

MICHAEL E. DERGOSITS (State Bar No. 118206)  
TODD A. NOAH (State Bar No. 152328)  
TEDDY K. JOE (State Bar No. 242589)  
DERGOSITS & NOAH LLP  
Three Embarcadero Center, Suite 410  
San Francisco, CA 94111  
Telephone: (415) 705-6377  
Facsimile: (415) 750-6383  
Email: mdergosits@dergnoah.com  
Email: tnoah@dergnoah.com  
Email: tjoe@dergnoah.com

Attorneys for Plaintiff  
EXERGETIC SYSTEMS, LLC

UNITED STATES DISTRICT COURT  
NORTHERN DISTRICT OF CALIFORNIA  
SAN FRANCISCO DIVISION

EXERGETIC SYSTEMS, LLC,

Plaintiff,

vs.

ENERGY FUTURE HOLDING CORP.; TEXAS  
COMPETITIVE ELECTRIC  
HOLDINGS CO. LLC; TXU ENERGY RETAIL  
CO. LLC; EDISON MISSION ENERGY; AND,  
MIDWEST GENERATION LLC,  
Defendants.

FILED

FEB 27 2009

RICHARD W. WIEKING  
CLERK, U.S. DISTRICT COURT  
NORTHERN DISTRICT OF CALIFORNIA

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HRL

Civil Action No.: **09 0883**  
**COMPLAINT FOR PATENT  
INFRINGEMENT**

**DEMAND FOR JURY TRIAL**

Plaintiff Exergetic Systems, LLC ("Exergetic") brings this action against Energy Future Holding Corp. ("EFH"), Texas Competitive Electric Holdings Co. LLC ("TCEH"), TXU Energy Retail Co. LLC ("TXU RC"), Edison Mission Energy ("EME") and Midwest Generation LLC ("Midwest"), and for its causes of action alleges:

**THE PARTIES**

1. Exergetic is a corporation organized and existing under the laws of the State of California, with its principal place of business at 12 San Marino Drive, San Rafael, California 94901.

1           2.       Upon information and belief, defendant EFH is a corporation organized and existing  
2 under the laws of the State of Texas with its principal place of business at 1601 Bryan Street,  
3 Dallas, TX 75201-3411. Until 2007, defendant EFH was known as TXU Corp. Upon information  
4 and belief, defendant EFH has established regular and continuous contacts with California, and with  
5 the Northern District of California, and does business in this judicial district.

6           3.       Upon information and belief, defendant TCEH is a corporation organized and  
7 existing under the laws of the State of Delaware with its principal place of business at 1601 Bryan  
8 Street, Dallas, TX 75201-3411. Upon information and belief, defendant TCEH is a wholly-owned  
9 subsidiary of defendant EFH. Upon information and belief, defendant TCEH has established  
10 regular and continuous contacts with California, and with the Northern District of California, and  
11 does business in this judicial district.

12          4.       Upon information and belief, defendant TXU RC is a limited liability company  
13 organized and existing under the laws of the State of Texas with its principal place of business at  
14 1601 Bryan Street, Dallas, TX 75201-3411. Upon information and belief, defendant TXU RC is a  
15 wholly-owned subsidiary of defendant TCEH. Upon information and belief, defendant TXU RC  
16 has established regular and continuous contacts with California, and with the Northern District of  
17 California, and does business in this judicial district.

18          5.       Upon information and belief, defendant EME is a corporation organized and existing  
19 under the laws of the State of California with its principal place of business at 2244 Walnut Grove  
20 Avenue, Rosemead, CA 91770. Upon information and belief, defendant EME resides within the  
21 state of California and does business in this judicial district.

22          6.       Upon information and belief, defendant Midwest is a corporation organized and  
23 existing under the laws of the State of Illinois with its principal place of business at 440 S. LaSalle  
24 Street, Suite 3500, Chicago, IL 60605. Upon information and belief, defendant Midwest is a  
25 wholly owned subsidiary of defendant EME. Upon information and belief, defendant Midwest has  
26 established regular and continuous contacts with California, and with the Northern District of  
27 California, and does business in this judicial district.

**JURISDICTION & VENUE**

7. This action arises under the patent laws of the United States, Title 35 United States Code, particularly §§ 271 and 281 and Title 28 United States Code, particularly §1338(a). Venue is proper in this Court under Title 28 United States Code §§ 1391(b) and (c) and 1400(b).

**INTRADISTRICT ASSIGNMENT**

8. Since this is a patent infringement action, the matter is subject to district-wide assignment under Civil L.R. 3-2(c).

