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| APPLICATION NO.                                           | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO.             | CONFIRMATION NO.            |
|-----------------------------------------------------------|-------------|----------------------|---------------------------------|-----------------------------|
| 16/952,007                                                | 11/18/2020  | J. Carl Cooper       | JCC_5-12_Div_2020               | 3658                        |
| 57131                                                     | 7590        | 08/29/2023           |                                 |                             |
| J. CARL COOPER<br>900 Whites Creek Lane<br>Reno, NV 89511 |             |                      | EXAMINER<br>INGE, JOSEPH N      |                             |
|                                                           |             |                      | ART UNIT<br>2836                | PAPER NUMBER                |
|                                                           |             |                      | NOTIFICATION DATE<br>08/29/2023 | DELIVERY MODE<br>ELECTRONIC |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Continuation of Attachment(s) 2) Information Disclosure Statement(s) (PTO/SB/08a and/or PTO/SB/08b)  
Paper No(s)/Mail Date: 11/18/2020, 12/18/2020, 8/31/2021

**DETAILED ACTION**

***Notice of Pre-AIA or AIA Status***

The present application is being examined under the pre-AIA first to invent provisions.

***Election/Restrictions***

Applicant's election with traverse of **Invention VI (claims 29-44)** in the reply filed on 5/15/2023 is acknowledged. The traversal is on the ground(s) that the Applicant does not agree with the Examiner's interpretations, and that while "the multiple claims 1-71 differ substantially from each other" they cover "one embodiment of the invention which uses the output frequency of the power... to prevent and/or alleviate an overload.". This is not found persuasive because, as discussed within the Restriction/Election requirement, the inventions and their respective claims, are directed to separate and distinct structures, which although may perform similar functionality, require and recite unique structure and modes of operation to carry out each invention's intended functionality. Stated another way, while the final results of each invention may be similar, as well as the over-arching concept of overload prevention/alleviation, the inventions are not capable of use together (for example, from differing structures carrying out the desired functionality), have materially different design, etc. For these reasons, inter alia, the Examiner believes the previous restriction requirement should remain upheld, as the respective inventions are directed towards, and recite, mutually exclusive characteristics related to the various embodiments of the application, in addition to being non-obvious variants of each other, and generally (as pointed out by the Applicant) differing "substantially from each other".

The requirement is still deemed proper and is therefore made FINAL.

This application is in condition for allowance except for the presence of **claims 1-28, and 45-71** directed to an invention non-elected with traverse in the reply filed on 5/15/2023.

Applicant is given **TWO (2) MONTHS** from the date of this letter to cancel the noted claims or take other appropriate action (37 CFR 1.144). Failure to take action during this period will be treated as authorization to cancel the noted claims by Examiner's Amendment and pass the case to issue. Extensions of time under 37 CFR 1.136(a) will not be permitted since this application will be passed to issue.

The prosecution of this case is closed except for consideration of the above matter.

#### ***Claim Objections***

**Claim 29** is objected to because of the following informalities: claim 29 recites the phrase, "and/or" which renders the claim indefinite for failing to particularly point out and distinctly claim the subject matter which the inventor regards as the invention. For the sake of expediting prosecution, the phrase will be interpreted as "or". Appropriate correction is required.

#### ***Allowable Subject Matter***

**Claims 29-44 are allowed.**

To expedite the allowance of claims 29-44, the Applicant is reminded to address and fix the claim objections, as well as cancel the non-elected claims.

The following is an examiner's statement of reasons for allowance:

Independent claim 29 is currently believed to be in condition for allowance. While the prior art of record discloses similar power systems with subsequent load control in order to prevent potential overloads, the prior art of record fails to appropriately teach or suggest, "a non-utility type power source comprising an inverter... the power source having at least one maximum output power parameter which if exceeded causes an overload of the power source, the output A.C. power having an A.C. frequency, which frequency is controlled in response to the timely amount of the output A.C. power; b) a power sensing circuit... is responsive to the timely amount of the output A.C. power, the power source operating in response to the power sensing circuit to control the frequency of the output A.C. power to have a first frequency when the power source is not overloaded and a second frequency when the power source is overloaded or is near to being overloaded; c) a processor circuit comprising one or more processors responsive to the output A.C. power, the processor circuit operating in response to the occurrence of the second frequency to control the amount of output A.C. power consumed by at least one load of the one or more loads thereby helping to prevent or alleviate an overload of the power source."

For example, while prior art Lasseter et al. (U.S. Patent Publication Number 2004/0051387) discloses a non-utility type power source comprising an inverter, as well as a power sensing circuit, and a processor circuit (see, for example, Fig. 3, voltage source PWM inverter 450, voltage controller 330, power controller 340, etc., paragraphs 0055-0056, 0060, 0066, etc.), Lasseter fails to teach the power source operating in such a manner so as to control the frequency of the output AC power to have a first frequency when the power source is not

overloaded and a second frequency when the power source is overloaded or near to being overloaded in addition to a processor circuit operating in response to the occurrence of the second frequency to control the amount of AC output power consumed by at least one load. Said limitations, when taken into consideration with the claim language in its entirety, appears to be directed towards a non-obvious improvement over the prior art of record. For these reasons, inter alia, the claims are currently believed to be in condition for allowance. Claim 29, the sole remaining independent claim, is presented below.

**Claim 29:** A power system which provides A.C. power with a controlled A.C. frequency to assist in managing the loading thereof, the power system comprising:

- a) a non-utility type power source comprising an inverter which provides single or multiple phase output A.C. power to one or more of a plurality of loads, the power source having at least one maximum output power parameter which if exceeded causes an overload of the power source, the output A.C. power having an A.C. frequency, which frequency is controlled in response to the timely amount of the output A.C. power;
- b) a power sensing circuit which may be part of the power source or otherwise and is responsive to the timely amount of the output A.C. power, the power source operating in response to the power sensing circuit to control the frequency of the output A.C. power to have a first frequency when the power source is not overloaded and a second frequency when the power source is overloaded or is near to being overloaded;
- c) a processor circuit comprising one or more processors responsive to the output A.C. power, the processor circuit operating in response to the occurrence of the second frequency

to control the amount of output A.C. power consumed by at least one load of the one or more loads thereby helping to prevent or alleviate an overload of the power source.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JOSEPH N INGE whose telephone number is (571)270-7705. The examiner can normally be reached 9:00-5:00 EST.

Examiner interviews are available via telephone, in-person, and video conferencing using a USPTO supplied web-based collaboration tool. To schedule an interview, applicant is encouraged to use the USPTO Automated Interview Request (AIR) at <http://www.uspto.gov/interviewpractice>.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rexford Barnie can be reached on 571-272-7492. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of published or unpublished applications may be obtained from Patent Center. Unpublished application information in Patent Center is available to registered users. To file and manage patent submissions in Patent Center, visit:

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Art Unit: 2836

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/JOSEPH N INGE/  
Examiner, Art Unit 2836

/REXFORD N BARNIE/  
Supervisory Patent Examiner, Art Unit 2836

|                                   |                                       |                                                               |             |
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|                                   | Examiner<br>JOSEPH N INGE             | Art Unit<br>2836                                              | Page 1 of 1 |

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|   | L |                                                  |                 |                     |                    |                   |
|   | M |                                                  |                 |                     |                    |                   |

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**NON-PATENT DOCUMENTS**

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\*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)  
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Part of Paper No. 20230815

|                                                                                                          |                                              |                                                                   |
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| <b>Search Notes</b><br> | <b>Application/Control No.</b><br>16/952,007 | <b>Applicant(s)/Patent Under Reexamination</b><br>Cooper, J. Carl |
|                                                                                                          | <b>Examiner</b><br>JOSEPH N INGE             | <b>Art Unit</b><br>2836                                           |

| CPC - Searched* |            |          |
|-----------------|------------|----------|
| Symbol          | Date       | Examiner |
| H02J 3/00       | 08/15/2023 | Jl       |
| H02J 9/00       | 08/15/2023 | Jl       |

| CPC Combination Sets - Searched* |      |          |
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| US Classification - Searched* |          |      |          |
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| Class                         | Subclass | Date | Examiner |
|                               |          |      |          |

\* See search history printout included with this form or the SEARCH NOTES box below to determine the scope of the search.

| Search Notes    |            |          |
|-----------------|------------|----------|
| Search Notes    | Date       | Examiner |
| Inventor Search | 08/15/2023 | Jl       |
| PE2E Search     | 08/15/2023 | Jl       |

| Interference Search |                       |            |          |
|---------------------|-----------------------|------------|----------|
| US Class/CPC Symbol | US Subclass/CPC Group | Date       | Examiner |
| H02J                | 3/00                  | 08/15/2023 | Jl       |
| H02J                | 9/00                  | 08/15/2023 | Jl       |

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Receipt date: 11/18/2020

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PTO/SB/08a (03-15)

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| <b>INFORMATION DISCLOSURE<br/>STATEMENT BY APPLICANT</b><br>( Not for submission under 37 CFR 1.99) | Application Number     | 16952007          |
|                                                                                                     | Filing Date            | 2020-11-18        |
|                                                                                                     | First Named Inventor   | J. Carl Cooper    |
|                                                                                                     | Art Unit               |                   |
|                                                                                                     | Examiner Name          |                   |
|                                                                                                     | Attorney Docket Number | JCC_5-12_DIV_2020 |

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| 55 | 20020024332 | A1 | 2002-02-28 | Gardner           | All. |

**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**  
( Not for submission under 37 CFR 1.99)

|                        |                   |
|------------------------|-------------------|
| Application Number     | 16952007          |
| Filing Date            | 2020-11-18        |
| First Named Inventor   | J. Carl Cooper    |
| Art Unit               |                   |
| Examiner Name          |                   |
| Attorney Docket Number | JCC_5-12_DIV_2020 |

|    |             |    |            |            |
|----|-------------|----|------------|------------|
| 56 | 20020084697 | A1 | 2002-07-04 | Radusewicz |
|----|-------------|----|------------|------------|

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**FOREIGN PATENT DOCUMENTS**


| Examiner Initial* | Cite No | Foreign Document Number <sup>3</sup> | Country Code <sup>2</sup> | Kind Code <sup>4</sup> | Publication Date | Name of Patentee or Applicant of cited Document | Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear | T <sup>5</sup> |
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|--------------------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|
|                    | 1       | SCHNEIDER ELECTRIC, 8910DPA92V02 Product Data Sheet, copyright 2011                                                                                                                                                                                             |                |
|                    | 2       | GENERAC, Load Control Module brochure, printed 04/07/10                                                                                                                                                                                                         |                |
|                    | 3       | TESLA MOTORS, High Power Connector Installation Manual, (date unknown)                                                                                                                                                                                          |                |
|                    | 4       | SIMON COHEN, Which apps would you like to see on the iPad?, February 10, 2010                                                                                                                                                                                   |                |
|                    | 5       | LASKO, 30" Tall Digital Ceramic Pedestal Heater with Remote, Model 5350, 03/06                                                                                                                                                                                  |                |

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| Attorney Docket Number | JCC_5-12_DIV_2020 |

|    |                                                                                      |
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| 6  | GENERAC, Nexus LTS connections, (date unknown)                                       |
| 7  | GENERAC, Technical Manual Nexus Smart Switch, 04/22/10                               |
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| 9  | CUMMINS, Automatic transfer switches, copyright 2007                                 |
| 10 | CUMMINS, GGHE Generator set data sheet, copyright 2009                               |
| 11 | CUMMINS, GGMA Generator set data sheet, copyright 2009                               |
| 12 | KIRK A. KLEINSCHMIDT, A Closer Look at Inverter Generators, ca. 2008                 |
| 13 | CUMMINS, PowerCommand 3100 Digital generator set control, copyringt 2008             |
| 14 | GENERAC, RTSS Load Shed Automatic Transfer Switch Technical Manual, Rev. C, 05/02/08 |

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See attached certification statement.

The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☒ A certification statement is not submitted herewith.

