

**In the Matter of
POLYPORE INTERNATIONAL, INC.,
a corporation
Docket No. 9327**

Opinion of the Commission

By RAMIREZ, Commissioner, for a Unanimous Commission:

I. INTRODUCTION¹

This case involves a consummated merger of two of the three North American firms that produce battery separators for flooded lead-acid batteries.² The battery separators at issue – membranes placed between the positive and negatively-charged plates in batteries to prevent electrical short circuits – are used in a multitude of products, ranging from floor scrubbers and golf carts to cars and backup telecommunications power systems. Battery separators for flooded lead-acid batteries are vital components of products that U.S. consumers use every day.

The acquiring firm, Respondent Polypore International, Inc. (“Polypore” or “Respondent”), develops, manufactures, and sells a broad range of flooded lead-acid battery separators for various end-use applications through its Daramic business unit. The acquired company, Microporous L.P. (“Microporous”), also manufactured flooded lead-acid battery separators, and, at the time of the acquisition, was an aggressive competitor of Daramic.

In August 2007, Respondent’s representatives began discussions with Microporous’ owners about acquiring Microporous. Contemporaneous documents establish that Daramic at the time feared losing a large amount of business to Microporous, wanted to eliminate Microporous as a competitor, and believed that its acquisition of Microporous would allow it to maintain market share and increase prices. On February 29, 2008, Respondent acquired all of the outstanding stock of Microporous’

¹ This opinion uses the following abbreviations for citations to the record:

Initial Decision	ID
ALJ Findings of Fact	IDF
Respondent’s Appeal Brief	RAB
Complaint Counsel’s Answering Brief on Appeal	CCAB
Respondent’s Reply Brief on Appeal	RRB
Complaint Counsel’s Exhibit	PX
Respondent’s Exhibit	RX
Trial Transcript	Tr.

² A flooded lead-acid battery is a battery containing an electrolyte liquid acid in which the positive and negative lead plates are suspended. IDF 20. Flooded lead-acid batteries, which are the focus of this case, are different than non-flooded lead-acid batteries, also known as gel or absorbed-glass-mat batteries, which use silica gel instead of liquid acid to interact with the positive and negative plates in the battery. IDF 22, 36, 83.

parent corporation for approximately \$76 million.³ The acquired Microporous business included a plant in Piney Flats, Tennessee, a plant in Feistritz, Austria on the verge of commencing operations, and equipment for an additional production line (referred to as “a line in boxes”).

Based on our *de novo* review of the facts and law in this matter, we conclude that the acquisition is reasonably likely to substantially lessen competition in three relevant markets: North American deep-cycle; motive; and starter, lighting, and ignition (“SLI”) battery separators. We agree with Chief Administrative Law Judge D. Michael Chappell (the “ALJ”) that the appropriate remedy is complete divestiture of all of the acquired Microporous assets, as well as certain other ancillary relief necessary to restore competition that was lost through the acquisition. However, while we conclude that Complaint Counsel properly defined a relevant market for uninterruptible power source (“UPS”) battery separators in North America, and the record supports the conclusion that Daramic has a monopoly in that market, we find that Complaint Counsel did not meet their burden to show that the acquisition has lessened, or is reasonably likely to substantially lessen, competition in the UPS separator market.⁴

II. FACTUAL BACKGROUND

A. THE PARTIES

1. Polypore/Daramic

Polypore, a Delaware corporation headquartered in North Carolina, manufactures microporous membranes used in separation and filtration processes. Daramic, one of Polypore’s four divisions, develops, manufactures, and sells various types of flooded lead-acid battery separators both in the United States and abroad. IDF 1-4. Prior to the acquisition of Microporous, Daramic had two plants in the United States and five foreign plants.⁵ IDF 38-39. Daramic’s worldwide production capacity was [REDACTED] with approximately [REDACTED] of that total capacity located in the United States. IDF 40.

At that time, Daramic produced polyethylene or “PE” separators for all four end-use applications alleged in the Complaint to constitute relevant product markets:

- Deep-cycle – batteries installed in products with a lower amperage draw over a longer period of time, such as golf carts and floor scrubbers (IDF 19);

³ The Commission did not become aware of the transaction, which was not subject to the premerger notification requirements of the Hart-Scott-Rodino Antitrust Improvements Act of 1976, 15 U.S.C. § 18a, until after the acquisition had been consummated.

⁴ We adopt the ALJ’s findings of fact to the extent not inconsistent with this opinion and make new factual findings based on our *de novo* review of the record. We present our findings of fact and conclusions of law throughout the opinion as appropriate to the subject matter under discussion.

⁵ These plants were located in Owensboro, Kentucky; Corydon, Indiana; Selestat, France; Norderstadt, Germany; Potenza, Italy; Prachinburi, Thailand; and Tianjin, China. IDF 38-39.

- Motive power – batteries used in mobile industrial products such as forklifts and mining equipment (IDF 25, 204);
- UPS – “uninterruptible power source” products, such as backup stationary batteries for computer and telecommunication systems (IDF 35, 235);⁶ and
- SLI (starter, lighting, and ignition) – batteries used in automotive applications, including cars, trucks, buses, boats, and jet skis. IDF 32.

For motive and UPS, Daramic sold primarily Daramic CL (IDF 197, 411); and for SLI it sold primarily Daramic HP. IDF 253-54, 427. Daramic also produced Daramic HD, a PE separator made with a liquid latex additive, which was created primarily for deep-cycle applications. IDF 41, 373, 472, 475. Daramic also sold a product called Darak, a non-PE separator produced in Germany and used primarily in gel batteries. IDF 41, 234, 618. Daramic’s total worldwide separator sales in 2007 were approximately [REDACTED] IDF 42. Of that amount, approximately [REDACTED] was from PE separator sales for SLI applications (*i.e.*, automotive products). *Id.*

2. Microporous

Microporous, also a Delaware corporation, was a smaller battery separator company owned by a private equity firm, Industrial Growth Partners. IDF 5, 9. Microporous previously had done business under the name Amerace. IDF 8. Prior to the February 2008 acquisition, Microporous operated one plant in Piney Flats, Tennessee and was scheduled to begin operating a second plant in Feistritz, Austria in March 2008. IDF 43-44, 778-79. Microporous also owned a line in boxes – unassembled manufacturing equipment it had originally ordered for the purpose of building a fourth production line at the Piney Flats plant. IDF 773, 775. As of the date of trial, some of the equipment for the line remained in boxes in Austria, while other pieces of the new line were at a semi-finished stage with a supplier, or in use in existing lines at Piney Flats. IDF 1269-70.

Prior to the acquisition, Microporous’ product line consisted of three products: Flex-Sil, a separator made of rubber, primarily for deep-cycle applications; Ace-Sil, a hard rubber separator typically used in high-end industrial applications; and CellForce, a PE-based separator sold primarily for motive applications, which includes ground-up Ace-Sil as an additive to improve performance. IDF 45, 198, 387. Microporous’ 2007 sales were approximately [REDACTED] over [REDACTED] of which were attributable to Flex-Sil. IDF 46. Microporous competed head-to-head against Daramic for sales to both deep-cycle and motive battery separator customers. Additionally, Microporous had begun developing and marketing a PE separator for use in SLI applications – the source of most of Daramic’s PE battery separator sales – and was in the process of negotiating a

⁶ Separators for industrial applications, such as industrial motive and UPS products, are sometimes collectively referred to as “industrial” separators. IDF 23.

⁷ SLI is by far the largest market segment, accounting for almost three-quarters of flooded lead-acid battery separator sales in 2005. IDF 261.

supply contract with Exide Technologies, Inc. (“Exide”), a large potential customer. IDF 429-36, 694-716.

Microporous was also engaged in a research and development project approved in early 2007 known as Project LENO. IDF 617. Project LENO began as an effort to develop a separator to compete with Daramic’s Darak separator. IDF 234, 618. The project later included research related to the development of a separator for flooded lead-acid UPS batteries. IDF 618. At the time of the acquisition, the success of Project LENO was in doubt, and even if the research proved successful, a commercially qualified product was at best several years away. McDonald, Tr. 3866-69, *in camera*; IDF 1011-14.

B. OTHER BATTERY SEPARATOR FIRMS

1. Entek

Entek⁸ was the only firm other than Daramic and Microporous that supplied flooded lead-acid battery separators to North American customers at the time of the acquisition. Entek has one manufacturing facility in the United States (in Oregon) and one in the United Kingdom. IDF 47. Entek had sold separators for industrial applications in the 1990s, but had since exited the industrial side of the business. IDF 392-93, 578, 1027, 1029. Entek’s sales at the time of the acquisition consisted almost entirely of SLI separators. IDF 382. In 2007, [REDACTED] [REDACTED] [REDACTED] [REDACTED] IDF 1115.

2. Foreign Firms

A number of suppliers in India, China, Indonesia and Korea produce flooded lead-acid battery separators for local customers. IDF 444, 1064-78. Anpei and BFR are Chinese manufacturers that produce SLI separators. IDF 340, 444, 1064, 1070. Amer-Sil is a European manufacturer that operates a plant in Luxembourg that produces polyvinyl chloride (“PVC”) separators used in European flooded lead-acid motive batteries.⁹ IDF 443. No foreign firm exports flooded lead-acid battery separators to North America, and none has any facilities in North America. IDF 332-34, 338-40, 343-50, 449-51.

⁸ Entek International LLC and its sister company Entek International Ltd. were owned and operated by Entek Holding Company (collectively “Entek”). IDF 47.

⁹ North American customers do not use PVC separators for motive batteries due to performance disadvantages relative to PE separators and because PVC separators may be associated with the release of unstable chlorine at certain temperatures. [REDACTED] Thus, while EnerSys, a large motive customer, uses PVC separators for some applications in Europe, it does not approve PVC separators for use in North America, where the applications are heavier duty. IDF 203.

C. CUSTOMERS

The battery separators at issue in this case are sold to firms that manufacture flooded lead-acid batteries. Some customers are large companies with multinational operations, while others are relatively small with operations only in the United States. Four of the largest customers are Exide, JCI, EnerSys, and East Penn Battery Company (“East Penn”). IDF 49-59, 65-66.

Exide is one of the largest battery manufacturers in the world, with facilities in North America, Europe and Asia. IDF 52, 53. Although it produces batteries for all four end-use applications, the majority of its business is in SLI batteries (for cars, trucks, motorcycles, recreational vehicles, and boats) and deep-cycle (for golf carts). IDF 54. Prior to the acquisition, Exide worked with Microporous to develop an SLI battery separator product and was in the process of negotiating a supply contract with Microporous. IDF 694-716.

JCI is the largest automotive battery manufacturing company in the world. IDF 49. It is headquartered in Milwaukee, Wisconsin and has plants throughout the world. IDF 51. JCI primarily purchases SLI separators; it also buys some deep-cycle separators for golf cart batteries, which account for 2-3% of its total production. IDF 50. Prior to the acquisition, JCI encouraged Microporous to develop an SLI separator to provide a competitive alternative to Daramic for automotive applications. IDF 650, 684-89. In 2007, JCI qualified the Microporous SLI product for use but ultimately entered into a supply contract with Entek [REDACTED] IDF 690, 1115.

EnerSys is the world’s largest manufacturer of industrial batteries, including both motive (for forklifts) and reserve power batteries (for UPS battery backup, telecommunications, and utilities). IDF 56. It has plants in the United States, China and Europe. IDF 57. EnerSys encouraged Microporous to develop a separator product to provide a competitive alternative to the Daramic products for UPS applications, and Microporous was in the process of attempting to do so at the time of the acquisition. IDF 618.

East Penn is a lead-acid battery and wire and cable manufacturing company headquartered in Pennsylvania. IDF 65. It has two U.S. plants and an assembly plant in China, and produces batteries for all four end uses. IDF 65-66.

Other battery manufacturer customers include: Trojan Battery Company, which manufactures and sells deep-cycle batteries primarily for golf carts and other deep-cycle applications;¹⁰ Crown Battery Manufacturing Company, which makes batteries for all four applications (IDF 67-69); Douglas Battery Manufacturing Company, a family-

¹⁰ Trojan Battery has two plants, both in the United States. IDF 63. Trojan was Microporous’ largest customer, representing about 43% of all Microporous’ sales. IDF 64. Trojan is the largest golf cart battery manufacturer in the world, with 2007 sales of approximately [REDACTED] IDF 60, 61.

owned company that produces certain types of deep-cycle and motive batteries¹¹ (IDF 70-73); U.S. Battery Manufacturing Company, which has two U.S. plants and manufactures batteries primarily for deep-cycle applications (IDF 74-77); and Bulldog Battery Corporation, which has one U.S. plant and makes flooded-lead batteries for motive applications. IDF 78-80.

III. PROCEDURAL HISTORY

A. PLEADINGS

On September 29, 2008, the Commission issued a three-count complaint against Polypore. In Count I, the Complaint charged that Polypore's February 29, 2008 acquisition of Microporous may substantially lessen competition or tend to create a monopoly in relevant North American markets for deep-cycle, motive, SLI, and UPS battery separators in violation of Section 7 of the Clayton Act, 15 U.S.C. § 18, and Section 5 of the Federal Trade Commission Act (the "FTC Act"), 15 U.S.C. § 45.¹² Complaint ¶¶ 5, 14, 48. Specifically, Count I alleged that the acquisition was a merger to monopoly in the North American deep-cycle and motive markets, and a merger to duopoly in the SLI market. *Id.* ¶¶ 20-23, 27-29, 38. With respect to the UPS market, Count I alleged that competition was harmed because Microporous had developed a new separator that would compete with Polypore and had secured a contract with a major customer that was testing Microporous' new UPS product. *Id.* ¶¶ 24, 30, 31. Count I alleged further that testing, qualification, and reputation create significant barriers to entry in each of the relevant markets, and that the acquisition will cause and has caused higher prices and other anticompetitive effects in the relevant markets. *Id.* ¶¶ 32-38.

Count II alleged that Polypore had entered into an unlawful joint marketing agreement with Hollingsworth & Vose ("H&V"), a firm that manufactures absorbed-glass-mat separators, to forestall H&V's entry into the PE separator market, in violation of Section 5 of the FTC Act. *Id.* ¶¶ 47, 51. Count III charged that Daramic monopolized the alleged relevant markets, also in violation of Section 5 of the FTC Act, by executing contracts with large customers that would preclude or deter Microporous from competing effectively. *Id.* ¶¶ 39-40, 45-46.

Polypore filed an answer on October 15, 2008, admitting only that it had acquired Microporous and denying all of the substantive allegations in the Complaint. As an affirmative defense, Daramic alleged that the acquisition is a procompetitive response to market dynamics that will result in substantial merger-specific efficiencies that will outweigh any potential anticompetitive effects. Answer ¶ 14.

¹¹ In January 2010, EnerSys announced its purchase of certain Douglas assets. IDF 59.

¹² The Complaint alleged in the alternative that the transaction was unlawful in an "all PE" separator market in North America. Complaint ¶¶ 6, 14. However, Complaint Counsel did not pursue this theory and instead opposed Respondent's claim of an "all PE" market at trial.

