IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLORADO
DENVER DIVISION

CRUSOE ENERGY SYSTEMS LLC,	§	
	§	
Plaintiff,	§	
	§	Civil Action No. 1:22-CV-2142
v.	§	Jury Trial Demanded`
	§	
ALKANE MIDSTREAM LLC,	§	
	§	
Defendant.	§	

CRUSOE ENERGY SYSTEMS LLC'S EMERGENCY MOTION FOR A TEMPORARY RESTRAINING ORDER AND PRELIMINARY INJUNCTION AND BRIEF IN SUPPORT

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I. INTRODUCTION

Pursuant to Federal Rule of Civil Procedure 65, Plaintiff Crusoe Energy Systems LLC ("Crusoe") respectfully moves the Court to grant a preliminary injunction to enjoin Defendant Alkane Midstream LLC ("Alkane") and its affiliates from using, manufacturing, selling, offering for sale, or importing the accused systems within the United States. In addition, until the Court has an opportunity to hear and rule on Crusoe's motion for a preliminary injunction, Crusoe respectfully moves the Court to grant a temporary restraining order ("TRO") to restrain and enjoin Alkane from the above-listed conduct. Crusoe seeks the temporary relief in order to maintain the status quo until there is an opportunity to conduct expedited discovery, submit a supplemental brief following discovery, and be heard by the Court. Crusoe also respectfully requests the Court enjoin Alkane, and those persons in active concert with Alkane, from altering and/or destroying any existing evidence that detail or discuss the accused products.

As set forth in Crusoe's Complaint (and exhibits thereto), Alkane has committed acts of infringement in Colorado by making, using, selling, and/or offering to sell the accused systems to Crusoe's Colorado customers. *See* Complaint at ¶¶ 4, 45; *see also* Ex. P at ¶¶ 37-42. In addition, Alkane is believed to have committed acts of infringement in other locations in the United States. *See* Complaint at ¶ 4; *see also* Ex. P at ¶¶ 2, 37-42. Absent relief, Crusoe will suffer imminent and irreparable harm from the infringement of its valuable utility patents: U.S. Pat. No. 10,862,307 (the "'307 Patent") (Ex. B) and U.S. Pat. No. 10,862,309 (the "'309 Patent") (Ex. C). *See Infra* § (IV)(B).[1] Accordingly, for the reasons set forth herein, a temporary restraining order and

[1] Crusoe has received notices of allowance for other patents, though they had not yet issued at the time of filing this civil action. In addition, Crusoe has a number of pending patent applications.

preliminary injunction are both justified and in the interest of justice.

II. FACTUAL BACKGROUND

A. Crusoe

Long before starting Crusoe, Denver natives Charles Cavness ("Charles") and Chase Lochmiller ("Chase") were grade-school friends at Kent Denver School. Complaint at ¶ 19. They remained friends over the years, with Chase going to MIT and gaining exposure to distributed network computing and the financial services industries, and Charles going to Middlebury College and gaining experience in the oil and gas industry. *Id.* at ¶¶ 20-21.

In 2018, they were back in Denver and decided to go for a hike together. *Id.* at ¶ 19. Among other things, they discussed their work. *Id.* at ¶ 26. Charles talked about his natural gas consultancy work and growing concern over the environmental impacts of that industry, while Chase discussed his foray into cryptocurrency investing and similar concerns over the environmental impacts of that industry. *Id.* at ¶¶ 22-26. During the hike, they had a "lightbulb" moment in which they envisioned an elegant solution to solve the natural gas "flaring"[2] problem and cryptocurrency mining's energy problem by harvesting stranded natural gas that would typically be burned at the well site and using it to generate electricity to offset the energy consumed during cryptocurrency mining. *Id*. at ¶¶ 27-28. By utilizing the stranded natural gas in this way, they could engineer a win-win-win-win solution: (1) eliminating a wasteful practice, (2) off-setting an energy intensive

[2] During oil extraction, there is typically excessive natural gas, and natural gas by-products, that are generated. These by-products, unless they can be safely connected to a gas pipeline, will build up on the oil extraction sites—this is known as "stranded" gas. Storing or harvesting the stranded gas can be difficult for a variety of reasons. With few options, well operators will simply burn the stranded gas on site—a process called "flaring." That is, rather than utilize or store the natural gas, well operators simply combust it. This is an incredibly wasteful practice that has recently received significant regulatory scrutiny across the country.

computing process on earth, (3) reducing strain on the electricity grid, and (4) amassing cryptocurrency assets at the same time. *See id*. ¶ 28.

In 2018, following that "light bulb" moment, Charles and Chase founded Crusoe in Denver, Colorado. Crusoe's mission is to provide innovative solutions to eliminate natural gas flaring, reduce the cost of computing, and minimize the carbon emissions that accelerate climate change. *Id.* at ¶ 29; Ex. A at ¶ 2. During the development of Crusoe's business, Crusoe repeatedly and continuously invested in research and development to provide its customers the best flare gas mitigation technology possible. Complaint at ¶ 36; Ex. A at ¶ 3. These efforts came to fruition in Crusoe's Digital Flare Mitigation® system, among others. Complaint at ¶ 37; Ex. A at ¶ 3.

