matters. A model is useful and elegant. But implementation equally matters.” 7/22 AM Tr. 56:2-57:1 (Bailey).

Chem., 528 F. Supp. at 94 (producers have “strong incentives to keep the price of [intermediate products] low” to preserve future demand for finished products).

186. As Dr. Bailey explained: “[I]f the price of SPRB coal were to go up by a small amount . . . in the short run, that has an effect on utilization or dispatch. And then in the medium and longer run, that has an effect on dynamic substitution, these changes in generation strategies.” 7/22 AM Tr. 29:23-30:3 (Bailey); *see also* DX8010, at -0004 (explaining that the “relative costs of different fuel sources have had both short-term effects on the utilization (or dispatch) of existing capacity and longer-term effects on investment and retirement decisions”); DX8743, at -0002 (“Sustained relatively low natural gas prices has allowed natural gas-fired generators to become more competitive with coal-fired units, leading to a general decline in using coal-fired capacity. A decline in use leads to a decline in revenues at a plant, which generally translates to lower operating margins, less ability to cover costs, and in many cases, retiring that capacity.”).

187. Over the longer run, competition from natural gas and renewables triggers two sources of “bad news” for SPRB coal suppliers and customers: (1) reduced utilization; and (2) a decline in wholesale electricity prices, which causes *all* generating units to be paid less when they do run. 7/22 AM Tr. 46:18-48:11 (Bailey), DX4002 (Bailey Rebuttal Ex. 12); DX4001 (Bailey Report Exs. 26-27, 34). This “bad news” means that, if SPRB coal prices were to increase, both short-run and longer-run demand would fall. This drives dynamic substitution away from SPRB coal: “And getting paid less means having less money. And having less money means less available to cover all of your costs and less operating margin and, ultimately, making different generation strategy decisions going forward. And Dr. Hill leaves that piece out entirely.” 7/22 AM Tr. 48:7-11 (Bailey).

188. These longer-term competitive pressures can take multiple forms, including a shift to seasonal operations, entering into power purchase agreements, accelerating investments in alternative generation sources, accelerating retirement decisions, or retiring a unit permanently. *Id.* at 31:23-17.

189. Dr. Bailey used one former SPRB coal customer, [REDACTED], to illustrate these longer-term competitive effects. In 2010, [REDACTED] coal plant operated at nearly 90% utilization. *Id.* at 34:19-35:3. As competition from natural gas and subsidized renewables increased, [REDACTED] evaluated a range of options, from buying energy off the grid through power-purchase agreements, shifting to seasonal operations, temporarily idling or “mothballing” the plant, and then finally retiring the plant. *Id.* at 35:4-36:1; [REDACTED]

[REDACTED] Throughout this time period, Arch responded to these dynamic competitive pressures by offering to provide price “relief” to try to make [REDACTED] more competitive with other energy sources. 7/22 AM Tr. 36:2-12 (Bailey); [REDACTED]

[REDACTED] Importantly, *none* of Arch’s efforts to make [REDACTED] more competitive were the result of an RFP or other competitive solicitation. [REDACTED]

190. These competitive forces – static and dynamic substitution – impact *all* SPRB coal generating units, albeit to different degrees. 7/22 AM Tr. 30:4-31:20, 48:12-52:7 (Bailey). For example, Dr. Bailey analyzed SPRB coal units that have retired or shifted to seasonal operations, finding that even those customers’ relatively efficient units further down the dispatch curve have made dynamic changes in generation strategy in response to competition from other fuel sources. *Id.* at 50:15-52:7.

191. Dr. Israel also explained that these dynamic aspects of competition impact how a rational, profit-maximizing coal producer will operate. DX4003 (Israel Report ¶¶ 84-130). When

setting prices, they must account for the risk that raising prices would induce customers to accelerate coal EGU retirements. In the short run, an SPRB coal price increase causes coal EGUs to be dispatched less frequently, with electricity generation shifting to natural gas and other fuels. Over the longer term, as coal capacity utilization falls and the relative operational costs increase, electricity generators will accelerate coal retirements. DX4003 (Israel Report ¶¶ 81, 86-88); DX4004 (Israel Rebuttal ¶¶ 39-40, 76-79).

192. Dr. Hill's own analyses show that a small SPRB coal price increase would cause both short-term and longer-term substitution to alternative fuels, yet Dr. Hill did not even *attempt* to estimate the full range of dynamic competitive factors that increasingly drive the shift away from SPRB coal. 7/24 PM Tr. 105:12-17 (Hill) (none of the methods used to estimate elasticity accounts for the long-term dynamic risks such as coal unit closures); 7/17 AM Tr. 109:1-4 (Hill) (Dr. Hill is unaware whether rail study takes retirements into account); *id.* 111:19-113:1 (shipment data captures "quick changes in demand"); *id.* 113:24-114:7 (PROMOD closures are all based on announced closures); *id.* 118:11-21 (dispatch decision model does not take coal unit retirements into account). In his Rebuttal, Dr. Hill offered a fifth method, a plant closure analysis, but that too fails to address dynamic factors such as decisions to idle a unit or convert it to seasonal operations. 7/24 PM Tr. 106:4-21 (Hill); 7/22 AM Tr. 32:18-33:13 (Bailey).

193. Dr. Hill's HMT attempts to estimate the competitive pressures that would cause substitution away from SPRB coal but because his elasticity estimates capture *only* the immediate, static substitution caused by shifts in the dispatch curve, they miss the longer term dynamic risks. Even his so-called "plant closure" study only attempts to estimate the impact on retirements over a short time period. *Id.* Dr. Hill's own cross-price elasticity analysis shows that "as the SPRB coal price increases so does the probability of retirement." PX8006 (Hill Rebuttal ¶ 170); 7/17 AM Tr. 143:16-144:20 (Hill). Yet Dr. Hill admitted that he did not even *attempt* to estimate the myriad ways in which dynamic competition causes substitution away from SPRB coal. *E.g.*, 7/24 PM Tr. 105:8-21, 106:4-21 (Hill). Thus, Dr. Hill's elasticity estimates completely miss the dynamic substitution observed, for example, [REDACTED], 7/22 AM Tr. 34:14-36:11

(Bailey), or the threat to idle or shift to seasonal operations that [REDACTED] used to obtain more competitive pricing in its RFPs sent to Arch and other coal suppliers. [REDACTED]

[REDACTED]

[REDACTED]

b. Dr. Hill's HMT Contradicts Real-World Facts

194. Furthermore, the implications of Dr. Hill's HMT contradict observable, real world facts. While Dr. Hill is a skilled economist, "antitrust theory . . . cannot trump facts," *see Arch Coal*, 329 F. Supp. 2d at 116, and, here, the record does not support Dr. Hill's theory that a hypothetical monopolist could successfully impose a SSNIP or that other, reasonably interchangeable fuels used to generate electricity are properly excluded from the relevant market. *See also Sabre*, 2020 WL 1855433, at *40 (government expert's market concentration statistics "cannot be relied on because it ignores industry realities," including by leaving out competition from an alternative product that the expert's own testimony "showed . . . exerts competitive pressure" on the parties).

195. The FTC's and Dr. Hill's theory is that SPRB coal suppliers operate within an oligopoly, which has become even more highly concentrated since Judge Bates' 2004 decision in *Arch Coal*. But real-world facts critically undermine the FTC's proposed narrow market definition and Dr. Hill's HMT. Real-world evidence can help "inform market definition." HMG § 4; *see also id.* at § 2.1.2 ("The Agencies look for historical events, or 'natural experiments', that are informative regarding the competitive effects of the merger."). In fact, real-world data and evidence is "particularly valuable" for cases like this one, in which "analysis suggests alternative and reasonably plausible candidate markets, and where the resulting market shares lead to very different inferences regarding competitive effects." *Id.* at § 4.