During the trial, which began on May 12, 2009 and concluded on June 12, 2009, the ALJ heard testimony from over thirty witnesses and admitted more than 2,000 exhibits into evidence. The ALJ closed the hearing record on June 22, 2009. The parties submitted post-trial briefs and proposed findings of fact on July 17, 2009 and made their closing arguments on August 20, 2009.¹³

B. INITIAL DECISION

The ALJ issued an Initial Decision (“ID”) on February 22, 2010, holding that the acquisition was reasonably likely to substantially lessen competition in North American markets for deep-cycle, motive, UPS, and SLI separators, as charged in Count I. ID at 7, 213-24. In particular, the ALJ found that the relevant markets were the North American markets for deep-cycle, motive, UPS, and SLI battery separators, basing his decision on the fact that separators are manufactured and designed according to end use and sellers can set prices according to a separator’s end use and customer location. The ALJ found further that, at the time of the acquisition, Microporous was Daramic’s only competitor in the deep-cycle and motive markets, and one of Daramic’s two competitors in the SLI market. The transaction was therefore a presumptively unlawful merger to monopoly in the deep-cycle and motive markets, and a presumptively unlawful merger to duopoly in the SLI market. ID at 246-51, 253-59. In the UPS market, the ALJ determined that Microporous was developing a product to compete with Daramic for North American customers and was a “substantial factor” in the market. ID at 252-53, 258. Having found that Microporous was the only firm positioned to enter the UPS market, the ALJ concluded that the acquisition entrenched Daramic’s existing UPS monopoly. ID at 259.

The ALJ also found evidence of the procompetitive benefits of pre-acquisition competition between Microporous and Daramic, and evidence that the acquisition was motivated by anticompetitive intent and resulted in post-acquisition anticompetitive effects, which bolstered the presumption of reasonably likely anticompetitive effects in each of the four relevant markets. ID at 266, 269. The ALJ also considered Daramic’s rebuttal evidence concerning entry barriers, buyer power, efficiencies and Microporous’ financial condition, but held that the evidence was not sufficient to overcome Complaint Counsel’s strong *prima facie* case. ID at 270-99.

With respect to Count II, the ALJ held that the noncompete provisions in Daramic’s joint marketing agreement with H&V constituted an unlawful horizontal market allocation agreement. ID at 319-22.

As to Count III, the ALJ concluded that Complaint Counsel failed to establish their claims of monopolization and attempted monopolization in any of the four relevant markets. Specifically, he found that Complaint Counsel did not prove that Daramic

¹³ On October 15, 2009, the ALJ reopened the trial record for the limited purpose of receiving evidence regarding Daramic’s alleged decline in sales to Exide. On July 19, 2010, after the ALJ had issued the Initial Decision, the Commission reopened the hearing record to accept into evidence declarations regarding Entek’s efforts to develop a deep-cycle separator.

possessed monopoly power or a dangerous probability of achieving monopoly power in the SLI market. ID at 305. The ALJ also found that while Complaint Counsel proved that Daramic had monopoly power in the deep-cycle, motive and UPS markets, they did not establish that Daramic engaged in exclusionary conduct in those markets. ID at 306-16. The ALJ therefore dismissed Count III in its entirety. ID at 316.

As a remedy for Count I, the ALJ ordered complete divestiture of all the acquired physical and intangible assets, along with ancillary relief to eliminate the anticompetitive effects of the acquisition. ID at 338-41. In connection with Count II, the ALJ ordered Daramic to terminate the noncompetition provisions of its marketing agreement with H&V, and to cease and desist from implementing or enforcing them. ID at 323-28.

C. APPEAL

Respondent timely filed a Notice of Appeal on March 10, 2010 and a Revised Notice of Appeal on March 15, 2010. Respondent challenges all of the ALJ's findings of fact and conclusions of law relating to Count I, including the remedy. Respondent also disputes those factual findings and legal conclusions related to whether Daramic had monopoly power or a dangerous probability of achieving or maintaining monopoly power in the North American deep-cycle, motive and UPS battery separator markets.¹⁴ Respondent did not appeal any portion of the Initial Decision related to Count II, and Complaint Counsel did not appeal the dismissal of Count III. The Commission heard oral argument on July 28, 2010.

Respondent makes four principal claims on appeal. It argues first that Complaint Counsel failed to prove that separators for deep-cycle, motive, SLI and UPS batteries constitute distinct and separate relevant product markets. RAB at 9-19. According to Respondent, at the time of the acquisition, Daramic competed in an "all PE market," while Microporous competed largely in a market for rubber separators that included only its Flex-Sil product. Respondent also argues that Complaint Counsel failed to prove that the relevant geographic market is North America, asserting instead that the proper geographic market is global. RAB at 19-24.

Respondent also claims that even if Complaint Counsel had proven their alleged relevant product and geographic markets, they failed to prove actual or likely anticompetitive effects. According to Respondent, Complaint Counsel's case fails because Microporous was not a competitor in the SLI or UPS markets; Entek competes in the deep-cycle, motive and UPS markets; barriers to entry are low; and buyers are sophisticated and have substantial leverage. RAB at 4, 25-28, 34, 41-50. Finally, Respondent argues that the remedy, and in particular the portion of the order requiring divestiture of Microporous' plant in Feistritz, Austria, is overbroad and punitive. RAB at 50-58.

¹⁴ Because the ALJ dismissed Count III, and Complaint Counsel did not appeal the dismissal, we review all of the factual findings and legal conclusion relevant to the ALJ's decision on Count I, but do not review those factual findings or legal conclusions that were relevant solely to Count III.

IV. STANDARD OF REVIEW

The Commission reviews the ALJ's findings of facts and conclusions of law *de novo*, considering "such parts of the record as are cited or as may be necessary to resolve the issues presented." The Commission may "exercise all the power which it could have exercised if it had made the initial decision."¹⁵ 16 C.F.R. § 3.54.

V. LEGAL FRAMEWORK

Section 7 of the Clayton Act prohibits acquisitions "where in any line of commerce or in any activity affecting commerce in any section of the country, the effect of such acquisition may be substantially to lessen competition, or tend to create a monopoly." 15 U.S.C. § 18. As the statutory language suggests, Congress enacted Section 7 to curtail anticompetitive harm in its incipiency. *See Chicago Bridge & Iron Co. v. FTC*, 534 F.3d 410, 423 (5th Cir. 2008) (citing *Brown Shoe Co. v. United States*, 370 U.S. 294, 323 n.39 (1962)). Section 7 prohibits acquisitions that create a reasonable probability of anticompetitive effects. Thus, while a Section 7 violation cannot rest on proof of the "mere possibility" of anticompetitive effects, Section 7 does not require that competitive harm be established with certainty. *Id.*; *FTC v. H.J. Heinz Co.*, 246 F.3d 708, 713 (D.C. Cir. 2001). Even in a consummated merger, the ultimate issue under Section 7 is whether anticompetitive effects are reasonably probable in the future, not whether such effects have occurred as of the time of trial. *United States v. General Dynamics Corp.*, 415 U.S. 486, 505-06 (1974).¹⁶

Merger enforcement is therefore concerned with preventing the unlawful acquisition, maintenance, and exercise of market power. U.S. DEPT. OF JUSTICE & FED. TRADE COMM'N, HORIZONTAL MERGER GUIDELINES § 1 (Aug. 19, 2010), *available at* <http://www.ftc.gov/os/2010/08/100819hmg.pdf> ("2010 HORIZONTAL MERGER GUIDELINES").¹⁷ Mergers that enhance market power can enable the merged firm to

¹⁵ The *de novo* standard of review is required by the Administrative Procedure Act, 5 U.S.C. § 557(b), and the FTC Act, 15 U.S.C. § 45(b), (c), and applies to both findings of fact and inferences drawn from those facts. *Realcomp II, Ltd.*, No. 9320, at 15 n.11 (FTC Oct. 30, 2009), *available at* <http://www.ftc.gov/os/adjpro/d9320/091102realcompopinon.pdf>.

¹⁶ While evidence of post-acquisition consumer harm can provide conclusive proof that post-acquisition consumer harm is reasonably probable, the absence of post-acquisition evidence of anticompetitive effects does not necessarily prove the converse. Because post-acquisition evidence may be manipulated by the parties, it may in certain circumstances have little evidentiary value. *Chicago Bridge*, 534 F.3d at 435; *see also General Dynamics*, 415 U.S. at 504-05 ("If a demonstration that no anticompetitive effects had occurred at the time of trial or of judgment constituted a permissible defense to a § 7 divestiture suit, violators could stave off such actions merely by refraining from aggressive or anticompetitive behavior when such a suit was threatened or pending."). Moreover, the fact that consumers have not suffered harm during the interval between the acquisition and trial "does not mean that no substantial lessening will develop thereafter; the essential question remains whether the probability of such *future* impact exists at the time of trial." *General Dynamics*, 415 U.S. at 505; *Ash Grove Cement Co. v. FTC*, 577 F.2d 1368, 1378-79 (9th Cir. 1978); *see also* 2010 HORIZONTAL MERGER GUIDELINES § 2.1.1.

¹⁷ The U.S. Department of Justice and the Federal Trade Commission issued revised Horizontal Merger Guidelines on August 19, 2010. Although we rely on the 2010 Guidelines in this opinion, our substantive analysis in this case would be identical under the 1992 Horizontal Merger Guidelines.

profitably alter its marketplace decisions to the detriment of consumers by, for example, raising prices, cutting output or reducing product quality or variety. Mergers that enhance market power can also diminish incentives for innovation. *Id.* In some instances, a merger can reduce the number of firms in a market to a level that increases the likelihood that firms will expressly or tacitly coordinate their actions. *Id.* In other instances, a merger may create the likelihood of both unilateral and coordinated effects with respect to price or nonprice aspects of competition. *Id.*

Courts have traditionally analyzed Section 7 claims under a burden-shifting framework. *See, e.g., Heinz*, 246 F.3d at 715; *United States v. Baker Hughes Inc.*, 908 F.2d 981, 982-83 (D.C. Cir. 1990). Under this framework, Complaint Counsel can establish a presumption of liability by defining a relevant product and geographic market, and showing that the transaction will lead to undue concentration in the relevant market. *Baker Hughes*, 908 F.2d at 982-83.

A plaintiff can bolster a *prima facie* case based on market structure with evidence showing that anticompetitive unilateral or coordinated effects are likely. *Heinz*, 246 F.3d at 717. Documents created by the merging parties in the ordinary course of business are often highly probative of both industry conditions and the likely competitive effects of a merger. 2010 HORIZONTAL MERGER GUIDELINES § 2.2.1. Indeed, qualitative evidence regarding pre-acquisition competition between the merging parties can in some cases be sufficient to create a *prima facie* case even without quantitative evidence of changes in market concentration. *See, e.g., Chicago Bridge & Iron Co.*, 138 F.T.C. 1024, 1053 (2004) (noting that qualitative evidence on pre-acquisition competition may support the conclusions based on market structure and can provide an independent basis for a *prima facie* case under Section 7); 2010 HORIZONTAL MERGER GUIDELINES § 2.1.4. Evidence that sheds light on the strategic objectives of the merging parties is also probative of likely competitive effects. *FTC v. Whole Foods Market, Inc.*, 548 F.3d 1028, 1047 (D.C. Cir. 2008) (Tatel, J., concurring); 4A PHILLIP E. AREEDA & HERBERT HOVENKAMP, ANTITRUST LAW ¶ 964, at 18-19 (3d ed. 2009); 2010 HORIZONTAL MERGER GUIDELINES § 2.2.1.

If the plaintiff establishes a *prima facie* case of probable harm, the burden of production shifts to the defendant, who must produce evidence showing that the plaintiff's evidence paints an inaccurate picture of the merger's likely competitive effects. *United States v. Marine Bancorporation*, 418 U.S. 602, 631 (1974); *Heinz*, 246 F.3d at 725. The stronger the plaintiff's *prima facie* case, the greater the defendant's burden of production on rebuttal. *Heinz*, 246 F.3d at 725; *Baker Hughes*, 908 F.2d at 991. A defendant can rely on a variety of types of evidence to meet its burden on rebuttal, including evidence that casts doubt on the significance or accuracy of the plaintiff's market share and concentration evidence, factors that indicate that collusion is improbable, and evidence of likely efficiencies. *Baker Hughes*, 908 F.2d at 985. If the defendant meets its burden, the burden of production shifts back to the plaintiff to produce additional evidence of competitive harm and merges with the ultimate burden of persuasion, which remains with the plaintiff at all times. *Id.* at 983.

Both Complaint Counsel and Respondent developed their evidence and litigated this case by reference to a relevant market and this traditional burden-shifting framework. The ALJ relied on the same legal framework in the ID. We find that this framework illuminates the factual record and competitive issues in this case and therefore apply it in this opinion. As we have noted in prior cases, however, and as the courts have also recognized, this analytical approach “does not exhaust the possible ways to prove a § 7 violation on the merits.” *Whole Foods*, 548 F.3d at 1036; *see also Evanston Northwestern Healthcare Corp.*, No. 9315, Comm’n Op. at 86-88 (FTC Aug. 6, 2007), *available at* <http://www.ftc.gov/os/adjpro/d9315/070806opinion.pdf>; 2010 HORIZONTAL MERGER GUIDELINES § 4. Market definition is a predictive tool that is not always the best vehicle to establish proof of competitive harm and can in some cases obscure rather than expose the competitive effects of a merger. *See Evanston Northwestern*, Comm’n Op. at 86 (“The role of the market definition tool, however, is potentially much less important in merger cases in which the availability of natural experiments allows for direct observation of the effects of competition between the merging parties, as well as the absence of such competition.”). In a consummated merger, post-acquisition evidence of actual anticompetitive harm may in some cases be sufficient to establish Section 7 liability without separate proof of market definition. *Evanston Northwestern*, Concurring Op. of Comm’r Rosch at 8, *available at* <http://ftc.gov/os/adjpro/d9315/070806rosch.pdf>. Accordingly, the legal framework for analyzing a Section 7 claim is and should be a flexible tool that enables the factfinder to credibly and efficiently organize evidence in a manner that sheds light on the likely competitive effects of a merger.

VI. LIABILITY

A. RELEVANT PRODUCT MARKETS

The ALJ concluded that, prior to the acquisition, Daramic and Microporous competed in four distinct relevant product markets: deep-cycle, motive, UPS, and SLI battery separators. ID at 210. This determination was based on the fact that battery separators have different design and performance features that vary with the end use of the separator, and that, in most instances, separators manufactured for one type of battery are not reasonably interchangeable with separators for a different type of battery. ID at 211. The ALJ also found that industry participants not only recognize battery separator markets based on end use but that separator manufacturers price that way. ID at 211-12.

Respondent disputes these findings. According to Respondent, PE separators, which comprise most of Daramic’s product line, are reasonably interchangeable with each other regardless of end use. Respondent also claims that Daramic’s PE separators are not substitutes for, and do not compete with, Microporous’ Flex-Sil product, a rubber separator used in deep-cycle batteries. RAB at 9-19. On that basis, Respondent argues that the proper relevant product markets are an “all PE” separator market and a market consisting only of Flex-Sil.¹⁸ *Id.* We disagree and affirm the ALJ’s product market determinations.