Crusoe's investments in the development of its technology have been very successful and the resultant intellectual property is one of the company's most important assets. Complaint at ¶ 36; Ex. A at ¶¶ 3-5. Indeed, Crusoe has obtained patent protection for its Digital Flare Mitigation® system. *See* Complaint at ¶ 37; Ex. A at ¶ 4. Though Crusoe is a young organization, it is at the forefront of flare gas mitigation technology and is pioneering clean computing infrastructure solutions that reduce both the cost and the environmental impact of the world's expanding digital economy. Complaint at ¶¶ 29-30; Ex. A at ¶¶ 5-6.

Propelled by its intellectual property, Crusoe quickly found success both in Colorado and nationally. Complaint at ¶¶ 32-34; Ex. A at ¶¶ 5-6. Now operating more than 100 modular data centers, Crusoe has earned contracts and partnerships with many of North America's oil and gas operators and energy providers. Complaint at ¶¶ 32-34; Ex. A at ¶ 5. Crusoe's most recent accolade

is securing "unicorn"[3] status. *See The Crunchbase Unicorn Board,* crunchbase news (Aug. 21, 2022), available at: https://news.crunchbase.com/unicorn-company-list/.

Crusoe has emerged as the provider of a premier, scalable solution that reduces flaring by harnessing otherwise wasted energy to power energy intensive computing systems not just in the digital mining or cloud computing fields, but also in the graphical rendering, artificial intelligence, and medical research fields. Complaint at ¶ 27; Ex. A at ¶ 3.

B. Alkane and This Action

Alkane has sites in North Dakota and Texas and has now expanded to Colorado. *See* Ex. K (referencing Alkane's locations in the Williston and Permian Basins); s*ee also* Complaint ¶ 45. Historically, Alkane has primarily focused on converting natural gas extracted from a wellsite into liquid natural gas ("LNG") and capturing natural gas liquids ("NGLs"), while Crusoe's focus has been on flare gas mitigation systems designed to power energy intensive computing systems, such as those focused on cryptocurrency mining. *Compare* Ex. O at 2-4 *with* Ex. R at 2-4. Crusoe recently became aware that Alkane's offerings changed after Alkane had an opportunity to learn about Crusoe's innovative and patented flare gas mitigation systems. Complaint at ¶¶ 42; 49-55; Ex. A at ¶¶ 16-17; *compare* Ex. L at 3-4 (November 14, 2019 meeting, Alkane presenting LNG solutions) *with* Ex. M at 1–9 (October 6, 2020, Alkane presenting different services to committee).

Since Crusoe's founding, both Alkane and Crusoe have appeared at some of the same industry events and functions. *See e.g.,* Ex. L at 3-4 (Nov. 14, 2019 agenda); *See e.g.* Ex. J (March 3, 2020 agenda). During one such event on November 14, 2019, one of Crusoe's founders gave a

[3] Unicorn refers to a young private start-up company that has reached a valuation at, or exceeding, one billion dollars. *Unicorn*, Dictionary.com, (August 9, 2022), available at: https://www.dictionary.com/browse/unicorn. It is commonly used in the venture capital industry.

presentation about Crusoe's patented Digital Flare Mitigation® system, and disclosed details regarding the cost efficiency, benefits, use cases, components, and modular design of the system. *See generally* Ex. R. On March 3, 2020, Alkane had an additional opportunity to observe Crusoe's presentation and learn more about Crusoe's patented system and the benefits associated therewith when one of Crusoe's founders gave a presentation about Crusoe's patented Digital Flare Mitigation® system. *See* Ex. J. Thereafter, Alkane began offering systems that include the same features and capabilities as those Crusoe disclosed at the 2019 and 2020 meetings. *Compare* Ex. O (Alkane's 2019 materials focused primarily on converting natural gas into LNG and capturing NGLs) *with* Ex. M at 1-9 (Alkane's October 2020 materials disclose a system that uses flare gas to power a distributed computing system used for cryptocurrency mining).

In particular, Alkane began offering such systems to Crusoe's customers in an effort to poach their business. Specifically, on or about July 14, 2022, Crusoe learned two of its Colorado customers (hereinafter, the "Colorado Producers") had entered into an agreement with Alkane to take over the services Crusoe would have provided under an existing contract between Crusoe and the Colorado Producers.[4] *See* Ex. A at ¶ 9-11; *see also* Complaint at ¶¶ 40-42. On July 22, 2022, Crusoe attended a meeting to discuss the termination of its contract with the Colorado Producers. *See* Ex. A at ¶¶ 14-17; Complaint at ¶¶ 45-48. At that meeting, Crusoe learned that, while Alkane ultimately intended to convert the stranded natural gas at the Colorado Producers' well pad into

[4] Under the agreement between Crusoe and the Colorado Producers, Crusoe would have installed several modules of Crusoe's Digital Flare Mitigation® equipment to mitigate natural gas flaring at a well pad in Colorado (the "Colorado Well Pad"). *See* Ex. A at ¶ 9; Complaint at ¶ 40. Pursuant to the agreement, Crusoe had agreed to pay the Colorado Producers a set amount per Mcf for stranded flare gas consumed by Crusoe's system, which would in turn be used to power cryptocurrency mining. *See* Ex. A at ¶ 9; Complaint at ¶ 40.