196. Dr. Bailey explained that each of the key economic performance measures for SPRB coal suppliers – margins, prices, and production – diverge sharply from the FTC's theory of an increasingly concentrated oligopoly. 7/22 AM Tr. 53:5-55:1 (Bailey); DX4001 (Bailey Report Exs. 11, 19, 23, 43). To evaluate Dr. Hill's theory that the sale of SPRB coal – which no

one disputes has become highly concentrated – is a “relevant antitrust market,” Dr. Bailey compared Dr. Hill’s HHI calculations with the actual profit margins for both Peabody and Arch over the same time period. Her analysis shows that, as the proposed “market” has become more concentrated, margins have *fallen*, exactly the opposite from what Dr. Hill’s economic theory would predict. 7/22 AM Tr. 53:21-54:13 (Bailey); DX4002 (Bailey Rebuttal Exs. 2-3); *see also* DX4004 (Israel Rebuttal ¶¶ 11-45); 7/24 AM Tr. 23:8-25:5 (Israel). It simply does not make sense that a properly defined product market already so highly concentrated would yield such low margins. The more credible explanation for the SPRB coal producers’ falling margins is that they compete with and are constrained by other fuels, in particular natural gas. *See* DX4001 (Bailey Report Exs. 17, 19); DX4002 (Bailey Rebuttal Ex. 2-3). This real-world evidence is also critical because the FTC’s theory of harm is that the Joint Venture will cause the market to become even more concentrated giving the Joint Venture “market power.”

197. The FTC speculates – without support – that declining margins and prices could be explained by increased competition among SPRB coal suppliers, but the evidence tells a different story. Over the same time period that SPRB margins, prices, and production have dramatically fallen, the number of SPRB coal suppliers has remained unchanged. As Dr. Bailey explained: “[This is] an important fact because what it means is that the decline that we’re seeing in the profit margins is not being driven by entry or a change in the number of suppliers or what that market structure looks like.” 7/22 AM Tr. 55:20-56:1 (Bailey).

198. Moreover, as Dr. Israel explained, compared to real world margins, Dr. Hill’s estimated elasticities fail the test he establishes to compare them to commercial realities. 7/24 AM Tr. 77:8-22, 78:20-25, 79:16-23 (Israel).

199. Ultimately, Dr. Hill’s failure to adequately account for dynamic competition and low producer margins renders his analysis inconsistent with the realities of competition and unpersuasive in market definition. *See Kraft*, 926 F. Supp. at 335 (rejecting government’s product market and agreeing with independent, court-appointed economist that “any market definition . . . that ignores the dynamic aspects of changing demands . . . would produce

misleading results”); *Sabre*, 2020 WL 1855433, at *24 (finding an expert’s SSNIP test unpersuasive where he relied on inaccurate assumption that “ignore[d] industry realities”).

c. Customers Would Resist a Small But Significant Non-Transitory Price Increase by Switching to Other Fuels.

200. The evidence shows that a hypothetical monopolist would not successfully impose a SSNIP because ISOs/RTOs would cause utility customers to resist such a price increase by dispatching electricity generation to lower-cost fuels. ISOs/RTOs applying merit order dispatch decide which EGUs run and which do not. Any increase in SPRB coal prices relative to other fuel prices will result in coal EGUs bidding into the ISO/RTO at higher prices and dispatching even less frequently. That substitution will occur automatically by operation of least cost dispatch, and no customer “choice” to resist the price increase is required. FOF ¶ 3. Moreover, utility customers, wanting their EGUs to dispatch and thus get paid the ISO/RTO market clearing price, in turn would switch from coal to other fuels in response to any increase in SPRB coal’s relative cost, both in the short term by reducing coal burn, reducing coal purchases, taking advantage of optionality to defer coal purchases, or purchasing power, and in the longer run by shifting their electricity generation resources away from coal EGUs to EGUs powered by other fuels. FOF ¶¶ 48, 106, 112, 114-15, 117, 119-20. The evidence shows that this substitution is already happening due to the current low cost of natural gas and other fuels relative to SPRB coal, *e.g.*, FOF ¶¶ 8, 12, 45, 94, 116, 118, and this substitution would only be amplified if a hypothetical SPRB coal monopolist attempted to impose a price increase.

201. The Court heard testimony from numerous witnesses indicating that, if SPRB coal prices rose, customers would switch to other fuels. Customers indicated that they would resist price increases by switching from coal to other forms of generation or power purchases. FOF ¶ 55. Defendants’ executives likewise disagreed with the FTC’s theory, recognizing that any price increases would decrease sales and increase retirement risks. FOF ¶ 57.

202. The FTC relies on select SPRB coal customers who claim that they (or their members) would not be able to resist a SSNIP by switching to other forms of generation. As a

starting point, the FTC cannot meet its burden by offering evidence from a limited subset of customers. *See R.R. Donnelley*, 1990 WL 193674, at *2 (“Isolated segments with isolated customers do not make for a separate product market.”); *SunHard*, 172 F. Supp. 2d at 189-92. In *SunGard*, the government relied on evidence from a “limited number” of customers to “to argue that a substantial number of customers cannot afford to switch in the face of a 5– to 10–percent price increase.” 172 F. Supp. 2d at 189. Considering the evidence from customers as a whole, however, the court concluded that the government “failed, however, to show whether this captive group is substantial enough that a hypothetical monopolist would find it profitable to impose such an increase in price.” *Id.* at 191-92. “Instead of fine-tuning its presentation to account for significant differences among defendants’ customers, the government lumped all customers together.” *Id.* at 192. The FTC’s case here suffers from the same deficiency.

203. Even the evidence from the FTC’s witnesses fails to show that the market is limited to SPRB coal for several reasons. First, none have conducted any real analysis to support their assertions. *See* FOF ¶ 72; *see also* 7/16 PM Tr. 115:1-3 (Sandlin) (agreeing that WFA did not do “any analysis that would suggest the joint venture could actually raise coal prices by 5 percent”). The Court should not simply accept unsubstantiated allegations that these customers are powerless to resist a SSNIP. *See Tenet Health*, 186 F.3d at 1054 (questioning district court’s reliance on suspect testimony from select customers that “they would unhesitatingly accept a price increase” and reversing injunction); *U.S. v. Oracle*, 331 F. Supp. 2d 1098, 1131 (N.D. Cal. 2004) (rejecting customer testimony regarding that was “largely, their preferences” and “not backed up by serious analysis that they had themselves performed or evidence they presented”); *U.S. v. AT&T, Inc.*, 310 F. Supp. 3d 161, 211–15 (D.D.C. 2018) (finding customer and competitor concerns unreliable and driven by self interest).

204. Even if the Court were convinced that certain customers could not resist a SSNIP, these customers are not representative of most utility customers who rely far less on coal generation, have coal EGUs that are much less likely to be “in the money,” and are thus more sensitive to fuel price changes. As the Eleventh Circuit has explained, the government cannot

meet its burden to prove a relevant product market by relying on a subset of customers who “cannot be predictive of the entire market” because they are not “representative of the market.” *U.S. v. Englehard*, 126 F.3d 1302, 1306 (11th Cir. 1997). Moreover, when determining whether customers would be able to resist a SSNIP, the Court “must consider the degree to which buyers treat the [fuels] as interchangeable, but need not find that *all* buyers will substitute one [fuel] for another.” *Arch Coal*, 329 F. Supp. 2d at 122 (emphasis in original). The fact that certain, isolated customers may choose not to substitute other fuels for SPRB coals in response to a SSNIP is not sufficient to show that hypothetical monopolist would be able to successfully impose a SSNIP.²⁰

3. Economic Analyses of Real-World Data Further Undermine the FTC’s Proposed Market Definition

205. The Merger Guidelines recognize that studies of real-world events, known as “natural experiments,” provide useful, direct evidence of competitive effects that may also “inform market definition.” HMG § 2.1.2. Dr. Bailey conducted several such event studies, each providing real-world empirical confirmation that coal is constrained by other fuels, and that any antitrust market must account for interfuel competition. *See* 7/22 AM Tr. 44:22-46:2 (Bailey) (explaining how analysis of real-world data and event studies fits within the HGM framework).

