

**UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF MINNESOTA**

CARBEX AB,

Plaintiff,

v.

CUTSFORTH INC.,

Defendant.

Case No.: \_\_\_\_\_

**COMPLAINT FOR  
DECLARATORY JUDGMENT OF  
NONINFRINGEMENT  
AND DEMAND FOR JURY TRIAL**

Plaintiff Carbex AB (“Carbex” or “Plaintiff”) by and through its attorneys, hereby pleads the following claims for declaratory judgment against Defendant Cutsforth Inc. (“Cutsforth” or “Defendant”), and alleges as follows:

**BACKGROUND**

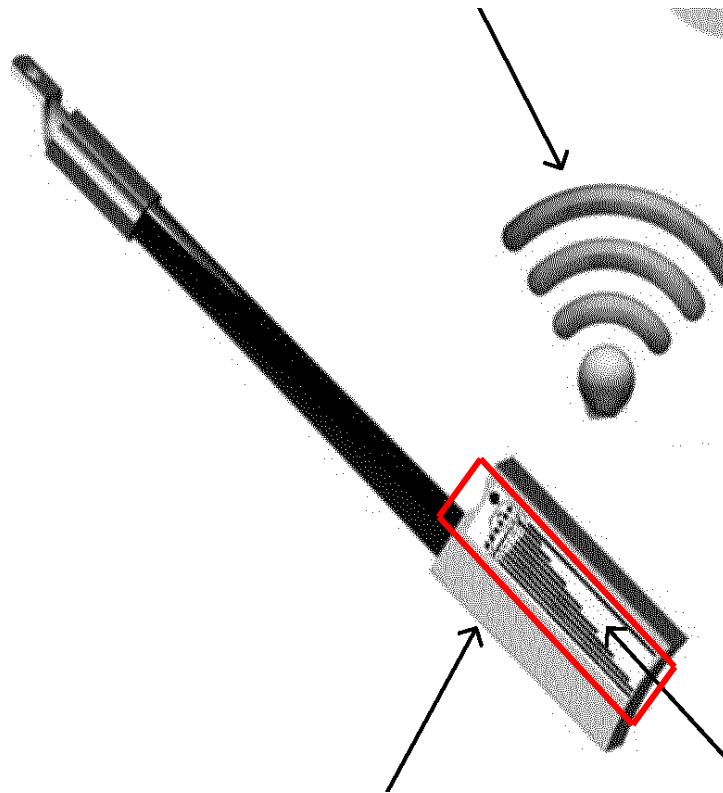
1. Plaintiff Carbex has been one of the leading manufacturers of carbon brushes since 1887. Carbon brushes are used in electrical machines such as motors, generators, and wind turbines. These electrical machines are used, for example in, wind power systems, power stations, and medical equipment. Carbon brushes allow electrical contact to occur between a moving part of an electrical machine and a stationary part of that device. Here is an example of a carbon brush that Carbex sells.



2. The portion of the carbon brush that contacts the moving surface is shown

on the left above. Over time, the condition of the carbon brush degrades as the moving surface wears down the carbon brush. Therefore, long ago engineers developed systems for monitoring the condition of these carbon brushes. Carbex manufactures one such system: the i-BRUSH system. Carbex has expended considerable effort and financial resources to design, develop, manufacture, and sell its i-BRUSH system. Carbex has sold and/or offered to sell the i-BRUSH system in the United States and is continuing to offer it for sale.