**SIGNATURE**

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

|            |                  |                     |            |
|------------|------------------|---------------------|------------|
| Signature  | /J. Carl Cooper/ | Date (YYYY-MM-DD)   | 2020-11-18 |
| Name/Print | J. Carl Cooper   | Registration Number | 34,568     |

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6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
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|                                                                                                     | Art Unit               |                   |
|                                                                                                     | Examiner Name          |                   |
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|                                                                                                            | 1       | 8350405                                                                                                                                                                                                                                                         | B2                        | 2013-01-08             | Vicari et al.                                   | All                                                                      |                                                                          |                |
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|   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|---|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | GENERAC POWER SYSTEMS, INC. (August 14, 2020) Owners Manual For PWRcell Automatic Transfer Switch, Rev. B. Generac Power Systems, Inc. Waukesha, WI 53189, USA. Retrieved from <a href="https://www.generac.com/service-support/product-support-lookup/product-support-details?productid=d2736fee-be12-4237-a6cb-b4f029652a44&amp;serialNumber=CXSC100A3&amp;registered=false">https://www.generac.com/service-support/product-support-lookup/product-support-details?productid=d2736fee-be12-4237-a6cb-b4f029652a44&amp;serialNumber=CXSC100A3&amp;registered=false</a> |
| 2 | GENERAC POWER SYSTEMS, INC. (August 28, 2019) Generac PWRCELL SOLAR + BATTERY STORAGE SYSTEM REV 10/20. Generac Power Systems, Inc. Waukesha, WI 53189, USA. Retrieved from <a href="https://www.generac.com/generacorporate/media/library/content/clean%20energy/pwrcell_consumer_brochure.pdf?ext=.pdf">https://www.generac.com/generacorporate/media/library/content/clean%20energy/pwrcell_consumer_brochure.pdf?ext=.pdf</a>                                                                                                                                        |
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| 4 | GENERAC POWER SYSTEMS, INC. (July 29, 2020) LINE DIAGRAMS PWR CELL. Generac Power Systems, Inc. Waukesha, WI 53189, USA. Retrieved from <a href="https://www.generac.com/service-support/product-support-lookup/product-support-details?productid=8ba6048c-9b6d-46a1-acb9-27af74be6b74">https://www.generac.com/service-support/product-support-lookup/product-support-details?productid=8ba6048c-9b6d-46a1-acb9-27af74be6b74</a>                                                                                                                                        |
| 5 | GENERAC POWER SYSTEMS, INC. (November 16, 2018) Generac Owner's/Installation Manual Smart Management Module (SMM) Rev. B 11/16/18. Generac Power Systems, Inc. Waukesha, WI 53189, USA.                                                                                                                                                                                                                                                                                                                                                                                  |
| 6 | GENERAC POWER SYSTEMS, INC. (March 26, 2019) Generac Owner's/Installation Manual 100A Smart Management Module (SMM) Rev. A 11/16/18. Generac Power Systems, Inc. Waukesha, WI 53189, USA.                                                                                                                                                                                                                                                                                                                                                                                |

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## Bibliographic Data

Application No: 16/952,007

Foreign Priority claimed: ☐ Yes ☒ No

35 USC 119 (a-d) conditions met: ☐ Yes ☒ No ☐ Met After Allowance

Verified and Acknowledged:

/JOSEPH N INGE/

Examiner's Signature

Initials

Title:

Power Source Load Control

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| FILING or 371(c) DATE | CLASS | GROUP ART UNIT | ATTORNEY DOCKET NO. |
|-----------------------|-------|----------------|---------------------|
| 11/18/2020            | 307   | 2836           | JCC_5-12_Div_2020   |
| RULE                  |       |                |                     |

### APPLICANTS

### INVENTORS

J. Carl Cooper, Reno, NV, UNITED STATES

### CONTINUING DATA

This application is a DIV of 13481804 05/26/2012 PAT 10879727

13481804 has PRO of 61624360 04/15/2012

13481804 has PRO of 61598564 02/14/2012

13481804 has PRO of 61552722 10/28/2011

13481804 has PRO of 61490253 05/26/2011

### FOREIGN APPLICATIONS

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11/30/2020

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### STATE OR COUNTRY

UNITED STATES

### ADDRESS

J. CARL COOPER

900 Whites Creek Lane

Reno, NV 89511

UNITED STATES

### FILING FEE RECEIVED

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Doc description: Information Disclosure Statement (IDS) Filed

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|                                                                                                     | Art Unit               | 2631              |
|                                                                                                     | Examiner Name          |                   |
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|                                                                                             | 1       | 20020084697        | A1                     | 2002-07-04       | Radusewicz, Peter J.                            | All                                                                      |        |
|                                                                                             | 2       | 20100007300        | A1                     | 2010-01-14       | Hein, Bruch H.                                  | All                                                                      |        |
|                                                                                             | 3       | 20110062888        | A1                     | 2011-03-17       | Bondy, Montgomery C.                            | All                                                                      |        |
|                                                                                             | 4       | 20110210606        | A1                     | 2011-09-01       | Selker, Jens                                    | All                                                                      |        |
|                                                                                             | 5       | 20140111006        | A1                     | 2014-04-24       | Baldassarre, John                               | All                                                                      |        |

**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**  
( Not for submission under 37 CFR 1.99)

|                        |                   |
|------------------------|-------------------|
| Application Number     | 16952007          |
| Filing Date            | 2020-11-18        |
| First Named Inventor   | J. Carl Cooper    |
| Art Unit               | 2631              |
| Examiner Name          |                   |
| Attorney Docket Number | JCC_5-12_Div_2020 |

|   |             |    |            |                |     |
|---|-------------|----|------------|----------------|-----|
| 6 | 20190027933 | A1 | 2019-24-01 | Lian, Jianming | All |
|---|-------------|----|------------|----------------|-----|

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| Examiner Initial* | Cite No | Foreign Document Number <sup>3</sup> | Country Code <sup>2</sup> | Kind Code <sup>4</sup> | Publication Date | Name of Patentee or Applicant of cited Document | Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear | T <sup>5</sup> |
|-------------------|---------|--------------------------------------|---------------------------|------------------------|------------------|-------------------------------------------------|--------------------------------------------------------------------------|----------------|
|                   | 1       |                                      |                           |                        |                  |                                                 |                                                                          |                |

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| Examiner Signature | /JOSEPH N INGE/ | Date Considered | 08/15/2023 |
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\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> See Kind Codes of USPTO Patent Documents at [www.USPTO.GOV](http://www.USPTO.GOV) or MPEP 901.04. <sup>2</sup> Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>3</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>4</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. <sup>5</sup> Applicant is to place a check mark here if English language translation is attached.

**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**  
( Not for submission under 37 CFR 1.99)

|                        |                   |
|------------------------|-------------------|
| Application Number     | 16952007          |
| Filing Date            | 2020-11-18        |
| First Named Inventor   | J. Carl Cooper    |
| Art Unit               | 2631              |
| Examiner Name          |                   |
| Attorney Docket Number | JCC_5-12_Div_2020 |

**CERTIFICATION STATEMENT**

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

**OR**

☐ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

See attached certification statement.

The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☒ A certification statement is not submitted herewith.

**SIGNATURE**

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

|            |                  |                     |            |
|------------|------------------|---------------------|------------|
| Signature  | /J. Carl Cooper/ | Date (YYYY-MM-DD)   | 2021-08-31 |
| Name/Print | J. Carl Cooper   | Registration Number | 34568      |

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# PE2E SEARCH - Search History (Prior Art)

| Ref # | Hits | Search Query                                                                                                                                                                                                                                                                                                                                                                                          | DBs               | Default Operator | Plurals | British Equivalents | Time Stamp          |
|-------|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|------------------|---------|---------------------|---------------------|
| L1    | 0    | "13481804"                                                                                                                                                                                                                                                                                                                                                                                            | (US-PGPUB; USPAT) | OR               | ON      | ON                  | 2015/09/15 11:46 AM |
| L2    | 0    | "13481804"                                                                                                                                                                                                                                                                                                                                                                                            | (US-PGPUB; USPAT) | OR               | ON      | ON                  | 2015/09/15 11:47 AM |
| L3    | 29   | ("20070053123" "6313632" "20050216131" "20050109387" "20070222294" "20070276547" "8159084" "20130116487" "20130159738" "20070222295" "8248058" "20040078153" "20050116814" "20060018069" "20070008076" "7356384" "20100134073" "20100328850" "7692332" "20130158726" "20060276938" "7338364" "7015599" "20020072868" "20050216131" "20070010916" "7379778" "7053497" "20040075343" "20100225167").PN. | (US-PGPUB; USPAT) | OR               | ON      | ON                  | 2015/09/15 11:48 AM |
| L4    | 0    | "13481804"                                                                                                                                                                                                                                                                                                                                                                                            | (US-PGPUB; USPAT) | OR               | ON      | ON                  | 2015/09/15 11:49 AM |
| L5    | 130  | "6528957"                                                                                                                                                                                                                                                                                                                                                                                             | (US-PGPUB; USPAT) | OR               | ON      | ON                  | 2015/09/15 11:55 AM |
| L6    | 1    | "6528957".pn.                                                                                                                                                                                                                                                                                                                                                                                         | (US-PGPUB; USPAT) | OR               | ON      | ON                  | 2015/09/15 11:55 AM |
| L7    | 1    | "20060164773"                                                                                                                                                                                                                                                                                                                                                                                         | (US-PGPUB; USPAT) | OR               | ON      | ON                  | 2015/09/15 11:56 AM |
| L8    | 0    | "13481804"                                                                                                                                                                                                                                                                                                                                                                                            | (US-PGPUB; USPAT) | OR               | ON      | ON                  | 2016/02/17 05:14 PM |
| L9    | 0    | "13481804"                                                                                                                                                                                                                                                                                                                                                                                            | (US-PGPUB; USPAT) | OR               | ON      | ON                  | 2016/02/18 12:47 PM |
| L10   | 143  | "6528957"                                                                                                                                                                                                                                                                                                                                                                                             | (US-PGPUB; USPAT) | OR               | ON      | ON                  | 2016/02/18 01:02 PM |
| L11   | 35   | "6528957" and management with control with system                                                                                                                                                                                                                                                                                                                                                     | (US-PGPUB; USPAT) | OR               | ON      | ON                  | 2016/02/18 01:02 PM |
| L12   | 1    | "5196982".pn.                                                                                                                                                                                                                                                                                                                                                                                         | (US-PGPUB; USPAT) | OR               | ON      | ON                  | 2016/02/18 02:58 PM |
| L13   | 29   | ("20070053123" "6313632" "20050216131" "20050109387" "20070222294" "20070276547" "8159084" "20130116487" "20130159738" "20070222295" "8248058" "2                                                                                                                                                                                                                                                     | (US-PGPUB; USPAT) | OR               | ON      | ON                  | 2016/02/19 02:02 PM |

|     |      |                                                                                                                                                                                                                                                                                                                                                                                                       |                   |    |    |    |                     |
|-----|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|----|----|----|---------------------|
| L14 | 6    | 0040078153 "20050116814 "20060018069 "20070008076 "7356384 "20100134073 "20100328850 "7692332 "20130158726 "20060276938 "7338364 "7015599 "20020072868 "20050216131 "20070010916 "7379778 "7053497 "20040075343 "20100225167").PN.                                                                                                                                                                    | (US-PGPUB; USPAT) | OR | ON | ON | 2016/02/19 02:02 PM |
| L15 | 522  | ("20070053123 "6313632 "20050216131 "20050109387 "20070222294 "20070276547 "8159084 "20130116487 "20130159738 "20070222295 "8248058 "20040078153 "20050116814 "20060018069 "20070008076 "7356384 "20100134073 "20100328850 "7692332 "20130158726 "20060276938 "7338364 "7015599 "20020072868 "20050216131 "20070010916 "7379778 "7053497 "20040075343 "20100225167").PN. and (automobile vehicle car) | (US-PGPUB; USPAT) | OR | ON | ON | 2016/02/19 02:21 PM |
| L16 | 1140 | h02j1/10                                                                                                                                                                                                                                                                                                                                                                                              | (US-PGPUB; USPAT) | OR | ON | ON | 2016/02/19 02:22 PM |
| L17 | 1774 | h02j3/00                                                                                                                                                                                                                                                                                                                                                                                              | (US-PGPUB; USPAT) | OR | ON | ON | 2016/02/19 02:22 PM |
| L18 | 0    | "13481804"                                                                                                                                                                                                                                                                                                                                                                                            | (US-PGPUB; USPAT) | OR | ON | ON | 2016/06/23 11:30 AM |
| L19 | 29   | ("20070053123 "6313632 "20050216131 "20050109387 "20070222294 "20100134073 "20070276547 "8159084 "20130116487 "20130159738 "20070222295 "8248058 "20050116814 "7015599 "20040078153 "20050116814 "20060018069 "20070008076 "7356384 "20100134073 "20100328850 "7692332 "20130158726 "20060276938 "7338364 "701559                                                                                     | (US-PGPUB; USPAT) | OR | ON | ON | 2016/06/23 12:06 PM |

|     |   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                   |    |    |    |                        |
|-----|---|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|----|----|----|------------------------|
| L20 | 5 | 9 "20020072868 "20050216131 "20070010916 "7379778 "7053497 "20040075343 "20100225167".PN.<br>(("20070053123 "6313632 "20050216131 "20050109387 "20070222294 "20100134073 "20070276547 "8159084 "20130116487 "20130159738 "20070222295 "8248058 "20050116814 "20060018069 "2007008076 "7356384 "20100134073 "20100328850 "7692332 "20130158726 "20060276938 "7338364 "7015599 "20020072868 "20050216131 "20070010916 "7379778 "7053497 "20040075343 "20100225167".PN. and memory and processor and ((back adj up) backup) near2 power | (US-PGPUB; USPAT) | OR | ON | ON | 2016/06/23<br>12:13 PM |
| L21 | 1 | (("20070053123 "6313632 "20050216131 "20050109387 "20070222294 "20100134073 "20070276547 "8159084 "20130116487 "20130159738 "20070222295 "8248058 "20050116814 "20060018069 "2007008076 "7356384 "20100134073 "20100328850 "7692332 "20130158726 "20060276938 "7338364 "7015599 "20020072868 "20050216131 "20070010916 "7379778 "7053497 "20040075343 "20100225167".PN. and memory same parameter\$1 and processor and ((back adj up) backup) near2 power                                                                            | (US-PGPUB; USPAT) | OR | ON | ON | 2016/06/23<br>12:14 PM |