**FIRST CAUSE OF ACTION**

**(Patent Infringement U.S. Pat No. 6,522,994)**

9. On February 18, 2003, U.S. Patent No. 6,522,994 ("the '994 patent"), titled "Input/Loss Method for Determining Fuel Flow, Chemistry, Heating Value and Performance of a Fossil-Fired System," was issued to Exergetic. A copy of the '994 patent is attached hereto as Exhibit A. By assignment, Exergetic is the owner of the '994 patent and at all relevant times has had the right to enforce the '994 patent.

10. The '994 patent, in general, relates to methods for determining fuel flow, chemistry, heating value and performance of a fossil-fired system in which fuel chemistry (including fuel water and ash), heating value, unit heat rate, effluent flow are determined in an explicit manner online.

11. Upon information and belief, defendants own and operate power generation facilities using software provided by Tennessee Technological University ("TTU") such that the operation of the power generation facilities under the control of the TTU software infringes at least one claim of the '994 patent. By so operating their power generation facilities, defendants have in the past and continue to infringe directly, by inducement, or by contributing to the infringement of the '994 patent.

12. As a result of defendants' infringing conduct, defendants have damaged plaintiff Exergetic. Defendants are therefore liable to Exergetic in an amount that adequately compensates

1 Exergetic for defendants' infringement, which by law shall in no event be less than a reasonable  
2 royalty. As one potential measure of damages, TTU reports that use their software can improve  
3 power plant heat rate by at least one (1) percent, leading to annual savings of over \$1,000,000.00.

4 13. Upon information and belief, defendants have known about Exergetic's invention  
5 and ownership of the technology embodied in the '994 patent. Upon information and belief,  
6 defendants' past and continued infringement of the '994 patent is willful.

7 **SECOND CAUSE OF ACTION**

8 **(Patent Infringement U.S. Pat No. 5,790,420)**

9 14. On August 4, 1998, U.S. Patent No. 5,790,420 ("the '420 patent"), titled "Method  
10 And Systems For Improving Thermal Efficiency, Determining Effluent Flows and For Determining  
11 Fuel Mass Flow Rates Of A Fossil Fuel Fired System," was issued to Exergetic. A copy of the '420  
12 patent is attached hereto as Exhibit B. By assignment, Exergetic is the owner of the '420 patent and  
13 at all relevant times has had the right to enforce the '420 patent.

14 15. The '420 patent, in general, relates to Input/Loss methods where fuel chemistry is  
15 determined using an iterative online procedure.

16 16. Upon information and belief, defendants own and operate power generation facilities  
17 using software provided by Tennessee Tech University ("TTU") such that the operation of the  
18 power generation facilities under the control of the TTU software infringes at least one claim of the  
19 '420 patent. By so operating their power generation facilities, defendants have in the past and  
20 continue to infringe directly, by inducement, or by contributing to the infringement of the '420  
21 patent.

22 17. As a result of defendants' infringing conduct, defendants have damaged plaintiff  
23 Exergetic. Defendants are therefore liable to Exergetic in an amount that adequately compensates  
24 Exergetic for defendants' infringement, which by law shall in no event be less than a reasonable  
25 royalty. As one potential measure of damages, TTU reports that the use of their software can  
26 improve power plant heat rate by at least one (1) percent, leading to annual savings of over  
27 \$1,000,000.00.

1           18.     Upon information and belief, defendants have known about Exergetic's invention  
2 and ownership of the technology embodied in the '420 patent. Upon information and belief,  
3 defendants' past and continued infringement of the '420 patent is willful.

4  
5                                   **THIRD CAUSE OF ACTION**

6                           **(Patent Infringement U.S. Pat No. 6,714,877)**

7           19.     On March 30, 2004, U.S. Patent No. 6,714,877 ("the '877 patent"), titled "Method  
8 For Correcting Combustion Effluent Data When Used For Input/Loss Performance Monitoring Of  
9 A Power Plant," was issued to Exergetic. A copy of the '877 patent is attached hereto as Exhibit C.  
10 By assignment, Exergetic is the owner of the '877 patent and at all relevant times has had the right  
11 to enforce the '877 patent.

12           20.     The '877 patent, in general, relates to methods involving the use of error analysis to  
13 correct effluent data and any other data which might impact system stoichiometrics.

14           21.     Upon information and belief, defendants own and operate power generation facilities  
15 using software provided by Tennessee Tech University ("TTU") such that the operation of the  
16 power generation facilities under the control of the TTU software infringes at least one claim of the  
17 '877 patent. By so operating their power generation facilities, defendants have in the past and  
18 continue to infringe directly, by inducement, or by contributing to the infringement of the '877  
19 patent.