206. Event studies confirm that the precipitous drop in natural gas prices has caused decreases in both SPRB coal prices *and* margins. To study how this sharp drop in natural gas prices affects SPRB coal prices, Dr. Bailey compared SPRB coal prices for contracts executed in 2010-2011 (the earliest years for which Arch data were available) with prices for contracts executed in 2018-2019 (the latest years for which the same data were available). 7/22 AM Tr. 74:6-24 (Bailey). Comparing the same 8800 coal across the same set of customers, Dr. Bailey

²⁰ The FTC has also suggested that Defendants’ pass-through of the Black Lung Excise Tax (“BLET”) shows that Defendants know their customers can and will absorb a modest price increase. *See* FTC Br. at 27-28 (DE 137); Reply Br. at 12. The BLET, however, is not a price increase; it is a tax imposed on coal producers, provides no financial benefit to coal producers, and is passed-on to customers as a standard business practice and a matter of contractual arrangement between the customers and the coal producers. [REDACTED]; 7/16 PM Tr. 108:19-109:4 (Sandlin). Moreover, Dr. Hill acknowledged that one explanation for why PRB sales are down in 2020 could be the BLET, but he failed to test that hypothesis. 7/24 PM Tr. 103:22-104:6 (Hill).

found that SPRB coal prices declined [REDACTED] DX4001 (Bailey Report Exs. 43-46); *see also id.* Exs. 45-46 (reporting similar resorts for Peabody's NARM). And *all* customers benefited from increased competition from natural gas, including the FTC's witnesses that lack combined-cycle natural gas plants. 7/22 AM Tr. 74:25-76:2 (Bailey).

207. Dr. Bailey performed similar studies with respect to coal margins, comparing SPRB coal contracts signed before the precipitous decline in natural gas prices to those signed in 2018 and 2019. Her analysis demonstrates that Defendants' margins declined significantly, and she concludes that the "decline in natural gas prices cause[d] the decline in SPRB coal profit margins" as a direct result of merit order dispatch and the competition it forces among fuels. DX4001 (Bailey Report ¶¶ 47-55); *see also* 7/22 AM Tr. 68:21-70:3, 72:3-25 (Bailey). Dr. Bailey also explained that her analysis is robust across different potential comparison periods reflecting margins before the steep decline in natural gas prices. *Id.* at 73:1-74:5.

208. Dr. Bailey also studied the competitive impact of past supply disruptions on SPRB coal prices and utilization, finding that temporary SPRB coal output restrictions did not result in price increases. In May-June 2018, heavy rains disrupted operations at certain SPRB mines, but not Arch's. Dr. Bailey compared Arch's prices for spot purchases for near-term delivery of SPRB coal during and immediately before this supply disruption, finding that Arch's spot prices during were no higher (and [REDACTED] lower) than they had been before. DX4001 (Bailey Report ¶¶ 69-75). If the FTC's SPRB-coal only market were correct, Arch should have taken advantage of the disruption and raised prices, not lowered them. This finding demonstrates the [REDACTED] [REDACTED] DX4001 (Bailey Report ¶ 75); *see also* 7/22 AM Tr. 58:3-66:17 (Bailey).

209. Dr. Hill argues that, instead of analyzing the month immediately preceding this supply disruption, Dr. Bailey should have used May and June of the prior year to account for seasonal variation in electricity demand. But Dr. Hill's alternative comparison period misses the critical *reason* that electricity demand generally varies by season: *weather*. Although he acknowledged that weather can affect demand for coal, [REDACTED] Dr. Hill did not

even consider whether this key driver of electricity demand and prices was similar in May/June 2017 compared to May/June 2018. *Id.* 229:10-15. They were not: “[T]he weather was different . . . May and June '17 [were] unusually lower priced because it was unusually cool, unseasonably cool.” 7/22 AM Tr. 60:13-61:15 (Bailey); *see also* DX4001 (Bailey Report ¶ 74 & n.127) (explaining why April 2018 is an appropriate, even *conservative*, comparison period and addressing why May/June of other years would not be).

210. On cross-examination, the FTC suggested that Dr. Bailey should have analyzed other supply disruptions instead. 7/22 AM Tr. 91:5-92:5 (Bailey). But Dr. Hill had access to the same data as Dr. Bailey, yet the FTC has not identified any other SPRB supply disruptions that caused an increase in SPRB coal prices. Notably, Judge Bates’ opinion from the 2004 *Arch Coal* case observes that, in 2001 – before the dramatic changes in the competitive conditions that have occurred over the past decade – spot prices for SPRB coal “spiked” due to a supply disruption. *See id.* at 65:18-66:17 (Bailey) (explaining why the 2001 price spike provides useful context for evaluating the results of her study of the 2018 flooding event).

211. The results of these event studies further confirm the Court’s determination that the FTC has not met its burden to prove that the relevant market excludes all other fuels.

4. The FTC Has Not Established an SPRB Coal Only Market Through RFPs

212. While the FTC presents a theoretical competitive effects model that ignores individual negotiations, the evidence the FTC cited in opening statements and relied on in their briefs are incidents of so-called “pencil-sharpening” during RFPs. But a handful of RFPs, without more, is insufficient to demonstrate that SPRB coal is the relevant antitrust market. The parties do not dispute that coal producers compete. The question before the Court, however, is whether the existence of RFPs, together with anecdotal evidence that SPRB producers have occasionally lowered prices as part of that process, is sufficient to meet the FTC’s burden to show that that competition from natural gas and other fuels is not a sufficient constraint. As discussed above, not all coal buyers use RFPs, and not all negotiate. FOF ¶¶ 43-44. Testimony suggests the “pencil-sharpening” is not common. FOF ¶ 44. Moreover, there is ample evidence

that natural gas and renewables affect demand before, during, and after the RFP process. FOF ¶¶ 36-39, 46-48, 111-14.

213. [REDACTED]

214. The FTC has argued that Peabody’s MPSC process, and the role natural gas plays in setting coal prices, is irrelevant because the MPSC-set prices are affected by head-to-head competition during the RFP process. However, the FTC and its expert have established neither the frequency of the “pencil sharpening” nor the magnitude of any benefits produced during the RFP process. 7/17 PM Tr. 32:6-12, 35:3-8 (Hill); FOF ¶¶ 40 n.6, 44, 126.

215. The evidence shows both that actual prices track MPSC prices and that RFPs do not generate any significant price benefit for SPRB coal customers. FOF ¶ 40. [REDACTED]

216. [REDACTED]

[REDACTED]

217. By contrast, Dr. Hill finds a negative correlation between natural gas prices and SPRB coal prices; in other words, when natural gas prices go up, coal prices go down. 7/24 PM Tr. 98:22-99:1 (Hill). Those findings are inconsistent with his finding that a 1% increase in natural gas prices would lead to a 0.33% increase in SPRB coal demand. 7/17 PM Tr. 31:8-14 (Hill). The flaw in Dr. Hill's analysis is that he compares SPRB coal prices and natural gas prices from different periods. For example, if a customer entered into a contract in 2016 for coal to be delivered in 2017, 2018, 2019, and 2020, Dr. Hill compares a 2020 contract price set by the MPSC process in 2016 to the actual price of natural gas in 2020. 7/24 AM Tr. 27:11-28:22 (Israel). An apples-to-apples comparison would compare the MPSC's 2016 projections for 2020 coal prices against the MPSC's corresponding 2016 projections for natural gas prices in 2020. *Id.* at 28:4-14. Dr. Hill did not perform that analysis.

218. The Court recognizes instances of price competition between SPRB producers, but the FTC failed to analyze the extent to which competition during the RFP process influences the prevailing SPRB coal price. Neither Dr. Hill nor the FTC conducted any systematic analysis of the parties' bidding data. FOF ¶ 40 n.6, 44, 126; 7/24 AM Tr. 55:4-17 (Israel). In the absence of any such analysis, and in the face of contrary systematic analysis by Dr. Israel, the Court cannot conclude that the FTC's anecdotal evidence of the RFP process alone demonstrates that natural gas is not a sufficient constraint or that SPRB coal only is the relevant antitrust market.