NGL and LNG products that can be transported and monetized, it would take up to a year to set up such operations. *See* Ex. A at ¶¶ 14-15; *see also* Complaint at ¶¶ 45-46. In the interim, Alkane had agreed to provide flare-gas mitigation the same way as Crusoe's patented Digital Flare Mitigation® system—by using flare gas to generate electricity, which would in turn be used to power computer equipment for cryptocurrency mining. *See* Ex. A at ¶¶ 14-17; *see also* Complaint at ¶¶ 45-48. At the time Alkane agreed to do so, it knew or should have known not only of Crusoe's Digital Flare Mitigation® system, but also of the Asserted Patents. *See* Ex. A at ¶¶ 20-23; *see also* Complaint at ¶¶ 49-59. Alkane enticed the Colorado Producers to terminate the agreement with Crusoe and switch to Alkane by offering to pay a significantly higher price than Crusoe for the stranded natural gas. Ex. A at ¶¶ 16, 24; *see also* Complaint at ¶ 47.

Thereafter, Crusoe began investigating Alkane's offerings, and discovered that Alkane's systems infringe the Asserted Patents. *See* Ex. P at ¶¶ 37-42; *see also* Complaint at ¶¶ 61-80. Rather than compete with infringing products, Crusoe has filed the present lawsuit.

C. The Asserted Patents

The Asserted Patents claim systems designed to utilize fuel gases to power distributed computing devices. *See generally* Exs. B, C. Crusoe Energy Systems LLC is the current lawful owner of the Asserted Patents. A true and correct copy of the Asserted Patents are attached hereto as Exhibits B ('307 Patent) and C ('309 Patent).

The '307 Patent was filed on August 1, 2019 as U.S. Pat. App No. 16/529,152 and on its face claims priority to Provisional Application No. 62/713,368, which was filed on August 1, 2018. *See* Ex. B, (21), (22), (60). The '307 Patent, entitled "Systems and Methods for Generating and Consuming Power from Natural Gas," was duly and legally issued by the U.S. Patent and

Trademark Office ("PTO") on December 8, 2020. *See id*., (45), (54). The named inventors of the '307 Patent are Charles Cavness, Chase Lochmiller, and Kenneth Parker. *Id*., (72).

The '309 Patent is a continuation application of the '307 Patent, was filed on November 29, 2019 as U.S. Pat. App No. 16/694,883, and on its face claims priority to Provisional Application No. 62/713,368, which was filed on August 1, 2018. *See* Ex. C, (21), (22), (63). The '309 Patent, entitled "Systems and Methods for Generating and Consuming Power from Natural Gas," was duly and legally issued by the PTO on December 8, 2020. *See id*., (45), (54). The named inventors of the '309 Patent are Charles Cavness, Chase Lochmiller, and Kenneth Parker. Crusoe Energy Systems LLC is the current lawful owner of the '309 Patent. *See id*., (72).

III. LEGAL STANDARD

The standards for issuing a TRO are identical to the standards for a preliminary injunction. *See Hicks v. Jones*, 332 Fed. Appx. 505, 508 (10th Cir. 2009) (citing *Wilderness Workshop v. United States Bureau of Land Mgmt.*, 531 F.3d 1220, 1223 (10th Cir. 2008)). A plaintiff "must establish that he is likely to succeed on the merits, that he is likely to suffer irreparable harm in the absence of preliminary relief, that the balance of equities tips in his favor, and that an injunction is in the public interest." *Winter v. Natural Res. Def. Council, Inc.*, 555 U.S. 7, 20 (2008); *see also Purdue Pharma L.P. v. Boehringer Ingelheim GMBH*, 237 F.3d 1359, 1363 (Fed. Cir. 2001). However, "[t]he determination of a motion for a preliminary injunction and a decision on the merits are different and, thus, [it] is not necessary that plaintiff [] show positively that [it] will prevail on the merits before a preliminary injunction may be granted. Rather, plaintiff need only establish a reasonable probability of success, . . . not an overwhelming likelihood of success[.]" *Caught Fish Enterprises, LLC v. Action Mfg., LLC*, Case No. 1:10-cv-00656-REB, 2010 WL 2508397, at *2

(D. Colo. June 17, 2010) (internal quotations and citations omitted).

None of the four factors identified above are dispositive; rather, each factor must be considered and weighed in context of the circumstances. *See Hybritech Inc. v. Abbott Labs.*, 849 F.2d 1446, 1451 (Fed. Cir. 1988); *Monsanto Co. v. McFarling*, 302 F.3d 1291, 1297 (Fed. Cir. 2002) ("Courts should balance these four factors based on their relative weights.").