¹⁸ Respondent also argues that Microporous’ Ace-Sil constitutes its own relevant market. Ace-Sil is a hard

The factors that determine the contours of a relevant market are well known. The “boundaries of a product market are determined by the reasonable interchangeability of use or the cross-elasticity of demand between the product itself and substitutes for it.” *Brown Shoe*, 370 U.S. at 325; *see also United States v. E.I. du Pont de Nemours & Co.*, 351 U.S. 377, 395 (1956). “Interchangeability of use and cross-elasticity of demand look to the availability of products that are similar in character or use to the product in question and the degree to which buyers are willing to substitute those similar products for the product.” *FTC v. Swedish Match N. Am., Inc.*, 131 F. Supp. 2d 151, 157 (D.D.C. 2000).

As “evidentiary proxies for direct proof of substitutability” courts look at “practical indicia” of market boundaries, such as industry or public recognition of the market, the product’s peculiar characteristics and uses, unique production facilities, distinct customers, distinct prices, sensitivity to price changes, and specialized vendors.¹⁹ *Brown Shoe*, 370 U.S. at 325; *Rothery Storage & Van Co. v. Atlas Van Lines, Inc.*, 792 F.2d 210, 218 (D.C. Cir. 1986). These observable market facts provide evidence of interchangeability and the cross-elasticity of demand.

Under the Horizontal Merger Guidelines, a product market is defined by asking whether a hypothetical monopolist of the proposed product market could impose a small but significant and nontransitory increase in price (“SSNIP”) without losing sufficient sales to render the price increase unprofitable. 2010 HORIZONTAL MERGER GUIDELINES § 4.1.1; *see also Whole Foods*, 548 F.3d at 1038; *Swedish Match*, 131 F. Supp. 2d at 160-61 & n.8. Where a seller “could profitably target a subset of customers for price increases,” a relevant market can be based on a particular use or uses by groups of buyers of the product for which a hypothetical monopolist could profitably impose at least a “small but significant and nontransitory” increase in price. 2010 HORIZONTAL MERGER GUIDELINES § 4.1.4. A hypothetical monopolist is unlikely to be able to raise price to a targeted group where buyers can engage in arbitrage. *Id.*

The record here supports relevant product markets based on the end use of separators. Manufacturers tailor separators along a variety of dimensions according to both the individual customer and the specific application or end use. IDF 92-98, 104,

rubber battery separator that is typically used in very high-end stationary applications such as telecommunications, nuclear plants, and military products. IDF 45. The Complaint does not allege that the transaction led to a substantial lessening of competition in any market where Ace-Sil separators are sold. We therefore reach no conclusion as to whether Ace-Sil constitutes a relevant product market.

¹⁹ Although Respondent criticizes the ALJ’s reliance on “46-year old *Brown Shoe*’s ‘practical indicia’” rather than quantitative evidence, courts continue to rely on these factors to define a relevant market. *See, e.g., Whole Foods*, 548 F.3d at 1033, 1044-45; *FTC v. CCC Holdings Inc.*, 605 F. Supp. 2d 26, 41-43 (D.D.C. 2009); *FTC v. Staples, Inc.*, 970 F. Supp. 1066, 1075, 1078 (D.D.C. 1997). The Commission and the DOJ also consider such evidence relevant and probative. 2010 HORIZONTAL MERGER GUIDELINES § 2.2; U.S. DEPT. OF JUSTICE & FED. TRADE COMM’N, COMMENTARY ON THE HORIZONTAL MERGER GUIDELINES 9 (Mar. 2006), *available at* <http://www.ftc.gov/os/2006/03/CommentaryontheHorizontalMergerGuidelinesMarch2006.pdf> (“In the vast majority of cases, the Agencies largely rely on non-econometric evidence, obtained primarily from customers and from business documents.”).

106-08, 110. Flooded lead-acid battery separators are differentiated by various physical characteristics, including their base material (*e.g.*, polyethylene or rubber), additives to the base material, “rib spacing and profile,” “backweb” thickness, overall thickness, border areas, and finishing (*e.g.*, delivered in rolls or cut into smaller flat sheets).²⁰ IDF 85-86. The fact that two separators may have one characteristic in common, such as backweb thickness, does not mean that the separators can be substituted for one another in a particular application if the other features are different, such as the base material, additives to the base material, or profile. IDF 86-97. If a separator designed for one type of battery is used in a different type of battery, the battery’s performance, including its life, would be adversely affected. *See, e.g.*, Leister, Tr. 4022-24. Thus, based on design and functionality, a separator manufactured for a particular end use or customer is not reasonably interchangeable with other separators.

We recognize that certain separator products, such as Daramic HD and CellForce, can be used in more than one type of battery. But that fact does not alter our conclusion. Daramic itself distinguishes between end-use separator markets and sets separator prices accordingly. For instance, it currently charges different prices for Daramic HD and CellForce (formerly a Microporous product) depending on the separator’s end use. IDF 114-16; PX0395 at 40, *in camera*; Gilchrist, Tr. 458, *in camera*; Hauswald, Tr. 793-95, *in camera*. Daramic also tracks sales according to the end use of separators (as did Microporous). IDF 100-02. Moreover, because separators are tailored according to customer-specific designs, arbitrage is unlikely. IDF 85, 92, 117-18. Accordingly, as explained in detail below, deep-cycle, motive, UPS, and SLI separators constitute distinct relevant product markets.

1. Deep-Cycle Market

Deep-cycle batteries are used in products such as golf carts, floor scrubbers, and scissor lifts that require a low amperage draw over a long duration of time. IDF 19, 128. Deep-cycle batteries are typically discharged more deeply – to a lower state of discharge – than motive batteries and are designed to run at a lower amperage for a longer period of time than SLI batteries. IDF 130-31.

Relative to other batteries, deep-cycle batteries have high antimony content in the lead alloy grid, which aids in their construction and enhances the capacity for cycles of charges and deep discharges. IDF 15, 132-37. If antimony migrates from the positive to the negative plate in the battery, “antimony poisoning” occurs, which causes the voltage of the battery to drop and can lead to conditions that shorten the battery’s life. IDF 138-39. The separator in a deep-cycle battery ties up the antimony in the electrolyte liquid, preventing the antimony from settling on the negative plate. IDF 15.

²⁰ Ribs are protrusions on the separator that help establish the physical spacing in the battery to ensure that there is an appropriate amount of acid between the plates. The shapes and sizes of the ribs make up part of the separator’s profile. IDF 31. Backweb thickness is measured between the ribs and acts to create a wall of insulation in the battery between the plates. IDF 16.

Rubber separators are the most effective in preventing the transfer of antimony between the lead plates and therefore in reducing antimony poisoning in deep-cycle batteries. IDF 140. Microporous' Flex-Sil is made of natural rubber. IDF 143. CellForce, also developed and sold by Microporous, is a PE-based separator with a rubber additive in the form of ground-up Ace-Sil. IDF 144, 148. Microporous sold both for deep-cycle batteries. As alternatives to the Microporous products, Daramic sold a rubber separator, Daramic DC, and later a blended PE-rubber product, Daramic HD, which includes rubber in the form of latex. IDF 145-47, 502, 505-06.

Pure PE separators that are used in motive, UPS, and SLI batteries are not viable substitutes for deep-cycle separators because they do not suppress antimony poisoning and do not perform as well in deep-cycle batteries as separators that are made of, or incorporate, rubber. IDF 150-55. Similarly, because of the differences in the batteries and the corresponding requirements for the separators used in those batteries, separators made for motive batteries and separators made for SLI batteries are not reasonably interchangeable with separators made for deep-cycle batteries. IDF 130, 132, 152-56.

Prior to the acquisition, Daramic HD competed with Microporous' Flex-Sil separators. When Daramic HD was introduced in 2005 as a competitive alternative to Flex-Sil, deep-cycle customers initially used it in a limited way, but then expanded their use over time. IDF 512. U.S. Battery tested Daramic HD in 2005, for example, and "indicated a desire to switch four of its new product lines away from Flex-Sil to Daramic HD." IDF 480. U.S. Battery later increased its purchases of Daramic HD and extended its use to additional battery models. IDF 515. Similarly, Exide began switching from Flex-Sil to Daramic HD for its deep-cycle batteries in 2005 and later continued to convert additional batteries from Flex-Sil to Daramic HD. IDF 502, 513, 518. Exide now uses both Flex-Sil and Daramic HD as substitutes in its most common golf cart battery, which makes up approximately 80% of Exide's deep-cycle sales. IDF 503. The record also shows that Microporous responded to competition from Daramic's deep-cycle separators by reducing prices. IDF 464, 470-71. Daramic HD constrained the price of Flex-Sil. IDF 470-71. Similarly, prior to the acquisition, U.S. Battery, Trojan Battery, and Exide successfully used the threat of switching to Daramic HD as leverage to avoid Flex-Sil price increases. IDF 470, 521, 523, 528-29.

Certain customers, however, continue to prefer Flex-Sil over both Daramic HD and CellForce despite Flex-Sil's higher price, and Respondent points to this preference to support its claim that Flex-Sil occupies its own relevant market. We are not convinced, however. Preferences by some buyers for one product do not necessarily mean that the product comprises a separate relevant product market, particularly when differentiated products are involved. Substitution for the purpose of defining relevant markets does not require complete switching between products in the same market. *See United States v. Oracle*, 331 F. Supp. 2d 1098, 1131 (N.D. Cal. 2004); *FTC v. Arch Coal, Inc.*, 329 F. Supp. 2d 109, 122 (D.D.C. 2004). Furthermore, courts have not hesitated to assign

products to the same market despite price differences when the products, in fact, constrained each other's price levels.²¹

The record also shows that deep-cycle battery manufacturers would not switch to pure PE products in response to a price increase. For instance, when Exide was unable to purchase Daramic HD due to a strike at Daramic's Owensboro plant, Exide did not switch to a pure PE separator for its deep-cycle batteries, instead paying a price premium to purchase Flex-Sil as a substitute.²² IDF 173. Daramic's Vice-President of Marketing and Sales, Sterling Tucker Roe, testified that despite price increase announcements, no deep-cycle customers have switched from products that contain rubber to pure PE separators. IDF 170-71. We therefore find that separators for deep-cycle batteries are a relevant product market.

2. Motive Market

Motive batteries are used primarily in industrial equipment such as forklifts. IDF 204. These batteries are typically operated for much longer periods than SLI batteries and have more rigorous mechanical and chemical requirements. IDF 196. Motive separators are designed to meet these more demanding performance standards. *Id.* The positive plates in motive batteries, for instance, are surrounded by thick insulation to prevent an electrical short. IDF 194. This means that motive battery separators typically have a thicker backweb than other separators. IDF 195. Requirements for electrical resistance are lower because of the typically low current densities for motive batteries. IDF 196. Because of motive batteries' distinctive characteristics, separators that are made for deep-cycle, UPS, SLI and other applications are not typically interchangeable with motive separators.²³ IDF 130, 193-96.

Larry Axt, Vice President of Global Procurement at EnerSys, testified that when Daramic declared *force majeure* for motive separators in 2006, EnerSys established a team to search worldwide for an alternative source of supply, but was unable to find an alternative supplier anywhere in the world. Axt, Tr. 2216-18, *in camera*. The merging

²¹ See, e.g., *AD/SAT v. Associated Press, Inc.*, 181 F.3d 216, 228 (2d Cir. 1999) (holding that the price difference between one-hour delivery services for newspaper advertisements (\$40) and overnight transmission services (\$8) was insufficient to demonstrate the two services were in different markets). Even the cases cited by Respondent did not hold that products fall in different markets based on price differences alone; rather, the courts considered whether the price differences had implications for substitution and the cross-elasticity of demand. Thus, in *United States v. Archer-Daniels-Midland Co.*, 866 F.2d 242, 246 (8th Cir. 1988), the court *in dictum* expressly stated that "generally a price differential, even a substantial one, is irrelevant for purposes of determining reasonable interchangeability."

²² Respondent takes issue with this and other similar customer testimony, arguing it is unreliable. RAB at 19. We disagree. The record contains credible customer testimony identifying specific actions that customers have taken to fill supply needs. See *Oracle*, 331 F. Supp. 2d at 1133 (finding testimony of defendant's witnesses credible because they testified about concrete and specific actions taken to meet customers' information processing needs).

²³ North American customers do not use PVC separators for motive batteries because they do not perform as well as PE separators and may be associated with the release of unstable chlorine. Thus, while EnerSys uses PVC separators for some applications in Europe, it does not use PVC separators in North America where the applications are heavier duty. IDF 203.

parties' own documents also confirm that motive separators are a distinct market. *See* IDF 216-20.

3. UPS Market

UPS batteries provide reserve power for stationary products such as computer systems, telecommunications networks, and data centers. IDF 225-35. UPS batteries generate a higher current over a shorter period of time than classic reserve power batteries. They must be very dependable and generally last between 15 and 20 years. IDF 225. UPS batteries have thick plates and tend to be built with a clear case to allow inspection of the battery's acid level. IDF 226. Separators for UPS batteries are typically made of microporous PE but require lower residual oil content than separators for other flooded battery applications to reduce what is referred to as the "black scum" problem. IDF 227-29. Oil residue or "black scum" interferes with the maintenance of a UPS battery by obscuring the indicators of the acid level, making it harder to detect the formation of lead sulfate on the plates. IDF 228. Black scum can also interfere with a valve, causing the battery to overflow and spill acid when an automatic watering system is used. IDF 229.

Daramic developed a separator, Daramic CL, with a patented type of oil, which Daramic calls "clean oil," that reduced the black scum problem. IDF 230. Other PE separators do not reduce black scum and are not well suited for UPS battery applications.²⁴ IDF 231-32. Accordingly, separators for UPS batteries are also a relevant product market.

4. SLI Market

SLI batteries are used in automobiles and other motorized vehicles. IDF 259-60. SLI separators have their own distinct characteristics, which enable SLI separators to perform optimally in motor vehicles, and distinguish SLI separators from other PE separators. SLI separators must have relatively low electrical resistance to permit the surge in current that is needed to start a car. IDF 249. Puncture resistance and mechanical strength are also particularly important because the battery fails if the separator is punctured during assembly of the vehicle. IDF 252. In addition, SLI separators, and hence the backweb, must be very thin. IDF 250-51. Because SLI separators are thin, they are produced with fewer raw materials and are typically priced lower than separators for other end uses.²⁵ Based on functionality and performance characteristics, separators made for other types of batteries are not reasonably interchangeable with separators made for SLI batteries. IDF 131-32, 195-96. Daramic

²⁴ Daramic's Darak separator, made from cross-linked phenolic rather than PE, contains no oil and might solve the black scum problem, but it is very stiff and very chemically stable with low electrical resistance. Darak is primarily used in gel, as opposed to flooded lead-acid batteries, and is significantly more costly than PE-based separators. IDF 41, 234.