III. THE FTC HAS NOT ESTABLISHED A PRIMA FACIE CASE.

219. The market share analysis provided by the FTC and Dr. Hill assumes that the relevant market is limited to SPRB coal, shows that the FTC's alleged SPRB coal market is

highly concentrated, and shows the Joint Venture will significantly increase concentration in that market. FOF ¶ 125. But the FTC's analysis is premised on an SPRB coal-only market that, as explained above, the FTC has not met its burden to prove and is not consistent with the commercial realities. The FTC's market share analysis is thus inapposite. The FTC has not met its initial burden to prove a *prima facie* case, and is not entitled to a presumption that the Joint Venture is illegal and should be enjoined. *See, e.g., RAG-Stiftung*, 436 F. Supp. 3d at 311-12.

IV. LIKELIHOOD OF ANTICOMPETITIVE EFFECTS

220. Although the FTC has not established a *prima facie* case, the Court will nonetheless assess the likelihood that the Joint Venture will have anticompetitive effects to “provide as complete a review of the record as possible.” *RAG-Stiftung*, 436 F. Supp. 3d at 312. As discussed below, even if the FTC had met its burden to prove an SPRB coal-only market and established a *prima facie* case, Defendants have put forth sufficient evidence to rebut any presumption of illegality. While the Joint Venture would increase concentration in an SPRB coal-only market, the FTC has not met its ultimate burden to establish that the Joint Venture will be anticompetitive, *i.e.*, that the likely effect of the Joint Venture will be to increase SPRB coal prices. To the contrary, the record before the Court shows that Defendants have no plans or incentives to raise prices given the real-world competition from other fuels. The evidence suggests the Joint Venture will continue to be constrained by customers, other low-cost fuels used to generate electricity, and other coal suppliers with significant excess capacity to check any attempted price increase. Finally, the cost savings and other synergies generated by the Joint Venture are likely to enhance competition in this evolving market in numerous ways.

A. THE JOINT VENTURE IS UNLIKELY TO RESULT IN INCREASED PRICES.

1. The Joint Venture Has No Intent, Incentive or Ability to Raise Prices.

221. The FTC has failed to show a likelihood of anticompetitive effects because the evidence shows it would be self-defeating for the Joint Venture to increase prices.

222. The evidence shows that coal producers have no incentive to raise prices and further erode future coal demand due to dynamic interfuel competition and the significant risk of

further coal EGU retirements. Coal producers' only rational business strategy is to lower costs, be price competitive with other fuels, and affirmatively work with their customers to improve the ability of their coal EGUs to dispatch and improve utilization, delay retirements, and preserve coal demand. FOF ¶¶ 32, 52. Defendants' executives candidly testified that raising prices would be detrimental to the Joint Venture's business, and many customers agreed. FOF ¶¶ 57-58.

223. These facts reveal a "basic flaw in the antitrust theory and economic analyses" advanced by the FTC: their failure to account for the fact that anticompetitive effects "do not just happen" as a result of increased market share, but instead are the result of "purposeful business choices made by the corporation's management calculated, affirmatively or by effect, to achieve those ends." *Deutsche Telekom*, 439 F. Supp. 3d at 245. Put another way, the FTC cannot simply show increased concentration in a narrowly defined market and assume anticompetitive effects will automatically follow as a matter of economic theory. Defendants have presented compelling evidence that, given the dynamic interfuel competition facing coal producers, the Joint Venture will not result in "whatever anticompetitive course traditional antitrust economic theory and analysis would foretell may come to pass by a merger in a simple, static market." *Id.* Indeed, the evidence shows that it "would be counter-productive, even self-defeating" for the Joint Venture to raise prices, as such action "would effectively imperil its own future." *Id.* at 246.

224. Moreover, unlike in most successful merger challenges, the anticompetitive strategy theorized by the FTC lacks evidentiary support. Despite conducting a months-long investigation, the FTC identified no evidence that Defendants intend to raise prices post-Joint Venture. *Contra FTC v. Tronox Ltd.*, 332 F. Supp. 3d 187, 208 (D.D.C. 2018) (granting injunction where merging company planned to "slow down" or "manag[e]" production so that "prices will rise"); *FTC v. Wilhelmsen Holding ASA*, 341 F. Supp. 3d 27, 63 (D.D.C. 2018) (granting injunction where internal document noted that if merger closed, it would "increase our ability to charge far better prices"). Here the evidence "reflects a perfectly legitimate reason" why Peabody and Arch would want to form the Joint Venture "that has nothing to do with raising prices": to combine complimentary assets, reduce costs, and better compete with other

fuels. *RAG-Stiftung*, 436 F. Supp. 3d at 320-21 (denying injunction where “record contains *no* evidence that [Defendant] intends to raise prices post-merger”).

225. The limited evidence that the FTC cites to suggest that the Joint Venture will result in increased prices is not persuasive. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] At most, [REDACTED] documents present conflicting speculation by members of an investment firm about the Joint Venture’s possible impacts on a complex and evolving industry they do not participate in, and do not outweigh the substantial evidence cited by Defendants showing that the Joint Venture has no incentive to raise prices. *See Deutsche Telekom*, 439 F. Supp. 3d at 235-236 (rejecting claims of anticompetitive effects where “main evidence” cited were “statements from [controlling shareholder] executives” that were entitled to less weight than “actual history of aggressive competition and the incentives for the [merged] company to continue competing”).

226. The FTC also cites customer statements that the Joint Venture, by eliminating one competitor, would increase concentration among SPRB coal producers, and thus *could* lead to reduced competition and increased SPRB coal prices. FOF ¶ 72. But speculative customer statements to this effect cannot substitute for conclusions from rigorous analysis. *Arch Coal*, 329 F. Supp. 2d at 145; *see also RAG-Stiftung*, 436 F. Supp. 3d at 321 (“declarations are not enough

²¹ No witness [REDACTED] was deposed or provided testimony at the Hearing and the hearsay documents cited by the FTC cannot be considered with the context their authors could have provided if their testimony had been sought.

to outweigh the overall trends in the . . . market reflected in the record: decreasing prices, aggressive competition for sophisticated customers with large and long-term contracts, and substantial cost savings from blind bidding”). Indeed, the only customer that actually conducted a detailed analysis of the Joint Venture’s potential effects on competition concluded it would *not* result in increased prices. FOF ¶¶ 73, 96. Isolated, unsubstantiated customer concerns that prices might rise is wholly insufficient to meet the FTC’s burden to prove price increases are the probable – not just possible – result of the Joint Venture. *Deutsche Telekom*, 439 F. Supp. 3d at 235-36; *Rag-Stiftung*, 436 F. Supp. 3d at 321 (denying injunction where FTC did not show substantial harm to competition was “probable”).

227. Dr. Hill’s theoretical projection of anticompetitive effects totaling hundreds of millions of dollars is likewise unconvincing. The FTC alleges RFPs provide the competitive constraint among coal suppliers, but Dr. Hill estimates competitive effects using a Cournot model that relies on quantity, not price competition in a market with few suppliers that behave in a strategic manner.²² 7/24 AM Tr. 71:2-6 (Hill). Dr. Hill’s Cournot model estimates a uniform price for all SPRB suppliers and assumes those suppliers compete on quantity, not price. 7/17 AM Tr. 124:10-15 (Hill). Dr. Hill’s analyses show there is relationship between SPRB coal prices and retirements, but his Cournot model fails to take retirement risk into account. 7/17 AM Tr. 127:17-23 (Hill). None of Dr. Hill’s Cournot models incorporate dynamic risks such as coal plant closures, the growth of renewables or even the effect of SPRB coal prices on demand.