|     |      |                                                                                                                                                                                                                                       |                   |    |    |    |                        |
|-----|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|----|----|----|------------------------|
| L22 | 19   | (307/29.ccls.<br>h02j1/00.cpc.<br>h02j3/00.cpc.) and<br>memory same<br>parameter\$1 and<br>processor and ((back<br>adj up) backup) near2<br>power                                                                                     | (US-PGPUB; USPAT) | OR | ON | ON | 2016/06/23<br>12:15 PM |
| L23 | 2    | "20100146333"                                                                                                                                                                                                                         | (US-PGPUB; USPAT) | OR | ON | ON | 2016/06/23<br>12:19 PM |
| L24 | 1277 | power same load\$1 and<br>((back adj up) backup<br>auxiliary secondary)<br>with power with source<br>and (controller<br>processor) same<br>memory with stor\$3<br>with (information<br>parameter) and<br>switch\$3                    | (US-PGPUB; USPAT) | OR | ON | ON | 2016/06/23<br>12:24 PM |
| L25 | 122  | power same load\$1 and<br>((back adj up) backup<br>auxiliary secondary)<br>with power with source<br>and (controller<br>processor) same<br>memory with stor\$3<br>with (information<br>parameter) and<br>switch\$3 and<br>"307".clas. | (US-PGPUB; USPAT) | OR | ON | ON | 2016/06/23<br>12:24 PM |
| L26 | 2    | "20060184810"                                                                                                                                                                                                                         | (US-PGPUB; USPAT) | OR | ON | ON | 2016/06/23<br>12:40 PM |
| L27 | 2    | "20110064445"                                                                                                                                                                                                                         | (US-PGPUB; USPAT) | OR | ON | ON | 2016/06/23<br>12:42 PM |
| L28 | 54   | "6188182"                                                                                                                                                                                                                             | (US-PGPUB; USPAT) | OR | ON | ON | 2016/06/24<br>02:56 PM |
| L29 | 1    | "6188182".pn.                                                                                                                                                                                                                         | (US-PGPUB; USPAT) | OR | ON | ON | 2016/06/24<br>02:56 PM |
| L30 | 2427 | (process\$3 control\$3)<br>same memory with<br>stor\$3 with<br>(parameter\$1<br>information) with power<br>near2 source\$1                                                                                                            | (US-PGPUB; USPAT) | OR | ON | ON | 2016/06/24<br>03:06 PM |
| L31 | 215  | (process\$3 control\$3)<br>same memory with<br>stor\$3 with<br>(parameter\$1<br>information) with<br>(auxiliary secondary<br>backup (back adj up))<br>with power near2<br>source\$1                                                   | (US-PGPUB; USPAT) | OR | ON | ON | 2016/06/24<br>03:07 PM |
| L32 | 1    | "7423355".pn. and                                                                                                                                                                                                                     | (US-PGPUB; USPAT) | OR | ON | ON | 2016/06/24             |

|     |   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                   |    |    |    |                                    |
|-----|---|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|----|----|----|------------------------------------|
| L33 | 2 | memory<br>"20060133181"                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | (US-PGPUB; USPAT) | OR | ON | ON | 03:13 PM<br>2016/06/24<br>03:17 PM |
| L34 | 0 | ("20070053123" "63136<br>32" "20050216131" "20<br>050109387" "20070222<br>294" "20100134073" "2<br>0070276547" "8159084<br>" "20130116487" "2013<br>0159738" "2007022229<br>5" "8248058" "2005011<br>6814" "7015599" "2004<br>0078153" "2005011681<br>4" "20060018069" "200<br>70008076" "7356384" "2<br>0100134073" "201003<br>28850" "7692332" "201<br>30158726" "200602769<br>38" "7338364" "701559<br>9" "20020072868" "200<br>50216131" "200700109<br>16" "7379778" "705349<br>7" "20040075343" "201<br>00225167" "201002251<br>67").PN. and memory<br>with (parameter\$1<br>information) with<br>(backup auxiliary<br>secondary second<br>(back adj up)) near2<br>power near2 source | (US-PGPUB; USPAT) | OR | ON | ON | 2016/06/24<br>03:20 PM             |
| L35 | 0 | ("20070053123" "63136<br>32" "20050216131" "20<br>050109387" "20070222<br>294" "20100134073" "2<br>0070276547" "8159084<br>" "20130116487" "2013<br>0159738" "2007022229<br>5" "8248058" "2005011<br>6814" "7015599" "2004<br>0078153" "2005011681<br>4" "20060018069" "200<br>70008076" "7356384" "2<br>0100134073" "201003<br>28850" "7692332" "201<br>30158726" "200602769<br>38" "7338364" "701559<br>9" "20020072868" "200<br>50216131" "200700109<br>16" "7379778" "705349<br>7" "20040075343" "201<br>00225167" "201002251<br>67").PN. and memory<br>same (parameter\$1<br>information) with<br>(backup auxiliary<br>secondary second                                               | (US-PGPUB; USPAT) | OR | ON | ON | 2016/06/24<br>03:21 PM             |

|     |          |                                                                                                                                                                                                     |                   |    |     |     |                        |
|-----|----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|----|-----|-----|------------------------|
| L36 | 260      | (back adj up)) near2<br>power near2 source<br>memory with stor\$3<br>with (parameter\$1<br>information) with<br>(backup auxiliary<br>secondary second<br>(back adj up)) near2<br>power near2 source | (US-PGPUB; USPAT) | OR | ON  | ON  | 2016/06/24<br>03:40 PM |
| L37 | 10850291 | memory with stor\$3<br>with (parameter\$1<br>information) with<br>(backup auxiliary<br>secondary second<br>(back adj up)) near2<br>power near2 source<br>@ad>="2011"                                | (US-PGPUB; USPAT) | OR | ON  | ON  | 2016/06/24<br>03:45 PM |
| L38 | 260      | memory with stor\$3<br>with (parameter\$1<br>information) with<br>(backup auxiliary<br>secondary second<br>(back adj up)) near2<br>power near2 source<br>and @ad>="2011"                            | (US-PGPUB; USPAT) | OR | ON  | ON  | 2016/06/24<br>03:46 PM |
| L39 | 2        | "20120179929"                                                                                                                                                                                       | (US-PGPUB; USPAT) | OR | ON  | ON  | 2016/06/24<br>03:50 PM |
| L40 | 1        | "7787339".pn.                                                                                                                                                                                       | (US-PGPUB; USPAT) | OR | ON  | ON  | 2016/06/24<br>03:57 PM |
| L41 | 3071     | (307/29.ccls.<br>h02j3/00.cpc.<br>h02j1/10.cpc.)                                                                                                                                                    | (US-PGPUB; USPAT) | OR | ON  | ON  | 2016/06/24<br>07:01 PM |
| L45 | 0        | "13481804"                                                                                                                                                                                          | (US-PGPUB; USPAT) | OR | ON  | ON  | 2016/12/20<br>08:17 PM |
| L51 | 0        | "13481804"                                                                                                                                                                                          | (US-PGPUB; USPAT) | OR | ON  | ON  | 2017/04/03<br>11:27 AM |
| L52 | 3        | ("5381554" "5315161"<br>"4611289").pn.                                                                                                                                                              | (US-PGPUB; USPAT) | OR | ON  | ON  | 2017/10/06<br>09:58 AM |
| L53 | 0        | "13481804"                                                                                                                                                                                          | (US-PGPUB; USPAT) | OR | ON  | ON  | 2017/10/06<br>10:04 AM |
| L54 | 11       | 2011/0298286                                                                                                                                                                                        | (US-PGPUB; USPAT) | OR | OFF | OFF | 2017/11/14<br>09:47 AM |
| L55 | 2        | "20110298286"                                                                                                                                                                                       | (US-PGPUB; USPAT) | OR | OFF | OFF | 2017/11/14<br>09:47 AM |
| L56 | 2        | "20110298285"                                                                                                                                                                                       | (US-PGPUB; USPAT) | OR | OFF | OFF | 2017/11/14<br>09:48 AM |
| L57 | 1        | "20100019574"                                                                                                                                                                                       | (US-PGPUB; USPAT) | OR | OFF | OFF | 2017/11/14<br>09:49 AM |
| L58 | 1        | "20120204584"                                                                                                                                                                                       | (US-PGPUB; USPAT) | OR | OFF | OFF | 2017/11/14<br>09:50 AM |
| L59 | 1        | "20100019574"                                                                                                                                                                                       | (US-PGPUB; USPAT) | OR | OFF | OFF | 2017/11/14<br>09:50 AM |

|     |      |                                                                                  |                   |    |     |     |                        |
|-----|------|----------------------------------------------------------------------------------|-------------------|----|-----|-----|------------------------|
| L60 | 2    | "20060072262"                                                                    | (US-PGPUB; USPAT) | OR | OFF | OFF | 2017/11/14<br>09:50 AM |
| L61 | 2    | ("6172432"<br>"5583419").pn.                                                     | (US-PGPUB; USPAT) | OR | OFF | OFF | 2017/11/14<br>09:51 AM |
| L62 | 0    | "13481804"                                                                       | (US-PGPUB; USPAT) | OR | OFF | OFF | 2017/11/14<br>11:35 AM |
| L63 | 27   | "5583419"                                                                        | (US-PGPUB; USPAT) | OR | ON  | ON  | 2017/11/22<br>08:07 AM |
| L64 | 1    | "20020024332"                                                                    | (US-PGPUB; USPAT) | OR | ON  | ON  | 2017/11/22<br>08:08 AM |
| L65 | 2    | "20110254370"                                                                    | (US-PGPUB; USPAT) | OR | OFF | OFF | 2017/11/22<br>08:10 AM |
| L66 | 2    | "20120146417"                                                                    | (US-PGPUB; USPAT) | OR | OFF | OFF | 2017/11/22<br>08:10 AM |
| L67 | 1    | "20030075982"                                                                    | (US-PGPUB; USPAT) | OR | OFF | OFF | 2017/11/22<br>08:13 AM |
| L68 | 2    | "20090121547"                                                                    | (US-PGPUB; USPAT) | OR | OFF | OFF | 2017/12/21<br>03:44 PM |
| L69 | 2    | "20060072262"                                                                    | (US-PGPUB; USPAT) | OR | OFF | OFF | 2017/12/21<br>04:01 PM |
| L70 | 1330 | (h02j9/066 h02j9/08<br>y10t307/438<br>y10t307/636).cpc.                          | (US-PGPUB; USPAT) | OR | OFF | OFF | 2017/12/21<br>04:28 PM |
| L71 | 1902 | (307/68 307/31<br>307/35).ccls.                                                  | (US-PGPUB; USPAT) | OR | OFF | OFF | 2017/12/21<br>04:28 PM |
| L72 | 529  | L70 and L71                                                                      | (US-PGPUB; USPAT) | OR | OFF | OFF | 2017/12/21<br>04:28 PM |
| L73 | 74   | L72 and (overload (over<br>adj load))                                            | (US-PGPUB; USPAT) | OR | OFF | OFF | 2017/12/21<br>04:28 PM |
| L78 | 1    | "20020024332"                                                                    | (US-PGPUB; USPAT) | OR | OFF | OFF | 2018/02/26<br>07:33 PM |
| L79 | 2    | "20110254370"                                                                    | (US-PGPUB; USPAT) | OR | OFF | OFF | 2018/02/26<br>07:40 PM |
| L80 | 1    | "6172432".pn.                                                                    | (US-PGPUB; USPAT) | OR | OFF | OFF | 2018/02/26<br>07:58 PM |
| L81 | 0    | "13481804"                                                                       | (US-PGPUB; USPAT) | OR | OFF | OFF | 2018/02/28<br>10:46 AM |
| L82 | 8775 | (h02j9/\$\$ y10t307/438<br>y10t307/636).cpc.                                     | (US-PGPUB; USPAT) | OR | OFF | OFF | 2018/02/28<br>10:48 AM |
| L83 | 829  | (h02j9/\$\$ y10t307/438<br>y10t307/636).cpc. and<br>overload                     | (US-PGPUB; USPAT) | OR | OFF | OFF | 2018/02/28<br>10:48 AM |
| L84 | 67   | (h02j9/\$\$ y10t307/438<br>y10t307/636).cpc. and<br>over adj load                | (US-PGPUB; USPAT) | OR | OFF | OFF | 2018/02/28<br>10:48 AM |
| L85 | 868  | (h02j9/\$\$ y10t307/438<br>y10t307/636).cpc. and<br>(over adj load)<br>overload) | (US-PGPUB; USPAT) | OR | OFF | OFF | 2018/02/28<br>10:50 AM |
| L86 | 87   | (h02j9/\$\$ y10t307/438<br>y10t307/636).cpc. and                                 | (US-PGPUB; USPAT) | OR | OFF | OFF | 2018/02/28<br>10:50 AM |

|     |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                   |    |     |     |                     |
|-----|----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|----|-----|-----|---------------------|
| L87 | 39 | ((over adj load) overload) and process\$3 same memory same (parameter\$3 information)<br>(h02j9/\$\$ y10t307/438 y10t307/636).cpc. and ((over adj load) overload) and process\$3 same memory same (parameter\$3 information) and generator\$1                                                                                                                                                                                                                   | (US-PGPUB; USPAT) | OR | OFF | OFF | 2018/02/28 10:51 AM |
| L88 | 59 | (h02j9/\$\$ y10t307/438 y10t307/636).cpc. and ((over adj load) overload) and process\$3 same memory same (parameter\$3 information) and ((back adj up) backup generator\$1)                                                                                                                                                                                                                                                                                     | (US-PGPUB; USPAT) | OR | OFF | OFF | 2018/02/28 10:51 AM |
| L89 | 1  | "20050116814"                                                                                                                                                                                                                                                                                                                                                                                                                                                   | (US-PGPUB; USPAT) | OR | OFF | OFF | 2018/02/28 10:54 AM |
| L90 | 1  | "6891478".pn.                                                                                                                                                                                                                                                                                                                                                                                                                                                   | (US-PGPUB; USPAT) | OR | OFF | OFF | 2018/03/02 09:56 AM |
| L91 | 35 | ("20100019574" "20110254370" "20110298286" "6172432" "6671586" "6891478" "20050216131" "20070222294" "7356384" "8248058" "20040075343" "20070222295" "20130116487" "20130158726" "20130159738" "7015599" "7053497" "7692332" "8159084" "20020072868" "20040078153" "20050109387" "20050116814" "20060018069" "20060276938" "20070008076" "20070010916" "20070053123" "20070276547" "20100134073" "20100225167" "20100328850" "6313632" "7338364" "7379778").PN. | (US-PGPUB; USPAT) | OR | OFF | OFF | 2018/03/06 08:37 AM |
| L92 | 2  | "20140167727"                                                                                                                                                                                                                                                                                                                                                                                                                                                   | (US-PGPUB; USPAT) | OR | OFF | OFF | 2018/03/14 10:07 AM |
| L93 | 1  | "6445088".pn.                                                                                                                                                                                                                                                                                                                                                                                                                                                   | (US-PGPUB; USPAT) | OR | OFF | OFF | 2018/03/14 01:00 PM |