20           22.     As a result of defendants' infringing conduct, defendants have damaged plaintiff  
21 Exergetic. Defendants are therefore liable to Exergetic in an amount that adequately compensates  
22 Exergetic for defendants' infringement, which by law shall in no event be less than a reasonable  
23 royalty. As one potential measure of damages, TTU reports that the use of their software can  
24 improve power plant heat rate by at least one (1) percent, leading to annual savings of over  
25 \$1,000,000.00.

26           23.     Upon information and belief, defendants have known about Exergetic's invention  
27 and ownership of the technology embodied in the '877 patent. Upon information and belief,  
28 defendants' past and continued infringement of the '877 patent is willful.

**FOURTH CAUSE OF ACTION****(Patent Infringement U.S. Pat No. 6,584,429)**

24. On June 24, 2003, U.S. Patent No. 6,584,429 ("the '429 patent"), titled "Input/Loss Method For Determining Boiler Efficiency Of A Fossil-Fired System," was issued to Exergetic. A copy of the '429 patent is attached hereto as Exhibit D. By assignment, Exergetic is the owner of the '429 patent and at all relevant times has had the right to enforce the '429 patent.

25. The '429 patent relates to methods for determining boiler efficiency using Input/Loss methods.

26. Upon information and belief, defendants own and operate power generation facilities using software provided by Tennessee Tech University ("TTU") such that the operation of the power generation facilities under the control of the TTU software infringes at least one claim of the '429 patent. By so operating their power generation facilities, defendants have in the past and continue to infringe directly, by inducement, or by contributing to the infringement of the '429 patent.

27. As a result of defendants' infringing conduct, defendants have damaged plaintiff Exergetic. Defendants are therefore liable to Exergetic in an amount that adequately compensates Exergetic for defendants' infringement, which by law shall in no event be less than a reasonable royalty. As one potential measure of damages, TTU reports that the use of their software can improve power plant heat rate by at least one (1) percent, leading to annual savings of over \$1,000,000.00.

28. Upon information and belief, defendants have known about Exergetic's invention and ownership of the technology embodied in the '429 patent. Upon information and belief, defendants' past and continued infringement of the '429 patent is willful.

**FIFTH CAUSE OF ACTION****(Patent Infringement U.S. Pat No. 6,810,358)**

29. On October 6, 2004, U.S. Patent No. 6,810,358 ("the '358 patent"), titled "Method To Synchronize Data When Used For Input/Loss Performance Monitoring Of A Power Plant," was issued to Exergetic. A copy of the '358 patent is attached hereto as Exhibit E. By assignment,



1 Exergetic is the owner of the '358 patent and at all relevant times has had the right to enforce the  
2 '358 patent.

3 30. The '358 patent, in general, relates to methods for protecting the Input/Loss  
4 Methods' ability to synchronize all data such that it can be consistently analyzed at the same  
5 acquisition time.

6 31. Upon information and belief, defendants own and operate power generation facilities  
7 using software provided by Tennessee Tech University ("TTU") such that the operation of the  
8 power generation facilities under the control of the TTU software infringes at least one claim of the  
9 '358 patent. By so operating their power generation facilities, defendants have in the past and  
10 continue to infringe directly, by inducement, or by contributing to the infringement of the '358  
11 patent.

12 32. As a result of defendants' infringing conduct, defendants have damaged plaintiff  
13 Exergetic. Defendants are therefore liable to Exergetic in an amount that adequately compensates  
14 Exergetic for defendants' infringement, which by law shall in no event be less than a reasonable  
15 royalty. As one potential measure of damages, TTU reports that the use of their software can  
16 improve power plant heat rate by at least one (1) percent, leading to annual savings of over  
17 \$1,000,000.00.

18 33. Upon information and belief, defendants have known about Exergetic's invention  
19 and ownership of the technology embodied in the '358 patent. Upon information and belief,  
20 defendants' past and continued infringement of the '358 patent is willful.

21 **SIXTH CAUSE OF ACTION**

22 **(Patent Infringement U.S. Pat No. 6,873,933)**

23 34. On March 29, 2005, U.S. Patent No. 6,873,933 ("the '933 patent"), titled "Method  
24 and Apparatus for Analyzing Coal Containing Carbon Dioxide Producing Mineral Matter As  
25 Effecting Input/Loss Performance Of A Power Plant," was issued to Exergetic. A copy of the '933  
26 patent is attached hereto as Exhibit F. By assignment, Exergetic is the owner of the '933 patent and  
27 at all relevant times has had the right to enforce the '933 patent.  
28

1           35.     The '933 patent , in general, protects a technique used to correctly analyze , e.g.,  
2 Powder River Basin ("PRB") coals, and is a key to the proper analysis of PRB coals when  
3 determining its chemistry online, recognizing the unique features of PRB coals.

