

**UNITED STATES DISTRICT COURT  
FOR THE NORTHERN DISTRICT OF IOWA**

GS CLEANTECH CORPORATION,

Plaintiff,

v.

HOMELAND ENERGY SOLUTIONS,  
LLC

Defendant.

Civil Action No.

**JURY TRIAL DEMANDED**

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**COMPLAINT FOR PATENT INFRINGEMENT**

Plaintiff, GS CleanTech Corporation, for its Complaint against Defendant Homeland Energy Solutions, LLC, does hereby, through its attorneys, allege as follows:

**THE PARTIES**

1. Plaintiff, GS CleanTech Corporation (hereinafter “GS CleanTech”), is a Delaware corporation having its principal place of business at 5950 Shiloh Road East, Suite N, Alpharetta, Georgia 30005. GS CleanTech is a wholly-owned subsidiary of GreenShift Corporation (hereinafter “GreenShift”), a Delaware corporation having its principal place of business at 5950 Shiloh Road East, Suite N, Alpharetta, Georgia 30005.

2. Upon information and belief, Defendant Homeland Energy Solutions, LLC (“HES”) is an Iowa limited liability company having its principal place of business at 2779 Iowa 24, Lawler, IA 52154.

## **JURISDICTION**

3. This is a claim for patent infringement and arises under the patent laws of the United States, Title 35 of the United States Code. This Court has original jurisdiction over the subject matter of this claim under 28 U.S.C. §§ 1331 and 1338(a).

4. The Court has personal jurisdiction over HES because, upon information and belief and among other things, it resides in and/or directly, or indirectly through its agents, transacts business in this judicial District, has committed acts within this judicial District giving rise to this action and/or at least by offering to sell, selling, purchasing, and/or advertising the infringing products and/or placing them into the stream of commerce in such a way as to reach customers in this judicial District, and/or because each has sufficient minimum contacts with this judicial District. Requiring HES to respond to this action will not violate due process.

## **VENUE**

5. Upon information and belief, HES resides in this judicial District, directly, or indirectly through its agents, transacts business in this judicial District and/or has committed acts within this judicial District giving rise to this action. Venue is proper in this judicial District under 28 U.S.C. §§ 1391(b), (c) and 1400(b).

## **BACKGROUND FACTS**

6. GS CleanTech is the owner by assignment of United States Patent No. 7,601,858, entitled “Method Of Processing Ethanol Byproducts And Related Subsystems,” issued on October 13, 2009 (the “ ‘858 patent”). A true and correct copy of the ‘858 patent is attached hereto as Exhibit 1. The ‘858 patent issued from a patent application originally filed on May 5, 2005 as Serial No. 11/122,859 (the “ ‘859 application”) and published on February 23, 2006 as U.S. Patent Application Publication 2006/0041152. *See* Exhibit 1. Both the ‘858 patent and the

'859 application claim priority to GS CleanTech's first patent application related to its novel corn oil extraction methods and systems, which was filed in August of 2004 as a provisional application (Serial No. 60/602,050) (the "'050 provisional application"). *Id.* The '858 patent and the '859 patent application are generally directed to the recovery of corn oil from the byproducts produced during the manufacture of ethanol from corn. *Id.*

7. GS CleanTech is the owner by assignment of U.S. Pat. No. 8,008,516 ("the '516 patent"), entitled "Method Of Processing Ethanol Byproducts And Related Subsystems," issued on August 30, 2011. A true and correct copy of the '516 patent is attached hereto as Exhibit 2. The '516 patent issued from a patent application originally filed on September 30, 2005 as Serial No. 11/241,231 (the "'231 application") and published on February 23, 2006 as U.S. Patent Application Publication 2006/0041153. The '516 patent is a continuation of, and claims priority to, the '858 patent, that in turn claims priority to the '050 provisional application. The '516 patent is generally directed to the recovery of corn oil from the byproducts produced during the manufacture of ethanol from corn.