²⁵ The average price of Daramic's SLI separators is \$0.70 per square meter; Daramic HD separators for deep-cycle applications range in price from \$1.50 to \$2.90 per square meter; and its motive power separators cost \$1.90 to \$3.00 per square meter. IDF 267, 114.

and Microporous documents and testimony also segregate automotive separators as a distinct market segment. IDF 268-70. Separators for SLI batteries are therefore also a relevant product market.

5. The Expert Evidence

Complaint Counsel's expert, Dr. John Simpson, applied the hypothetical monopolist test to each market using a critical loss analysis. PX0033 at 6, 12-19, *in camera*. Dr. Simpson concluded that a hypothetical monopolist that supplied separators for each end use would lose less than 10% of its sales in response to a 5% price increase. *Id.*

Respondent's expert, Dr. Henry Kahwaty, opined in turn that PE separators belong in a single relevant market because they are highly differentiated and can be tailored to work across applications. RX0945 at 035-38, 049-53, *in camera*. He also concluded that separator manufacturers do not have sufficient information to set targeted prices based on end use. *Id.* at 053-56. Dr. Kahwaty also argued that Flex-Sil constitutes a separate relevant market because Flex-Sil has unique performance characteristics and is sold at a premium. *Id.* at 041-42. Dr. Kahwaty's application of the hypothetical monopolist test to a market consisting of Flex-Sil led him to find that the critical loss from a 5% price increase for Flex-Sil is 15.4%. Based largely on qualitative evidence regarding the preferences of Flex-Sil's largest customers, Dr. Kahwaty concluded that a hypothetical monopolist could profitably raise the price of Flex-Sil by at least 5%. *Id.* at 046.

We do not find Dr. Kahwaty's opinions persuasive. As explained above, there is more than ample evidence that separator manufacturers can and do set separator prices according to end use. Dr. Kahwaty also failed adequately to consider the evidence regarding pre-acquisition competition between Daramic HD and Flex-Sil.²⁶ While we agree with Dr. Kahwaty that Dr. Simpson's application of the hypothetical monopolist test to the deep-cycle market could in theory miss a separate relevant market for Flex-Sil,²⁷ that did not occur here. Dr. Simpson carefully analyzed the qualitative evidence

²⁶ As Dr. Simpson pointed out, Dr. Kahwaty argued that a hypothetical firm that was the only supplier of Flex-Sil could profitably raise the price of Flex-Sil over existing prices by at least 5%, but does not explain why Microporous did not raise the price of Flex-Sil prior to the acquisition if it had the power to do so. PX2251 at 2-3, *in camera*. Dr. Kahwaty also stated that Flex-Sil appears to be priced below a profit maximizing level because its price is set by negotiations with customers, but he fails to explain how customers that allegedly have no competitive alternatives could extract lower prices through negotiations. RX0945 at 048, *in camera*. Elsewhere, Respondent emphasizes that Flex-Sil was priced above competitive levels before the acquisition and asserts that the ALJ defined an overly broad market by examining substitution patterns without adjustment for Flex-Sil's pre-existing market power. RRB at 33. However, for the purpose of evaluating the competitive effects of a merger between the producers of Flex-Sil and Daramic HD, evidence of pre-merger competition between those products suggests that customers could be harmed by the acquisition and warrants including both products in the same relevant market.

²⁷ In setting out the framework for his analysis, Dr. Simpson considered whether a hypothetical monopolist supplying deep-cycle separators to North American customers could profitably impose a SSNIP, but did not first consider whether a monopolist supplying Flex-Sil to North American customers could do the same.

regarding pre-acquisition competition between Flex-Sil and Daramic HD and based on that evidence correctly concluded that Daramic HD was a meaningful competitive constraint on the price of Flex-Sil. PX0033 at 13. Moreover, even apart from Dr. Simpson's opinion, for the reasons discussed above, Complaint Counsel established that the proper relevant markets in this matter are based on the end use of battery separators.

B. RELEVANT GEOGRAPHIC MARKET

The ALJ defined a North American geographic market based on customer location. ID at 239-43. He found that separator manufacturers can and do set prices based on a customer's geographic location, and that, because separators are tailored to an individual customer's demand, a customer could not likely defeat a discriminatory price increase through arbitrage. IDF 271-79.

Respondent argues that arbitrage would defeat any effort to exercise market power based on customer location and claims that the proper geographic market is global. RAB at 19-24. Respondent's expert also rejected the conclusion that sellers could price discriminate based on customer location. Analyzing the geographic market based on the location of suppliers, Dr. Kahwaty concluded that the relevant geographic market is global. RX0945 at 057-58, *in camera*.

We review the evidence under the familiar standards from the case law and the Horizontal Merger Guidelines. The boundaries of the relevant geographic market, like the boundaries of the relevant product market, depend on reasonable interchangeability and cross-elasticity of demand. *Brown Shoe*, 370 U.S. at 336. A relevant geographic market defines the geographic area to which consumers "could practicably turn for alternative sources of the product." *FTC v. Freeman Hosp.*, 69 F.3d 260, 268 (8th Cir. 1995). Under the Horizontal Merger Guidelines, a relevant geographic market is the smallest region in which a hypothetical monopolist that was the only seller of the relevant product located within that region could profitably implement a "small but significant and non-transitory" increase in price. 2010 HORIZONTAL MERGER GUIDELINES § 4.2. Where suppliers can set prices based on customer location, and customers cannot avoid targeted price increases through arbitrage, suppliers may be able to exercise market power over customers located in a particular geographic region, even if a price increase to customers located in other geographic regions would be unprofitable. *Id.* at § 4.2.2.

Applying these standards to this case, we find that the relevant geographic market is North America. Because battery separators are tailored to a particular customer and type of battery, and sold through individualized negotiations, separator suppliers set separator prices based in part on customer location. IDF 275-79. Moreover, because separators are differentiated along a variety of dimensions according to customer

demand, a customer could not easily defeat a discriminatory price increase through arbitrage.²⁸ IDF 274.

Additionally, while the evidence shows that North American suppliers export separators to other parts of the world, it is undisputed that North American battery manufacturers do not consider foreign supply a reasonable competitive alternative to local supply due primarily to cost and quality. Foreign supply increases the risk of supply chain disruption and entails greater freight, warehousing, inventory and other costs. It also decreases the likelihood of a timely response to quality or technical problems. IDF 286-91, 312-14. With one exception, there is no evidence that any North American battery manufacturer has imported flooded lead-acid battery separators from outside North America. IDF 283-85, 311, 333-34, 346, 349-50, 352-53. The lone exception occurred in 2008 when EnerSys was forced to purchase separators from Daramic's plant in Feistritz due to a labor strike at Daramic's Owensboro, Kentucky plant. EnerSys estimated that importing separators from Europe increased its costs by approximately 20%. IDF 313. Other separator customers, as well as Daramic and Microporous, recognize the cost-based benefits of local supply. IDF 287-88, 290-300, 303-09. All of this serves to confirm that North America is the relevant geographic market.

C. MARKET PARTICIPANTS

Market participants are firms that currently supply products in the relevant market, as well as firms not currently selling in the market that are likely to provide rapid and effective supply responses to the exercise of market power by current sellers without incurring significant sunk costs. 2010 HORIZONTAL MERGER GUIDELINES § 5.1. Where a firm is actively attempting to sell its products to customers in the relevant market and those efforts impact the behavior of existing sellers, that firm may be treated as an actual competitor. *United States v. El Paso Natural Gas Co.*, 376 U.S. 651 (1964) (finding that a merger violated Section 7 where the acquired firm had made efforts to sell in the relevant market and those efforts, even though unsuccessful, had influenced the behavior of the acquiring firm in that market).²⁹

²⁸ Complaint Counsel established that Daramic and Entek currently charge different prices for separators in different geographic regions, which shows that suppliers can and do set prices according to customer location. That fact, along with the inability of customers to defeat a discriminatory price through arbitrage, supports the conclusion that the transaction could enhance Daramic's market power over North American customers, even if it did not have the same impact on customers located in other parts of the world. For similar reasons, we find the Elzinga-Hogarty test does not illuminate the competitive effects of this transaction because it considers competition based on supplier rather than customer location. See Kenneth G. Elzinga & Thomas F. Hogarty, *The Problem of Geographic Market Delineation in Antimerger Suits*, 18 ANTITRUST BULLETIN 45 (1973); Kenneth G. Elzinga & Thomas F. Hogarty, *The Problem of Geographic Market Delineation Revisited: The Case of Coal*, 23 ANTITRUST BULLETIN 1 (1978).

²⁹ See also *Marine Bancorp.*, 418 U.S. at 625 n.24 (noting that the unlawful merger in *El Paso* had "removed not merely a potential, but rather an actual, competitor" because the acquired firm's marketing efforts relative to one of the acquiring firm's customers had caused the acquirer to make major price and other concessions); 4 PHILLIP E. AREEDA & HERBERT HOVENKAMP, ANTITRUST LAW ¶ 912a (3d ed. 2006) ("The acquisition by an already dominant firm of a new or nascent rival can be just as anticompetitive as a

The ALJ found that Daramic and Microporous were the only firms participating in the deep-cycle separator market prior to the acquisition, with market shares of approximately 10% and 90% respectively. IDF 384-85. He also found them to be the sole participants in the motive market, respectively representing approximately 90% and 10% of the market. IDF 410. In the SLI market the ALJ concluded that Daramic accounted for approximately 48% of the market, Entek had approximately 52%, and Microporous was actively bidding for SLI business. IDF 439; ID at 259. Finally, he also determined that, while Daramic had a 100% share in the UPS market, Microporous was a “substantial factor” in that market. ID at 258. We affirm the ALJ’s conclusions with respect to the deep-cycle, motive and SLI markets. However, we find that Complaint Counsel failed to prove that Microporous was a participant in the UPS market.

1. Microporous Was a Participant in the North American SLI Market

We agree that Microporous was a participant in the North American SLI market, seeking to challenge Daramic and Entek’s hold on the market. Not only was Microporous actively competing for SLI business, it had made meaningful progress towards supply arrangements with JCI and Exide, two of the largest automotive battery manufacturers in the world with significant manufacturing facilities in North America. IDF 49-55; ID at 258-59. It is also clear that Daramic perceived Microporous as a competitive threat and reacted by reducing prices. IDF 820-21, 824-25, 849, 852.

JCI first approached Microporous about an SLI supply agreement in 2003, as part of JCI’s plan to generate more competition in the market. IDF 649-50. Daramic responded by convincing JCI to enter into a [REDACTED] supply contract with the suggestion it would cut off supply in Europe if JCI did not agree to a long-term commitment. IDF 663, 667, 677-78. At the same time, however, JCI continued to work with Microporous to develop acceptable SLI separators and qualified the SLI separators in 2007. IDF 684-90.

During this time, Microporous was also negotiating a supply agreement with Exide. IDF 710-16. In 2007, Microporous and Exide had entered into a memorandum of understanding (“MOU”) in which Microporous represented it would supply substantial volumes of SLI separators to Exide beginning in 2010. IDF 697-700. Microporous sent separator samples to Exide for testing, exchanged drafts of a supply agreement with Exide, and continued to meet and consult with Exide regarding an SLI separator. IDF 707-09. The MOU expired at the end of 2007, and the parties renewed the agreement in February 2008. IDF 710. Melvin Gillespie, who was responsible for Exide’s negotiations with Microporous, testified that when Exide renewed the MOU in February 2008, it planned to purchase SLI separators from Microporous beginning in January 2010. *Id.* Microporous and Exide were still engaged in discussions shortly before Daramic acquired Microporous in February 2008. IDF 711-16.

merger to monopoly. . . . [a] firm that has submitted bids against the dominant firm but lost is clearly an ‘actual’ competitor, perhaps even forcing the dominant firm to lower its bid in the face of a rival bidder.”).

Respondent tries to downplay Microporous' dealings with these customers. It argues, for instance, that Microporous failed to produce an acceptable SLI product for JCI and that their discussions ended in 2007. RAB at 25-26. But, while JCI did reject Microporous' early run of separators, the record shows that JCI qualified the Microporous SLI product in 2007. IDF 640, 651, 684-90. Moreover, JCI's decision to enter into a long-term supply agreement with Entek rather than Microporous in the fall of 2007 does not mean that Microporous was not an active participant in the SLI market. JCI's decision had little to do with Microporous' development or manufacturing capabilities and instead reflected JCI's concern that Daramic might acquire Microporous and that a trade secrets dispute between Daramic and Microporous³⁰ could delay Microporous' installation of necessary capacity by the end of 2008. IDF 691-93, 734.

Respondent also claims that Exide did not seriously pursue a supply relationship with Microporous. RAB at 26. Respondent notes that Exide did not renew the MOU until several weeks after the original had expired, and that the parties made no progress on a supply agreement in 2007. Respondent also points to a February 2008 email in which Steven McDonald, Microporous' Director of Sales and Marketing, expressed frustration with the pace of the negotiations with Exide. RAB at 27 (citing RX0285). However, Exide's Vice-President for Global Procurement testified that, in February 2008, when Exide's MOU with Microporous was extended, "We had full intention that we were going to be buying Microporous separators in 2010." Gillespie, Tr. 2976; IDF 710. Moreover, we fail to see why Microporous' expression of frustration with the pace of negotiations with Exide suggests Microporous was not seriously competing for business in the SLI market. Indeed, the document suggests just the opposite.

Finally, citing a November 2007 Board of Directors memorandum, Respondent contends the Microporous Board mandated a business strategy away from the production of SLI separators.³¹ RAB at 27 (citing RX0401). Here too, the weight of the evidence demonstrates otherwise. Both the former President and owners of Microporous testified that nothing in that Board document prevented Microporous from pursuing SLI opportunities, and that, absent the acquisition, Microporous intended to supply Exide. IDF 799-803; Trevathan, Tr. 3753. In fact, negotiations with Exide continued through February 2008, providing direct, contemporaneous evidence that Microporous did not regard pursuit of SLI business as foreclosed. IDF 710-16.

³⁰ The dispute concerned a PE manufacturing line Microporous had purchased from Jungfer, an Austrian company, in 1999. Under its contract with Jungfer, Microporous was prohibited from using Jungfer's trade secrets to sell PE separators in Europe. Daramic acquired Jungfer in 2001 and attempted to enforce the trade secrets clause against Microporous, to prevent Microporous from installing PE production lines in Europe. IDF 760-65.

³¹ The memorandum, titled "MPLP Strategic Mandates," was from the Microporous Board of Directors to Microporous' President Mike Gilchrist. Describing the company's strategic objectives for 2008, the Board wrote that, "[o]ther than filling the 2nd line in Austria, the Board does not endorse a pure PE growth strategy competing head-to-head with larger competitors (i.e. Daramic, Entek). Some exceptions may be made to this . . . but these and any other exceptions must be approved by Board on a case-by-case basis." RX0401.