4           36.     Upon information and belief, defendants own and operate power generation facilities  
5 using software provided by Tennessee Tech University ("TTU") such that the operation of the  
6 power generation facilities under the control of the TTU software infringes at least one claim of the  
7 '933 patent. By so operating their power generation facilities, defendants have in the past and  
8 continue to infringe directly, by inducement, or by contributing to the infringement of the '933  
9 patent.

10          37.     As a result of defendants' infringing conduct, defendants have damaged plaintiff  
11 Exergetic. Defendants are therefore liable to Exergetic in an amount that adequately compensates  
12 Exergetic for defendants' infringement, which by law shall in no event be less than a reasonable  
13 royalty. As one potential measure of damages, TTU reports that the use of their software can  
14 improve power plant heat rate by at least one (1) percent, leading to annual savings of over  
15 \$1,000,000.00.

16          38.     Upon information and belief, defendants have known about Exergetic's invention  
17 and ownership of the technology embodied in the '933 patent. Upon information and belief,  
18 defendants' past and continued infringement of the '933 patent is willful.

19                   **SEVENTH CAUSE OF ACTION**

20                   **(Patent Infringement U.S. Pat No. 6,868,368)**

21          39.     On March 15, 2005, U.S. Patent No. 6,868,368 ("the '368 patent"), titled "Method  
22 For Improving The Control Of Power Plants When Using Input/Loss Performance Monitoring,"  
23 was issued to Exergetic. A copy of the '368 patent is attached hereto as Exhibit G. By assignment,  
24 Exergetic is the owner of the '368 patent and at all relevant times has had the right to enforce the  
25 '368 patent.

26          40.     The '368 patent , in general, protects use of computed data from Input/Loss methods  
27 as it effects the control of a power plant.



41. Upon information and belief, defendants own and operate power generation facilities using software provided by Tennessee Tech University ("TTU") such that the operation of the power generation facilities under the control of the TTU software infringes at least one claim of the '368 patent. By so operating their power generation facilities, defendants have in the past and continue to infringe directly, by inducement, or by contributing to the infringement of the '368 patent.

42. As a result of defendants' infringing conduct, defendants have damaged plaintiff Exergetic. Defendants are therefore liable to Exergetic in an amount that adequately compensates Exergetic for defendants' infringement, which by law shall in no event be less than a reasonable royalty. As one potential measure of damages, TTU reports that the use of their software can improve power plant heat rate by at least one (1) percent, leading to annual savings of over \$1,000,000.00.

43. Upon information and belief, defendants have known about Exergetic's invention and ownership of the technology embodied in the '368 patent. Upon information and belief, defendants' past and continued infringement of the '368 patent is willful.

#### **EIGHTH CAUSE OF ACTION**

##### **(Patent Infringement U.S. Pat No. 6,799,146)**

44. On September 28, 2004, U.S. Patent No. 6,799,146 ("the '146 patent"), titled "Method For Remote On-Line Advisory Diagnostics And Dynamic Heat rate When Used For Input/Loss Performance Monitoring Of A Power Plant," was issued to Exergetic. A copy of the '146 patent is attached hereto as Exhibit H. By assignment, Exergetic is the owner of the '146 patent and at all relevant times has had the right to enforce the '146 patent.

45. The '146 patent, in general, protects the flow of data and its presentation techniques, e.g., the Online Advisory Diagnostics (OAD), used for remote heat rate monitoring as used by Input/Loss Methods.

46. Upon information and belief, defendants own and operate power generation facilities using software provided by Tennessee Tech University ("TTU") such that the operation of the power generation facilities under the control of the TTU software infringes at least one claim of the

1 '146 patent. By so operating their power generation facilities, defendants have in the past and  
2 continue to infringe directly, by inducement, or by contributing to the infringement of the '146  
3 patent.

4 47. As a result of defendants' infringing conduct, defendants have damaged plaintiff  
5 Exergetic. Defendants are therefore liable to Exergetic in an amount that adequately compensates  
6 Exergetic for defendants' infringement, which by law shall in no event be less than a reasonable  
7 royalty. As one potential measure of damages, TTU reports that the use of their software can  
8 improve power plant heat rate by at least one (1) percent, leading to annual savings of over  
9 \$1,000,000.00.