8. GS CleanTech is the owner by assignment of U.S. Pat. No. 8,008,517 ("the '517 patent"), entitled "Method Of Recovering Oil From Thin Stillage," issued on August 30, 2011. A true and correct copy of the '517 patent is attached hereto as Exhibit 3. The '517 patent issued from a patent application originally filed on September 14, 2009 as Serial No. 12/559,136 (the "'136 application") and published on January 7, 2010 as U.S. Patent Application Publication 2010/0004474. The '517 patent is a continuation of, and claims priority to the '858 patent, that in turn claims priority to the '050 provisional application. The '517 patent is generally directed to the recovery of corn oil from the byproducts produced during the manufacture of ethanol from corn.

9. GS CleanTech is the owner by assignment of U.S. Pat. No. 8,283,484 (“the ‘484 patent”), entitled “Method Of Processing Ethanol Byproducts And Related Subsystems,” issued on October 9, 2012. The ‘484 patent issued from a patent application originally filed on May 13, 2011 as Serial No. 13/107,197 (the “ ‘197 application”) and published on November 17, 2011 as U.S. Patent Application Publication 2011/0282085. A true and correct copy of the ‘484 patent is attached hereto as Exhibit 4. The ‘484 patent is a continuation of, and claims priority to, the ‘858 patent, that in turn claims priority to the ‘050 provisional application. The ‘484 patent is generally directed to the recovery of corn oil from the byproducts produced during the manufacture of ethanol from corn.

10. GS CleanTech is the owner by assignment of U.S. Pat. No. 8,168,037 (“the ‘037 patent”), entitled “Method And Systems For Enhancing Oil Recovery From Ethanol Production Byproducts,” issued on May 1, 2012. The ‘037 patent issued from a patent application originally filed on September 17, 2007 as Serial No. 11/856,150 (the “ ‘150 application”) and published on May 15, 2008 as U.S. Patent Application Publication 2008/0110577. A true and correct copy of the ‘037 patent is attached hereto as Exhibit 5. The ‘037 patent is a continuation of, and claims priority to, PCT/US2006/009238, filed on March 15, 2005. The ‘037 patent is generally directed to the recovery of corn oil from the byproducts produced during the manufacture of ethanol from corn.

11. GS CleanTech has standing to sue for infringement of the ‘858, ‘516, ‘517, ‘484, and ‘037 patents (collectively “the patents-in-suit”) because it owns all right, title and interest in and to the patents-in-suit, including the right to collect for past and future damages. GS CleanTech has suffered injury from Defendant’s acts of patent infringement.

12. GS CleanTech invented a novel patented process to extract corn oil from the byproducts created during the manufacture of ethyl alcohol. This process is claimed in GS CleanTech's patents-in-suit.

13. Recently, significant attention has been given to the production of ethyl alcohol, or "ethanol," for use as an alternative fuel. Ethanol not only burns cleaner than fossil fuels, but also can be produced using grains such as corn, which are abundant and renewable domestic resources.

14. In the United States, ethanol is typically produced from corn. Corn contains significant amounts of sugar and starch, which are fermented to produce ethanol.

15. A popular method of producing ethanol is known as "dry milling," whereby the starch in the corn is used to produce ethanol through fermentation. In a typical dry milling method, the process starts by grinding each kernel of corn into meal, which is then slurried with water into mash. Enzymes are added to the mash to convert the starch to sugar. Yeast is then added in fermentors to convert the sugar to ethanol and carbon dioxide. After fermentation, the mixture is transferred to distillation columns where the ethanol is evaporated and recovered as product, leaving an intermediate product called "whole stillage." The whole stillage contains the corn oil and the parts of each kernel of corn that were not fermented into ethanol.

16. Despite containing valuable corn oil, the whole stillage has traditionally been treated as a byproduct of the dry milling fermentation process and used primarily to supplement animal feed mostly in the form of a product called "dried distillers grains with solubles" (hereinafter "DDGS").