There is also no question that Daramic perceived Microporous as a serious competitive threat in the SLI market. As early as January 2004, Daramic's head of worldwide sales, Mr. Roe, alerted the sales team that JCI might soon be pursuing automotive opportunities and that it had "become critical that we assess the true sales situation of [Microporous'] Cell-Force product." IDF 681 (quoting PX0244; Roe, Tr. 1248-51). By 2007, Daramic believed that Microporous was a serious competitive threat and that it had the potential to capture as much as 20 to 25 msm of Daramic's business in 2009 and an even larger share in 2010. IDF 807. Responding to a request concerning Daramic's 2008 budget and long range plans, Mr. Roe stated that "2008 will be the most challenging year ever faced by Daramic," that Daramic was "beginning to feel the real effects" of price competition and Daramic's past performance issues; and that, "unlike prior years, we have a true legitimate big competitor entering the market [Microporous] and for sure they will capture volume whatever it takes."³² IDF 435 (citing PX0482 at 2); IDF 809 (quoting PX0238 at 1; PX0922 at 362-63, *in camera*; Roe, Tr. 1302-03). Collectively, this evidence demonstrates that Microporous was a participant and actual competitor in the North American SLI separator market.

2. Complaint Counsel Failed to Prove That Microporous Was a Participant in the UPS Separator Market

In 2007, Microporous began developing a PE separator to compete with Daramic's Darak product, a non-PE separator made in Germany, as part of a research effort known as Project LENO.³³ IDF 244. Based on the status of Project LENO at the time of the acquisition, the ALJ concluded that Microporous was a potential competitor "poised" to enter the North American UPS separator market and was a "substantial factor" in that market. ID at 258-59.

Respondent disputes this, claiming that Microporous' research effort was unsuccessful and failed to lead to a commercially viable product. RAB at 27-28. Respondent also argues that Project LENO focused on developing separators for gel batteries primarily for European customers. *Id.* Thus, even if successful, the research would have had no impact on a North American market for flooded lead-acid UPS battery separators. *Id.* Complaint Counsel counter by arguing that Project LENO included the development of a "white PE" separator for flooded lead-acid UPS batteries, and that Microporous was testing a UPS product it expected would generate substantial revenues as early as 2008. CCAB at 8, 20-21.

We find that the evidence is not sufficient to prove that Microporous was a participant in the UPS battery separator market. Unlike in the SLI market, Microporous had not developed a commercially viable separator to offer North American UPS customers, nor had any customer qualified or come close to qualifying a Microporous UPS separator. There is also no indication that Daramic perceived Microporous as a

³² Likewise, there is evidence that Entek also considered Microporous to be a competitive threat in the SLI market. IDF 436; Weerts, Tr. 4517, *in camera*; PX1832 at 26-27, *in camera*.

³³ Respondent maintains Darak has never been sold for use in flooded lead acid batteries in North America. RAB at 28.

competitive threat in the UPS market, or that it reacted by competing more aggressively in the UPS market. In addition, while Project LENO did evolve to include research related to the development of a white PE separator for UPS batteries, the evidence suggests that the success of Project LENO was in doubt. The ALJ relied primarily on the testimony of Microporous' Director of Research & Development, George Brilmyer, to find otherwise. Based on Mr. Brilmyer's testimony, the ALJ concluded that the Microporous team believed it had found a solution to the "black scum" problem and that EnerSys planned to switch to the Microporous white PE product for its flooded lead-acid UPS batteries when it was qualified. IDF 622-24. The ALJ determined that, with Project LENO, Microporous "would likely have been in the [UPS separator] market within one year without the additional expenditure of sunk costs of entry." IDF 420. However, Mr. Brilmyer had left the merged company by August 2008 and testified he did not know the current status of the EnerSys tests on the white PE separator. Brilmyer, Tr. 1857. He also acknowledged that testing often takes years, the industry had been seeking a solution to the black scum problem for a long time, and Daramic was still working on a possible formulation when he left the company in August 2008. *Id.* at 1847, 1887, 1908. Moreover, Mr. McDonald, Microporous' Director of Sales, testified that when samples of a white PE product were provided to EnerSys in the summer of 2007, the testing ran into problems and could not be conducted in actual batteries. McDonald, Tr. 3866-68, *in camera*. Mr. McDonald also testified that an additional sample was provided to EnerSys in July 2008, but his understanding of the status of the project at the time of trial was that there is "no advantage with the white PE versus the PE they are already purchasing from Daramic." McDonald, Tr. 3869, *in camera*.

Considering the record as a whole, and in light of the evidence regarding entry barriers in this industry discussed below, we conclude that the evidence does not support the ALJ's conclusion that Microporous was a participant in the North American UPS market.

3. Entek Was Not a Participant In Either the Motive or Deep-Cycle Market

Of the four relevant markets, the ALJ concluded that Entek was a participant only in the SLI market. IDF 382-83, 392, 403, 421, 1027-30. Specifically, the ALJ found that Entek was committed to an SLI-only strategy, and that its past refusals and disinterest in response to customer invitations to supply non-SLI separators showed it did not intend to participate outside the SLI separator market. IDF 378-81, 394-98, 421, 1029-30.

Respondent initially argued that Entek was an uncommitted entrant in the deep-cycle and motive markets because it had previously sold separators for deep-cycle and industrial applications and could quickly shift supply to these applications in response to a price increase. RAB at 5-6, 28. Respondent also maintained that Entek had substantial excess capacity at the time of the acquisition and was discussing sales of deep-cycle and industrial applications with EnerSys, Exide and JCI. *Id.* at 28. In connection with its Third Motion to Reopen the Hearing Record, Respondent purported to present new evidence showing that "a competitor of [Daramic], which Respondent believes to be Entek . . . is providing separators for deep-cycle and motive applications to North

American customers, in direct competition with Daramic.” Brief in Support of Third Motion to Reopen at 1. Accordingly, Respondent now argues that Entek is an actual competitor in both the motive and the deep-cycle markets and that the ALJ erroneously concluded that the acquisition resulted in mergers to monopoly in those two markets. *Id.* at 2.

We disagree. There is no evidence that Entek is currently supplying separators for motive or deep-cycle batteries. Nor is there evidence suggesting a likelihood of timely entry by Entek in either market. Entek exited the motive market over ten years ago, deciding to focus on thin separators such as those used in SLI applications. IDF 1027, 1029. Prior to the acquisition, Entek declined numerous opportunities to re-enter the motive market.³⁴ IDF 395, 397, 1032, 1034. Although Entek had excess capacity in 2008,³⁵ and appears, at least initially, to have considered potential motive opportunities, the evidence does not show that Entek is likely to provide a rapid supply response. IDF 399. For example, while Entek responded to Exide’s November 2008 request for proposal to supply motive and UPS separators, Entek explicitly stated that Exide would have to pay for tooling and that it could not guarantee a competitive price. IDF 1035. These were important issues to Entek. IDF 1035 (citing Gillespie, Tr. 3129-30, *in camera*). At the time of trial in June 2009, Entek still had not run any material and did not know what the costs or pricing would be for industrial separators. IDF 1037; Weerts, Tr. 4509, 4527, *in camera*. Moreover, Exide estimated that testing separators for motive or stationary applications would take approximately two years. Gillespie, Tr. 2973-74.

Entek also had discussions with EnerSys, but here too the evidence does not show that Entek is a participant in the motive market. EnerSys first approached Entek at an industry conference in May 2008 about potential production of motive separators. IDF 1041. While indicating initial interest at the conference, Entek failed to return a signed non-disclosure agreement, which was the prerequisite for further discussions, despite numerous follow-up e-mails and telephone calls from EnerSys. *Id.* Then, shortly before trial, Entek submitted an offer for approximately 1,000 square meters of one profile of industrial product where EnerSys required six msm of that profile. IDF 1042. EnerSys determined that Entek’s profile would not work for its North American products, and it had no plans to order PE separators from Entek. IDF 1042-43. Moreover, even had the parties decided to proceed further, six to eight months of preliminary testing on pre-production samples would have been required, and production testing would have taken another two and a half years. IDF 1044.

³⁴ Likewise, when Crown Battery asked Entek if it could supply industrial PE separators during the Daramic Owensboro strike in August 2008, Entek could not do so because it lacked the proper tooling. IDF 394, 952.

³⁵ The record shows that Entek had substantial excess capacity in 2008. Much of that capacity was due to an expansion undertaken pursuant to a 2007 MOU under which Entek became JCI’s exclusive supplier in North America and Europe. Weerts, Tr. 4472-74, *in camera*; RX0131, *in camera*. The expansion was aimed at SLI separators, not motive or deep-cycle products, and most of the excess capacity was at Entek’s UK plant rather than its U.S. plant in Oregon. Weerts, Tr. 4458-59, *in camera*.

The recent evidence submitted by Respondent does not show Entek to be any closer to participation in the motive market. Daramic's CEO, Mr. Toth, stated that, in May 2010, he spoke with a JCI representative regarding "JCI's need for battery separators for industrial applications, including separators for golf cart batteries." Affidavit of Robert B. Toth, ¶ 2 (June 30, 2010), *in camera*. The JCI representative apparently responded that "Entek was willing to produce an industrial separator . . . and had, in fact produced industrial separators."³⁶ *Id.* at 3. However, in a declaration submitted by Complaint Counsel, Robert Gruenster, JCI's Executive Director of Product Engineering, stated that JCI does not manufacture motive batteries [REDACTED]. Declaration of Robert Gruenster, ¶ 2 (July 12, 2010), *in camera*; see also Hall, Tr. 2665.

Respondent also argues that Entek is a participant in the deep-cycle market, pointing to evidence that Entek has considered developing a deep-cycle separator for JCI.³⁷ RAB at 28. Entek has discussed supplying separators to deep-cycle customers. Prior to the acquisition, Crown Battery discussed purchasing a deep-cycle separator from Entek and expected to test an Entek separator for its deep-cycle batteries in 2009. IDF 1031; Balcerzak, Tr. 4138-39. It appears from Respondent's recent affidavits that Entek recently provided samples to JCI and Superior Battery for testing.³⁸ However, these discussions with customers are not sufficient to show that Entek is a participant in this market. More than two years after the acquisition, and despite evidence of Daramic's post-acquisition price increases in the deep-cycle market, there is nothing to suggest Entek has entered the deep-cycle market or even qualified a product. At best, the record shows that Entek is testing a product with JCI and Superior Battery, which is not enough to show that Entek is a market participant.

The evidence, in other words, does not show that Entek is in a position to provide a rapid and effective supply response to the exercise of market power by Daramic in the motive or deep-cycle markets. The ALJ therefore correctly concluded that Entek was not a participant in these markets, and the additional evidence that Respondent submitted on reopening does not persuade us otherwise.

³⁶ The reference in Mr. Toth's affidavit to "industrial separators" is ambiguous. Daramic has elsewhere used the term "industrial" to refer to a broad range of batteries – basically, all batteries other than SLI and other starter batteries. RX1305 at 7. As a result, it is unclear whether the phrase is intended to refer to separators for motive batteries. The other affidavits submitted by Respondent – all from Daramic employees – clearly refer only to golf cart (*i.e.*, deep-cycle) battery separators. See Affidavit of Randy A. Hanschu, ¶¶ 3, 6 (June 29, 2010), *in camera*; Affidavit of Steve McDonald, ¶ 3 (June 28, 2010); Affidavit of S. Tucker Roe, ¶¶ 4, 6 (June 30, 2010), *in camera*.

³⁷ Although JCI entered into a long-term supply agreement with Entek [REDACTED] [REDACTED] IDF 1046.

³⁸ See *supra* note 36.

D. REASONABLY LIKELY COMPETITIVE EFFECTS

1. The Acquisition Is Presumptively Illegal in the North American Deep-Cycle, Motive, and SLI Markets

The ALJ concluded that the acquisition was presumptively unlawful in all four relevant markets. In particular, the ALJ found that the merger created a monopoly in the deep-cycle and motive markets, where prior to the acquisition, Daramic and Microporous were the only two market participants. ID at 246-49, 251. The ALJ also found that Daramic entrenched its monopoly position in the UPS market by acquiring the only firm “poised” to enter that market. ID at 259. In the SLI market, the ALJ concluded that Daramic acquired one of its two competitors, recreating the duopoly that existed before Microporous began to compete in that market. ID at 259.

Respondent disputes the ALJ’s findings on market definition and Entek’s participation in the non-SLI markets, and challenges the ALJ’s market concentration findings on those grounds. Respondent also claims that Complaint Counsel failed to make out a *prima facie* case with respect to the SLI market because Microporous did not have SLI sales at the time of the acquisition. Respondent asserts that Complaint Counsel cannot establish a *prima facie* case unless they show an increase in the numerical concentration data. RRB at 18.

As explained above, we find that the ALJ properly defined four relevant markets and concluded that Entek was a participant in only the North American SLI separator market. We also agree that the acquisition was presumptively unlawful in the North American deep-cycle, motive and SLI separator markets. However, we conclude that Complaint Counsel have not met their burden with respect to liability in the North American UPS market because, as discussed above, they have not proven that Microporous was a participant in that market.³⁹

Daramic and Microporous were the only participants in the deep-cycle market, with market shares of approximately 90% and 10% respectively. IDF 384-385. The acquisition increased the HHI in the deep-cycle market by 1,891 points, resulting in an HHI of 10,000. IDF 384. Likewise, Daramic and Microporous were the sole participants in the motive market, with market shares of approximately 90% and 10% respectively. IDF 410. The merger raised the HHI in the motive market by 1,663 points, also resulting in an HHI of 10,000. *Id.* The concentration data in both the deep-cycle and motive markets is in itself more than sufficient to create a presumption of illegality in those markets.⁴⁰ *See Heinz*, 246 F.3d at 716 (increase in HHI of 510 in a market with HHI of 4,775 created a presumption “by a wide margin”); 2010 HORIZONTAL MERGER GUIDELINES § 5.3.

³⁹ We also find that the evidence regarding Project LENO is not sufficient to establish liability under a theory of potential competition.

⁴⁰ While we find that the evidence does not support Respondent’s assertion that Entek was a participant in the deep-cycle or motive markets, our conclusion that the acquisition is presumptively unlawful in these markets would not differ with a merger to duopoly.

At the time of the acquisition, Daramic and Entek were responsible for all sales in the North American SLI market. IDF 439. The market was highly concentrated, with an HHI of 5,005. IDF 439; *see Heinz*, 246 F.3d at 716 (HHI of 4,775 indicative of a highly concentrated market); 2010 HORIZONTAL MERGER GUIDELINES § 5.3. Although Microporous had not yet made sales in the SLI market, it was actively competing for business and constraining Daramic's prices. IDF 820, 822, 826-28, 833, 849, 850-52. The acquisition eliminated the impact that Microporous had on competition in the market and returned the market to a duopoly controlled by the two long-time incumbents. This evidence is sufficient to create a presumption that the merger was also unlawful in the SLI market.⁴¹ *See Chicago Bridge*, 138 F.T.C. at 1053; *Heinz*, 246 F.3d at 717.