|      |    |                                                                                                                                                                                                                                                   |                             |    |     |     |                        |
|------|----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|----|-----|-----|------------------------|
| L97  | 1  | "20020024332"                                                                                                                                                                                                                                     | (US-PGPUB; USPAT)           | OR | OFF | OFF | 2018/03/16<br>01:04 PM |
| L102 | 3  | ("9088180" "8736103"<br>"8350405").pn.                                                                                                                                                                                                            | (US-PGPUB; USPAT)           | OR | OFF | OFF | 2018/05/17<br>02:58 PM |
| L103 | 2  | "20110175450"                                                                                                                                                                                                                                     | (US-PGPUB; USPAT)           | OR | OFF | OFF | 2018/05/17<br>02:58 PM |
| L104 | 2  | "20130270908"                                                                                                                                                                                                                                     | (US-PGPUB; USPAT)           | OR | OFF | OFF | 2018/05/17<br>02:58 PM |
| L105 | 2  | "20110175450"                                                                                                                                                                                                                                     | (US-PGPUB; USPAT)           | OR | OFF | OFF | 2018/06/09<br>01:40 PM |
| L106 | 2  | "20130270908"                                                                                                                                                                                                                                     | (US-PGPUB; USPAT)           | OR | OFF | OFF | 2018/06/09<br>01:50 PM |
| L107 | 3  | ("9088180" "8736103"<br>"8350405").pn.                                                                                                                                                                                                            | (US-PGPUB; USPAT)           | OR | OFF | OFF | 2018/06/09<br>01:52 PM |
| L108 | 7  | ("20050216131"  <br>"20070021874"  <br>"20070222295"  <br>"6172432"   "6510369"  <br>"7356384").PN. OR<br>("8350405").URPN.                                                                                                                       | (US-PGPUB; USPAT;<br>USOCR) | OR | OFF | OFF | 2018/06/09<br>01:52 PM |
| L109 | 15 | ("20050216131"  <br>"20060229768"  <br>"20070010916"  <br>"20070021874"  <br>"20070222295"  <br>"20080258558"  <br>"20110298285"  <br>"4324987"   "5536976"  <br>"6172432"   "6510369"  <br>"6813525"  <br>"7356384").PN. OR<br>("9088180").URPN. | (US-PGPUB; USPAT;<br>USOCR) | OR | OFF | OFF | 2018/06/09<br>01:53 PM |
| L110 | 0  | "13481804"                                                                                                                                                                                                                                        | (US-PGPUB; USPAT)           | OR | OFF | OFF | 2018/06/09<br>02:09 PM |
| L111 | 1  | "20020024332"                                                                                                                                                                                                                                     | (US-PGPUB; USPAT)           | OR | OFF | OFF | 2018/11/16<br>02:13 PM |
| L112 | 2  | "20110298286"                                                                                                                                                                                                                                     | (US-PGPUB; USPAT)           | OR | OFF | OFF | 2018/11/16<br>02:16 PM |
| L113 | 1  | "20020024332"                                                                                                                                                                                                                                     | (US-PGPUB; USPAT)           | OR | OFF | OFF | 2018/11/19<br>01:07 PM |
| L114 | 2  | "20110298286"                                                                                                                                                                                                                                     | (US-PGPUB; USPAT)           | OR | OFF | OFF | 2018/11/19<br>01:08 PM |
| L115 | 1  | "20100019574"                                                                                                                                                                                                                                     | (US-PGPUB; USPAT)           | OR | OFF | OFF | 2018/11/19<br>01:09 PM |
| L116 | 2  | "20060072262"                                                                                                                                                                                                                                     | (US-PGPUB; USPAT)           | OR | OFF | OFF | 2018/11/19<br>01:10 PM |
| L117 | 1  | "8324755".pn.                                                                                                                                                                                                                                     | (US-PGPUB; USPAT)           | OR | OFF | OFF | 2018/11/19<br>01:11 PM |
| L118 | 1  | "20090216386"                                                                                                                                                                                                                                     | (US-PGPUB; USPAT)           | OR | OFF | OFF | 2018/11/19<br>01:11 PM |
| L119 | 1  | "8222548".pn.                                                                                                                                                                                                                                     | (US-PGPUB; USPAT)           | OR | OFF | OFF | 2018/11/19<br>01:14 PM |

|      |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                   |    |     |     |                        |
|------|-------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|----|-----|-----|------------------------|
| L120 | 1     | "7948117".pn.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | (US-PGPUB; USPAT) | OR | OFF | OFF | 2019/06/24<br>02:05 PM |
| L121 | 0     | "13481804"                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | (US-PGPUB; USPAT) | OR | OFF | OFF | 2019/06/25<br>09:28 PM |
| L122 | 49    | ("20120242145" "59144<br>67" "6181028" "668654<br>7" "7208850" "7402766"<br> "20090216386" "82225<br>48" "8324755" "201101<br>75450" "20130270908"<br> "8350405" "8736103" "9<br>088180" "20100019574<br> "20110254370" "2011<br>0298286" "6172432" "6<br>671586" "6891478" "20<br>050216131" "20070222<br>294" "7356384" "82480<br>58" "20040075343" "20<br>070222295" "20130116<br>487" "20130158726" "2<br>0130159738" "7015599<br> "7053497" "7692332" "8<br>159084" "2002007286<br>8" "20040078153" "200<br>50109387" "200501168<br>14" "20060018069" "20<br>060276938" "20070008<br>076" "20070010916" "2<br>0070053123" "2007027<br>6547" "20100134073" "2<br>0100225167" "201003<br>28850" "6313632" "733<br>8364" "7379778").PN. | (US-PGPUB; USPAT) | OR | OFF | OFF | 2019/06/26<br>04:13 PM |
| L123 | 0     | "13481804"                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | (US-PGPUB; USPAT) | OR | OFF | OFF | 2020/01/30<br>11:34 AM |
| L124 | 37534 | (h02j1/\$\$ h02j3/\$\$<br>h02j9/\$\$).cpc.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | (US-PGPUB; USPAT) | OR | OFF | OFF | 2020/01/30<br>02:56 PM |
| L125 | 39    | L124 and ((power near2<br>source\$1) generator\$1)<br>with manufacturer\$2<br>near2 power                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | (US-PGPUB; USPAT) | OR | OFF | OFF | 2020/01/30<br>02:57 PM |
| L126 | 148   | generator\$1 same<br>maximum with (output<br>power) same circuit<br>near break\$3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | (US-PGPUB; USPAT) | OR | OFF | OFF | 2020/01/30<br>03:00 PM |
| L127 | 0     | power near2<br>generator\$1 same<br>maximum near2 (output<br>power) with less near2<br>than with (overload\$3<br>trip\$1 tripp\$3)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | (US-PGPUB; USPAT) | OR | OFF | OFF | 2020/01/30<br>03:20 PM |
| L128 | 0     | power near2<br>generator\$1 same<br>(output power) with less<br>near2 than with                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | (US-PGPUB; USPAT) | OR | OFF | OFF | 2020/01/30<br>03:20 PM |

|      |      |                                                                                                                              |                   |    |     |     |                     |
|------|------|------------------------------------------------------------------------------------------------------------------------------|-------------------|----|-----|-----|---------------------|
| L129 | 37   | (overload\$3 trip\$1 tripp\$3)<br>power near2 generator\$1 same (output power) with less with (overload\$3 trip\$1 tripp\$3) | (US-PGPUB; USPAT) | OR | OFF | OFF | 2020/01/30 03:20 PM |
| L130 | 81   | power near2 generator\$1 same (output power) with (less\$2 small\$2) with (overload\$3 trip\$1 tripp\$3)                     | (US-PGPUB; USPAT) | OR | OFF | OFF | 2020/01/30 03:20 PM |
| L131 | 0    | generator\$1 same surge near2 watts same running near2 watts                                                                 | (US-PGPUB; USPAT) | OR | OFF | OFF | 2020/01/30 03:31 PM |
| L132 | 935  | home near2 generator\$1                                                                                                      | (US-PGPUB; USPAT) | OR | OFF | OFF | 2020/01/30 03:47 PM |
| L133 | 281  | L132 and (preset pre\$set manufacturer\$1 specific specified) with (output power)                                            | (US-PGPUB; USPAT) | OR | OFF | OFF | 2020/01/30 03:48 PM |
| L134 | 152  | L133 and @ad<="20110526"                                                                                                     | (US-PGPUB; USPAT) | OR | OFF | OFF | 2020/01/30 03:51 PM |
| L135 | 2    | "20140191033"                                                                                                                | (US-PGPUB; USPAT) | OR | OFF | OFF | 2020/01/30 03:52 PM |
| L136 | 1    | "20060087784"                                                                                                                | (US-PGPUB; USPAT) | OR | OFF | OFF | 2020/01/30 04:00 PM |
| L137 | 3482 | generator\$1 same maximum near2 (watt\$3 power) same output near2 power                                                      | (US-PGPUB; USPAT) | OR | OFF | OFF | 2020/01/30 04:14 PM |
| L138 | 42   | generator\$1 same maximum near2 (watt\$3 power) same output near2 power same (break\$3 (circuit near2 breaker\$1))           | (US-PGPUB; USPAT) | OR | OFF | OFF | 2020/01/30 04:15 PM |
| L139 | 18   | L138 and @ad<="20110526"                                                                                                     | (US-PGPUB; USPAT) | OR | OFF | OFF | 2020/01/30 04:16 PM |
| L140 | 24   | L138 not L139                                                                                                                | (US-PGPUB; USPAT) | OR | OFF | OFF | 2020/01/30 04:19 PM |
| L141 | 1    | "7418314".pn.                                                                                                                | (US-PGPUB; USPAT) | OR | OFF | OFF | 2020/03/13 11:52 AM |
| L142 | 2    | "20090121547"                                                                                                                | (US-PGPUB; USPAT) | OR | OFF | OFF | 2020/03/13 12:26 PM |
| L143 | 0    | "13481804"                                                                                                                   | (US-PGPUB; USPAT) | OR | OFF | OFF | 2020/06/30 04:21 PM |
| L144 | 1    | "20100019574"                                                                                                                | (US-PGPUB; USPAT) | OR | OFF | OFF | 2020/07/15 02:04 PM |
| L145 | 1    | "12435329"                                                                                                                   | (US-PGPUB; USPAT) | OR | OFF | OFF | 2020/07/27 08:03 PM |

|      |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                             |    |     |     |                        |
|------|-----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|----|-----|-----|------------------------|
| L146 | 2   | ("6172432"<br>"7119457").pn.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | (US-PGPUB; USPAT)           | OR | OFF | OFF | 2020/07/27<br>08:03 PM |
| L147 | 1   | "4888495".pn.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | (US-PGPUB; USPAT)           | OR | OFF | OFF | 2020/09/01<br>02:25 PM |
| L148 | 2   | "20120056474"                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | (US-PGPUB; USPAT)           | OR | OFF | OFF | 2020/09/01<br>03:09 PM |
| L149 | 0   | "16952007"                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | (US-PGPUB; USPAT)           | OR | ON  | ON  | 2022/10/07<br>09:49 AM |
| L150 | 2   | ("11522365"<br>"11183843").pn.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | (US-PGPUB; USPAT)           | OR | ON  | ON  | 2023/08/14<br>10:41 AM |
| L151 | 110 | ("4888495"   "5914467"<br>  "6172432"   "6181028"<br>  "6285178"   "6313632"<br>  "6671586"   "6686547"<br>  "6891478"   "7015599"<br>  "7053497"   "7208850"<br>  "7338364"   "7356384"<br>  "7379778"   "7402766"<br>  "7692332"   "7863867"<br>  "8159084"   "8222548"<br>  "8248058"   "8324755"<br>  "8350405"   "8410633"<br>  "8569912"   "8653679"<br>  "8736103"   "9088180"<br>  "9281715"   "9312665"<br>  "9362845"   "9876343"<br>  "9887546"   "9979337"<br>  "10069331"  <br>"10554074"  <br>"20020024323"  <br>"20020072868"  <br>"20020084697"  <br>"20030036822"  <br>"20040007876"  <br>"20040051387"  <br>"20040075343"  <br>"20040078153"  <br>"20040117330"  <br>"20040267386"  <br>"20050109387"  <br>"20050116814"  <br>"20050216131"  <br>"20060018069"  <br>"20060071554"  <br>"20060072262"  <br>"20060208574"  <br>"20060276938"  <br>"20070008076"  <br>"20070010916"  <br>"20070053123"  <br>"20070222294"  <br>"20070222295"  <br>"20070276547"  <br>"20070282547"  <br>"20080093851"  <br>"20080203820" | (US-PGPUB; USPAT;<br>USOCR) | OR | ON  | ON  | 2023/08/14<br>10:42 AM |

|      |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                             |    |    |    |                        |
|------|----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|----|----|----|------------------------|
|      |    | "20080212343"<br>"20090027932"<br>"20090150100"<br>"20090216386"<br>"20090224690"<br>"20090299540"<br>"20090326724"<br>"20100007300"<br>"20100019507"<br>"20100019574"<br>"20100038966"<br>"20100090532"<br>"20100134073"<br>"20100225167"<br>"20100328850"<br>"20110062888"<br>"20110064445"<br>"20110112704"<br>"20110175450"<br>"20110198928"<br>"20110210606"<br>"20110254370"<br>"20110298286"<br>"20120053744"<br>"20120056436"<br>"20120065786"<br>"20120158196"<br>"20120242145"<br>"20120292920"<br>"20130066482"<br>"20130103223"<br>"20130116847"<br>"20130158726"<br>"20130159738"<br>"20130270908"<br>"20140097683"<br>"20140111006"<br>"20150180236"<br>"20150180367"<br>"20150180393"<br>"20150311843"<br>"20160181861"<br>"20170008413"<br>"20170168516"<br>"20170214225"<br>"20190027933"<br>"20190273393").pn. OR<br>("11522365").urpn.<br>AND (PGPB   USPT  <br>USOC).dbnm. |                             |    |    |    |                        |
| L152 | 12 | ("2013/0270908").urpn.<br>AND (PGPB   USPT  <br>USOC).dbnm.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | (US-PGPUB; USPAT;<br>USOCR) | OR | ON | ON | 2023/08/14<br>04:37 PM |
| L153 | 3  | "20070010916"                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | (US-PGPUB; USPAT;<br>USOCR) | OR | ON | ON | 2023/08/14<br>04:43 PM |
| L154 | 0  | "16952007"                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | (US-PGPUB; USPAT;<br>USOCR) | OR | ON | ON | 2023/08/14<br>05:03 PM |

|      |    |                                                            |                             |    |    |    |                        |
|------|----|------------------------------------------------------------|-----------------------------|----|----|----|------------------------|
| L155 | 56 | ("2004/0051387").upn.<br>AND (PGPB   USPT  <br>USOC).dbnm. | (US-PGPUB; USPAT;<br>USOCR) | OR | ON | ON | 2023/08/15<br>03:28 PM |
| L156 | 3  | "11681024"                                                 | (US-PGPUB; USPAT;<br>USOCR) | OR | ON | ON | 2023/08/15<br>03:29 PM |