IV. ARGUMENT

Crusoe seeks temporary relief to enjoin Alkane's infringing conduct, for which there is no adequate remedy at law. *See Reebok Int'l, Ltd. v. J. Baker, Inc.*, 32 F.3d 1552, 1557 (Fed. Cir. 1994). As explained below, all four factors weigh in favor of granting emergency relief.

A. Crusoe is Likely to Succeed on the Merits

Crusoe is likely to succeed in establishing Alkane's infringement and in rebutting any potential challenges to the validity of the asserted claims.

1. Alkane Infringes at Least One Claim of The Asserted Patents

Alkane has and continues to make, use, sell, and/or offer to sell flare-gas mitigation systems that infringe one or more claims of the Asserted Patents.[5] *See* Ex. P at ¶¶ 37-42. Evidence demonstrating Alkane's infringement is included in the infringement charts attached hereto as Exhibits D and E, as well as the declaration of Crusoe's technical expert Dr. Brun Hilbert. *See* Exs. D-E[6]; Ex. P at ¶¶ 37-42.

[5] The terms and phrases in the asserted claims have their common and ordinary meanings to one of skill in the art in light of the specification. *See Phillips v. AWH Corp.*, 415 F.3d 1303, 1314 (Fed. Cir. 2005). Unless Alkane proposes or otherwise argues that a claim term (or terms) should be interpreted contrary to their plain and ordinary meaning in light of the specification, no claim construction is necessary to resolve this motion.

[6] Exhibits D and E are also attached to Dr. Hilbert's Declaration as Exhibits C and D, respectively.

That Alkane's systems infringe one or more of the Asserted Patents is not surprising given the compelling evidence of copying. As explained above, after having multiple opportunities to learn about Crusoe's patented system, Alkane shifted to offering flare gas mitigation systems that mirror those offered by Crusoe (*i.e.*, systems that use natural gas to power energy intensive distributed computing functions). *See supra* § (II)(A)(2); *compare* Ex. M at 1-9 *with* Ex. O *and* Ex. R at 4-5, 15-16 *and* Ex. L at 3-4 (Alkane's 2019 presentation materials do not include cryptocurrency mining services while Alkane's 2020 presentation materials include cryptocurrency mining services).

Alkane's motivation for copying Crusoe's innovative systems is transparent. Between 2019 and 2020, Alkane was performing poorly, as was much of the oil and gas industry at the time. *See* Ex. Q at 1 ("In response to a question from Senator Rust, Mr. Woods said the Coronavirus (COVID-19) pandemic and the decline in oil and gas prices have caused 50 percent of Alkane Midstream employees to be furloughed."); *see generally* Ex. N. Oil and gas prices had hit rock-bottom, resulting in reduced profits industry wide, while a single Bitcoin was trading for more than $10,500. *See generally* Ex. N; Yahoo Finance, *Bitcoin USD (BTC-USD)*, https://finance.yahoo.com/quote/BTC-USD (last visited Aug. 11, 2022) (On October 6, 2021, Bitcoin had an intraday high of $10,680.51.). In response, Alkane shifted its business to begin offering a system that infringes Crusoe's patents, *see* Complaint at ¶ 55, presumably in the hope of capitalizing on the growth in the cryptocurrency industry.

Alkane's conduct has the tell-tale signs of intentional wanton patent infringement. *SRI Int'l, Inc. v. Cisco Sys., Inc.*, 14 F.4th 1323, 1330 (Fed. Cir. 2021) (*cert. denied.*) ("As we said in Eko Brands, [u]nder Halo, the concept of willfulness requires a jury to find no more than deliberate or

intentional infringement." (internal quotations omitted) (quoting *Eko Brands, LLC v. Adrian Rivera Maynez Enters., Inc.*, 946 F.3d 1367, 1378 (Fed. Cir. 2020)). Indeed, given Alkane's knowledge of Crusoe's innovative systems and patents, there is little question that Alkane's copying, and thus its infringement of the Asserted Patents, is likely to be found willful and deliberate.

2. Crusoe's Asserted Patents Are Valid

Alkane is unlikely to be able to prove by "clear and convincing evidence" that the Asserted Patents are invalid or unenforceable. S*ee Microsoft Corp. v. i4i Ltd. P'ship*, 131 S. Ct. 2238, 2242 (2011). A patent is presumed valid, and "the burden of persuasion to the contrary is and remains on the party asserting invalidity." *Ralston Purina Co. v. Far-Mar-Co., Inc.*, 772 F.2d 1570, 1573 (Fed. Cir. 1985); *Titan Tire Corp. v. Case New Holland, Inc.*, 566 F.3d 1372, 1377 (Fed. Cir. 2009). Absent a persuasive showing of invalidity by Alkane, the statutory presumption alone establishes a likelihood of success on the issue of validity. *See Canon Computer Sys., Inc. v. Nu-Kote Int'l, Inc.*, 134 F.3d 1085, 1088 (Fed. Cir. 1998).

In addition, the prosecution history of the Asserted Patents supports that Alkane will not likely be able to demonstrate that the Asserted Patents are invalid or unenforceable. In particular, the prosecution history is brief, with only a single Office Action for each Asserted Patent, and some claims being allowed with no comment from the Examiner. *See* Exs. F, G. The brevity of the prosecution history indicates the patent examiner did not find a significant volume of prior art relevant to the validity of the claims. Alkane is equally unlikely to be able to present invalidating prior art.