2. **There Is Also Evidence of Reasonably Likely Anticompetitive Effects in the Deep-Cycle, Motive and SLI Markets**

The ALJ also concluded that the evidence showed a reasonable likelihood of anticompetitive unilateral effects in all four markets and a reasonable likelihood of anticompetitive coordinated effects in the SLI market. We concur with the ALJ's findings with respect to the deep-cycle, motive and SLI markets.

a. **Pre-acquisition competition between Daramic and Microporous**

Daramic spent many years working to develop a battery separator that would perform effectively in deep-cycle applications. IDF 457. It introduced Daramic DC, its first commercial separator for deep-cycle batteries, in 2002, and an improved product, Daramic HD, in 2005. IDF 459, 476. The evidence shows that Daramic developed its deep-cycle products to compete with Microporous' Flex-Sil rubber separator. IDF 489-90.

Before the acquisition, competition between Daramic and Microporous in the deep-cycle market resulted in lower prices for customers. Donald Wallace, Executive

⁴¹ In light of our conclusions below that barriers to entry into each of the relevant markets are significant, we find that liability in the SLI market could be premised in the alternative on the elimination of actual or perceived potential competition. Both doctrines apply to mergers that involve concentrated markets with few likely entrants. *Marine Bancorp.*, 418 U.S. at 624-25, 630. Actual potential competition rests on the theory that the merger eliminated a firm that was on the verge of entering the market *de novo* or through a toehold acquisition. *Id.* at 633; *accord Yamaha Motor Co. v. FTC*, 657 F.2d 971, 977-78 (8th Cir. 1981); *Mercantile Texas Corp. v. Board of Governors*, 638 F.2d 1255, 1265-70 (5th Cir. 1981). Perceived potential competition rests on the theory that the very presence of one of the merging parties as a potential entrant constrained the exercise of market power by current sellers in the market. *Marine Bancorp.*, 418 U.S. at 624-25. The facts here support liability under both theories. Microporous was the only firm in a position to enter the concentrated North American SLI market and was already bidding for business. Daramic perceived Microporous as a competitive threat and reacted by offering more competitive terms to those customers it believed it could lose to Microporous. Accordingly, even if Microporous was not an actual competitor in the SLI market at the time of the acquisition, the acquisition was nevertheless unlawful. The Agencies analyze acquisitions of potential competitors under the standard horizontal merger framework. 2010 HORIZONTAL MERGER GUIDELINES § 5.1.

Vice President of U.S. Battery, testified that after he told Microporous his company was buying deep-cycle separators from Daramic, Microporous offered a lower price for Flex-Sil. Wallace, Tr. 1927, 1945-46. Mr. McDonald, a Daramic sales manager and former Microporous employee, testified that Microporous had reduced its price in response to customer threats to switch to HD. McDonald, Tr. 3779, 3943. Trojan Battery, U.S. Battery, and Exide were each able to get a price reduction or avoid a price increase from Microporous by threatening to switch at least a portion of their deep-cycle business to Daramic HD. IDF 470, 520, 521, 525, 535.

Pre-acquisition competition between Daramic and Microporous also led to lower prices for customers in the motive market. Daramic's Vice-President for Sales and Marketing testified that he reduced prices on industrial separators in response to competing offers from Microporous. IDF 583; Roe, Tr. 1265; PX0409. In 2004, EnerSys was able to use a competing bid from Microporous to negotiate a price reduction from Daramic of approximately 14% for its North American motive business. IDF 593. The President of Bulldog Battery, Norman Benjamin, testified that after his company switched its motive business from Daramic to Microporous, Daramic tried to win the business back by offering a lower price. IDF 607; Benjamin, Tr. 3505, 3516. Microporous responded by reducing its price to close to the price Daramic had quoted. Benjamin, Tr. 3516-17. But where Daramic did not face competition from Microporous, it pushed for higher prices. In an internal Daramic email regarding Exide, a Daramic sales executive wrote to his colleague that Daramic should be prepared to push for a price premium, noting that "Since they can't go to Amerace [*i.e.*, Microporous], we can negotiate a little tougher."⁴² IDF 600; PX0843 at 1.

Microporous was also planning to expand its production capacity in both Europe and the United States. IDF 773-804. Daramic perceived this expansion as a threat in both the motive and SLI markets. PX0433 at 4; PX2242 at 1, *in camera*. In response, Daramic put together "the MP plan." IDF 820-23; Roe, Tr. 1292-94. Daramic identified East Penn Battery, Crown Battery, and Douglas Battery as customers that were "At Risk via MP." PX0258; Roe, Tr. 1288-90. In the fall of 2007, Daramic offered these customers contracts that would freeze prices in 2009 and limited future price increases to a pre-set formula as part of its "strategy against Amerace." IDF 822; PX0255, *in camera*.

b. Daramic's pre-acquisition intent

Daramic's internal business documents, including the documents given to Polypore's Board of Directors shortly before it met to consider the acquisition, provide convincing evidence of Daramic's pre-acquisition anticompetitive intent. In an effort to minimize the import of these documents, Respondent claims it acquired Microporous "as a means to diversify its product line, gain access to Microporous' rubber technology and enter the niche rubber market, as requested by customers." RAB at 3, 34 & n.23. While

⁴² Despite the evidence of the benefits to customers of pre-acquisition competition between Daramic and Microporous, Respondent asserted at oral argument that certain customers supported the acquisition. Transcript of Oral Argument at 71-72. However, the record does not show pre-acquisition customer support for the merger, nor does the record show that, at the time of trial, any customers were better off as a result of the merger.

Daramic was certainly interested in acquiring Microporous' rubber technology and increasing its sales to deep-cycle battery customers, that does not contradict the strong evidence of anticompetitive intent.

Daramic's documents show it was motivated to acquire Microporous at least in part to eliminate a competitive threat in the motive and SLI markets. These documents also show that Daramic saw the acquisition as a profitable alternative to expanding its share in the deep-cycle market through continued innovation and competition with Microporous on price and quality.

Several years before the acquisition, Daramic executives began to express their concerns about competition with Microporous and discuss an acquisition as a defensive strategy. IDF 759; PX0167. Daramic's head of sales sent a memorandum to Daramic's then-CEO, Frank Nasisi, on May 13, 2005, explaining the advantages and disadvantages of acquiring Microporous. PX0433 at 4; Hauswald, Tr. 638; Roe, Tr. 1192. Mr. Roe stated that if Daramic did not acquire Microporous, Microporous "may continue [its] plans for a second line resulting in either our loss of current customers or further reduction in our market pricing, hence loss of margins." PX0433 at 4.

Mr. Toth took over as CEO of Polypore in July 2005. IDF 754. Daramic's Vice President, Pierre Hauswald, helped him assess a potential acquisition of Microporous. *Id.* In a cover note on the subject, Mr. Hauswald wrote that Microporous represented "a threat to Daramic for the future (construction of a second line, former discussion they had with JCI . . .). Their first line cost us [REDACTED] year, in price concession and loss of business. The second line could cost us another [REDACTED]" PX2242 at 1, *in camera*. Internal Daramic emails from 2005 also show that Daramic executives were concerned about Microporous' expansion plans and more vigorous competition in both the motive and SLI markets.⁴³

Daramic remained concerned about Microporous' expansion just prior to the acquisition. On October 24, 2007, Mr. Hauswald reported to Polypore's Board on Daramic's due diligence on the proposed acquisition, known as "Project Titan." IDF 854. Documents prepared for the October 24, 2007 Board meeting show that Daramic continued to view the acquisition as a profitable alternative to competition in the motive and SLI markets. PX0738, *in camera*; PX0203, *in camera*.

On October 4, 2007, Michael Graff, Chairman of the Board, received an advance copy of the Project Titan October 24, 2007 Board presentation that included Mr. Hauswald's speaker notes as part of an interim report on the project. IDF 854. With the exception of the speaker notes and backup slides, the presentation to the Board on

⁴³ PX0168 (September 21, 2005 email from Pierre Hauswald to Robert Toth, stating that "[Microporous] is a real threat for our business, not only in the industrial market, but, later, in the automotive market, because there is no doubt that JCI and EXIDE will contact them for a deal, when our contracts expire."); PX0694 (October 14, 2005 email from Frank Nasisi to Pierre Hauswald and Robert Toth, responding to news that Microporous had started construction on a second production line, stating "We must do everything possible to stop this process The bottom line is that [Microporous] can be another Entek: building plants to exclusively supply EnerSys, JCI, East Penn and so forth.").

October 24, 2007 was identical to the slides previously provided to Mr. Graff. IDF 859. The slides and speaker notes include projections of Daramic's sales volumes, prices, margins and earnings with and without the acquisition. Daramic projected that without the acquisition, its volume would fall by ██████ in 2008, ██████ in 2009, and ██████ in 2011. PX0738 at 4, *in camera*. Daramic also projected that absent the acquisition, it would suffer a loss of ██████ in 2008, ██████ in 2009, and ██████ in 2010 from competition with Microporous. *Id.* at 8. In a slide summarizing Daramic's business risks without the acquisition, Daramic wrote that it faced a "5-year EBIDTA loss of ██████ by fighting against MP Phase III; Excess supply and market price erosion, Daramic market share loss of ██████" *Id.* at 10. Mr. Hauswald wrote in his speaker notes that without the acquisition, Daramic would have to "lower prices by ██████ beginning in 2008 on ██████ of IND volume to avoid MP phase 3." *Id.* at 4.

The Board presentation also included a slide describing benefits and synergies from the acquisition. These included "implement ██████ price increase to non-contract customers on industrial product in 2010-generating ██████ incremental EBITDA." PX0738 at 7, *in camera*. With respect to the deep-cycle market, the stated benefits included replacing HD with CellForce, improvements in efficiency at the Owensboro plant, and "increase in market price." *Id.* Daramic's 2008 budget also projected that absent the acquisition Daramic would lose increasing amounts of business to Microporous and would be forced to reduce prices. The budget documents projected that, with the acquisition, Daramic could increase the price of CellForce and industrial products. PX0823 at 13, *in camera*.

Shortly before the acquisition closed on February 28, 2008, the due diligence team provided the Board with a status report on the acquisition, citing, as a benefit, the intended implementation of a "█████ increase to non-contract customers on industrial product in 2010" and "phase out HD with CellForce . . . and increase in market price." IDF 861; PX0464 at 004, *in camera*.

c. Daramic's post-acquisition prices

The evidence also shows that Respondent announced post-acquisition price increases that were consistent with the anticompetitive increases projected in its pre-acquisition documents. This evidence is probative of the acquisition's reasonably likely anticompetitive effects and strengthens Complaint Counsel's *prima facie* case.

Approximately six months after Respondent acquired Microporous, it began to announce broad-based price increases ██████ IDF 611, 912-16; PX0950 at 14-15, *in camera*. Daramic's announced price increases were as high as ██████ IDF 611, 913-915; PX0950 at 14-15, *in camera*. While Respondent is correct that Complaint Counsel did not prove that all customers that received price increase announcements actually began to pay higher prices, the record does show that the announced increases were effective in at least some instances. For example, Daramic announced a ██████ price increase to East Penn Battery on PE separators for 2009. IDF 897; PX0950 at 15, *in camera*. Daramic's head of sales testified that

Daramic had effectively negotiated a [REDACTED] price increase with East Penn. Roe, Tr. 1192, 1222. Mr. Roe testified that the price increase applied to Daramic's HD products, as well as separators for SLI and motive applications. *Id.* Similarly, between August and November 2008, Daramic notified Bulldog Battery that it would be increasing the price of CellForce by [REDACTED], effective January 1, 2009. IDF 898; PX0950, *in camera*. Mr. Benjamin, Bulldog Battery's President, testified that Bulldog experienced a price increase of [REDACTED] on CellForce, effective January 1, 2009. IDF 898; Benjamin, Tr. 3503, 3505, 3521-22. By contrast, in the five years immediately preceding the acquisition, Microporous had only increased the price of CellForce to Bulldog Battery by approximately 3%. IDF 613. When asked at trial whether he tried to move his business to a different supplier in response to the price increase, Mr. Benjamin testified that "there is no other supplier, so you're kind of stuck." IDF 614; Benjamin, Tr. 3526.

Additionally, Complaint Counsel's expert credibly testified that Daramic's across-the-board price increases, whether implemented or announced, could not be explained by rising input costs, increasing demand, or changes in productivity alone. IDF 920-21; Simpson, Tr. 3213-20, *in camera*. Respondent argues Dr. Simpson did not rely on the correct price indices to measure post-acquisition changes in input costs. RAB at 37. However, Dr. Simpson testified that he selected the indices based on the input costs that Daramic itself cited to customers as the basis for increasing price. Simpson, Tr. 3214-19, *in camera*; PX2068 at 1. We find Dr. Simpson's testimony on this issue persuasive.

This strong qualitative evidence of anticompetitive unilateral effects in the deep-cycle, motive, and SLI markets corroborates Complaint Counsel's already strong *prima facie* case.

3. Anticompetitive Coordinated Effects Are Likely in the SLI Market

The ALJ found that Respondent failed to rebut the strong presumption of likely coordinated effects in a merger to duopoly in the SLI market. ID at 265. Respondent maintains that, because SLI separators are differentiated and sold through large individually-negotiated supply contracts, coordination is unlikely. RAB 39-40.

In a market with high barriers to entry, a merger to duopoly creates a presumption of anticompetitive coordinated effects. *Heinz*, 246 F.3d at 724-25 (finding that the elimination of a third rival would create a "durable duopoly," increasing both the opportunity and incentive for the duopolists to coordinate to increase price); *FTC v. PPG Indus.* 798 F.2d 1500, 1503 (D.C. Cir. 1986) (noting that "where rivals are few, firms will be able to coordinate their behavior either by overt collusion or implicit understanding, in order to restrict output and achieve profits above competitive levels"). By eliminating Microporous as a third player in the SLI market, the acquisition increased the likelihood of anticompetitive coordinated effects. A defendant can defeat the presumption of likely coordination with evidence showing structural barriers to coordination in the market. *FTC v. CCC Holdings, Inc.*, 605 F. Supp. 2d 26, 60 (D.D.C. 2009). Respondent has not met that burden here.

Respondent is correct that battery separators are differentiated products and, in many cases, sold through large negotiated contracts. Respondent is also correct that these factors make it more difficult for sellers to coordinate on price and increase the incentives for sellers to deviate from any coordinated pricing arrangement. But there is a strong presumption of coordination in a market with only two sellers, and the evidence regarding industry custom and practice supports that presumption here.