3. The carbon brushes in the i-BRUSH system are represented by the following figure.<sup>1</sup>



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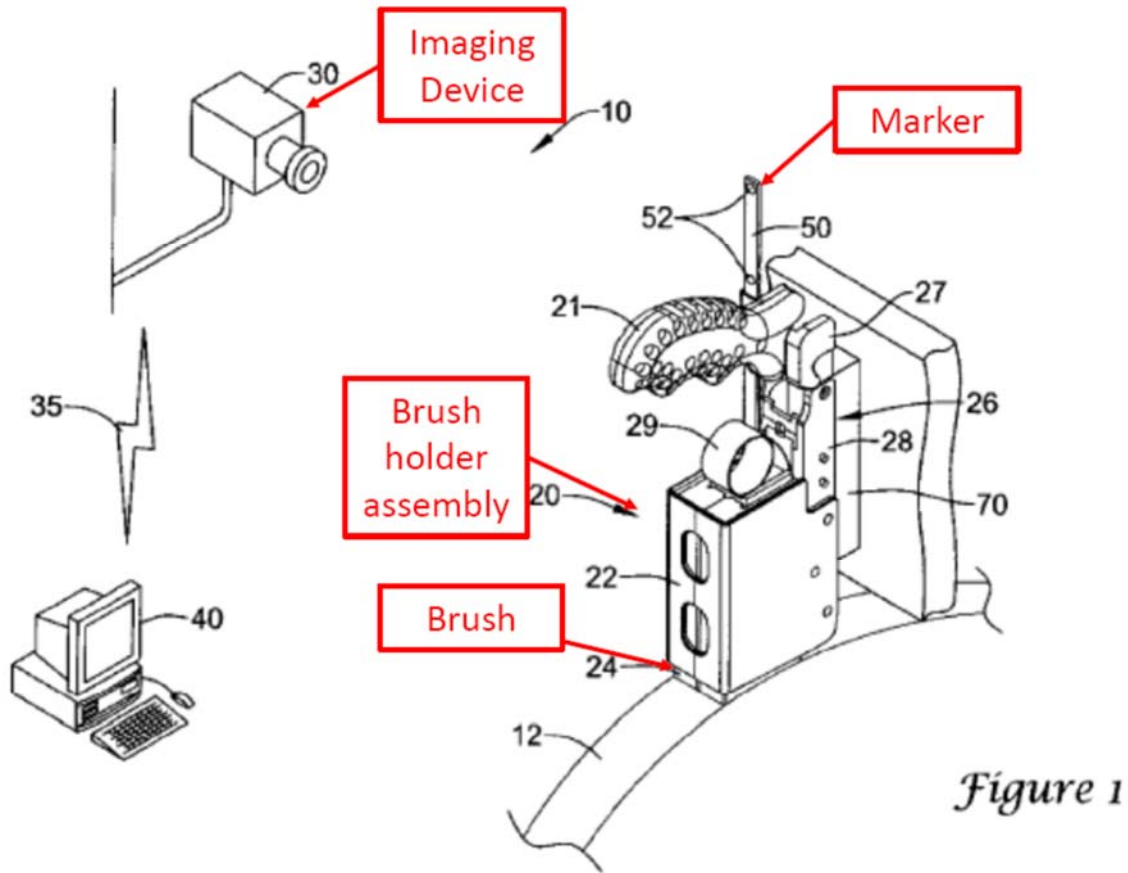
<sup>1</sup> This figure is not a direct representation of the brush in the i-BRUSH system and is used for illustrative purposes only.

The sensor in the i-BRUSH system includes a circuit board that is located on the brush (illustrated in red above). This sensor monitors the brush wear by determining how much of the circuit board has been worn away by the moving surface. Hence, the sensor provides a measurement of a remaining length of the carbon brush. The i-BRUSH system does not compare the position of the brush to anything outside of the brush.

4. Upon information and belief, Defendant sells brush holders and shaft grounding replacements and collector ring services to power companies.

5. On information and belief, Defendant owns all rights to U.S. Patent Nos. 10,249,999 (“the ’999 patent”) and 9,590,376 (“the ’376 patent”) (collectively, the “Patents-in-Suit”). The Patents-in-Suit are attached as Exhibits 1-2.

6. The Patents-in-Suit disclose brush monitoring systems wherein the brush is held in such a way that as it wears it moves downward. In this system, the brushes have a “marker” attached to them, and images of that marker are recorded at different times. The system then compares these images to determine how far the marker has moved relative to the brush holder and uses that distance to identify when the brush needs to be replaced. This system is shown in Figure 1 of the Patents-in-Suit.



Ex. 1 at Fig. 1 (red annotations added).

7. The claims of the Patents-in-Suit require that an infringing method “acquir[e] data indicative of linear displacement” of the carbon brush “relative to” the “brush holder assembly”. Ex. 1 at Claims 1, 8, and 11; Ex. 2 at Claims 1, 11.