B. Crusoe Will Suffer Irreparable Harm Absent an Injunction

"At the preliminary injunction stage, irreparable harm consists of harm that could not be sufficiently compensated by money damages or avoided by a later decision on the merits." *Canon, Inc. v. GCC Int'l, Ltd.*, 263 Fed. Appx. 57, 62 (Fed. Cir. 2008) ("*GCC Int'l.*"). ''Irreparable injury encompasses different types of losses that are often difficult to quantify.'' *Douglas Dynamics, LLC v. Buyers Products Co.*, 717 F.3d 1336, 1344 (Fed. Cir. 2013). "Price erosion, loss of goodwill, damage to reputation, and loss of business opportunities are all valid grounds for finding irreparable harm." *Celsis In Vitro, Inc. v. CellzDirect, Inc.*, 664 F.3d 922, 930-31 (Fed. Cir. 2012); *Kanga Care LLC v. GoGreen Enters. LLC*, Case. No. 1:13-cv-02770-PAB-BNB, 2014 U.S. Dist. LEXIS 159867, *9, 2014 WL 5889815 (D. Colo. Nov. 12, 2014) ("'Where the defendant produces a product violating a patent, the infringement upon the exclusive right to practice the teachings of [the] patent cannot be adequately compensated by monetary damages.'") (quoting *Otter Products, LLC v. FreeCo, Inc.*, No. 1:10–cv–02028–LTB, 2011 WL 1542150 at *3 (D. Colo. April 25, 2011)).

A party seeking injunctive relief must show a risk of irreparable injury which includes showing: (1) it is at risk of substantial and immediate irreparable harm, and (2) there is a causal nexus between the harm and the infringement. *See Jiaxing Super Lighting Elec. Appliance Co., Ltd. v. CH Lighting Tech., Ltd.*, Case No. 6:20-cv-00018-ADA, 2022 U.S. Dist. LEXIS 137964, *47-48 (W.D. Tex. July 21, 2022) (citing *Apple Inc. v. Samsung Elecs. Co.*, 735 F.3d 1352, 1359–60 (Fed. Cir. 2013) ("*Apple III"*)). There is a causal nexus when the harm suffered has "some connection between the patented feature and demand for [the infringer's] products." *See Apple III*, 735 F.3d at 1364.

Here, as explained below, Crusoe has and will continue to suffer substantial and immediate irreparable harm in the form of loss of market share, price erosion, and damage to its reputation and goodwill due to Alkane's infringement. In addition, the irreparable nature of this harm is further demonstrated by the uncertainty of Alkane's financial position.

1. Crusoe's Harm is Substantial, Immediate, and Irreparable

a. Crusoe has Already Lost Market Share

Crusoe has already lost market share since Alkane entered the Colorado market. Ex. A at ¶¶ 11, 14, 24. Alkane's entrance into the Colorado marketplace was paved by Alkane's infringing sale to Crusoe's customer. *See id*. Alkane's offer and sale of infringing services caused Crusoe to lose market share. *See id.* at ¶¶ 4, 11, 14, 24; Complaint at ¶¶ 42, 45, 47. Alkane's introduction of an infringing product into the market created direct competition between Crusoe and Alkane where there previously was none. *See* Ex. A at ¶¶ 30; *see also Trebro Mfg., Inc. v. Firefly Equip., LLC*, 748 F.3d 1159, 1171 (Fed. Cir. 2014) ("Trebro and FireFly are direct competitors selling competing products in this market. Thus, the record strongly shows a probability for irreparable harm."); *Douglas Dynamics*, 717 F.3d at 1345 ("Where two companies are in competition against one another, the patentee suffers the harm—often irreparable—of being forced to compete against products that incorporate and infringe its own patented inventions."); *Presidio Components, Inc. v. Am. Tech. Ceramics Corp.*, 702 F.3d 1351, 1363 (Fed. Cir. 2012) ("Direct competition in the same market is certainly one factor suggesting strongly the potential for irreparable harm without enforcement of the right to exclude."); *Polymer Techs., Inc. v. Bridwell*, 103 F.3d 970, 975–76 (Fed. Cir. 1996) (loss of market opportunities cannot be quantified or adequately compensated, and is evidence of irreparable harm).

Further, Crusoe's market share loss is not hypothetical, it is concrete; ***Crusoe has already lost customers*** due to Alkane's infringing product. *See* Ex. A at ¶¶ 11, 14, 16, 24; Complaint ¶ 42, 45, 47. As a result, Crusoe's Colorado market share has decreased. Ex. A. at ¶¶ 11, 14, 16, 24. Allowing Alkane to continue selling infringing products is likely to result in further loss of market share. *Id*. at ¶¶ 25-26; *see, e.g.*, *Bio-Tech. Gen. Corp. v. Genentech, Inc.*, 80 F.3d 1553, 1566 (Fed. Cir. 1996) (reduced revenues and lost goodwill justified an injunction); *Robert Bosch LLC v. Pylon Mfg. Corp.*, 659 F.3d 1142, 1154 (Fed. Cir. 2011); *TEK Glob., S.R.L. v. Sealant Sys. Int'l*, 920 F.3d 777, 793 (Fed. Cir. 2019) ("Head-to-head competition and lost market share tend to evidence irreparable harm.").