Despite product differentiation, price levels and price increases are relatively transparent in the industry. Daramic announces price increases publicly. In 2005, after Daramic announced that it was increasing prices, Daramic's head of sales told his colleagues in an internal email that he had "GREAT NEWS . . . [a]s you can see, Entek has followed our lead. Their increase for thinner (6 mil – 8 mil) backwebs is 4%-5% and the thicker is 7% -10%. I am sure NSG and [Microporous] will follow. We really should not be afraid to ask and get the 6% we announced." PX0235. When Daramic announced its 2009 price increases in the fall of 2008, it did so in a press release. PX0371. Moreover, Daramic's Vice-President, Mr. Hauswald, testified that the separator industry is small enough that sellers are typically able to acquire competitive information from customers in the course of negotiations. IDF 731-33; Hauswald, Tr. 629, 834-40, *in camera*. Based on both the presumption of coordination and the evidence regarding pricing transparency, we conclude that anticompetitive coordinated effects in the SLI market are likely.⁴⁴

E. RESPONDENT'S REBUTTAL EVIDENCE

While we conclude that Complaint Counsel have established a *prima facie* case of likely competitive harm in the North American deep-cycle, motive and SLI separator markets, Respondent can rebut Complaint Counsel's case with evidence that shows that competitive harm is unlikely. *Heinz*, 246 F.3d at 725. Respondent argues that entry and power buyers would counteract any potential anticompetitive effects from the acquisition. We affirm the ALJ's conclusion that Respondent did not satisfy its burden of production.⁴⁵

⁴⁴ Respondent argues that it has lost significant business from JCI and Exide to Entek since the acquisition, demonstrating vigorous competition in the SLI market. RAB at 39. We find otherwise. As an initial matter, JCI entered into a long-term supply agreement with Entek [REDACTED] before the acquisition, even though the agreement was not effective until JCI's contract with Daramic expired in December 2008. IDF 734, 736. And while Exide did move a portion of its business from Daramic to Entek since the acquisition, the evidence shows that Exide's long-term supply arrangement with Daramic expired, and Exide adopted a strategy of avoiding sole-source arrangements. IDF 744, 747. We do not agree that these events show coordination in the SLI market is unlikely post-acquisition.

⁴⁵ At trial, Respondent also argued that evidence of efficiencies and Microporous' financial condition were sufficient to rebut Complaint Counsel's *prima facie* case. ID at 293-300. The ALJ rejected these arguments and Respondent has not raised these arguments in its appeal briefs. However, because Respondent's Notice of Appeal challenges all portions of the ID relating to Count I, we have reviewed the evidence in support of these defenses and agree with the ALJ that Respondent's evidence regarding efficiencies and Microporous' financial condition at the time of the acquisition is not sufficient to show that competitive harm from the acquisition is unlikely.

1. Entry

Even mergers in concentrated markets are unlikely to harm competition where entry is likely, timely and sufficient to alleviate the otherwise likely anticompetitive effects. *FTC v. Cardinal Health, Inc.*, 12 F. Supp. 2d 34, 55 (D.D.C. 1998); 2010 HORIZONTAL MERGER GUIDELINES § 9. For entry to constrain the likely harm from a merger that enhances market power, the scale must be large enough to constrain prices post-acquisition. *Chicago Bridge*, 534 F.3d at 429. Respondent's burden is to produce evidence sufficient to show that the likelihood of entry "reaches a threshold ranging from 'reasonable probability' to 'certainty.'" *Id.* at 430 n.10. The history of entry in the relevant markets "is a central factor in assessing the likelihood of entry in the future." *Cardinal Health*, 12 F. Supp. 2d at 56; 2010 HORIZONTAL MERGER GUIDELINES § 9.

The ALJ concluded that entry into the relevant markets is slow and difficult and that neither Asian manufacturers nor Entek were likely to enter the markets and restore lost competition. ID at 283-88. Respondent contends that entry barriers are low and that evidence of likely entry from Asian suppliers and Entek is sufficient to rebut Complaint Counsel's *prima facie* case. RAB at 41-50.

We find that the record does not support Respondent's arguments. In fact, Daramic itself acknowledges the existence of substantial barriers to entry. IDF 928-30. Among other barriers, a *de novo* entrant would face large capital requirements to build a separator plant of sufficient size and scale to operate profitably and service large customers. IDF 924-25, 928-29. An entrant would also have to possess or develop the specialized technological expertise and know-how needed to build and operate a production line. IDF 935-63. Reputation also creates barriers to entry. IDF 970-71; PX0265 at 11. Patent protections and other proprietary information can create additional barriers. IDF 932-34.

Overcoming these entry barriers is a slow process. Design, installation and testing of a PE separator line can take eighteen to twenty months. IDF 974-75, 988-90, 992. Product testing and qualification with customers can last from 18 to 24 months for deep-cycle separators (IDF 1017-24); two to three years for motive and UPS separators (IDF 1011-13); and up to 21 months for SLI separators. IDF 1025. Since many of the steps towards entry must happen sequentially, entry takes several years. IDF 923. The history of entry into the North American separator markets supports our conclusion that entry barriers are substantial. There is no evidence that any firms other than Daramic and Microporous have entered the relevant markets in the past ten years. Daramic's history of entry in the deep-cycle market, and Microporous' history with respect to CellForce, and its motive and SLI separators, show that entry into the relevant markets is slow and costly, and developing a products reputation for reliability with customers is difficult, even for manufacturers with experience in other separator markets. IDF 457-69, 649-51, 684-90, 993-95.

The barriers are even greater for Asian firms. As discussed above, Asian supply is not a competitive alternative for North American customers due to transportation costs, import and export duties, and the increased costs and risks with respect to supply chain

management and warehousing. IDF 286-91, 312-19, 349, 1060. Excluding freight, import duties, and value-added tax, the prices that BFR quoted to EnerSys were more than 10% higher than Daramic's prices. IDF 341, 1096. When transportation costs and taxes are included, the differential is approximately 20%. IDF 341. Mr. Kung, a principal of Chinese SLI supplier BFR, testified that BFR cannot compete in North America because its prices are not competitive and it does not have enough English-speaking staff or capacity to supply North American customers. IDF 321, 336. Accordingly, BFR has no intention of selling PE separators in North America. IDF 343. Asian manufacturers also face higher production costs than North American manufacturers and have a relatively poor reputation for quality and reliability among North American battery manufacturers. IDF 1061, 1065-66, 1075-77, 1082, 1088-89. For example, EnerSys does not perceive Chinese SLI manufacturers BFR and Anpei to be comparable to Microporous in terms of quality or reliability. IDF 1101.

There is also little support for Respondent's contention that battery manufacturers would sponsor Asian entry into the North American market. RAB at 45-50. [REDACTED]

[REDACTED] IDF 336, 339, 343, 1111, 1121. The record also shows that EnerSys at one time considered sponsoring development of a PE separator from Alpha Beta, a Chinese manufacturer that provides EnerSys with absorbed-glass-mat separators, but stopped plans to move forward because Alpha Beta lacked the expertise to justify a large capital investment. IDF 1124. Exide and East Penn Battery each testified that they did not intend to sponsor entry by any manufacturer, Asian or otherwise. IDF 1125-26. Nor does the evidence show that Asian firms could enter more quickly because their products have already been approved and qualified by North American customers.⁴⁶ While some battery manufacturers have performed preliminary testing on material produced by certain Asian manufacturers, the results have generally not been encouraging, and none of the Asian manufacturers has yet been qualified to provide separators in any of the relevant product markets. IDF 1102, 1061, 1081-83, 1095, 1102.

Significantly, no Asian firm has entered the North American separator market, despite Daramic's post-acquisition price increases. IDF 897-916. In fact, there is no evidence that any Asian separator manufacturer has ever sold separators to North American customers. IDF 346, 349. When Respondent's counsel was asked at oral argument about Asian imports, he stated that there had been "interaction" between North American customers and Asian suppliers, but he could not point to any actual sales or imports into North America, or even the likely prospect of such sales. Oral Argument Tr. at 33-35. Interaction between North American customers and Asian firms is not sufficient to show a likelihood of entry. As we explained in *Chicago Bridge*, mere

⁴⁶ Respondent overstates the evidence supporting this argument. RAB at 43. The record shows that in 2003, East Penn tested and approved a separator from Anpei, a Chinese manufacturer, for a small engine battery, such as those used in lawn mowers, though it never purchased any of the separators. IDF 1108; Leister, Tr. 3992, 4032-33; RX0079. Otherwise, the evidence Respondent cites shows only that North American customers have conducted the first steps of the testing and qualification process. IDF 1001, 1004-05.

evidence of customers inquiring about producers' willingness to supply products is not sufficient to establish an entry defense. 138 F.T.C. at 1102.

We also find that the evidence does not support Respondent's argument that entry by Entek is likely to alleviate the anticompetitive effects of Daramic's merger to monopoly in the deep-cycle and motive markets. Entek exited the motive market years ago and has since shown little interest in pursuing opportunities in that market. IDF 398, 1029. To the contrary, it has committed itself to an SLI strategy. *Id.* Entek has acknowledged in post-acquisition commercial communications that it is unlikely to be price-competitive in other markets. IDF 1035; Gillespie, Tr. 3040, *in camera*; Weerts, Tr. 4509, *in camera*. An Entek representative testified that Entek would face costly technical difficulties producing the thicker non-SLI separators. IDF 1030; Weerts, Tr. 4515-16, *in camera*. These price and cost considerations suggest not only that Entek is unlikely to enter the motive market, but that if it did, entry would not be sufficient to constrain Daramic's pricing unless or until these disadvantages were overcome. Moreover, Entek would also face the delays associated with qualification, which, for motive separators, are particularly lengthy. IDF 402, 1011-13; Gillespie, Tr. 3038-39, *in camera*.

Additionally, while recent evidence suggests that Entek is taking some steps to enter the deep-cycle market, there is no evidence that Entek's separators have been qualified. Qualification in deep-cycle markets typically takes between eighteen and twenty-four months. IDF 1018-24. Even if we assume that Entek's deep-cycle products will be qualified and that Entek eventually will enter the market, Daramic's own history of entry in the deep-cycle market suggests it will take several years before Entek's participation in the market would restore lost competition. IDF 993. Thus, evidence of Entek's recent steps towards entering the deep-cycle market is not sufficient to show that a merger to monopoly in the deep-cycle market is not likely to cause substantial competitive harm.

2. Power Buyers

Respondent argues that large buyers like JCI, Exide, EnerSys, and Trojan Battery will prevent the exercise of market power that Daramic gained through the acquisition. RAB at 4-5. However, even large and sophisticated customers cannot alleviate the anticompetitive effects of a merger if the customers have no competitive options. Buyers now face a monopoly in the deep-cycle and motive markets. JCI, Exide, EnerSys, and Trojan Battery each testified that they have no alternatives to Daramic in these markets. IDF 206, 210, 555, 574, 579; Hall, Tr. 2703-07. Although Respondent argues that large customers have demonstrated their past ability to constrain prices, the evidence shows that buyers previously negotiated lower prices by relying on the competition between Daramic and Microporous that no longer exists. IDF 523, 562, 529, 593-95. The evidence shows these customers now lack any leverage with Daramic and are paying higher prices post-acquisition. IDF 555-57, 574. The evidence also fails to show that these putative power buyers have leverage in the SLI market. The post-acquisition supply proposals to Exide are less favorable on pricing than what Exide was paying pre-

acquisition.⁴⁷ IDF 903-05. Overall, Exide's analysis shows that it will "pay more, in the millions of dollars more" for its separator supply in 2010 than it would have had to pay in the pre-acquisition environment. Gillespie, Tr. 3049-50, *in camera*.

While some customers have continued to bargain with Daramic for lower prices, a customer's struggle to avoid immediately acceding to a price increase does not render it a power buyer. The mere failure to acquiesce silently is hardly equivalent to a successful constraint of market power. Here, buyers typically responded to announcements of price increases by asking Daramic to justify the price increase or seeking to engage in negotiations to reduce its size,⁴⁸ but this is far from a showing of any substantial constraint on price. Similarly, even when customers attempted to use stronger tactics, they remained unable to avoid Daramic's price increases.⁴⁹

Moreover, even if we were to assume that the four claimed power buyers somehow would be able to avoid price increases as a result of their size and sophistication, there is no reason to believe that other Daramic customers would fare as well. Separator sales are individually negotiated for each customer, and the separators are manufactured with customer-specific designs. IDF 117. In these circumstances, smaller buyers would not be protected by the resistance offered by larger, more powerful customers. *See, e.g., United States v. United Tote, Inc.*, 768 F. Supp. 1064, 1085 (D. Del. 1991) (large customers that could protect themselves would not shelter smaller buyers from increased prices); *FTC v. Bass Bros. Enterprises, Inc.*, 1984-1 Trade Cas. (CCH) ¶ 66,041 at 68,616 (N.D. Ohio 1984) (large buyers could not protect remainder of purchasers).

VII. REMEDY

To remedy Respondent's violation of Section 7, the ALJ ordered complete divestiture of Microporous' assets, which included the manufacturing plants in Piney Flats and Feistritz, as well as the line in boxes. ID at 330-31; Order at ¶¶ I.AA, II.A, II.B. The divestiture also included any technology and intellectual property that Microporous owned before the acquisition, along with additions or improvements that Respondent made to those assets since the acquisition. ID at 338; Order at ¶ II.A. To ensure a divestiture buyer could continue operating the Piney Flats and Feistritz plants without

⁴⁷ The other putative power buyers do not have a recent pricing history with Daramic for SLI separators. EnerSys and Trojan Battery do not sell SLI batteries. IDF 56-57, 60. JCI's SLI business is covered by a 2007 exclusive contract with Entek. IDF 734, 736.

⁴⁸ In the deep-cycle market, Daramic announced a post-acquisition price increase of 15% on CellForce and 13% on Flex-Sil despite a contract that limited price increases. Trojan responded with a counterproposal accepting only much smaller increases. Daramic reduced its announced increase only slightly, to 13% on CellForce and 10% on Flex-Sil. When no agreement was reached, Daramic sued Trojan. The dispute had not been resolved as of the time of trial. IDF 557-60.

⁴⁹ EnerSys and Exide have short-paid invoices in response to price increases but have no choice but to pay the increases when Daramic threatens to cut off supply. IDF 562-63 (in the post-acquisition deep-cycle market, Exide ultimately agreed to pay a surcharge); IDF 205-06 (in the motive market, at the time of the trial, Daramic was seeking price increases that EnerSys would have no choice but to pay if Daramic threatened to cut off supply).

disruption, the ALJ also ordered Respondent to grant the acquirer a perpetual, worldwide, royalty-free license to Daramic technology that Respondent used at these manufacturing facilities. ID at 338; Order at ¶ II.C.4. Respondent was ordered to agree that it would not sue the acquirer to block access to technology that Respondent owned at the time of divestiture, where the lawsuit would interfere with the acquirer's ability to compete in the relevant markets. ID at 338; Order at ¶ II.F.1. The ALJ also ordered other ancillary relief to support the divestiture and restore competition that was lost as a result of the acquisition.⁵⁰ ID at 339-41.

Assuming liability, Respondent argues that divestiture of the Feistritz plant is not necessary to restore competition in North America. RAB at 50-56; RRB at 16-17. Respondent also challenges the portion of the ALJ's order requiring it to grant the acquirer a license to certain Daramic intellectual property used since the acquisition. Respondent also takes issue with two of the ancillary provisions: Paragraph VI, regarding customer contracts executed after the acquisition, and Paragraph V.B.1., regarding maintenance of the Microporous workforce. RAB at 57-58.