8. Carbex’s i-BRUSH system does not literally infringe any claim of the Patents-in-Suit. For example, Carbex’s i-BRUSH system measures the wear of the brush directly through a circuit board that is fixedly attached to the carbon brush and that is worn along with the brush. It does not measure or acquire data about the position of the carbon brush relative to anything outside of the brush. In other words, it does not “acquire data

indicative of linear displacement” of the carbon brush “relative to” the “brush holder assembly” as is required by the claims of the Patents-in-Suit. The differences between these two techniques are substantial, and Carbex’s i-BRUSH system does not perform substantially the same function in substantially the same way with substantially the same result as the methods claimed by the Patents-in-Suit. Therefore, Carbex’s i-BRUSH system does not infringe the claims under the doctrine of equivalents.

9. Nevertheless, Defendant has sought to cloud Carbex’s business with its patents for more than two years. About six months ago, Defendant got more aggressive. It explicitly accused Carbex’s i-BRUSH system of infringing the Patents-in-Suit and provided a claim chart allegedly describing how the system met certain patent claims. Prior to this correspondence, Carbex had already explained to Defendant that it did not infringe the ’999 patent because its i-BRUSH system does not use data indicative of the linear displacement of the carbon brush “relative to the brush holder assembly.” Carbex also identified prior art showing that Defendant’s patent claims are invalid if they are read to be broad enough to cover Carbex’s i-BRUSH system. Nevertheless, Defendant disagreed with Carbex’s position and continued to suggest Carbex infringed. Therefore, Carbex was forced to file this lawsuit to resolve the immediate, real, and substantial justiciable controversy between the parties.

#### **Pre-Suit Communications Between the Parties**

10. On August 23, 2019, Defendant sent a letter to Carbex to inform Carbex of its patents related to the Brush Condition Monitoring System, and specifically the ’999 patent. Defendant stated that it wished to discuss Defendant’s technology with Carbex and

consider mutually beneficial opportunities.

11. On September 3, 2019, Carbex responded stating that its technology differed from Defendant's patented technology because while Defendant's system used an imaging device to measure brush wear, Carbex's system uses "integrated sensors in the carbon brush." Defendant responded on September 13, 2019, disagreeing with Carbex's position that the '999 patent was not related to the i-BRUSH system.

12. On October 18, 2019, Carbex provided to Defendant a detailed three-page explanation as to why the claims of the '999 patent were not related to the solution provided by Carbex. Carbex explained that the alleged invention of the '999 patent was not relevant to Carbex's system because the '999 patent "relates to measuring a linear displacement, *relative to the brush holder*" while in Carbex's system "the *circuit board or sensor provided on or in the brush itself*" provides the relevant signals.

13. Defendant did not respond to Carbex's explanation of why the '999 patent is not applicable to Carbex's system in writing and instead asked for a telephone conference to discuss this issue.

14. The parties picked up their discussion on March 3, 2021, when Defendant sent a letter to Carbex and its distributor Ohio Carbon Industries Inc. ("Ohio Carbon"). This letter stated that Defendant understood that Ohio Carbon marketed and sold the i-BRUSH system on behalf of Carbex. The letter also stated that Defendant was in discussions with Carbex regarding Defendant's intellectual property, including the '999 patent and that it wanted Ohio Carbon to be aware of Defendant's patents and asked to discuss Defendant's technology with Ohio Carbon.

15. On April 13, 2021, Carbex sent an email to Defendant reiterating its belief that it was not possible to construe the '999 patent so as to be relevant to the i-BRUSH system. Carbex again explained that while the '999 patent “measures a linear displacement of the brush holder”, “the i-BRUSH system measures wear of the brush only using internally referenced measurement points of the brush itself and does not acquire data indicative of linear displacement of the carbon brush relative to the brush holder assembly.”

16. The parties engaged in a telephonic discussion in May of 2021. On July 7, 2021, Defendant sent a letter requesting a discussion with Carbex relating to not only the '999 patent the parties had been previously discussing but also the '376 patent and U.S. Patent Nos. 8,825,800 and 10,790,629. Defendant further proposed the parties negotiate a license to Defendant's intellectual property for the North American market.

17. On July 27, 2021, Defendant delivered a letter to Carbex that directly accused Carbex of infringing Defendant's patents and included claim charts allegedly “detailing how the i-BRUSH system infringes on Cutsforth's intellectual property.” This letter stated that “Carbex (and Ohio Carbon) are using [Defendant's] intellectual property through the sale and use of the i-BRUSH system.” Defendant stated that “[i]n particular, Carbex and Ohio Carbon have adopted and implemented Cutsforth's patented technology, including that of at least U.S. Patent Nos. 8,825,800; 9,590,376; and 10,249,999.” The claim charts that were attached to this letter described how claims from the '376 patent and '999 patent were allegedly infringed by the i-BRUSH system. Defendant further stated that licensing its intellectual property would significantly benefit Carbex.