The competition between Crusoe and Alkane is not the sort of typical competition to be expected between participants in the same market. Rather, Crusoe is being forced to compete against Alkane's use, sales, and offers to sell infringing products that Alkane copied from Crusoe. *See supra* § (IV)(A)(2); *see also Douglas Dynamics*, 717 F.3d at 1345 (unfair to allow a patentee to compete against infringing products). As a result of Alkane's infringement, Crusoe will be forced to match Alkane's financial terms by paying its customers more for stranded natural gas, which will cut off Crusoe's ability to recoup its significant investments in the development of its patented technology. *See* Ex. A at ¶¶ 3-4, 25-26; *Mylan Institutional LLC v. Aurobindo Pharma Ltd.*, 2016 U.S. Dist. LEXIS 180551, *70 (E.D. Tex. Nov. 19, 2016) ("A patentee can also demonstrate irreparable harm from a diminished ability to invest in research and development.") (citing *Bio-Tech.*, 80 F.3d at 1566) (*aff'd*). Unless enjoined, Alkane will continue its efforts to poach Crusoe's customers and thereby significantly magnify the non-monetary harm to Crusoe. *See* Ex. A at ¶¶ 25-26.

b. Unfair Competition Will Erode Crusoe's Prices

Without judicial intervention, Alkane will continue soliciting Crusoe's customers with unfair and unsustainable financial terms. *See* Ex. A at ¶¶ 9, 16, 25-28. As a result, Crusoe will have to pay unsustainable rates for stranded flare gas in order to compete, or else be forced out of the market. *See id*. at ¶ 25; *See Automated Merch. Sys., Inc. v. Crane Co.*, 357 Fed. Appx. 297, 301 (Fed. Cir. 2009). Crusoe has substantially invested in its patented technology and must structure its deals at a level that allows it to recover some of its research and development costs. *See* Ex. A at ¶¶ 3-4, 26-27. Meanwhile, Alkane can structure its deals more favorably because it is a coat-tail rider that copied Crusoe's innovation. *See id*. at ¶ 14, 16, 28; *see also supra* § (IV)(A)(2). This irreversible price erosion has and will continue to cut into Crusoe's profits and thus reduce what Crusoe can spend on further expansion and research. *See Mylan*, 2016 U.S. Dist. LEXIS 180551 at *70 ("A patentee can also demonstrate irreparable harm from a diminished ability to invest in research and development." (citing *Bio-Tech.*, 80 F.3d at 1566). Alkane's price erosion will be irreversible, and cause irreparable harm to Crusoe, if permitted to continue because any later attempt to lower the rate Crusoe is willing to pay its customers for stranded flare gas will result in a loss of customers, Crusoe's goodwill, or both. *Celsis*, 664 F.3d at 930-31 ("Price erosion . . . [is] valid grounds for finding irreparable harm."); *see also* Ex. A at ¶ 29.

Specifically, Crusoe has and will continue to suffer a loss of goodwill each time a customer is lured to switch to Alkane through the promise of more favorable financial terms because those customers will be left with the false impression that Crusoe underpays for stranded flare gas. *See id.* at ¶¶ 14, 16, 27-29. At present, the harm to Crusoe—though irreparable—is limited to a small number of customers. *See id*. at ¶¶ 14, 16, 24. But if Alkane were to be permitted to continue

poaching customers by giving more favorable financial terms, there is no ceiling to the resulting harm to Crusoe's reputation and goodwill. *See id*. at ¶¶ 14, 16, 29-30; *Celsis*, 664 F.3d at 930. Indeed, it is not difficult to understand why a customer would be upset when the amount they were being compensated for an identical good suddenly decreased and why the customer's opinion of the company offering a lower rate may diminish.

To add insult to injury, Alkane's financial terms can be more preferable to customers because Alkane—unlike Crusoe—does not have to worry about attempting to recoup the substantial research and development costs incurred by Crusoe. *See* Ex. A at ¶¶ 3, 14, 16, 26, 28. Once Alkane is removed—and Crusoe attempts to restore pricing that allows Crusoe to recoup its investment and continue innovating—customers will feel disgruntled. *See id*. at ¶¶ 3, 28-29; *See Celsis*, 664 F.3d at 930; *see also Gonza LLC v. Mission Competition Fitness Equip. LLC*, Case No. 6:21-cv-00771-ADA, 2021 WL 5657193, at *7 (W.D. Tex. Dec. 1, 2021); *Edwards Lifesciences AG v. CoreValve, Inc.*, Case No. 1:08-cv-00091-GMS, 2014 WL 1493187, at *6 (D. Del. Apr. 15, 2014).

c. Crusoe's Goodwill and Reputation Will be Permanently Tarnished

The non-monetary harm of Alkane's overtures to Crusoe's customers, or potential customers, is magnified since Crusoe is still establishing its brand and reputation in the industry. *See* Ex. A at ¶¶ 29-30; *Celsis*, 664 F.3d at 931 ("During the growth stage of a product, it is particularly crucial to be able to distinguish oneself from competitors. This includes building the brand, expanding the customer base, and establishing one's reputation and leadership in the market."). Alkane's infringement prevents Crusoe from further establishing itself as a market leader and developing Crusoe's brand to its full potential. *See* Ex. A at ¶¶ 29-30; *Celsis*, 664 F.3d

at 931.