#### PE2E SEARCH - Search History (Interference)

| Ref # | Hits | Search Query                                                                                                                                                                    | DBs               | Default Operator | Plurals | British Equivalents | Time Stamp             |
|-------|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|------------------|---------|---------------------|------------------------|
| N42   | 3071 | (307/29.ccls.<br>h02j3/00.cpc.<br>h02j1/10.cpc.)                                                                                                                                | (US-PGPUB; USPAT) | OR               | ON      | ON                  | 2016/06/24<br>07:01 PM |
| N43   | 37   | (307/29.ccls.<br>h02j3/00.cpc.<br>h02j1/10.cpc.) and<br>(process\$3 control\$3)<br>same (backup (back adj<br>up) auxiliary secondary)<br>near power near source<br>same load\$1 | (US-PGPUB; USPAT) | OR               | ON      | ON                  | 2016/06/24<br>07:02 PM |
| N44   | 168  | ((process\$3 control\$3)<br>same (backup (back adj<br>up) auxiliary secondary)<br>near power near source<br>same load\$1).clm.                                                  | (US-PGPUB; USPAT) | OR               | ON      | ON                  | 2016/06/24<br>07:03 PM |
| N46   | 3308 | (307/29.CCLS.<br>H02J1/10.CPC.<br>H02J3/00.CPC.)                                                                                                                                | (US-PGPUB; USPAT) | OR               | ON      | ON                  | 2016/12/30<br>12:16 PM |
| N47   | 24   | (307/29.CCLS.<br>H02J1/10.CPC.<br>H02J3/00.CPC.) and<br>(process\$3 and power<br>and load\$1 and<br>invert\$3).clm.                                                             | (US-PGPUB; USPAT) | OR               | ON      | ON                  | 2016/12/30<br>12:17 PM |
| N48   | 14   | (307/29.CCLS.<br>H02J1/10.CPC.<br>H02J3/00.CPC.) and<br>(process\$3 and power<br>and load\$1 and invert\$3<br>and switch\$3).clm.                                               | (US-PGPUB; USPAT) | OR               | ON      | ON                  | 2016/12/30<br>12:17 PM |
| N49   | 831  | (process\$3 and power<br>and load\$1 and invert\$3<br>and switch\$3).clm.                                                                                                       | (US-PGPUB; USPAT) | OR               | ON      | ON                  | 2016/12/30<br>12:17 PM |
| N50   | 9    | (307/29.CCLS.<br>H02J1/10.CPC.<br>H02J3/00.CPC.) and<br>(process\$3 and power<br>and load\$1 and invert\$3<br>and switch\$3 and<br>communicat\$3).clm.                          | (US-PGPUB; USPAT) | OR               | ON      | ON                  | 2016/12/30<br>12:18 PM |
| N74   | 237  | (power and (backup<br>(back adj up) auxiliary<br>secondary) and                                                                                                                 | (USPAT)           | OR               | OFF     | OFF                 | 2017/12/21<br>03:40 PM |

|      |       |                                                                                                                                           |                   |    |     |     |                     |
|------|-------|-------------------------------------------------------------------------------------------------------------------------------------------|-------------------|----|-----|-----|---------------------|
| N75  | 397   | (control\$3 process\$3) and (overload (over adj load))) .clm.                                                                             | (US-PGPUB; USPAT) | OR | OFF | OFF | 2017/12/21 03:40 PM |
| N76  | 264   | (power and (backup (back adj up) auxiliary secondary) and (control\$3 process\$3) and (overload (over adj load))) .clm.                   | (US-PGPUB; USPAT) | OR | OFF | OFF | 2017/12/21 03:41 PM |
| N77  | 144   | (power and (backup (back adj up) auxiliary secondary) and (control\$3 process\$3) and switch\$3 and (overload (over adj load))) .clm.     | (US-PGPUB; USPAT) | OR | OFF | OFF | 2017/12/21 03:41 PM |
| N94  | 19    | (vehicle and inverter and transfer near2 switch\$3 and generator\$1) .clm.                                                                | (US-PGPUB; USPAT) | OR | OFF | OFF | 2018/03/14 08:43 PM |
| N95  | 3     | (vehicle and inverter and transfer near2 switch\$3 and generator\$1 and grid) .clm.                                                       | (US-PGPUB; USPAT) | OR | OFF | OFF | 2018/03/14 08:43 PM |
| N96  | 4     | (vehicle and inverter and transfer near2 switch\$3 and generator\$1 and (utility grid)) .clm.                                             | (US-PGPUB; USPAT) | OR | OFF | OFF | 2018/03/14 08:44 PM |
| N98  | 0     | "200200224332"                                                                                                                            | (US-PGPUB; USPAT) | OR | OFF | OFF | 2018/03/16 01:03 PM |
| N99  | 0     | "2002000224332"                                                                                                                           | (US-PGPUB; USPAT) | OR | OFF | OFF | 2018/03/16 01:04 PM |
| N100 | 0     | "200200224332"                                                                                                                            | (US-PGPUB; USPAT) | OR | OFF | OFF | 2018/03/16 01:04 PM |
| N101 | 0     | "20020224332"                                                                                                                             | (US-PGPUB; USPAT) | OR | OFF | OFF | 2018/03/16 01:04 PM |
| N102 | 42756 | (h02j3/\$\$ h02j9/\$\$) .cpc.                                                                                                             | (US-PGPUB; USPAT) | OR | ON  | ON  | 2023/08/15 05:21 PM |
| N103 | 8     | N102 AND (frequenc\$3 AND (overload\$3 over\$1load\$3) AND maximum AND load\$1 AND (prevent\$3 mitigat\$3 alleviat\$3 eliminat\$3)) .clm. | (US-PGPUB; USPAT) | OR | ON  | ON  | 2023/08/15 05:22 PM |



## ELECTRONIC ACKNOWLEDGEMENT RECEIPT

APPLICATION #  
**16/952,007**

RECEIPT DATE / TIME  
**10/27/2023 05:20:53 PM ET**

ATTORNEY DOCKET #  
**JCC\_5-12\_Div\_2020**

### Title of Invention

Power Source Load Control

### Application Information

APPLICATION TYPE Utility - Nonprovisional Application  
under 35 USC 111(a)

PATENT # -

CONFIRMATION # 3658

FILED BY Carl Cooper

PATENT CENTER # 63102735

FILING DATE 11/18/2020

CUSTOMER # 57131

FIRST NAMED INVENTOR J. Carl Cooper

CORRESPONDENCE ADDRESS -

AUTHORIZED BY -

### Documents

**TOTAL DOCUMENTS: 3**

| DOCUMENT                                                                                                                                                          | PAGES | DESCRIPTION                                        | SIZE (KB) |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|----------------------------------------------------|-----------|
| sb0030efs.pdf                                                                                                                                                     | 3     | Request for Continued Examination (RCE)            | 1628 KB   |
| JCC_5-12_Div_2020_RCE_claims_1-126-CLM.docx                                                                                                                       | 21    | Claims                                             | 45 KB     |
| Warning: One or more pages are missing page numbering. Page numbering will be automatically applied after submission. Bookmarks were found and have been removed. |       |                                                    |           |
| IDS_10_27_23.pdf                                                                                                                                                  | 4     | Information Disclosure Statement (IDS) Form (SB08) | 1010 KB   |

**Digest**

| <b>DOCUMENT</b>                                     | <b>MESSAGE DIGEST(SHA-512)</b>                                                                                                           |
|-----------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|
| sb0030efs.pdf                                       | 0AA7674EB3F6A9C5456AFA591CBA8D31C1E8A21041A32E170<br>364B6FE8974515E7553265E133C1F1394C210AF4C4DA41FC6B<br>BDCCEB1A0814C9BC70EDA6834737A |
| JCC_5-<br>12_Div_2020_RCE_claims_1-<br>126-CLM.docx | 17AC14F6C8511EB5CC177F6378D4097856503C531969FD004E<br>B6CF6F39EBA60C10AD6E43BE7EB7FB803A46B108978780E30<br>41EAC3F9DA79F7276A6125E79A8F4 |
| IDS_10_27_23.pdf                                    | 7C1E47400368BF2585D0FFE8A9D2B63F674971811819C53703<br>9723EF8ECF21295F56B636BED96BAE10963009DCCCD69A3B<br>D532E28C9FB22354E9DC0A9230C0EA |

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**New Applications Under 35 U.S.C. 111**

If a new application is being filed and the application includes the necessary components for filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

**National Stage of an International Application under 35 U.S.C. 371**

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

**New International Application Filed with the USPTO as a Receiving Office**

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

Doc code: RCEX

Doc description: Request for Continued Examination (RCE)

PTO/SB/30EFS (01-22)

Approved for use through 05/31/2024. OMB 0851-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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# **REQUEST FOR CONTINUED EXAMINATION(RCE)TRANSMITTAL** **(Submitted Only via EFS-Web)**

|                      |                |             |            |                               |                   |          |      |
|----------------------|----------------|-------------|------------|-------------------------------|-------------------|----------|------|
| Application Number   | 16952007       | Filing Date | 2020-11-18 | Docket Number (if applicable) | JCC_5-12_Div_2020 | Art Unit | 2836 |
| First Named Inventor | J. Carl Cooper |             |            | Examiner Name                 | Inge, Joseph N    |          |      |

**This is a Request for Continued Examination (RCE) under 37 CFR 1.114 of the above-identified application.**

Request for Continued Examination (RCE) practice under 37 CFR 1.114 does not apply to any utility or plant application filed prior to June 8, 1995, or to any design application. The Instruction Sheet for this form is located at [WWW.USPTO.GOV](http://WWW.USPTO.GOV)

## **SUBMISSION REQUIRED UNDER 37 CFR 1.114**

Note: If the RCE is proper, any previously filed unentered amendments and amendments enclosed with the RCE will be entered in the order in which they were filed unless applicant instructs otherwise. If applicant does not wish to have any previously filed unentered amendment(s) entered, applicant must request non-entry of such amendment(s).

☐ Previously submitted. If a final Office action is outstanding, any amendments filed after the final Office action may be considered as a submission even if this box is not checked.

☐ Consider the arguments in the Appeal Brief or Reply Brief previously filed on \_\_\_\_\_

☐ Other \_\_\_\_\_

☒ Enclosed

☒ Amendment/Reply

☒ Information Disclosure Statement (IDS)

☐ Affidavit(s)/ Declaration(s)

☐ Other \_\_\_\_\_

## **MISCELLANEOUS**

☐ Suspension of action on the above-identified application is requested under 37 CFR 1.103(c) for a period of months \_\_\_\_\_.  
 (Period of suspension shall not exceed 3 months; Fee under 37 CFR 1.17(i) required)

☐ Other \_\_\_\_\_

## **FEES**

☒ The RCE fee under 37 CFR 1.17(e) is required by 37 CFR 1.114 when the RCE is filed.  
 The Director is hereby authorized to charge any underpayment of fees, or credit any overpayments, to Deposit Account No \_\_\_\_\_

## **SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT REQUIRED**

☒ Patent Practitioner Signature

☐ Applicant Signature

Doc code: RCEX

Doc description: Request for Continued Examination (RCE)

PTO/SB/30EFS (01-22)

Approved for use through 05/31/2024. OMB 0851-0031

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| Signature of Registered U.S. Patent Practitioner |                  |                     |            |
|--------------------------------------------------|------------------|---------------------|------------|
| Signature                                        | /J. Carl Cooper/ | Date (YYYY-MM-DD)   | 2023-10-27 |
| Name                                             | J. Carl Cooper   | Registration Number | 34,568     |

This collection of information is required by 37 CFR 1.114. The information is required to obtain or retain a benefit by the public which is a patent (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450.

*If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.*

## Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these records.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

## Claims

Claims 1-28 (canceled)

Claim 29 (currently amended): A power system which provides A.C. power with a controlled A.C. frequency to assist in managing the loading thereof, the power system comprising:

- a) a non-utility type power source comprising an inverter which provides single or multiple phase output A.C. power to one or more of a plurality of loads, the power source having at least one maximum output power parameter which if exceeded causes an overload of the power source, the output A.C. power having an A.C. frequency, which frequency is controlled in response to the timely amount of the output A.C. power;
- b) a power sensing circuit which may be part of the power source or otherwise and is responsive to the timely amount of the output A.C. power, the power source operating in response to the power sensing circuit to control the frequency of the output A.C. power to have a first frequency when the power source is not overloaded and a second frequency when the power source is overloaded [and/]or is near to being overloaded;
- c) a processor circuit comprising one or more processors responsive to the output A.C. power, the processor circuit operating in response to the occurrence of the second frequency to control the ~~amount~~ of output A.C. power consumed by at least one load of the one or more loads thereby helping to prevent or alleviate an overload of the power source.