The purpose of relief in a Section 7 case is to restore competition lost through the unlawful acquisition. *See Evanston Northwestern*, Comm'n Op. on Remedy at 3 (Apr. 28, 2008), available at www.ftc.gov/os/adjpro/d9315/080428commopiniononremedy.pdf; *Ford Motor Co. v. United States*, 405 U.S. 562, 573 n.8 (1972). We recognize that complete divestiture is generally the most appropriate way to restore competition lost through an unlawful acquisition. *See United States v. E.I. du Pont de Nemours & Co.*, 366 U.S. 316, 329 (1961); *Chicago Bridge*, 534 F.3d at 441. Moreover, because Complaint Counsel have established a strong case of liability in three of the relevant markets, any doubts as to remedy should be resolved in favor of broader relief. *See E.I. du Pont de Nemours*, 366 U.S. at 334; *Chicago Bridge*, 138 F.T.C. at 1164.

In accordance with these well-established principles, we conclude that complete divestiture is the most appropriate remedy. As discussed in more detail below, complete divestiture provides the greatest likelihood that the asset package will restore competition and be sufficiently viable to readily attract an acceptable buyer. We therefore order Daramic to divest all the assets it acquired from Microporous, including the plant in Feistritz. We also adopt the remaining provisions of the ALJ's Order with certain modifications.

A. DIVESTITURE

The Commission is "clothed with wide discretion in determining the type of order that is necessary to bring an end to the unfair practices found to exist." *FTC v. National*

⁵⁰ Paragraph III of the Order provides for the appointment of a Monitor Trustee to ensure compliance with the Order. Paragraph IV provides for a divestiture trustee in the event Respondent does not divest within the required time frame. Paragraph V requires Respondent to maintain the Microporous assets pending divestiture. Paragraph VI requires Respondent to permit customers to reopen and negotiate or terminate contracts entered into by Daramic after its acquisition of Microporous. Paragraph VII relates to Count II and is not at issue on appeal. Paragraph VIII prevents Respondent from introducing any battery separator using the Microporous cross-linked rubber technology for a period of two years following the divestiture.

Lead Co., 352 U.S. 419, 428 (1957). In the exercise of that discretion, the Commission may order divestiture of assets outside the relevant market where divestiture of those assets is necessary to restore competition within the relevant market. *See Chicago Bridge*, 138 F.T.C. at 1163-64 (ordering divestiture of assets for building water tanks although the relevant product market was cryogenic tanks, because cryogenic tank sales were irregularly timed and water tank sales would provide the regular income stream needed for the divestiture buyer's viability), *aff'd*, 534 F.3d at 442. We find that complete divestiture of the former Microporous battery separator business, including the Feistritz plant, is warranted here.

As an initial matter, a divestiture package that includes the Feistritz plant will allow the acquirer to maintain sufficient capacity at the Piney Flats facility to ensure that it can effectively compete for business in North America. Prior to the acquisition, Microporous produced CellForce for its foreign customers at its Piney Flats plant, which constrained its capacity to compete for additional business within North America. IDF 769, 795. In 2005 and 2006, the CellForce line at Piney Flats was operating at full capacity. RX0741 at 65; Trevathan, Tr. 3667-68. As a result, Microporous was unable to respond to new North American customer demand. For example, EnerSys was using CellForce in Europe but was unable to obtain CellForce for North America because of this capacity constraint. Axt, Tr. 2126. Similarly, Trojan Battery's ability to expand its use of CellForce for its deep-cycle batteries was limited by the capacity constraint at Piney Flats. Godber, Tr. 276. Once the Feistritz plant was under construction, Microporous became a more vigorous competitor in North America. Microporous was able to commit to additional North American CellForce sales to EnerSys, Trojan Battery, and U.S. Battery. IDF 787, 1280; Godber, Tr. 226-27; PX1741 at 4, *in camera*. Microporous also entered into discussions with other battery separator customers who had not yet made purchase commitments at the time of the acquisition. IDF 797.

Absent divestiture of the Feistritz plant, an acquirer is likely to face the same capacity constraint Microporous faced before it constructed the Feistritz plant. CellForce production in 2008 totaled nearly [REDACTED]. RX0677, *in camera*. Microporous' backfill efforts that began after 2008 led to additional commitments from EnerSys, Trojan, and U.S. Battery that would have added more than 3.3 msm to sales. RX0207, *in camera*; Godber, Tr. 226-27; PX1741, *in camera*; Wallace, Tr. 1977; Qureshi, Tr. 2037. The 2008 production plus the additional commitments exceeded the Piney Flats plant's CellForce capacity of [REDACTED]. RX0561, *in camera*. Beyond the existing commitments, Microporous executives had no doubt they would be able to backfill the remaining freed capacity at Piney Flats after production for European customers was transferred to Feistritz. Microporous' President at the time of the acquisition testified that in 2007 "we had more offers for business than we were going to be able to handle under the scenario of backfilling." Gilchrist, Tr. 344. Because the purpose of any divestiture is to create an effective future competitor that would restore lost competition, it is important to avoid saddling the divestiture buyer with capacity constraints that would hinder its ability to seek future sales and limit its competitive significance in the relevant markets.

Respondent argues that even if Piney Flats does not provide the acquirer with enough capacity to compete effectively in North America, divestiture of the line in boxes

is the proper solution. We disagree. The line in boxes is not yet operational at Piney Flats. IDF 1269. Although design and planning work has been done and much of the long-lead equipment has been acquired, not all of the necessary equipment is on hand. IDF 775, 1268. As of the time of the trial, no work had been done to install the line. IDF 777. On average, it takes about four months to install equipment and about two months to start up and debug a separator line. IDF 975. Even after installation, more time will be necessary for the line to operate efficiently, and it will take six months to fully train the manufacturing line workforce. IDF 985. The acquirer would also need time for customers to qualify any material produced on the new production line. Gilchrist, Tr. 322-23, 348. Thus, the line in boxes would not provide the acquirer with the timely or certain production capacity it would need to compete effectively in North America when the order takes effect. Moreover, while the line in boxes and the CellForce line at Piney Flats would provide sufficient capacity to produce the current worldwide volume of CellForce, if that capacity were largely employed to produce CellForce for motive and deep-cycle customers, the acquirer would not have meaningful capacity to compete for SLI business with either CellForce or a pure PE separator, as Microporous was doing at the time of the acquisition.⁵¹

In addition to eliminating the capacity constraint in North America, a divestiture package that includes the Feistritz plant will also allow the acquirer to offer North American customers benefits they find attractive, and that Microporous would have offered absent the acquisition. The evidence shows that some customers prefer suppliers with multiple plants as insurance against supply disruptions at any one location. IDF 313 (finding that EnerSys imported separators from Daramic's Feistritz plant for use in Mexico during a 2008 strike at Daramic's Owensboro plant); Hauswald, Tr. 1073-74 (describing how Daramic shifted production from Owensboro to Piney Flats to partially compensate for the strike at Owensboro). EnerSys, Trojan Battery, Exide, and Crown Battery all testified that it was important to have a supplier with more than one plant for an essential input like a separator. IDF 1273; Axt, Tr. 2129-31; PX1660 at 2-3; Godber, Tr. 225-26; Gillespie, Tr. 2993; Balcerzak, Tr. 4125-26. Indeed, when Microporous had only the plant in Piney Flats, EnerSys would not commit to additional volume unless Microporous had another manufacturing facility. IDF 1277. Daramic itself considers multiple plants an advantage and emphasizes its multi-plant operations as a selling point to customers.⁵² Roe, Tr. 1318.

Customers also prefer suppliers with global operations. Two of Microporous' largest global customers expressed their preference to work with a supplier that can provide local supply for their global operations. Larry Axt, Vice-President of Global Procurement for EnerSys, testified that his company had large manufacturing operations in both Europe and North America, and he preferred to do business with a supplier that

⁵¹ The capacity of the line in boxes is 11 msm, which can be used for either CellForce or a pure PE separator. PX0063 at 3. The CellForce line in Piney Flats, plus the line in boxes, would provide capacity of 22 msm.

⁵² Respondent now argues that customers could gain equivalent protection through other steps such as acquiring and holding backup supplies. This, however, would increase the customers' warehousing and inventory costs and make it more difficult for the supplier to compete effectively.

could provide supply locally to both regions. Axt, Tr. 2108-09. Although EnerSys does more business in Europe than in North America, it is the largest producer of industrial batteries in the world, with three plants producing motive batteries located in North America. IDF 56-59, 278. Similarly, Melvin Gillespie, Vice-President of Global Procurement for Exide, testified that because Exide has large operations in both North America and Europe, a Microporous with production capacity in both North America and Europe “would be the best model for us.” Gillespie, Tr. 3131-3132, *in camera*. Exide is also one of the largest buyers of battery separators in the world. IDF 52-55. At the time of the acquisition, Microporous was able to offer all its customers the insurance of multiple plants and the cost advantages associated with global operations. These attributes would have made Microporous a more attractive option for North American customers, and a more effective competitor in the relevant markets. Divestiture of the Piney Flats plant alone, even with the line in boxes, would not restore the more attractive competitor lost through the unlawful acquisition.⁵³

Respondent also claims that a divestiture package that includes the Feistritz facility will not be viable in the marketplace because Feistritz is currently operating at a loss. According to Respondent, an order that requires divestiture of Feistritz without a minimum price is punitive. RAB at 56. We agree with Respondent that we must consider the viability of the asset package in the marketplace. We conclude, however, that excluding Feistritz from the divestiture package creates the greater risk to marketplace viability. As we explain above, a divestiture package that does not include the Feistritz plant will not provide the acquirer with sufficient capacity to expand in the North American markets for motive and SLI separators. Moreover, since the acquisition, Daramic has transferred CellForce production for EnerSys’ foreign plants from its Piney Flats plant to Feistritz, which Microporous was planning to do at the time of the acquisition. Gaugl, Tr. 4569-70; Trevathan, Tr. 3762-63. EnerSys is also currently an important CellForce customer in North America. Axt, Tr. 2099-2101, 2108. Excluding the Feistritz facility from the divestiture package would result in a buyer acquiring the entire CellForce business, including the EnerSys contracts, but not the production facilities that Daramic currently operates to fulfill those contracts. Without both production facilities, the associated disruption to the ongoing CellForce business will likely diminish rather than enhance the marketability of the former Microporous business.⁵⁴

⁵³ Respondent also contends that because Microporous was “viable” before operations at Feistritz commenced, a divestiture buyer would not need the Feistritz plant for viability. But even if that were true, Respondent’s contention is beside the point. Creating a firm whose operations are merely viable would not fully replicate the competition that Daramic unlawfully eliminated.

⁵⁴ See FED. TRADE COMM’N, STATEMENT OF THE FEDERAL TRADE COMMISSION’S BUREAU OF COMPETITION ON NEGOTIATING MERGER REMEDIES (Apr. 2, 2003), *available at* <http://www.ftc.gov/bc/bestpractices/bestpractices030401.shtm>. In policy guidance materials, the Commission’s Bureau of Competition has stated that divestiture of an autonomous ongoing business increases the likelihood that a divestiture package will be viable and sufficient to restore competition in the relevant market because it requires the agency to make the fewest assumptions about the market and its participants. This same logic applies with even greater force to this consummated merger, where we know for a fact that Microporous, as it was constituted in February 2008, was a marketable business. *See*

Finally, Respondent argues that the Feistritz divestiture is unjustified because the plant was not in operation at the time of the acquisition. But the Feistritz plant was in operation and producing commercial output within a week of the acquisition. IDF 1266. At the time of the acquisition, Microporous had employees in place and was testing the components of the production lines. IDF 1265. And, as discussed above, the backfill efforts associated with Microporous' planned expansion impacted competition in North America for at least several months prior to the acquisition as they allowed Microporous to secure additional business.

We thus conclude that complete divestiture of Microporous, including the Feistritz plant, is necessary to restore lost competition to the relevant North American markets.

B. ANCILLARY RELIEF

Respondent contests three additional provisions in the ALJ's Order. Respondent first objects to the requirement that it maintain a workforce equal to that in place at the time of the acquisition. RAB at 56, n.33; Order at ¶ V.B.1. Respondent explains that the workforce has already dropped below the February 2008 level due to the recession, efficiencies implemented at the Piney Flats plant, and employees that have quit. *Id.* Paragraph V.B.1. is designed to prevent Respondent from depleting the workforce once a divestiture is ordered. It does not appear that Daramic had any general incentive to deplete the Microporous workforce in a manner that might adversely impact the viability and competitiveness of the Microporous business prior to the date of the Order, March 1, 2010. Accordingly, we modify Paragraph V.B.1. to require that Respondent maintain a workforce that is at least equivalent in size, training, and expertise to what was associated with the former Microporous as of March 1, 2010.

Respondent also objects to the scope of post-acquisition customer contracts that are terminable pursuant to Paragraph VI.A. The ALJ's Order allows customers to reopen and negotiate or terminate Daramic contracts that reflected the exercise of post-acquisition market power. Respondent objects to the ALJ's definition of "Terminable Contracts" because it would include contracts entered into by Daramic prior to the acquisition that are in effect between the date of a final order and the effective date of the divestiture. RAB at 57. Complaint Counsel agree that pre-acquisition contracts should not be terminable so long as post-acquisition changes to such contracts remain terminable. CCAB at 61. We therefore modify the definition of "Terminable Contracts" to exclude contracts entered into by Daramic prior to the acquisition, while preserving the customer's ability to terminate post-acquisition modifications to such contracts.

Finally, Respondent objects to Paragraph II.C.4. of the ALJ's Order, which requires that it grant to the divestiture buyer a license to certain intellectual property that

Chicago Bridge, 138 F.T.C. at 1164 ("[W]hat we know with certainty is that this combination of assets has made a saleable package in the past."); *RSR Corp.*, 88 F.T.C. 800, 894 (1976) ("[A]bsent clear proof, which is generally likely to come only at the compliance stage when a good faith effort to divest has been made, the presumption should be that an acquired competitive entity can be viably restored to its pre-acquisition status.").

was owned or used by Daramic *prior* to the acquisition. RAB at 57. Complaint Counsel have clarified that they interpret the definition as only including such “intellectual property that Respondent *voluntarily* chose to use in and commingle with Microporous’ operations.” CCAB at 61 (emphasis in original). The license is not, therefore, meant to extend to all of Respondent’s pre-acquisition intellectual property, but only to such intellectual property as Respondent may have chosen to use or incorporate in Microporous operations or Microporous battery separators during the course of the investigation, litigation, and pending divestiture.

We retain the licensing provision because it protects the divestiture buyer from having to, in effect, remove any improvements or alterations that Respondent has incorporated in the products by using Daramic pre-acquisition intellectual property. Removal of the incorporated intellectual property could adversely impact customers of the divestiture buyer and undermine the divestiture buyer’s reputation. In addition, the threat of removal could harm sales of the battery separators that would be divested if customers were to perceive that such improvements would be removed from products delivered after divestiture. However, we modify the definition of “Shared Intellectual Property” to make it clear that not every “Retained Asset” is included in the license to the divestiture buyer. The scope of the license extends only to such intellectual property that the Respondent chose to use or incorporate in the operations or separators that will be divested.