Further, as a result of Alkane's copying and introduction of an infringing product, Crusoe will be forced to compete against Alkane's infringing product, which is itself inequitable. *See Douglas Dynamics*, 717 F.3d at 1345 (unfair to allow a patentee to compete against infringing products). Indeed, the Federal Circuit agrees "[t]here is no effective way to measure the loss of sales or potential growth—to ascertain the people who do not knock on the door or to identify the specific persons who do not reorder because of the existence of the infringer." *Id*. Because there is no effective way to measure the loss of sales or potential growth resulting from the inequities of being forced to compete against an infringer, the resulting harm to Crusoe cannot be compensated with monetary damages, and is thus irreparable. *See* Ex. A at ¶¶ 29-30.

d. Inadequate Remedies at Law

If injunctive relief is denied and Alkane is later found liable for infringement, it is unknown whether Alkane will be able to satisfy the resulting monetary judgment. *See* Ex. A at ¶ 31. As discussed above, the cause of Alkane's decision to copy Crusoe's system is its poor financial health. *See supra* (IV)(A)(2) (citing Ex. Q at 1). With little known about Alkane's financial situation, and evidence suggesting it could not meaningfully satisfy a judgment, *see* Ex. Q at 1, the Court should find irreparable harm weighs in favor of Crusoe. *See GCC Int'l.,* 263 Fed. Appx. at 62 (it is permissible to consider ability to satisfy a judgment when weighing irreparable harm); *Robert Bosch*, 659 F.3d at 1156 ("[T[he district court's failure to consider the extent to which a forward-looking monetary award is a viable or meaningful alternative to an injunction was error.").

2. There is a Causal Nexus Between Crusoe's Harm and Alkane's Infringement

"[T]he causal nexus requirement is simply a way of distinguishing between irreparable

harm caused by patent infringement and irreparable harm caused by otherwise lawful competition." *Apple III*, 735 F.3d at 1361. "[A] plaintiff could make out a causal nexus with evidence that a patented feature is one of several features that cause consumers to make their purchasing decisions." *Jiaxing Super Lighting*, 2022 U.S. Dist. LEXIS 137964 at *56 (internal quotations omitted) (citing *Apple Inc. v. Samsung Elecs. Co.*, 809 F.3d 633, 642 (Fed. Cir. 2015) ("*Apple IV*")); *see also Kamstrup v. Axiøma Metering UAB*, Case No. 1:19-cv-1669-WJM-SKC, 2019 U.S. Dist. LEXIS 203738, *25 n.7 (D. Colo. Nov. 25, 2019). Here, the customers Crusoe lost to Alkane did not switch to a non-infringing flare mitigation system; rather, they chose Alkane's infringing system, Ex. A at ¶ 11, 16, 24, thereby demonstrating that the availability of the patented technology impacted the customer's decisions to go with Alkane's infringing system. *Apple IV*, 809 F.3d at 641 (causal nexus exists when the patented feature "impacts customers' purchasing decisions").

Alkane's decision to copy Crusoe's patented technology, as opposed to going to market with non-infringing technology, also demonstrates a nexus between Alkane's infringement and customer demand. *See id*. at 643 ("The district court was correct that evidence of copying does not, by itself, establish a causal nexus," but the evidence is nonetheless relevant.); *see also* Complaint at ¶ 49-59; Ex. A at ¶¶ 16, 20-23.

C. The Balance of Hardships Favors Crusoe

To balance the hardships, a "court must weigh the harm to the moving party if the injunction is not granted against the harm to the non-moving party if the injunction is granted." *Metalcraft of Mayville, Inc. v. Toro Co.*, 848 F.3d 1358, 1369 (Fed. Cir. 2017).

Here, the balance of hardships weigh in favor of Crusoe. If Alkane is not enjoined, Crusoe

stands to lose more customers and thus more market share, and sustain further damage to its reputation and goodwill. *See* Ex. A at ¶¶ 26, 29-31. These are all serious imminent harms that cannot be remedied through monetary damages. *Id*. at ¶¶ 29-30.

Whereas, if Alkane is enjoined, it will be prevented from providing infringing services to the customers it enticed away from Crusoe and be prevented from offering for sale the Accused Product to other Crusoe customers. *See Robert Bosch*, 659 F.3d at 1156 ("A party cannot escape an injunction simply because it is smaller than the patentee or because its primary product is an infringing one. On the other hand, requiring Bosch to compete against its own patented invention, with the resultant harms described above, places a substantial hardship on Bosch.").