18. On September 14, 2021, Carbex responded by reiterating its position that no

valid claims of Defendant's patents would read on Carbex's i-BRUSH system and provided details on the various prior art that existed. Carbex stated that it did not presently see a basis for a license agreement.

19. On November 30, 2021, Defendant sent a letter to Carbex stating that Defendant was not persuaded that its patent claims were invalid and believed that "Carbex concedes it is using Cutsforth's proprietary monitoring solutions in at least its i-BRUSH product line."

### **NATURE OF THE ACTION**

20. This is an action brought pursuant to the Declaratory Judgment Act, 28 U.S.C. § 2201 and 2202, for a declaratory judgment that Carbex does not infringe any of the claims of the '376 patent or '999 patent, including through its i-BRUSH system.

21. Carbex seeks a declaratory judgment that neither it nor the i-BRUSH system infringe either the '376 patent or '999 patent under the Patent Laws of the United States, 35 U.S.C. §§ 101 *et seq.*

### **THE PARTIES**

22. The parties to this lawsuit are Plaintiff Carbex and Defendant Cutsforth.

23. Plaintiff Carbex is a corporation organized and existing under the laws of Sweden with its place of business at Box 115, SE-592 22 Vadstena, Sweden.

24. Defendant Cutsforth, upon information and belief, is a corporation organized and existing under the laws of the state of Minnesota with a registered office at 2345 Rice St., Suite 230, Roseville, MN 55113.



25. Based on publicly available information, Cutsforth is the owner and assignee of record with the United States Patent and Trademark Office (“USPTO”) for the ’376 patent and ’999 patent.

**JURISDICTION AND VENUE**

26. This is an action under the Federal Declaratory Judgments Act, 28 U.S.C. §§ 2201 and 2202, against Defendant for a declaration that, pursuant to the patent laws of the United States 35 U.S.C. §§ 1 *et seq.*, the claims of U.S. Patent Nos. 9,590,376 and 10,249,999 are not infringed by Carbex or its i-BRUSH system.

27. This Court has subject matter jurisdiction over this action pursuant to 28 U.S.C. §§ 1331 and 1338(a) because this action involves substantial claims arising under the United States Patent Act (35 U.S.C. §§ 1 *et seq.*) and the Declaratory Judgment Act (28 U.S.C. §§ 2201 & 2202).

28. This Court has personal jurisdiction over Defendant at least because Defendant is a company incorporated in Minnesota with its registered office in Minnesota and has been registered to do business in Minnesota with the Minnesota Secretary of State since April 25, 1991.

29. Venue is proper in this jurisdiction under 28 U.S.C. §§ 1391 and 1400(b), at least because Defendant is incorporated in Minnesota and therefore the District of Minnesota is the judicial district where Defendant resides.

30. An actual controversy exists between Carbex and Defendant as to whether Carbex infringes the ’376 patent and ’999 patent. In both its July 27, 2021 and November

30, 2021 letters, Defendant identifies specific patent numbers, made an explicit and direct statement that Carbex is infringing the '376 patent and '999 patent, and in its July 27, 2021 letter asserted that Carbex "should take a license." The July 27 letter further provided claim charts of Carbex's i-BRUSH system relative to exemplary claims of the '376 patent and '999 patent.

31. Carbex denies that any of its activities or the i-BRUSH system infringe any claim of the '376 patent or '999 patent.

32. As a result of Defendant's actions and repeated licensing requests, Carbex has a reasonable apprehension that Defendant will commence litigation against Carbex and assert that Carbex's i-BRUSH system infringes the '376 patent and '999 patent.