10 48. Upon information and belief, defendants have known about Exergetic's invention  
11 and ownership of the technology embodied in the '146 patent. Upon information and belief,  
12 defendants' past and continued infringement of the '146 patent is willful.

13 **NINTH CAUSE OF ACTION**

14 **(Patent Infringement U.S. Pat No. 7,039,555)**

15 49. On May 2, 2006, U.S. Patent No. 7,039,555 ("the '555 patent"), titled "Method For  
16 Detecting Heat Exchanger Tube Failures And Their Location When Using Input/Loss Performance  
17 Monitoring Of A Recovery Boiler," was issued to Exergetic. A copy of the '555 patent is attached  
18 hereto as Exhibit I. By assignment, Exergetic is the owner of the '555 patent and at all relevant  
19 times has had the right to enforce the '555 patent.

20 50. The '555 patent, in general, involves methods to determine tube failures within a  
21 Recovery Boiler, and also identifies which heat exchanger within the Recovery Boiler has the failed  
22 tube. The '555 patent also provides additional protection of the Input/Loss Method.

23 51. Upon information and belief, defendants own and operate power generation facilities  
24 using software provided by Tennessee Tech University ("TTU") such that the operation of the  
25 power generation facilities under the control of the TTU software infringes at least one claim of the  
26 '555 patent. By so operating their power generation facilities, defendants have in the past and  
27 continue to infringe directly, by inducement, or by contributing to the infringement of the '555  
28 patent.

1           52. As a result of defendants' infringing conduct, defendants have damaged plaintiff  
2 Exergetic. Defendants are therefore liable to Exergetic in an amount that adequately compensates  
3 Exergetic for defendants' infringement, which by law shall in no event be less than a reasonable  
4 royalty. As one potential measure of damages, TTU reports that the use of their software can  
5 improve power plant heat rate by at least one (1) percent, leading to annual savings of over  
6 \$1,000,000.00.

7           53. Upon information and belief, defendants have known about Exergetic's invention  
8 and ownership of the technology embodied in the '555 patent. Upon information and belief,  
9 defendants' past and continued infringement of the '555 patent is willful.

**PRAYER FOR RELIEF**


WHEREFORE, Exergetic prays for entry of judgment as follows:

- A. That U.S. Patent No. 6,522,994, U.S. Patent No. 5,790,420, U.S. Patent No. 6,714,877, U.S. Patent No. 6,584,429, U.S. Patent No. 6,810,358, U.S. Patent No. 6,873,933, U.S. Patent No. 6,868,368, U.S. Patent No. 6,799,146, and U.S. Patent No. 7,039,555 have been infringed by defendants;
- B. That Defendants account for and pay to Exergetic all damages and costs caused by Defendants' infringement of U.S. Patent No. 6,522,994, U.S. Patent No. 5,790,420, U.S. Patent No. 6,714,877, U.S. Patent No. 6,584,429, U.S. Patent No. 6,810,358, U.S. Patent No. 6,873,933, U.S. Patent No. 6,868,368, U.S. Patent No. 6,799,146, and U.S. Patent No. 7,039,555;
- C. That Exergetic be granted pre-judgment and post-judgment interest on the damages caused by reason of Defendants' infringement;
- D. That Defendants' infringement be found willful and that Exergetic's damages be increased by three times the amount found or assessed pursuant to 35 U.S.C. § 284;
- E. That Exergetic be granted its costs and attorneys' fees in this action;
- F. That Defendants be preliminarily and permanently enjoined from further infringement of U.S. Patent No. 6,522,994, U.S. Patent No. 5,790,420, U.S. Patent No. 6,714,877, U.S. Patent No. 6,584,429, U.S. Patent No. 6,810,358, U.S. Patent No. 6,873,933, U.S. Patent No. 6,868,368, U.S. Patent No. 6,799,146, and U.S. Patent No. 7,039,555; and
- G. That Exergetic be granted such other and further relief that is just and proper under the circumstances.

Dated: February 27 2009

DERGOSITS & NOAH LLP

By:

  
Michael E. Dergosits  
Attorneys for Plaintiff  
EXERGETIC SYSTEMS, LLC


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**JURY DEMAND**

Pursuant to Rule 38(b) of the Federal Rules of Civil Procedure, Plaintiff Exergetic Systems, LLC hereby demands a trial by jury for all issues so triable.

Dated: February, 27 2009

DERGOSITS & NOAH LLP

By:   
Michael E. Dergosits  
Attorneys for Plaintiff  
EXERGETIC SYSTEMS, LLC