17. Prior to GS CleanTech's invention, efforts to recover the valuable corn oil from the whole stillage had not been successful in terms of efficiency or economy. A need therefore

existed for a more efficient and economical manner of recovering corn oil. GS CleanTech has filled that need with its novel and inventive process.

18. The inventors of the novel process completed feasibility testing with an early-stage corn oil extraction prototype in 2004 and demonstrated, for the first time, that efficient extraction of the corn oil trapped in the dry milling byproducts was economically feasible.

19. In August of 2004, the inventors filed the '050 provisional application directed to embodiments of their novel corn oil extraction methods and systems. The '858, '516, '517, and '484 patents claim priority back to the '050 provisional application.

20. In one embodiment, GS CleanTech's patented method comprises initially processing the whole stillage by mechanically separating (such as by using a centrifugal decanter) the whole stillage into distillers wet grains and thin stillage, and then introducing the thin stillage into an evaporator to form a concentrated byproduct or "syrup." Prior to recombining the now concentrated syrup with the distillers wet grains, the syrup is introduced into a second mechanical separator, such as a second centrifuge, which is different from the centrifuge that mechanically separated the whole stillage into distillers wet grains and thin stillage. This second centrifuge separates corn oil from the syrup thereby allowing for the recovery of usable corn oil. The syrup that exits the centrifuge is then recombined with the distillers wet grain and dried in a dryer to form the DDGS. The corn oil that is extracted from the syrup can be used for various purposes such as feedstock for producing biodiesel.

21. After filing the '050 provisional application in 2004, the inventors of GS CleanTech's novel corn oil extraction method began to engage the ethanol manufacturing industry to explain and market the corn oil extraction method itself and the benefits to be had by ethanol manufacturers if they were to install these systems in their facilities. In fact, in 2005, the

inventors invited ethanol manufacturers to a symposium to hear about the advantages of this method and about 30 percent of the industry attended.

22. Upon information and belief, HES infringes one or more of the claims of the patents-in-suit.

23. Upon information and belief, HES infringes, and will continue to infringe, the claims of GS CleanTech's patent applications as published and as issued in the patents-in-suit.

24. GS CleanTech is entitled to provisional rights under 35 U.S.C. § 154(d) because HES makes, uses, offers for sale, or sells in the United States the invention as claimed in the published '859 application; HES had actual notice of the published '859 application; and the issued claims in the '858 patent are substantially identical to the originally published claims in the '859 application.

**COUNT I**  
**(Infringement of U.S. Patent No. 7,601,858)**

25. GS CleanTech repeats and realleges paragraphs 1-24, above, as though fully set forth herein.

26. HES infringes and will continue to infringe one or more of the claims of the '858 patent by, among other activities, practicing the claimed methods and/or processes.

27. HES's infringement has injured GS CleanTech, and GS CleanTech is entitled to recover damages adequate to compensate it for such infringement.

28. HES's infringement has been willful, deliberate, and objectively reckless.

29. HES's infringing activities have injured and will continue to injure GS CleanTech, unless and until this Court enters an injunction prohibiting further infringement and, specifically, enjoining further manufacture, use, sale, importation, and/or offer for sale of

products or practice of any methods and/or processes that come within the scope of the claims of the '858 patent.

**COUNT II**  
**(Infringement of U.S. Patent No. 8,008,516)**

30. GS CleanTech repeats and realleges paragraphs 1-29, above, as though fully set forth herein.

31. HES infringes and will continue to infringe one or more of the claims of the '516 patent by, among other activities, practicing the claimed methods and/or processes.

32. HES's infringement has injured GS CleanTech, and GS CleanTech is entitled to recover damages adequate to compensate it for such infringement.

33. HES's infringement has been willful, deliberate, and objectively reckless.

34. HES's infringing activities have injured and will continue to injure GS CleanTech, unless and until this Court enters an injunction prohibiting further infringement and, specifically, enjoining further manufacture, use, sale, importation, and/or offer for sale of products or practice of any methods and/or processes that come within the scope of the claims of the '516 patent.