²² DX4004 (Israel Rebuttal) ¶ 8

[REDACTED]

228. Although Dr. Hill claimed to account for dynamic competition and risks posed by future coal retirements by conducting a “declined demand” model, he did not because, in his model, the rate of demand decline is independent, or “exogenous,” of coal prices. 7/17 AM Tr. 125:16-127:12 (Hill). Dr. Hill’s model also suffers from using a PROMOD data source that witnesses with experience in the energy industry testified was not designed for use in long-term retirement forecasting.²³ More importantly, Dr. Hill’s “declined demand” model of harm misses the key dynamic competition in play in this evolving market—price increases themselves may cause retirements and thereby accelerate already declining demand.²⁴ Dr. Hill’s competitive effects analysis is inconsistent with commercial realities, not to mention other parts of his own analysis. 7/17 AM Tr. 143:16-144:20 (Hill) (acknowledging that increased SPRB coal prices increase the probability of SPRB coal retirements). Notably, Dr. Israel extended Dr. Hill’s model by incorporating dynamic effects and showed that Dr. Hill’s hypothesized competitive harm falls away once dynamic elements of competition are accounted for. DX4003 (Israel Rebuttal ¶¶ 61-75).²⁵ While Dr. Israel’s dynamic analysis may not be perfect, it accounts for market forces that

²³ 7/15 AM Tr. 97:18-98:6 (Peterson) (“Q. PROMOD is not a tool for testing coal plant retirements; right? A. It’s not a long-term strategic model. It’s a very detailed short-term model.”); *see also*

DX4006 (Carey Response Report ¶¶ 127-133) (summarizing overall concerns with Dr. Hill's PROMOD analysis, primarily the opacity of his inputs: [REDACTED])

[REDACTED]; 7/24 AM Tr. 47:22-48:4 (Israel). Consistent with his lack of experience in analyzing energy markets, Dr. Hill acknowledged that prior to his work on this case, he had never used PROMOD data. 7/17 AM Tr. 103:10-12 (Hill).

²⁴ Using the PROMOD data, Dr. Hill’s “declined demand” scenario simply shifts SPRB coal demand down by a fixed rate per year. In effect, Dr. Hill assumes that the retirement of coal EGUs is unrelated to their relative operational and fuel costs, despite his own findings to the contrary. 7/17 AM Tr. 43:15-44:20 (Hill) (agreeing SPRB price increases increase risk of retirement).

²⁵ Dr. Israel extended Dr. Hill's Cournot model by allowing SPRB coal prices to increase the risk of retirements relying upon evidence from the EIA, customers, and party documents. Dr. Israel then asked how much more demand would have to decline in the face of an increase in SPRB coal prices such that the Joint Venture would no longer find it more profitable to raise prices. [REDACTED]

DX4004 (Israel Rebuttal ¶¶ 63-66); 7/24 AM Tr. 81:19-82:7 (Israel).

have plagued SPRB coal and meets the test that Dr. Hill sets up but fails: that a model's predicted margins should match observed margins. It is the FTC's burden to show that anticompetitive effects are likely, and Dr. Hill's analysis does not clear that hurdle.

229. Given the realities of dynamic interfuel competition, the Court cannot conclude that Defendants will elect a business strategy that would not only be contrary to their stated intentions, but also irrational and self-defeating. *Deutsche Telekom*, 439 F. Supp. 3d at 246. For this additional reason, the FTC has not met its burden to show that the Joint Venture is likely to have anticompetitive effects. *See U.S. v. AT&T, Inc.*, 916 F.3d 1029, 1039 (D.C. Cir. 2019) (finding industry had become "remarkably dynamic" and holding district court properly rejected as inaccurate projected price increases forecasted by government's traditional and outdated economic theory); *Tenet Health*, 186 F.3d at 1055 (reversing injunction and holding district court "did not properly evaluate evolving market forces in the rapidly-changing healthcare market" and had instead relied on "outdated assumption[s]").

2. The FTC's Statistical Case Fails to Account for Arch's Diminished Competitiveness in the "But For" World

230. The Eighth Circuit has instructed that "when examining a merger, a court must necessarily compare what may happen if the merger occurs with what may happen if the merger does not occur." *Nat'l Tea Co.*, 603 F.2d at 700. This precept has particular relevance to this Court's evaluation of the Joint Venture given the challenges that Arch in particular will face if the Joint Venture is enjoined.

231. Arch's challenging future prospects in the SPRB are "part of the overall record that must be examined in determining whether substantial anticompetitive effects are likely from

[REDACTED]

[REDACTED]

[REDACTED] 7/24 AM Tr. 82:8-11 (Israel). Importantly, the size of the dynamic effect incorporated into Dr. Israel's model is a function of the size of the gap between actual and predicted margins embedded in the FTC's Cournot model. The Court agrees with the key intuition of Dr. Israel's extension, that, at bottom, it really indicates that the FTC is missing significant elasticity in some form. 7/24 AM Tr. 83:9-19 (Israel) ("And then really what it says, if you can run it different ways, is there just has to be a lot more elasticity from some form" that the FTC is not accounting for); DX4004 (Israel Rebuttal ¶ 68).

the transaction[.]”²⁶ Indeed, courts have long recognized that past sometimes is not prologue when assessing the but-for world in the context of a merger challenge.²⁷

232. Here, the evidence shows that, absent the Joint Venture, Arch will become a far less important SPRB coal supplier and will increasingly struggle to supply SPRB coal at a competitive price. *See* FOF ¶¶ 64-68. The evidence further demonstrates that, unless Defendants can achieve the cost savings and other efficiencies through the Joint Venture, output at Arch’s SPRB mines is likely to decrease substantially in the but-for world. *See* FOF ¶¶ 66-69. This result – decreased output and less competitive prices without the Joint Venture than with it – is the antithesis of what Section 7 of the Clayton Act is designed to preserve.

3. Customers Can Resist Price Increases Through Multiple Competitive Levers

233. Customers’ ability to exercise competitive levers will preclude anticompetitive effects. *See* 7/15 PM Tr. 84:9-10 (Ruhl) (“[T]here is some negotiating power in the hands of the coal consumers.”); DX1034, at -0003 [REDACTED]

[REDACTED].²⁸

Coal purchasers are typically sophisticated, carefully assess the price and availability of all fuels, engage in confidential RFPs when procuring coal, and carefully negotiate supply contracts. Throughout the RFP process, customer “purchasing decisions with respect to coal [are] based primarily upon a comparison of competitive forms of energy.” *Gen. Dynamics*, 341 F. Supp. at 555. As result, these “sophisticated, knowledgeable purchasers wield[] great economic power

²⁶ *Arch Coal*, 329 F. Supp. 2d at 154; *accord Nat’l Tea*, 603 F.2d at 700 n.8.

²⁷ *See, e.g., Gen. Dynamics*, 415 U.S. at 501; *Arch Coal*, 329 F. Supp. 2d at 153 (“A weak financial condition, or limited reserves, may mean that a company will be a far less significant competitor than current market share, or production statistics, appear to indicate.”); *U.S. v. Int’l Harvester Co.*, 564 F.2d 769, 773 (7th Cir. 1977) (finding that “past market statistics” overstated the acquired firm’s competitive significance because the evidence showed that the firm would not “be as strong a competitor [in the future] as the bald statistical projections indicate”).

²⁸ *See also* [REDACTED] DX3011 (Gallaway 42:24-43:4) (agreeing “that competition in the wholesale electric markets for natural gas and renewables will continue to limit the price for SPRB coal”); [REDACTED]

and hav[e] formidable bargaining strength.” *Id.* at 559. They will be able to turn to other options, including other fuels, other coal producers, or purchasing power, if the Joint Venture attempts to increase prices beyond a competitive level. Sophisticated customers are able to resist prices and will ensure the Joint Venture’s realized cost efficiencies translate to lower prices notwithstanding any relative SPRB coal production concentration. *See, e.g., Baker Hughes*, 908 F. 2d at 986, 992 (affirming denial of injunction and noting customer sophistication will “promote competition even in a highly concentrated market”); *U.S. v. Country Lake Foods, Inc.*, 754 F. Supp. 669, 679 (D. Minn. 1990) (finding “power of buyers” will blunt any anticompetitive effects).

4. Competition Among Fuels Will Constrain the Joint Venture

234. Even if other fuels were not a substantial enough constraint to be included in the relevant product market, customers will continue to substitute (through generation or purchasing) other fuels for coal due to relative changes in price and thereby constrain the Joint Venture in both the short term, by reducing coal burn, deferring deliveries and purchasing less coal, and the longer term, by retiring their coal EGUs. *See, e.g., Deutsche Telekom*, 439 F. Supp. 3d at 202-03 (denying injunction where evidence of competition from related market participants was not sufficient to include them in market, but did “bear on the overarching competitive analysis”).