33. There is an immediate, real, and substantial justiciable controversy between Carbex and Defendant as to its purported right to threaten or maintain suit for infringement of the '376 patent and '999 patent; and as to whether Carbex or its i-BRUSH system infringes any claims of the '376 patent and '999 patent. This controversy is of such immediacy and reality as to warrant declaratory relief so that the parties may ascertain their rights and duties with respect to the '376 patent and '999 patent. Carbex has sold and/or offered to sell its i-BRUSH system in the United States and is continuing to offer it for sale in the United States. Carbex is at risk of Defendant initiating litigation against Carbex or Carbex's i-BRUSH system now or sometime in the future, creating an ongoing threat of potential injunctive relief and/or damages. Carbex needs certainty now so that it may make informed business decisions without the cloud caused by Defendant's

accusations of patent infringement. Therefore, without waiver of any rights, including the right to challenge prudential standing, Carbex brings this declaratory judgment action seeking a declaration that it and its i-BRUSH system do not infringe any claims of the '376 patent and '999 patent.

**CAUSES OF ACTION**

**FIRST CAUSE OF ACTION**

(Declaratory Judgment of Non-Infringement of the '999 patent)

34. Carbex incorporates herein by reference and re-alleges all preceding paragraphs as though fully set forth herein.

35. Defendant has alleged and continues to assert that Carbex and its i-BRUSH system infringe claims of the '999 patent.

36. The independent claims of the '999 patent (claims 1, 8, and 11) are shown below (with claim element enumeration added for convenience).

<b>Claim 1</b>
<b>1-a.</b> A method of monitoring a brush holder assembly of an electrical device including a carbon brush, the carbon brush of the brush holder assembly being in contact with a rotating conductive surface, the brush holder assembly permitting linear movement of the carbon brush toward the rotating conductive surface as the carbon brush wears, the method comprising:
<b>1-b.</b> acquiring data indicative of linear displacement of the carbon brush relative to the brush holder assembly;
<b>1-c.</b> and evaluating the data to estimate a remaining life expectancy of the carbon brush.
<b>Claim 8</b>
<b>8-a.</b> A method of monitoring a brush holder assembly of an electrical device including a carbon brush, the carbon brush of the brush holder assembly being in contact with a rotating conductive surface, the brush holder assembly permitting linear movement of

the carbon brush toward the rotating conductive surface as the carbon brush wears, the method comprising:
<b>8-b.</b> acquiring data indicative of linear displacement of the carbon brush relative to the brush holder assembly;
<b>8-c.</b> and evaluating the data to estimate a current wear rate of the carbon brush.
<b>Claim 11</b>
<b>11-a.</b> A method of monitoring a brush holder assembly of an electrical device at a plurality of remote monitoring locations, the brush holder assembly at each of the plurality of remote monitoring locations including a carbon brush in contact with a rotating conductive surface, the brush holder assembly permitting linear movement of the carbon brush toward the rotating conductive surface as the carbon brush wears, the method comprising:
<b>11-b.</b> acquiring data indicative of linear displacement of each of the carbon brushes relative to the respective brush holder assembly at each of the plurality of remote monitoring locations;
<b>11-c.</b> evaluating the data to estimate a remaining life expectancy of each of the carbon brushes being monitored;
<b>11-d.</b> and receiving the data at a central control unit in communication with the plurality of remote monitoring locations.

37. Carbex does not infringe any claims of the '999 patent, at least because, by way of non-limiting example, the i-BRUSH system does not meet claim limitations 1-b, 8-b, or 11-b above. Claims 2-7, 9-10, and 12-19 depend from claims 1, 8, or 11 and therefore include these same claim limitations.

38. For instance, Carbex's i-BRUSH system does not "acquire data indicative of linear displacement" of a carbon brush "relative to" a "brush holder assembly". Carbex's i-BRUSH system does not compare the position of the brush to anything outside of the brush.

39. Carbex's activities and its i-BRUSH system have not and do not directly infringe, do not infringe by inducement, and do not contributorily infringe any enforceable

claim of the '999 patent.

40. Carbex's activities and its i-BRUSH system have not and do not infringe literally or under the doctrine of equivalents, any enforceable claims of the '999 patent.

41. An actual controversy exists between Carbex and Defendant as to whether the i-BRUSH system infringes any claims of the '999 patent.

42. Carbex seeks a declaratory judgment from this Court under Rule 57 of the Federal Rules of Civil Procedure and 28 U.S.C. § 2201 declaring that Carbex and its i-BRUSH system are not infringing and have not infringed any claims of the '999 patent and granting Carbex all other declaratory relief to which it may be entitled.