Claim 30 (previously presented): A power system as claimed in claim 29 wherein when the one or more loads demand more power than the inverter can produce, the power source changes the A.C. power output frequency from the first frequency to the second frequency to signal the processor circuit to shed one or more of the plurality of loads to help the power source to recover from an overload.

Claim 31 (previously presented): A power system as claimed in claim 29 wherein the power source is used as a backup power source when utility power fails.

Claim 32 (previously presented): A power system as claimed in claim 29 wherein the inverter is responsive to power provided by a generator comprising an internal combustion engine to provide the output A.C. power.

Claim 33 (previously presented): A power system as claimed in claim 29 wherein the inverter is responsive to at least one rechargeable battery to provide the output A.C. power.

Claim 34 (currently amended): A power system as claimed in claim 33 wherein the power system controls the charging of the at least one rechargeable battery ~~battery~~.

Claim 35 (currently amended): A power system as claimed in claim 34 wherein the power system controls the charging of the at least one rechargeable battery ~~battery~~ from a power grid.

Claim 36 (currently amended): A power system as claimed in claim 34 wherein the power system controls the charging of the at least one rechargeable battery ~~battery~~ from at least one ~~a~~ solar panel.

Claim 37 (currently amended): A power system as claimed in claim 34 wherein the power system controls the charging of the at least one rechargeable battery ~~battery~~ from a non-grid internal combustion powered electrical power source.

Claim 38 (currently amended): A power system as claimed in claim 34 wherein a power grid and ~~a~~-at least one solar panel are available to charge the battery and the power system controls the selection of at least one of the power grid and the at least one solar panel to charge the at least one rechargeable battery. ~~battery~~.

Claim 39 (currently amended): A power system as claimed in claim 34 wherein a power grid and a non-grid internal combustion powered electrical power source are available to charge the at least one rechargeable battery-~~battery~~ and the power system controls the selection of at least one of the power grid and the non-grid internal combustion powered electrical power source to charge the at least one rechargeable battery. ~~battery~~.

Claim 40 (currently amended): A power system as claimed in claim 34 wherein a power grid, a solar panel array and a non-grid internal combustion powered electrical power source are available to charge the at least one rechargeable battery-~~battery~~ and the power system controls the selection of one or more of the power grid, the solar panel array and the non-grid internal combustion powered electrical power source to charge the at least one rechargeable battery. ~~battery~~.

Claim 41 (currently amended): A power system as claimed in claim 29 further including a transfer switch which may select a power ~~selects either a utility~~-grid or the power source to provide power to the one or more of a plurality of loads, the transfer switch outputting power from the ~~utility~~-grid when grid power meets acceptable parameters and to output power from the power source when the grid power does not meet acceptable standards.

Claim 42 (currently amended): A power system as claimed in claim 29 further including a transfer switch which may select a power ~~selects either a utility~~-grid or the power source to provide power to the one or more of a plurality of loads, the transfer switch outputting power

from the ~~power utility~~-grid when grid power meets acceptable ~~standards and may output parameters and outputting~~ power from the power source when the grid power does not meet acceptable standards, the power sensing circuit of b) comprising one or more current sensors electrically located to sense current output from the transfer switch.

Claim 43 (currently amended): A power system as claimed in claim 29 further including a transfer switch which ~~may select a power~~ selects either a utility-grid or the power source to provide power to the one or more of a plurality of loads, the transfer switch operating to select the ~~power utility~~ grid when grid power meets acceptable ~~standards parameters~~ and to select the power source when the grid power does not meet acceptable standards, the power sensing circuit of b) comprising one or more current sensors electrically located to sense current output from the transfer switch and thereby are responsive to the amount of current being provided to the one or more of a plurality of loads by the ~~power utility~~-grid when the transfer switch selects the ~~power utility~~-grid and to sense the amount of current being provided to the one or more of a plurality of loads by the power source when the transfer switch selects the power source.

Claim 44 (currently amended): A power system as claimed in claim 33 further including a transfer switch which ~~may output~~ outputs power from ~~a power either a utility-grid~~ or from the power source to provide power to the one or more of a plurality of loads, the power system operating to charge the ~~at least one rechargeable battery-battery~~ from the power grid via the transfer switch output when the transfer switch outputs grid power, with the power system stopping the charging of the ~~at least one rechargeable battery-battery~~ via the output of the transfer switch when the transfer switch outputs power from the power source to provide power to the one or more of a plurality of loads.

Claims 45-71 (canceled)

Claim 72 (new): A power system which provides AC power with a changeably controlled AC frequency to assist in managing the loading thereof, the power system comprising:

- a) a power source comprising one or more DC to AC inverter which provides output AC power to one or more of a plurality of loads, the power source having a known at least one power source parameter corresponding to the maximum output power capability of the power source;
- b) the output AC power having one or more timely power parameter which is sensed and compared to at least one corresponding power source parameter by a power source monitor which may be part of the power source or otherwise, the power source operating in response to the power source monitor to control the frequency of the output AC power to have at least a first frequency when the power source is not overloaded and a second frequency when the power source is overloaded including by supplying an excessive current for a period of time which if continued may risk damage or loss of power;
- c) a processor circuit comprising one or more processors responsive to the output AC power and operating in response to the occurrence of the second frequency to control the coupling of output AC power to at least one load of the one or more loads thereby helping to prevent or alleviate an overload of the power source.

Claim 73 (new): A power system as claimed in claim 72 wherein the at least one power source parameter of a) corresponds to at least one of the power source not being overloaded or being overloaded.

Claim 74 (new): A power system as claimed in claim 72 wherein in b) the one or more timely power parameter includes at least a voltage of the output AC power and is compared to the at least one power source parameter of a) which includes at least a voltage amount.

Claim 75 (new): A power system as claimed in claim 72 wherein in b) the one or more timely power parameter includes at least a current of the output AC power and is compared the at least one power source parameter of a) which includes at least a current amount.

Claim 76 (new): An electronic power system which provides single or multiple phase AC power having parameters including but not limited to voltage, current and frequency, the AC frequency being changeably controllable to assist in managing the loading of the power system, the power system comprising at least:

- a) a power source comprising one or more DC to AC inverter circuit which receives DC power from a DC power source and converts it to AC power having a changeably controlled frequency;
- b) a power source monitor circuit which may be part of the power source or otherwise operating in response to the operating condition of the power source to control the AC power frequency to be one of a plurality of frequencies including at least a first frequency which represents when the power source is being operated with loading that does not create an overload and a second frequency which represents when the power source is being operated with loading that if continued will risk damage to or loss of power by the power source;
- c) the power system further comprising a coupling circuit for controllably coupling at least some of the AC power from the power source to at least a first load of one or more loads, the coupling being responsive to the frequency of the output AC power in a manner such that it performs at one or more of helping to prevent overloading; helping to mitigate overloading or helping to not increase the overloading of the power source.

Claim 77 (new): A power system as claimed in claim 76 wherein in b) the power source monitor circuit is responsive to the operating condition of the power source which is a voltage of the AC power to control the AC power frequency.

Claim 78 (new): A power system as claimed in claim 76 wherein in b) the power source monitor circuit is responsive to a voltage of the AC power dropping below a known voltage to control the AC power frequency to be the second frequency.

Claim 79 (new): A power system as claimed in claim 76 wherein the AC power has a sine wave distortion parameter and in c) the coupling circuit is additionally responsive to the AC power sine wave distortion to performs at one or more of helping to prevent overloading; helping to mitigate overloading or helping to not increase the overloading of the power source.

Claim 80 (new): A power system as claimed in claim 76 wherein in b) the power source monitor circuit is responsive to a wattage of the AC power rising above a known wattage to control the AC power frequency to be the second frequency.

Claim 81 (new): A power system as claimed in claim 76 wherein in c) the coupling circuit comprises a contactor having input terminals for electrically connecting to the power source and output terminals for electrically connecting to the first load and providing AC power thereto when the contactor is closed, the coupling circuit further comprising a user interface whereby the user may configure the manner in which the coupling circuit responds to the frequency of the AC power to open the contactor thereby disconnecting the AC power from the first load.

Claim 82 (new): An electronic power system which provides AC power, the power system comprising at least:

- a) an AC power source having one or more DC to AC inverter which converts DC power to AC power having a changeably controlled frequency, the AC power source having at least one timely operating parameter from which an overload of the AC power source may be determined;
- b) a power source monitor, which may be part of the power source or otherwise, operating in response to the at least one timely operating parameter to control the AC power frequency to have a timely one of a plurality of frequencies including least a first frequency when there is no overload and a second frequency when there is an overload;
- c) the power system further comprising a coupling circuit for controllably coupling the AC power to at least a first load of the one or more loads, the first coupling being responsive to the loading of the AC power source in a manner that it performs at least one of helping to prevent, or helping to mitigate, overloading of the power source.

Claim 83 (new): A power system as claimed in claim 82 wherein in b) the power source monitor is responsive to the at least one timely operating parameter which is a voltage of the AC power to control the AC power frequency.

Claim 84 (new): A power system as claimed in claim 83 wherein in b) when a voltage of the AC power drops below a known voltage the AC power frequency is controlled to be the second frequency.

Claim 85 (new): A power system as claimed in claim 82 wherein in b) the power source monitor is responsive to the at least one timely operating parameter which is a current of the AC power to control the AC power frequency.

Claim 86 (new): A power system as claimed in claim 85 wherein in b) when a current of the AC power increases above a known current the AC power frequency is controlled to be the second frequency.

Claim 87 (new): A power system as claimed in claim 82 wherein in b) the power source monitor circuit is responsive to the at least one timely operating parameter which is a wattage of the AC power.

Claim 88 (new): A power system as claimed in claim 87 wherein in b) when a wattage of the AC power increases above a known wattage the AC power frequency is controlled to be the second frequency.

Claim 89 (new): An electronic power system which provides AC power to one or more loads, the power system comprising at least:

- a) an AC power source having one or more DC to AC inverter which converts DC power to AC power which may be controlled to change to different known frequencies, the AC power source having at least one timely operating parameter from which an overload of the AC power source may be determined;
- b) a power source monitor operating in response to the at least one timely AC power source operating parameter to control the AC power frequency to have a timely one of a plurality of frequencies including least a first frequency when there is no overload and a second frequency when there is an overload;
- c) the power system further comprising a first coupling circuit for controllably coupling the AC power to at least a first load of the one or more loads in a manner to mitigate overloading of the power source after the AC power takes on the second frequency; and

- d) further comprising a second coupling circuit for controllably coupling the AC power to at least a second load of the one or more loads, the second coupling circuit being responsive to at least one AC power source timely operating parameter, which may be the same as or different than the at least one timely operating parameter of b) to perform at least one of i) prevent an overload, ii) alleviate an overload or iii) prevent further overload if the power source is already overloaded.

Claim 90 (new): An electronic power system as claimed in claim 89 wherein in d) the second coupling circuit is responsive to the at least one AC power source timely operating parameter which is a voltage of the AC power.

Claim 91 (new): An electronic power system as claimed in claim 90 wherein in d) the second coupling circuit is responsive to a voltage of the AC power increasing above a known value.

Claim 92 (new): An electronic power system as claimed in claim 89 wherein in d) the second coupling circuit is responsive to the at least one AC power source timely operating parameter which is a current of the AC power.

Claim 93 (new): An electronic power system as claimed in claim 90 wherein in d) the second coupling circuit is responsive to a current of the AC power increasing above a known value.

Claim 94 (new): A power system which provides AC power with a controlled AC frequency to assist in managing the loading thereof, the power system comprising:

- a) a non-utility type power source having one or more inverter which provides single or multiple phase output AC power to one or more of a plurality of loads, the power source having at least one power system parameter which if exceeded indicates an actual or

potential overload of the power source, the output AC power having an AC frequency, which frequency is controlled in response to a timely amount of a parameter of the power source;

- b) a sensing circuit which may be part of the power source or otherwise and is responsive to the timely amount of at least one loading parameter of the power source, the power source operating in response to the sensing circuit and the at least one power system parameter to control the frequency of the output AC power to have a first frequency when the power source is not overloaded and a second frequency when the power source is overloaded or is near to being overloaded;
- c) a processor circuit comprising one or more processors responsive to the output AC power, the processor circuit operating in response to the occurrence of the second frequency to control the output AC power consumed by at least one load of the one or more loads thereby helping to prevent or alleviate an overload of the power source.

Claim 95 (new): A power system as claimed in claim 94 wherein in b) the at least one loading parameter is a voltage of the output AC power.

Claim 96 (new): A power system as claimed in claim 95 wherein in a) the at least one power system parameter is an amount of voltage and when in b) the voltage of the output AC power is less than the voltage amount the frequency of the output AC power is controlled to have the second frequency.

Claim 97 (new): A power system as claimed in claim 94 wherein in b) the at least one loading parameter is a current of the output AC power.

Claim 98 (new): A power system as claimed in claim 97 wherein in a) the at least one power system parameter is an amount of current and when in b) the current of the output AC power is greater than the current amount the frequency of the output AC power is controlled to have the second frequency.

Claim 99 (new): A power system as claimed in claim 94 wherein in c) the processor circuit operates to disconnect output AC power from the at least one or more loads for at least a time period which is responsive to a load priority which is selected via a user interface.