**COUNT III**  
**(Infringement of U.S. Patent No. 8,008,517)**

35. GS CleanTech repeats and realleges paragraphs 1-34, above, as though fully set forth herein.

36. HES infringes and will continue to infringe one or more of the claims of the '517 patent by, among other activities, practicing the claimed methods and/or processes.

37. HES's infringement has injured GS CleanTech, and GS CleanTech is entitled to recover damages adequate to compensate it for such infringement.



38. HES's infringement has been willful, deliberate, and objectively reckless.

39. HES's infringing activities have injured and will continue to injure GS CleanTech, unless and until this Court enters an injunction prohibiting further infringement and, specifically, enjoining further manufacture, use, sale, importation, and/or offer for sale of products or practice of any methods and/or processes that come within the scope of the claims of the '517 patent.

**COUNT IV**  
**(Infringement of U.S. Patent No. 8,283,484)**

40. GS CleanTech repeats and realleges paragraphs 1-39, above, as though fully set forth herein.

41. HES infringes and will continue to infringe one or more of the claims of the '484 patent by, among other activities, practicing the claimed methods and/or processes.

42. HES's infringement has injured GS CleanTech, and GS CleanTech is entitled to recover damages adequate to compensate it for such infringement.

43. HES's infringement has been willful, deliberate, and objectively reckless.

44. HES's infringing activities have injured and will continue to injure GS CleanTech, unless and until this Court enters an injunction prohibiting further infringement and, specifically, enjoining further manufacture, use, sale, importation, and/or offer for sale of products or practice of any methods and/or processes that come within the scope of the claims of the '484 patent.

**COUNT V**  
**(Infringement of U.S. Patent No. 8,168,037)**

45. GS CleanTech repeats and realleges paragraphs 1-44, above, as though fully set forth herein.

46. HES infringes and will continue to infringe one or more of the claims of the '037 patent by, among other activities, practicing the claimed methods and/or processes.

47. HES's infringement has injured GS CleanTech, and GS CleanTech is entitled to recover damages adequate to compensate it for such infringement.

48. HES's infringement has been willful, deliberate, and objectively reckless.

49. HES's infringing activities have injured and will continue to injure GS CleanTech, unless and until this Court enters an injunction prohibiting further infringement and, specifically, enjoining further manufacture, use, sale, importation, and/or offer for sale of products or practice of any methods and/or processes that come within the scope of the claims of the '037 patent.

#### **PRAYER FOR RELIEF**

WHEREFORE, GS CleanTech respectfully asks this Court to enter judgment against HES and against its respective subsidiaries, successors, parents, affiliates, officers, directors, agents, servants and employees, and all persons in active concert or participation with it, granting the following relief:

- A. The entry of judgment in favor of GS CleanTech and against HES;
- B. A preliminary injunction prohibiting further infringement of the patents-in-suit;
- C. A permanent injunction prohibiting further infringement of the patents-in-suit patents;
- D. An award of damages adequate to compensate GS CleanTech for the infringement that has occurred, but in no event less than a reasonable royalty for the use made of the inventions of the patents-in-suit as provided in 35 U.S.C. § 284, together with prejudgment interest from the date the infringement began;

- E. An award to GS CleanTech of all remedies available under 35 U.S.C. § 284;
- F. An award to GS CleanTech of all remedies available under 35 U.S.C. § 285;
- G. An award to GS CleanTech of all remedies available under 35 U.S.C. § 154(d);  
and
- H. Such other relief to which GS CleanTech is entitled under law, and any other and  
further relief that this Court or a jury may deem just and proper.

**DEMAND FOR JURY TRIAL**

Pursuant to Fed. R. Civ. P. 38(b), GS CleanTech demands a trial by jury on all issues so triable.

Respectfully submitted,

**CLARK, BUTLER, WALSH & HAMANN**

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