## SECOND CAUSE OF ACTION

(Declaratory Judgment of Non-Infringement of the '376 patent)

43. Carbex incorporates herein by reference and re-alleges all preceding paragraphs as though fully set forth herein.

44. Defendant has alleged and continues to assert that Carbex and its i-BRUSH system infringe claims of the '376 patent.

45. The independent claims of the '376 patent (claims 1 and 11) are shown below (with claim element enumeration added for convenience).

<b>Claim 1</b>
<b>1-a.</b> A method of monitoring a brush holder assembly of an electrical device including a carbon brush at a remote monitoring location, the carbon brush of the brush holder assembly being in contact with a rotating conductive surface, the brush holder assembly permitting linear movement of the carbon brush toward the rotating conductive surface as the carbon brush wears, the method comprising:

<b>1-b.</b> acquiring data indicative of linear displacement of the carbon brush relative to the brush holder assembly;
<b>1-c.</b> and evaluating the data to predict an estimated projection of a future condition of the carbon brush at a future date.
<b>Claim 11</b>
<b>11-a.</b> A method of monitoring a brush holder assembly of an electrical device at a plurality of remote monitoring locations, the brush holder assembly at each of the plurality of remote monitoring locations including a carbon brush in contact with a rotating conductive surface, the brush holder assembly permitting linear movement of the carbon brush toward the rotating conductive surface as the carbon brush wears, the method comprising:
<b>11-b.</b> acquiring data indicative of linear displacement of each of the carbon brushes relative to the respective brush holder assembly at each of the plurality of remote monitoring locations;
<b>11-c.</b> evaluating the data to predict an estimated projection of a future condition of the carbon brush at a future date;
<b>11-d.</b> and receiving the data at a central control unit in communication with the plurality of remote monitoring locations.

46. Carbex does not infringe any claims of the '376 patent, at least because, by way of non-limiting example, the i-BRUSH system does not meet claim limitations 1-b or 11-b above. Claims 2-10 and 12-19 depend from claims 1 or 11 and therefore include these same claim limitations.

47. For instance, Carbex's i-BRUSH system does not "acquire data indicative of linear displacement" of a carbon brush "relative to" a "brush holder assembly". Carbex's i-BRUSH system does not compare the position of the brush to anything outside of the brush.

48. Carbex's activities and its i-BRUSH system have not and do not directly infringe, do not infringe by inducement, and do not contributorily infringe any enforceable

claim of the '376 patent.

49. Carbex's activities and its i-BRUSH system have not and do not infringe literally or under the doctrine of equivalents, any enforceable claims of the '376 patent.

50. An actual controversy exists between Carbex and Defendant as to whether the i-BRUSH system infringes any claims of the '376 patent.

51. Carbex seeks a declaratory judgment from this Court under Rule 57 of the Federal Rules of Civil Procedure and 28 U.S.C. § 2201 declaring that Carbex and its i-BRUSH system are not infringing and have not infringed any claims of the '376 patent and granting Carbex all other declaratory relief to which it may be entitled.

### **REQUEST FOR RELIEF**

WHEREFORE, Plaintiff Carbex respectfully prays for relief against Defendant as follows:

1. The Court declare and enter judgment that:
  - a. Plaintiff has not and does not infringe, willfully or otherwise, any enforceable claim of the '376 patent or the '999 patent; and
  - b. Defendant, and those acting in concert with it or acting with knowledge of the judgment herein, are without right or authority to threaten or maintain suit against Plaintiff, or users of Plaintiff's products or services, for alleged infringement of any enforceable claim of the '376 patent or the '999 patent.
2. The Court enter an injunction enjoining Defendant, its officers, agents, servants,

employees, and all persons acting in concert or participation with Defendant from initiating infringement litigation against, and from threatening, Plaintiff or purchasers or distributors or users of Plaintiff's products or services with infringement litigation or charging any of them verbally or in writing with infringement of any enforceable claim of the '376 patent or the '999 patent, or representing to any of them that infringement has occurred, because of any activities of Plaintiff;

3. The Court find that this is an exceptional case under 35 U.S.C. § 285;

4. The Court direct that Defendant pay Plaintiff's costs and reasonable attorney's fees incurred herein; and

5. The Court award such other and further relief as the Court may deem appropriate.

**DEMAND FOR JURY TRIAL**

Plaintiff Carbex requests a trial by jury of all issues so triable.

Dated: February 2, 2022

/s/ Nathan D. Louwagie

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