5. Competition From Other Coal Producers Will Constrain the Joint Venture

235. The Joint Venture will also continue to face critical competitive constraints from other coal producers. The mere fact that Arch and Peabody compete against each other today and that competition will by definition be eliminated by the Joint Venture does not mean that competition among coal producers will cease.²⁹ Nor does it mean that RFPs issued after the Joint Venture closes will be likely to yield higher prices. Instead, customers will benefit from a combination of an even lower-cost supplier and remaining SPRB coal suppliers with substantial excess capacity. [REDACTED]

[REDACTED]

²⁹ *See* 7/15 PM Tr. 72:1-14 (Ruhl) (OPPD contracts with multiple SPRB coal producers, believes “all” SPRB mines “have similar quality,” and agreed “OPPD can burn any of [the SPRB] coals”).

Similarly, WFA's Meri Sandlin's concern is that the Joint Venture will reduce costs making it difficult for other SPRB producers to compete. 7/16 PM Tr. 114:11-18 (Sandlin).

236. The three largest other SPRB suppliers – NTEC, Eagle, and Kiewit – collectively operate five of the largest U.S. mines, frequently win business from Defendants, and will continue to compete in the future. Dr. Bailey estimated that rival SPRB producers (*i.e.*, other than Peabody and Arch) had [REDACTED] excess capacity in 2019, which is about [REDACTED] of Black Thunder's actual production in 2019 (71.7 mmt) and more than 120% of Black Thunder's expected production in 2020. DX4001 (Bailey Report ¶ 91 & Ex. 60); DX6000, at -0003 (“Given the current macro environment, [Arch] is not providing specific volume guidance beyond its already committed book of 58.4 million tons for 2020, but assumes there will be limited incremental sales opportunities for the balance of the year.”). Since then, overall SPRB production has declined, increasing the amount of available capacity in rivals' hands. The fact that SPRB coal competitors can use their significant, low-cost excess capacity to increase output and take market share in the event of a price increase makes any supposed price increase even less likely. *RAG-Stiftung*, 436 F. Supp. 3d at 318 (noting smaller competitor that “has won business . . . in the past” and has “excess capacity” will be well-positioned to disrupt any price increase); *Great Lakes*, 528 F. Supp. at 93-95 (finding a 5 to 4 merger would not substantially lessen competition due to excess capacity). This excess capacity will only grow as demand continues to decline due to additional coal EGU retirements and the continued shift to natural gas and renewable EGUs. [REDACTED] DX1500, at -0007; DX8022, at -0001 (projecting coal plant retirements may “reduce coal to as little as 11% of total US power generation by 2030,” with “greatest impact on demand for coal” in “the [PRB]”).

237. Other SPRB coal suppliers compete and frequently win business in RFPs against Defendants today, and there is no reason to believe they would not continue to do so. *See RAG-Stiftung*, 436 F. Supp. 3d at 320 (noting producers participating in RFPs “compete just as aggressively to win contracts no matter how many bidders are involved”). Indeed, in many of the RFPs cited by the FTC, competition from other coal producers was a key factor in the “pencil

sharpening” that the FTC insists is so important. *See, e.g.*, 7/16 AM Tr. 93:19-97:22 (James)

[REDACTED] 7/16 AM Tr. 97:23-

103:18 (James) [REDACTED]

[REDACTED] 7/16 AM Tr. 119:24-127:16 (James) [REDACTED]

238. Other SPRB coal producers, including Kiewit and NTEC, recently have significantly increased SPRB coal production to gain share and have ample excess capacity to continue doing so. DX4001 (Bailey Report ¶ 92 & Ex. 61-63). For example, [REDACTED]

[REDACTED]³⁰

B. THE JOINT VENTURE WILL ACHIEVE SIGNIFICANT EFFICIENCIES THAT ARE LIKELY TO ENHANCE COMPETITION

239. The Merger Guidelines recognize that the “primary benefit” of combinations like the Joint Venture is “their potential to generate significant efficiencies and thus enhance the merged firm’s ability and incentive to compete, which may result in lower prices, improved quality, enhanced service, or new products.” HMG § 10. Accordingly, the Court is required to consider “evidence of enhanced efficiency in the context of the competitive effects of the merger

³⁰ Coal produced outside the SPRB, including in the NPRB, ILB, Appalachia, Colorado, Texas, and even foreign countries, is additive to the SPRB coal supplier competition. Although electricity generators may have a preference for SPRB coal, they previously have, can, and do purchase coal from other areas. [REDACTED]

[REDACTED] DX3010 (Fuller 98:3-99:2) (Southern EGU can burn Colorado coal, currently burns a blend of PRB and Colorado coal because “it gives the customers a [lower] cost, a cheaper alternative for energy,” and has “burned many types of coal at times in the past” including ILB). [REDACTED]

. . . [as] the merged entity may well enhance competition.” *Tenet Health*, 186 F.3d at 1054-55. Any claimed efficiencies must be “verifiable and merger-specific.” *Deutsche Telekom*, 439 F. Supp. 3d at 208; *see also* HMG § 10 (same). Because efficiency projections are by their nature predictive, evidence of efficiencies need not be definitive in order to provide support for the Joint Venture; the evidence need only show that the FTC’s evidence “gives an inaccurate prediction of the proposed [Joint Venture’s] probable effect” on competition. *Staples*, 970 F. Supp. at 1089.

1. The Joint Venture Will Generate Significant Efficiencies

240. Dr. Israel estimates that the Joint Venture will achieve [REDACTED] variable cost savings through the end of the mines’ lives, and [REDACTED] variable cost savings in its first five years. DX4003 (Israel Report ¶¶ 138-40, 212-15). These efficiencies will be achieved by optimizing production across mines that are currently operated separately and, according to Dr. Israel, reflect the “[REDACTED] [REDACTED] [REDACTED]” *Id.* ¶¶ 134, 141-211.

241. Significant variable cost reductions are most likely to encourage further coal production, reduce coal prices, and to be pro-competitive. *See, e.g., Deutsche Telekom*, 439 F. Supp. 3d, at 210 (denying injunction where “incentive to use excess capacity given lower marginal costs, as well as the reduction of required capital and operational expenditures” will enhance competition); FTC & U.S. Dep’t of Justice, Commentary on the Horizontal Merger Guidelines 57-58 (2006) (“Economic analysis teaches that price reductions are expected when efficiencies reduce the merged firm’s marginal costs, *i.e.*, costs associated with producing one additional unit of each of its products.”); [REDACTED]

This is particularly true given intense competition from other fuel sources and the importance of preserving coal demand by slowing or preventing further coal retirements, and is consistent with the Joint Venture’s business rationale. 7/23 PM Tr. 25:24-26:5 (Haas) (“[T]his is all about

lowering the costs of producing coal. We want to preserve demand and be able to deliver the lowest cost product to our customers, so in this tough market, every penny, every penny matters.”); 7/21 AM Tr. 118:20-25 (Galli); DX4003 (Israel Report ¶ 134).

242. Given the efficiencies the Joint Venture is likely to realize and the commitments Defendants have already made, the Joint Venture will result in lower prices than would prevail in the but-for world, and will thereby enhance competition and benefit customers. *See, e.g., FTC v. Butterworth Health Corp.*, 946 F. Supp. 1285, 1301 (W.D. Mich. 1996) (denying injunction where merger “would result in significant efficiencies, in the form of capital expenditure avoidance and operating efficiencies” that would accrue to consumers in light of commitments made by defendants); *U.S. v. Long Island Jewish Med. Ctr.*, 983 F. Supp. 121, 148-49 (E.D.N.Y. 1997) (denying injunction where merger would “result in significant efficiencies in the form of annual operating savings” that would benefit consumers).