Claim 100 (new): A power system which provides AC power to one or more loads, the AC power frequency being changeably controlled to assist managing the loading of the power system at least when not sending power to a grid, the power system comprising:

a) a non-utility type power source comprising one or more inverter which receives power from one or more of:

- i) a rechargeable power storage system;
- ii) a vehicle battery;
- iii) a solar PV system;
- iv) an other green renewable power system;
- v) an internal combustion power generator;

the power source providing single or multiple phase output AC power to one or more loads which may include the power grid, the output AC power having one or more controlled parameter, including the AC frequency which frequency is controlled by the power source in response to the power grid frequency or another device frequency if synchronization thereto is desired, or if synchronization is not desired the one or more controlled parameter including the AC frequency may be controlled in response to the loading of the power source;

b) a control circuit which may be part of the power source or otherwise, is responsive to one or more power source operating parameter which affects the power source operation, the

control circuit operating at least when the output AC power is not synchronized to the power grid or another device, to control one or more parameter of the output AC power such that the AC power has at least first frequency when the power source is not overloaded including when it supplies excessive current which the AC power source can handle, and at least a second frequency when the power source is overloaded including when it supplies an excessive current for a period of time which if continued may risk power source damage or loss of AC power;

- c) a processor circuit comprising one or more processors responsive to the one or more parameter of the output AC power, and in response to the occurrence of the second frequency operating to control the coupling of output AC power to at least one load of the one or more loads thereby helping to prevent or alleviate an overload of the power source.

Claim 101 (new): A power system as claimed in claim 100 which provides renewable and backup power in addition to grid power, wherein the power source provides output AC power which is coupled via one or more contactor or transfer switch to the one or more loads which without the output AC power would normally be powered by the grid, the output AC power being synchronized to and paralleled with the power grid power to reduce consumption of grid power when grid power is available.

Claim 102 (new): A power system as claimed in claim 100 which provides renewable and backup power in addition to grid power, wherein the power source provides output AC power which is coupled via one or more contactor or transfer switch to the one or more loads in parallel with grid power, and when grid power is not available the grid is decoupled from the output AC power leaving the output AC power to provide backup power for ones of the one or more loads.

Claim 103 (new): A power system as claimed in claim 100 which provides renewable and backup power in addition to grid power to a sub-panel, wherein the power source provides output AC power which is coupled via one or more contactor or transfer switch to the sub-panel to

power a plurality of loads, each of which is electrically coupled thereto via a processor circuit c).

Claim 104 (new): A power system as claimed in claim 100 wherein in b) the control circuit controls the output AC power voltage to decrease from a standard voltage to a first known amount when the power source has been supplying an excessive current for a period of time which if continued may risk power source damage or loss of AC power.

Claim 105 (new): A power system as claimed in claim 100 wherein in b) when the power source has been supplying an excessive current for a period of time which if continued may risk power source damage or loss of AC power, the control circuit controls the output AC power voltage to decrease from a first standard voltage to a second known voltage and further controls the frequency of the AC power to decrease from a first standard frequency to a second known frequency.

Claim 106 (new): A power system as claimed in claim 100 which provides backup power for grid power wherein the one or more inverter providing output AC power which along with grid power is coupled via one or more contactor and/or transfer switch to loads in a manner that the loads are normally at least partially powered by the grid and when the grid power fails the grid is isolated from the power system output and at least one of the one or more loads with only backup power from the power source being coupled for use by the at least one of the one or more loads.

Claim 107 (new): A power system as claimed in claim 106 wherein the output AC voltage is controlled to have a first voltage when the power system is not overloaded and to have a second lower voltage when the power system is overloaded including when an excessive current has been supplied for a period of time which if continued may risk power source damage or loss of AC power.

Claim 108 (new): A power system as claimed in claim 100 which provides renewable and backup power in addition to grid power, wherein the one or more inverter receives DC power from at least one of a solar PV system or a rechargeable power storage system with the power system output AC power being coupled via one or more contactor and/or transfer switch to loads which are normally at least partially powered by the grid, the output AC power being synchronized to and paralleled with the power grid power to reduce consumption of grid power and when sufficient power is available from the power system additional output AC power is sent into the power grid.

Claim 109 (new): A power system as claimed in claim 100 wherein in b) the first frequency which is substantially the grid power frequency represents no overload and the second frequency which is lower than the first frequency represents an overload.

Claim 110 (new): A power system as claimed in claim 109 wherein in c) the processor circuit helps to prevent or alleviate an overload by controlling coupling output AC power to the at least one load by disconnecting that load and keeping it disconnected for a first time period which is responsive to the load's priority which is selected via a user interface, with the disconnection of the load taking place in response to the second frequency being present for at least a second time period or a third frequency being present for at least a third time period which is shorter than the second time period.

Claim 111 (new): A power system as claimed in claim 100 wherein in c) the processor circuit is part of the power source and controls coupling output AC power to a plurality of loads of the one or more loads whereby each of the plurality of loads is disconnected for at least a corresponding time period which is responsive to a corresponding load priority with each of the load priorities being selected via a user interface.

Claim 112 (new): A power system as in claim 100 comprising a plurality of physically distinct processor circuits c) each being contained in its own enclosure and not physically part of the power source, with each processor circuit being physically wired to the power source output to receive the output AC power, and physically wired to a corresponding at least one load of the one or more loads; with each distinct processor circuit c) responsive to the occurrence of the second frequency to control coupling of output AC power by disconnecting the corresponding load for at least a period of time which is responsive to a load priority for that corresponding load, the priority being selected via a user interface.

Claim 113 (new): A power system as claimed in claim 100 wherein the AC power of b) has at least a first voltage when the power source is not overloaded and at least a second voltage less than the first voltage when the power source is overloaded.

Claim 114 (new): A power system as claimed in claim 100 wherein the AC power of b) has at least a first voltage when the power source is not overloaded and is not supplying excessive current, and at least a second voltage when the power source is not overloaded and is supplying excessive current.

Claim 115 (new): A power system as claimed in claim 100 wherein the AC power of b) has at least a first voltage when the power source is not overloaded and is not supplying excessive current, and at least a second voltage less than the first voltage when the power source is not overloaded and has started supplying excessive current and at least a third voltage less than the second voltage when the power system is overloaded and the excessive current has been supplied for a period of time which if continued may risk power source damage or loss of AC power.

Claim 116 (new): A power system which provides AC power with one or more controlled power parameters to assist in managing the loading thereof, the power system comprising:

- a) a non-utility type power source comprising an inverter which provides single or multiple phase output AC power to one or more of a plurality of loads, the power source having at least one maximum power source parameter which if exceeded for a specified period of time may cause a loss of output AC power or damage to the power source, the output AC power having one or more timely power parameter, including AC frequency, which may be changed;
- b) a power sensing circuit which may be part of the power source or otherwise and is responsive to the timely power parameter, the power source operating in response to the power sensing circuit and the maximum output power parameter to control the frequency of the output AC power to indicate the loading of the power source;
- c) a processor circuit comprising one or more processors responsive to the frequency of the output AC power to control the coupling of power to at least one load of the one or more loads thereby helping to prevent or alleviate an overload of the power source.

Claim 117 (new): A power system as claimed in claim 116 wherein the processor circuit of c) is a physically distinct device contained in its own enclosure and not physically part of the power source of a), the processor circuit c) being physically wired to the power source output to receive the output AC power, and physically wired to the at least one load of the one or more loads, the processor circuit operating to controllably couple power from the power source output to the at least one load.

Claim 118 (new): A power system as claimed in claim 116 wherein the processor circuit of c) is a physically distinct device contained in its own enclosure and not physically part of the power source of a), the enclosure containing:

- d) a printed circuit assembly on which at least the one or more processor and supporting circuitry is mounted;
- e) at least one electrically controlled electro-mechanical switch, relay or contactor with one or more input electrical terminals via which it may be physically wired to the power source output to receive the output AC power, and one or more load electrical terminals via which it may be physically wired to the at least one load of the one or more loads and at least one control electrical terminal which is connected to the printed circuit assembly in order that the one or more processor can control connecting the output AC power to the at least one load via the input electrical terminals and the load electrical terminals;
- f) a power supply receiving the output AC power of d) and providing DC power for the one or more processors, the power supply circuit being partially or totally mounted on the printed circuit board or otherwise;
- g) a user interface circuit being partially or totally mounted on the printed circuit or otherwise, the user interface providing information to a user or installer and providing the capability to enter a priority for the at least one load of e).

Claim 119 (new): A power system as claimed in claim 116 wherein there are a plurality of processor circuits of c) the power system comprising:

a plurality of processor circuits of c) each being a physically distinct device contained in its own enclosure and not physically part of the power source of a) or other processor circuits c), each enclosure containing:

- d) a printed circuit assembly on which at least the one or more processor and supporting circuitry is mounted;

- e) at least one electrically controlled electro-mechanical switch, relay or contactor with one or more input electrical terminals via which it may be physically wired to the power source output to receive the output AC power, and one or more load electrical terminals via which it may be physically wired to the at least one load of the one or more loads and at least one control electrical terminal which is connected to the printed circuit assembly in order that the one or more processor can control connecting the output AC power to the at least one load via the input electrical terminals and the load electrical terminals;
- f) a power supply receiving the output AC power of d) and providing DC power for the one or more processors, the power supply circuit being partially or totally mounted on the printed circuit board or otherwise;
- g) a user interface circuit being partially or totally mounted on the printed circuit or otherwise, the user interface providing information to a user or installer and providing the capability to enter a priority for the at least one load of e).

Claim 120 (new): A power system as claimed in claim 116 wherein in a) the one or more inverter is a DC to AC inverter and receives DC power from one or more of:

- i) a power grid
- ii) a rechargeable power storage system;
- iii) a solar PV system;
- iv) another green renewable power system;
- v) an internal combustion power generator.

Claim 121 (new): A power system which manages the loading of at least one A.C. power sources which provides AC power with a controlled AC frequency, the power system comprising:

- a) one or more non-utility type power source comprising at least an AC power generating circuit which outputs sinusoidal single or multiple phase AC power which may be controllably coupled to one or more of a plurality of loads, the AC power having a plurality of parameters including at least a frequency, a voltage, sine wave distortion and a current which may range from zero to a maximum amount depending on the loading of the power source;
- b) one or more contactor and/or transfer switch whereby the AC power may be electrically paralleled with, or connected in place of or as a backup replacement for the grid power and the power source controls the AC power such that:
  - i. the frequency of the AC power is responsive to the grid power frequency when the AC power is provided in parallel with grid power so that connected loads receive power from one or both of the power source and grid; and
  - ii. when the AC power is not paralleled with the grid, its frequency is responsive in a manner that the frequency represents the loading of the power source;
- c) a load manager circuit comprising one or more processor, which load manager circuit may or may not be part of the power source, the load manager circuit responsive to the frequency of the AC power to provide AC power to at least one of the one or more of a plurality of loads when the power source is not overloaded and not provide AC power when the power source is overloaded.

Claim 122 (new): The power system of claim 121 wherein in b) ii, the power source also controls a second parameter of the AC power in response to power source loading.

Claim 123 (new): The power system of claim 121 wherein in b) ii, the AC power has a first standard voltage when the power source is not overloaded and the power source further controls

the voltage of the AC power to be a second voltage lower than the first voltage when the power source is near to being overloaded and to be a third voltage lower than the second voltage when the power source is overloaded.

Claim 124 (new): The power system of claim 121 wherein in c) the load manager circuit is responsive to the AC power frequency and to at least a second parameter of the AC power to provide or not provide AC power to the at least one of the one or more of a plurality of loads.

Claim 125 (new): The power system of claim 121 wherein in c) the load manager circuit is responsive to the AC power frequency and to at least the voltage of the AC power to provide or not provide AC power to the at least one of the one or more of a plurality of loads.

Claim 126 (new): The power system of claim 121 wherein in c) the load manager circuit is responsive to the AC power frequency and to at least the sine distortion of the AC power to provide or not provide AC power to the at least one of the one or more of a plurality of loads.



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## ELECTRONIC PAYMENT RECEIPT

APPLICATION #  
**16/952,007**

RECEIPT DATE / TIME  
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### Title of Invention

Power Source Load Control

### Application Information

|                        |                                                          |                      |                |
|------------------------|----------------------------------------------------------|----------------------|----------------|
| APPLICATION TYPE       | Utility - Nonprovisional Application under 35 USC 111(a) | PATENT #             | -              |
| CONFIRMATION #         | 3658                                                     | FILED BY             | Carl Cooper    |
| PATENT CENTER #        | 63102735                                                 | AUTHORIZED BY        | -              |
| CUSTOMER #             | 57131                                                    | FILING DATE          | 11/18/2020     |
| CORRESPONDENCE ADDRESS | -                                                        | FIRST NAMED INVENTOR | J. Carl Cooper |

### Payment Information

|                                  |                                                                         |                                      |
|----------------------------------|-------------------------------------------------------------------------|--------------------------------------|
| PAYMENT METHOD<br>DA / 505365    | PAYMENT TRANSACTION ID<br>E20230QH24039112                              | PAYMENT AUTHORIZED BY<br>Carl Cooper |
| PRE-AUTHORIZED ACCOUNT<br>505365 | PRE-AUTHORIZED CATEGORY<br>37 CFR 1.21 (Miscellaneous fees and charges) |                                      |

| FEE CODE      | DESCRIPTION                                                              | ITEM PRICE(\$) | QUANTITY | ITEM TOTAL(\$) |
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| 2801          | REQUEST FOR CONTINUED EXAMINATION (RCE) - 1ST REQUEST (SEE 37 CFR 1.114) | 544.00         | 1        | 544.00         |
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Doc code: IDS

Doc description: Information Disclosure Statement (IDS) Filed

PTO/SB/08a (02-18)

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| <b>INFORMATION DISCLOSURE<br/>STATEMENT BY APPLICANT</b><br>( Not for submission under 37 CFR 1.99) | Application Number     |                   | 16952007   |
|                                                                                                     | Filing Date            |                   | 2020-11-18 |
|                                                                                                     | First Named Inventor   | J. Carl Cooper    |            |
|                                                                                                     | Art Unit               | 2836              |            |
|                                                                                                     | Examiner Name          | Inge, Joseph N.   |            |
|                                                                                                     | Attorney Docket Number | JCC_5-12_Div_2020 |            |

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|                                                                                             | 1       | 9281715            | B2                     | 2016-03-08       | Lim et al.                                      | All                                                                    |        |
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|                                                                                             | 3       | 20100017045        | A1                     | 2010-01-21       | Nesler et al.                                   | All                                                                    |        |
|                                                                                             | 4       | 20100207448        | A1                     | 2010-08-19       | Cooper                                          | All                                                                    |        |
|                                                                                             | 5       | 20110298285        | A1                     | 2011-08-19       | Lim et al.                                      | All                                                                    |        |

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| Application Number     | 16952007          |
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| First Named Inventor   | J. Carl Cooper    |
| Art Unit               | 2836              |
| Examiner Name          | Inge, Joseph N.   |
| Attorney Docket Number | JCC_5-12_Div_2020 |

|   |             |    |            |               |     |
|---|-------------|----|------------|---------------|-----|
| 6 | 20010010032 | A1 | 2001-07-26 | Ehlers et al. | All |
| 7 | 20090027932 | A1 | 2002-01-29 | Haines et al. | All |

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|                        |                   |
|------------------------|-------------------|
| Application Number     | 16952007          |
| Filing Date            | 2020-11-18        |
| First Named Inventor   | J. Carl Cooper    |
| Art Unit               | 2836              |
| Examiner Name          | Inge, Joseph N.   |
| Attorney Docket Number | JCC_5-12_Div_2020 |

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Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

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☒ A certification statement is not submitted herewith.