While Alkane will surely contend these are significant harms to its business, "[o]ne who elects to build a business on a product found [likely] to infringe cannot be heard to complain if an injunction against continuing infringement destroys the business so elected." *Windsurfing Int'l, Inc. v. AMF, Inc.*, 782 F.2d 995, 1003 n.12 (Fed. Cir. 1986); *see also Broadcom Corp. v. Qualcomm, Inc.*, 543 F.3d 683, 704 (Fed. Cir. 2008) ("We agree with the district court that Qualcomm should not be permitted to prevail on a theory 'that successful exploitation of infringing technology shields a party from injunctive relief,' . . .") *(abrog'd by statute on other grounds*). Because the requested temporary relief is narrowly directed to preventing Alkane's direct infringement of the Asserted Patents, any resulting harm to Alkane does not outweigh the harm to Crusoe if relief is not granted.

D. The Public is Best Served by Curtailing Infringing Behavior

("[T]he public is best served by enforcing patents that are likely valid and infringed." *See Abbott Labs. v. Andrx Pharm., Inc.*, 452 F.3d 1331, 1348 (Fed. Cir. 2006). The Federal Circuit has

"long acknowledged the importance of the patent system in encouraging innovation. Indeed, the 'encouragement of investment-based risk is the fundamental purpose of the patent grant, and is based directly on the right to exclude.'" *Sanofi Synthelabo v. Apotex, Inc.*, 470 F.3d 1368, 1383 (Fed. Cir. 2006) (quoting *Patlex Corp. v. Mossinghoff*, 758 F.2d 594, 599 (Fed. Cir. 1985)). Allowing free-riders, like Alkane, to enter the market has a chilling effect on innovation. *See Abbott Labs. v. Sandoz, Inc.*, 544 F.3d 1341, 1362 (Fed. Cir. 2008). Further, the public is not served by "shifting market benefits to the infringer while litigation is pending for patents that are likely to withstand the attack," and thereby eroding the incentive to innovate. *Id*. Although competition may result in a better price for the product, better prices alone cannot justify unlawful patent infringement. *See Payless Shoesource, Inc. v. Reebok Int'l, Ltd.*, 998 F.2d 985, 991 (Fed. Cir. 1993) ("[S]elling a lower priced product does not justify infringing a patent.").

Not only will temporary relief advance the public interest, but there is no competing "critical public interest that would be injured by the grant of preliminary relief." *Hybritech*, 849 F.2d at 1458 (footnote omitted). There is no public health or safety issue implicated by a TRO.

E. Crusoe Respectfully Requests No Bond or Minimal Bond

Federal Rule of Civil Procedure 65(c) requires the Court to set a bond, to protect against any harm to Alkane, should it be wrongfully enjoined. Because the requested injunction simply preserves the status quo, Crusoe respectfully submits that no bond is necessary to prevent harm to Alkane. Should the Court find a bond is necessary, however, Crusoe is willing to post reasonable security. Under these circumstances, Crusoe submits a $5,000 bond is sufficient.

F. Crusoe Respectfully Requests an Emergency Hearing

Since Crusoe has, or is in the process of notifying Alkane of the pendency of this Motion

and matter, Crusoe respectfully requests that the Court expedite its consideration of Crusoe's Motion and expedite any hearing or briefing schedule the Court deems necessary.

V. CONCLUSION

For the foregoing reasons, Crusoe prays that Alkane be cited to appear and that the Court grant the following relief:

- Expedite any hearing or briefing the Court deems appropriate and necessary under the circumstances;
- Enjoin Alkane Midstream LLC and its officers, agents, servants, employees, and attorneys, and those persons in active concert or participation with them from using, manufacturing, selling, offering for sale, or importing the Accused Product within the United States until a ruling on the merits of the motion for a preliminary injunction;
- Enjoin Alkane Midstream LLC and its officers, agents, servants, employees, and attorneys, and those persons in active concert or participation with them from using, manufacturing, selling, offering for sale, or importing the Accused Product within the United States during the pendency of this lawsuit;
- Enjoin Alkane Midstream LLC and its officers, agents, servants, employees, and attorneys, and those persons in active concert or participation with them from altering the status quo as of the date of filing of Crusoe's Complaint by modifying and/or destroying any existing or planned Accused Product and the documents and communications describing same; and
- Direct Crusoe to post no bond, or in the alternative a $5,000 bond.

Dated: August 22, 2022

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Certificate of Counsel (D.C.COLO. LCivR 7.1)

Alkane was not informed prior to the filing of this action or Motion. Alkane has been served, or is in the process of being served, with the Complaint, this Motion, and all supporting documents. *See* D.C.COLO.LCivR 65.1(a)(2). Plaintiff does not know at this time who is representing Alkane in connection with this action.

/s/ Brett C. Govett
Brett C. Govett

CERTIFICATE OF SERVICE

The undersigned hereby certifies that on August 22, 2022 all counsel of record who are deemed to have consented to electronic service are being served with a copy of this document via the Court's CM/ECF system. Any other counsel of record will be served in accordance with the Federal Rules of Civil Procedure.

/s/ Brett C. Govett
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