243. The Joint Venture also will be better positioned to compete in today’s challenging marketplace and ensure that its mines continue to operate in the future. This will ensure that customers have access to a stable and reliable supply of SPRB coal in the future, a significant concern expressed by many customers given the coal industry’s continuing struggles. *See* FOF ¶¶ 56, 75. These important non-price synergies provide further evidence that the Joint Venture will enhance, rather than impair, competition. *See Tenet Health*, 186 F.3d at 1054-55 (noting evidence that “larger and more efficient” merged entity would provide better services than either entity “could separately” and concluding “merged entity may well enhance competition”).

2. The Efficiencies are Verifiable

244. Efficiencies are verifiable if shown in “real” terms.” *FTC v. Penn State Hershey Med. Ctr.*, 838 F.3d 332, 349 (3d Cir. 2016) (citation omitted). The HMG indicates that efficiencies are most likely to verifiable when they result from “shifting production among facilities formerly owned separately, which enable the merging firms to reduce the incremental cost of production,” and are “substantiated by analogous past experience.” HMG § 10.

245. The evidence shows that the efficiencies generated by the Joint Venture satisfy both criteria. The bulk of the efficiencies result from joining Arch and Peabody's contiguous SPRB mines and reducing incremental production costs. DX4003 (Israel Report ¶ 214 & Table 4). The Court heard testimony from Peabody's Vice President of Mine Finance, Brock Haas, regarding the extensive, deliberate process that Defendants undertook to establish a "Clean Team" composed of professionals from both companies with over 225 years of experience in mining and incorporating contiguous mine operations specifically, to develop a joint mine plan, compare that joint mine plan to Arch and Peabody's stand alone plans, and estimate the efficiencies that the Joint Venture would likely generate. 7/23 PM Tr. 30:2-39:16, 47:19-48:9 (Haas); 7/20 PM Tr. 8:1-24 (Lang). As Mr. Haas explained, many of the projected efficiencies result from combining formerly separate production operations to reduce incremental production costs by using more efficient mining methods, better utilizing mining equipment, reducing mine reclamation costs, and reducing purchasing costs. 7/23 PM Tr. 40:3-46:24 (Haas); *see also* DX4003 (Israel Report ¶¶ 136, 149-88, 192-211). Mr. Lang also described in detail how the combination of Peabody and Arch's adjoining mines would enable more efficient mining and reduce incremental costs of production. 7/20 PM Tr. 8:25-14:15 (Lang). In addition, Defendants' competitors and customers – including those with experience in mining – agree that the combination of these two mines is likely to generate significant savings, at times suggesting that the saving generated by combining these two mines were plainly obvious to anyone who had ever visited a mine. FOF ¶¶ 55, 74-76. The Court is convinced that Defendants have engaged in a robust process to estimate the projected cost savings that the Joint Venture is likely to generate, and that the Joint Venture will be able to achieve significant savings.

246. The Court's conclusion is further buttressed by evidence showing that Defendants have a history of exceeding efficiencies expected in similar transactions integrating contiguous mines into Black Thunder, and, in fact exceeded them.³¹ 7/24 PM Tr. 193:17-194:1 (Zmijewski)

³¹ FOF ¶¶ 59-62; *see also* DX4003 (Israel Report ¶¶ 234-39); DX4004 (Israel Rebuttal ¶¶ 84-89). Although the FTC has suggested that cost savings from these prior mine acquisition did not benefit

(despite not identifying the criteria in his demonstratives, agreeing that “specifically, the [Commentary to the Merger Guidelines] says that the best way to substantiate an efficiency claim is to demonstrate that similar efficiencies were achieved from similar actions”). And the types of efficiencies achieved there, including those that were credited in the 2004 *Arch Coal* decision, are similar to those presented here. The fact that Defendants historically have achieved efficiencies in connection with past combinations similar to the Joint Venture is additional, important evidence demonstrating that the efficiencies are not speculative, pie-in-the-sky projections, but instead verifiable and achievable based on past experience. *See, e.g. Deutsche Telekom*, 439 F. Supp. 3d, at 217 (denying injunction and finding efficiencies verifiable where defendant “already overdelivered on its projected efficiencies in an analogous past merger” and proposed combination “would be very similar”).

247. The FTC and Dr. Zmijewski contest the verifiability of the Joint Venture’s efficiencies largely by criticizing the joint mine plan optimization. [REDACTED]

[REDACTED] Dr. Zmijewski also opined that because he could not independently confirm the efficiencies projected in connection with the joint mine plan optimization from ordinary course business, they were not verifiable. 7/24 PM Tr. 122:21-124:1, 135:18-137:22 (Zmijewski); *see also, e.g.*, PX8002 (Zmijewski Report ¶¶ 21, 49); PX8007 (Zmijewski Rebuttal ¶¶ 10, 27). By definition, the proposed Joint Venture, including the optimized joint mine plan, is outside the current ordinary course of Defendants’ business. Defendants, however, used the same ordinary course

customers because SPRB coal prices increased following these previous mine acquisitions, the record does not support these claims. Both the Triton and Jacobs Ranch mines were struggling as standalone operations. *See* FOF ¶ 63. Their acquisition by Arch therefore ensured that those mines continued operation and production as part of a larger, more efficient mining complex, which likely did result in greater SPRB coal output and lower SPRB coal prices than would have prevailed absent those acquisitions. *See* FOF ¶¶ 61-63. Unsubstantiated claims to the contrary fail to appreciate this critical distinction. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

methodologies and processes that they use in their standalone mine planning to create the optimized joint mine plan and any projection of potential synergies had to be conducted with the Joint Venture in mind. 7/23 PM Tr. 35:9-20 (Haas). Indeed, after reviewing Dr. Zmijewski's criticisms, it is difficult to contemplate what quality of efficiencies evidence would satisfy Dr. Zmijewski's standards.³² Given these circumstances, the Court is hesitant to accept Dr. Zmijewski's invitation to disregard Defendants' extensive work to validate efficiencies.

248. At the end of the day, the FTC's and Dr. Zmijewski's critiques of verifiability go to the magnitude of the expected efficiencies, something that Dr. Zmijewski did not address. [REDACTED] *see also* 7/24 PM Tr. 201:1-4 (Zmijewski). But the Court need not determine the precise size of the efficiencies that the Joint Venture is likely to generate in order to assess whether they are likely to enhance competition. *Deutsche Telekom*, 439 F. Supp. 3d at 216. Based on the evidence presented, the Court is convinced that efficiencies generated by combining Arch and Peabody's adjoining mines will result in substantial, verifiable cost savings that are likely to translate into increased production and output, particularly when compared to the but-for world. *See id.* at 208-210, 216-17 (finding efficiencies sufficiently verifiable where merger would combine facilities, reduce marginal costs, and increase capacity).

3. The Efficiencies are Specific to the Joint Venture

249. Efficiencies are merger-specific if they "cannot be achieved by either company alone." *FTC v. H.J. Heinz Co.*, 246 F.3d 708, 722 (D.C. Cir. 2001); *see also* HMG § 10 (agencies "credit only those efficiencies likely to be accomplished with the proposed merger and unlikely to be accomplished in [its] absence"). Here, the Court is convinced that the Joint Venture will generate substantial efficiencies that Defendants cannot achieve on their own.

³² [REDACTED]
[REDACTED]
[REDACTED]

[REDACTED] Meeting Dr. Zmijewski's exacting standard also would have put Defendants at risk of violating the HSR Act by gun-jumping. *See* 7/24 PM Tr. 154:10-155:19 (Zmijewski) (wanting a "formal bid" from vendors that would permit him to say "this is what [the Joint Venture will] buy it at.")).

250. As an initial matter, both Peabody and Arch have filed for bankruptcy in the past five years and undergone significant restructurings designed to reduce their individual cost structures. FOF ¶ 29. [REDACTED] Peabody's executives testified to their continuing efforts to wring as much efficiency from their operations as possible, and acknowledged that those efforts have not been sufficient to prevent further deterioration in business performance. 7/20 AM Tr. 9:7-13 (Kellow) ("We have continued to operate [the PRB] business as efficiently as possible, but we have seen -- unfortunately, we have seen a deterioration in the financial returns of that business over" the last five years); [REDACTED] There is only so much Defendants can do to cut costs as separate entities, and Arch and Peabody's remaining options to reduce costs while operating separately are limited. [REDACTED]

251. As discussed above, most of the projected efficiencies result from combining Peabody and Arch's contiguous NARM and Black Thunder mines, and optimizing their now separate operations under a joint mine plan. Mr. Haas credibly testified that neither Peabody nor Arch could achieve the synergies offered by the Joint Venture because it "would just be impractical By getting rid of the border, it allows you to unlock all these synergies." 7/23 PM Tr. 46:25-47:8 (Haas). These efficiencies have not only been documented extensively, *id.* at 38:19-39:16 (Haas), but also represent a common-sense assessment that neither Arch nor Peabody could achieve these substantial efficiencies as stand alone entities. *See, e.g. Deutsche Telekom*, 439 F. Supp. 3d at 213 (finding merger-specificity where neither party "as a standalone can achieve the level of efficiencies promised").

V. BALANCE OF THE EQUITIES

252. It is not necessary to address the equities in this case given the FTC has not met its burden to establish a likelihood of success. *See Arch Coal*, 329 F. Supp. 2d at 159 ("Absent a likelihood of success on the merits . . . equities alone will not justify an injunction.").

253. In any event, the equities further support denying injunctive relief in this case. *FTC v. Lab. Corp. of Am.*, 2011 WL 3100372, at *12 (C.D. Cal. Mar. 11, 2011) (denying preliminary injunction where balance of equities weighed against). As explained above, the Joint

Venture will generate substantial efficiencies that will immediately benefit the Joint Venture's customers and likely will enhance competition in the future. Denying injunctive relief will ensure that these synergies are realized quickly and benefit customers. *See H.J. Heinz*, 246 F.3d at 726 (“[P]ublic equities include beneficial economic effects and procompetitive advantages for consumers.” (internal quotation omitted)).

254. If a preliminary injunction is granted, Defendants have indicated that they cannot weather the “glacial pace of an FTC administrative proceeding,” and will abandon the Joint Venture. *Lab. Corp.*, 2011 WL 3100372, at *22; 7/14 AM Hearing Tr. 61:24-62:7 (Def. Opening Statement).³³ As a practical matter, granting an injunction would therefore terminate the Joint Venture, ensure that the significant benefits it offers are never realized, and leave Defendants to increasingly unable to compete in an evermore challenging market environment.

255. As *amicus curiae* the State of Wyoming makes clear in its amicus brief in opposition to the FTC's motion for preliminary injunction, there are other significant equities at stake in this case beyond those impacting Defendants directly. *See State of Wyoming's Amicus Curiae Brief in Opposition to Motion for Preliminary Injunction* (DE 273-1) (“Wyoming Amicus Br.”). The evidentiary record leaves no doubt that the SPRB coal industry is in secular decline and struggling to compete against other fuels used to generate electricity. FOF ¶ 22. Many of the major SPRB coal producers have been forced into bankruptcy in recent years and have been forced to lay off hundreds of workers in recent months due to declining demand. FOF ¶¶ 29-30.

256. While Defendants disclaim any reliance on the “failing firm” defense, the Court is mindful of the industry's struggles and the impact they have on Defendants' employees and local economies and communities when assessing the balance of equities. *See, e.g., Wyoming Amicus Br.* at 14 (noting negative impact on SPRB coal industry and PRB economy more broadly that would accompany preliminary injunction); 7/20 AM Tr. 101:1-4 (Lang) (stating “full energy . . .

³³ Notably, this Court is not aware of any proposed transaction that has been completed after the issuance of a preliminary injunction and lengthy administrative review by the FTC's administrative court.

. has been on this JV” and that Mr. Lang thinks “it is the best not only for our customers but especially for our employees”). Issuing a preliminary injunction has significant real world consequences not just for Defendants and their competitive futures, but also for Defendants’ employees and their communities, and these concerns also weigh significantly against issuing a preliminary injunction on this record. *See FTC v. Weyerhaeuser Co.*, 665 F.2d 1072, 1082-83 (D.C. Cir. 1981) (noting district court may consider other public equities, including affects on local economy, in assessing balance of equities).

257. The Court is also mindful of the Eighth Circuit’s instruction that a court “ought to exercise extreme caution” when considering a request to enjoin a transaction, particularly “in an industry . . . experiencing significant and profound changes.” *Tenet Health*, 186 F.3d at 1055 (internal quotations omitted). The record makes clear that the commercial realities of electricity generation and coal production are rapidly evolving due to the rise of low cost natural gas and renewables and increasing competition among fuels through least-cost dispatch, and that SPRB coal producers are struggling to adapt to these commercial realities. Given these dynamics, the Court simply cannot justify blocking a Joint Venture that has a compelling pro-competitive rationale, generates significant efficiencies that are crucial to the competitive future of Defendants, and “may well enhance competition” in the future and benefit Defendants customers, their employees, and the communities they serve. *Id.* at 1054-55.

CONCLUSION

For the foregoing reasons, Defendants respectfully request that the Court adopt the Proposed Findings of Fact and Conclusions of Law set forth above, deny the FTC’s Motion for Preliminary Injunction, dissolve the TRO, and grant such other and further relief as may be just and proper.

Dated this 3rd day of August, 2020

Respectfully submitted,

/s/ Edward D. Hassi

DEBEVOISE & PLIMPTON LLP

Edward D. Hassi, #1026776 (DC)
(thassi@debevoise.com)

Leah S. Martin, #1029757 (DC)
(lmartin@debevoise.com)

801 Pennsylvania Avenue, N.W.
Washington, DC 20004
Tel.: (202) 383-8000

Michael Schaper, #4033486 (NY)
(mschaper@debevoise.com)

J. Robert Abraham, #4935110 (NY)
(jrabraham@debevoise.com)

Tristan M. Ellis, #5405444 (NY)
(tmellis@debevoise.com)

919 Third Avenue
New York, NY 10022
Tel.: (212) 909-6000

HUSCH BLACKWELL LLP

Catherine L. Hanaway
(catherine.hanaway@huschblackwell.com)

Michael C. Martinich-Sauter
(Michael.martinich-
sauter@huschblackwell.com)

190 Carondelet Plaza, Suite 600
St. Louis, MO 63105
Tel.: (314) 480-1500

**AKIN GUMP STRAUSS HAUER
& FELD LLP**

Goray Jindal, #471059 (DC)
(gjindal@akingump.com)

Corey W. Roush, #466337 (DC)
(croush@akingump.com)

J. Matthew Schmitten, #742690 (GA)
(mschmitten@akingump.com)

2001 K Street, N.W.
Washington, DC 20006
Tel.: (202) 887-4000

Cristina Thrasher, #5109954 (NY)
(cthrasher@akingump.com)

One Bryant Park
Bank of America Tower
New York, NY 10036
Tel.: (212) 872-1000

Counsel to Defendant Peabody Energy Corporation

BAKER BOTTS LLP

Stephen Weissman #451063 (DC)
(stephen.weissman@bakerbotts.com)

Michael Perry #1047965 (DC)
(michael.perry@bakerbotts.com)

William Lavery #503292 (DC)
(william.lavery@bakerbotts.com)

Matthew Adler #1022438 (DC)
(matthew.adler@bakerbotts.com)

Andrew George #988552 (DC)
(andrew.george@bakerbotts.com)

Elisa Beneze #1048179 (DC)
(elisa.beneze@bakerbotts.com)

Jarad Daniels #1044253 (DC)

(jarad.daniels@bakerbotts.com)
Steven Pet #1617458 (DC)
(steven.pet@bakerbotts.com)
700 K St NW
Washington, DC 20001
Tel: (202) 639-7700

Counsel to Defendant Arch Resources, Inc.

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that on the 28th day of January, 2021, I served the foregoing on the following counsel via electronic mail:

Daniel Matheson
Federal Trade Commission
400 Seventh Street SW
Washington, DC 20024
Telephone: (202) 326-2075
Email: dmatheson@ftc.gov

Attorney for Plaintiff Federal Trade Commission

/s/ Edward D. Hassi

Edward D. Hassi

Counsel to Defendant Peabody Energy Corporation