**SIGNATURE**

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

|            |                  |                     |            |
|------------|------------------|---------------------|------------|
| Signature  | /J. Carl Cooper/ | Date (YYYY-MM-DD)   | 2023-10-27 |
| Name/Print | J. Carl Cooper   | Registration Number | 34568      |

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6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

|                                                                                                                                 |                                                                                          |                                                                                                                                                                                                                               |                                            |               |                           |          |                                       |  |
|---------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|---------------|---------------------------|----------|---------------------------------------|--|
| <b>PATENT APPLICATION FEE DETERMINATION RECORD</b><br>Substitute for Form PTO-875                                               |                                                                                          |                                                                                                                                                                                                                               | Application or Docket Number<br>16/952,007 |               | Filing Date<br>11/18/2020 |          | <input type="checkbox"/> To be Mailed |  |
| ENTITY: <input type="checkbox"/> LARGE <input checked="" type="checkbox"/> SMALL <input type="checkbox"/> MICRO                 |                                                                                          |                                                                                                                                                                                                                               |                                            |               |                           |          |                                       |  |
| <b>APPLICATION AS FILED - PART I</b>                                                                                            |                                                                                          |                                                                                                                                                                                                                               |                                            |               |                           |          |                                       |  |
|                                                                                                                                 |                                                                                          | (Column 1)                                                                                                                                                                                                                    | (Column 2)                                 |               |                           |          |                                       |  |
| FOR                                                                                                                             |                                                                                          | NUMBER FILED                                                                                                                                                                                                                  | NUMBER EXTRA                               | RATE (\$)     |                           | FEE (\$) |                                       |  |
| <input type="checkbox"/> BASIC FEE<br>(37 CFR 1.16(a), (b), or (c))                                                             |                                                                                          | N/A                                                                                                                                                                                                                           | N/A                                        | N/A           |                           |          |                                       |  |
| <input type="checkbox"/> SEARCH FEE<br>(37 CFR 1.16(k), (l), or (m))                                                            |                                                                                          | N/A                                                                                                                                                                                                                           | N/A                                        | N/A           |                           |          |                                       |  |
| <input type="checkbox"/> EXAMINATION FEE<br>(37 CFR 1.16(o), (p), or (q))                                                       |                                                                                          | N/A                                                                                                                                                                                                                           | N/A                                        | N/A           |                           |          |                                       |  |
| TOTAL CLAIMS<br>(37 CFR 1.16(i))                                                                                                |                                                                                          | minus 20 = *                                                                                                                                                                                                                  |                                            | x \$50 =      |                           |          |                                       |  |
| INDEPENDENT CLAIMS<br>(37 CFR 1.16(h))                                                                                          |                                                                                          | minus 3 = *                                                                                                                                                                                                                   |                                            | x \$240 =     |                           |          |                                       |  |
| <input type="checkbox"/> APPLICATION SIZE FEE (37 CFR 1.16(s))                                                                  |                                                                                          | If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$310 (\$155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s). |                                            |               |                           |          |                                       |  |
| <input type="checkbox"/> MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))                                                      |                                                                                          |                                                                                                                                                                                                                               |                                            |               |                           |          |                                       |  |
| * If the difference in column 1 is less than zero, enter "0" in column 2.                                                       |                                                                                          |                                                                                                                                                                                                                               |                                            | TOTAL         |                           |          |                                       |  |
| <b>APPLICATION AS AMENDED - PART II</b>                                                                                         |                                                                                          |                                                                                                                                                                                                                               |                                            |               |                           |          |                                       |  |
|                                                                                                                                 |                                                                                          | (Column 1)                                                                                                                                                                                                                    | (Column 2)                                 | (Column 3)    |                           |          |                                       |  |
| AMENDMENT                                                                                                                       | 10/27/2023                                                                               | CLAIMS REMAINING AFTER AMENDMENT                                                                                                                                                                                              | HIGHEST NUMBER PREVIOUSLY PAID FOR         | PRESENT EXTRA | RATE (\$)                 |          | ADDITIONAL FEE (\$)                   |  |
|                                                                                                                                 | Total<br>(37 CFR 1.16(i))                                                                | * 72                                                                                                                                                                                                                          | Minus ** 28                                | = 44          | x \$40 =                  |          | 1760                                  |  |
|                                                                                                                                 | Independent<br>(37 CFR 1.16(h))                                                          | * 9                                                                                                                                                                                                                           | Minus *** 5                                | = 4           | x \$192 =                 |          | 768                                   |  |
|                                                                                                                                 | <input type="checkbox"/> Application Size Fee (37 CFR 1.16(s))                           |                                                                                                                                                                                                                               |                                            |               |                           |          |                                       |  |
|                                                                                                                                 | <input type="checkbox"/> FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j)) |                                                                                                                                                                                                                               |                                            |               |                           |          |                                       |  |
|                                                                                                                                 |                                                                                          |                                                                                                                                                                                                                               |                                            |               | TOTAL ADD'L FEE           |          | 2528                                  |  |
| AMENDMENT                                                                                                                       |                                                                                          | CLAIMS REMAINING AFTER AMENDMENT                                                                                                                                                                                              | HIGHEST NUMBER PREVIOUSLY PAID FOR         | PRESENT EXTRA | RATE (\$)                 |          | ADDITIONAL FEE (\$)                   |  |
|                                                                                                                                 | Total<br>(37 CFR 1.16(i))                                                                | *                                                                                                                                                                                                                             | Minus **                                   | =             | x \$0 =                   |          |                                       |  |
|                                                                                                                                 | Independent<br>(37 CFR 1.16(h))                                                          | *                                                                                                                                                                                                                             | Minus ***                                  | =             | x \$0 =                   |          |                                       |  |
|                                                                                                                                 | <input type="checkbox"/> Application Size Fee (37 CFR 1.16(s))                           |                                                                                                                                                                                                                               |                                            |               |                           |          |                                       |  |
|                                                                                                                                 | <input type="checkbox"/> FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j)) |                                                                                                                                                                                                                               |                                            |               |                           |          |                                       |  |
|                                                                                                                                 |                                                                                          |                                                                                                                                                                                                                               |                                            |               | TOTAL ADD'L FEE           |          |                                       |  |
| * If the entry in column 1 is less than the entry in column 2, write "0" in column 3.                                           |                                                                                          |                                                                                                                                                                                                                               |                                            |               | LIE                       |          |                                       |  |
| ** If the "Highest Number Previously Paid For" IN THIS SPACE is less than "20", enter "20".                                     |                                                                                          |                                                                                                                                                                                                                               |                                            |               | /JAMES T WASHINGTON/      |          |                                       |  |
| *** If the "Highest Number Previously Paid For" IN THIS SPACE is less than "3", enter "3".                                      |                                                                                          |                                                                                                                                                                                                                               |                                            |               |                           |          |                                       |  |
| The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1. |                                                                                          |                                                                                                                                                                                                                               |                                            |               |                           |          |                                       |  |

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

## NOTICE OF ALLOWANCE AND FEE(S) DUE

57131 7590 12/20/2023  
J. CARL COOPER  
900 Whites Creek Lane  
Reno, NV 89511

EXAMINER

INGE, JOSEPH N

ART UNIT PAPER NUMBER

2836

DATE MAILED: 12/20/2023

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 16/052,007      | 11/18/2020  | J. Carl Cooper       | JCC_5-12_Div_2020   | 3658             |

TITLE OF INVENTION: Power Source Load Control

| APPLN. TYPE    | ENTITY STATUS | ISSUE FEE DUE | PUBLICATION FEE DUE | PREV. PAID ISSUE FEE | TOTAL FEE(S) DUE | DATE DUE   |
|----------------|---------------|---------------|---------------------|----------------------|------------------|------------|
| nonprovisional | SMALL         | \$480         | \$0.00              | \$0.00               | \$480            | 03/20/2024 |

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. **PROSECUTION ON THE MERITS IS CLOSED.** THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. **THIS STATUTORY PERIOD CANNOT BE EXTENDED.** SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

### HOW TO REPLY TO THIS NOTICE:

I. Review the ENTITY STATUS shown above. If the ENTITY STATUS is shown as SMALL or MICRO, verify whether entitlement to that entity status still applies.

If the ENTITY STATUS is the same as shown above, pay the TOTAL FEE(S) DUE shown above.

If the ENTITY STATUS is changed from that shown above, on PART B - FEE(S) TRANSMITTAL, complete section number 5 titled "Change in Entity Status (from status indicated above)".

For purposes of this notice, small entity fees are 40% the amount of undiscounted fees, and micro entity fees are 20% the amount of undiscounted fees.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

**IMPORTANT REMINDER: Maintenance fees are due in utility patents issuing on applications filed on or after Dec. 12, 1980. It is patentee's responsibility to ensure timely payment of maintenance fees when due. More information is available at [www.uspto.gov/PatentMaintenanceFees](http://www.uspto.gov/PatentMaintenanceFees).**

## PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), by mail or fax, or via the USPTO patent electronic filing system.

By mail, send to: Mail Stop ISSUE FEE  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, Virginia 22313-1450

By fax, send to: (571)-273-2885

**INSTRUCTIONS:** This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications. **Because electronic patent issuance may occur shortly after issue fee payment, any desired continuing application should preferably be filed prior to payment of this issue fee in order not to jeopardize expediency.**

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

57131 7590 12/20/2023  
J. CARL COOPER  
900 Whites Creek Lane  
Reno, NV 89511

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

### Certificate of Mailing or Transmission

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being transmitted to the USPTO via the USPTO patent electronic filing system or by facsimile to (571) 273-2885, on the date below.

|  |                         |
|--|-------------------------|
|  | (Typed or printed name) |
|  | (Signature)             |
|  | (Date)                  |

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 16/952,007      | 11/18/2020  | J. Carl Cooper       | JCC_5-12_Div_2020   | 3658             |

TITLE OF INVENTION: Power Source-Load Control

| APPLN. TYPE    | ENTITY STATUS | ISSUE FEE DUE | PUBLICATION FEE DUE | PREV. PAID ISSUE FEE | TOTAL FEE(S) DUE | DATE DUE   |
|----------------|---------------|---------------|---------------------|----------------------|------------------|------------|
| nonprovisional | SMALL         | \$480         | \$0.00              | \$0.00               | \$480            | 03/20/2024 |

| EXAMINER       | ART UNIT | CLASS-SUBCLASS |
|----------------|----------|----------------|
| INGE, JOSEPH N | 2836     | 307-023000     |

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

☐ Change of correspondence address (or Change of Correspondence Address form PTO/AIA/122 or PTO/SB/122) attached.

☐ "Fee Address" indication (or "Fee Address" Indication form PTO/AIA/47 or PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list

(1) The names of up to 3 registered patent attorneys or agents OR, alternatively,

(2) The name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

|   |  |
|---|--|
| 1 |  |
| 2 |  |
| 3 |  |

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document must have been previously recorded, or filed for recordation, as set forth in 37 CFR 3.11 and 37 CFR 3.81(a). Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

(B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent): ☐ Individual ☐ Corporation or other private group entity ☐ Government

4a. Fees submitted: ☐ Issue Fee ☐ Publication Fee (if required)

4b. Method of Payment: (Please first reapply any previously paid fee shown above)

☐ Electronic Payment via the USPTO patent electronic filing system ☐ Enclosed check ☐ Non-electronic payment by credit card (Attach form PTO-2038)  
☐ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment to Deposit Account No. \_\_\_\_\_

5. Change in Entity Status (from status indicated above)

☐ Applicant certifying micro entity status. See 37 CFR 1.29

☐ Applicant asserting small entity status. See 37 CFR 1.27

☐ Applicant changing to regular undiscounted fee status.

NOTE: Absent a valid certification of Micro Entity Status (see forms PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.

NOTE: If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.

NOTE: Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

NOTE: This form must be signed in accordance with 37 CFR 1.31 and 1.33. See 37 CFR 1.4 for signature requirements and certifications.

|                             |                        |
|-----------------------------|------------------------|
| Authorized Signature _____  | Date _____             |
| Typed or printed name _____ | Registration No. _____ |



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www.uspto.gov

| APPLICATION NO.                                           | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------------------------------------------------|-------------|----------------------|---------------------|------------------|
| 16/952,007                                                | 11/18/2020  | J. Carl Cooper       | JCC_5-12_Div_2020   | 3658             |
| 57131                                                     | 7590        | 12/20/2023           | EXAMINER            |                  |
| J. CARL COOPER<br>900 Whites Creek Lane<br>Reno, NV 89511 |             |                      | INGE, JOSEPH N      |                  |
|                                                           |             |                      | ART UNIT            | PAPER NUMBER     |
|                                                           |             |                      | 2836                |                  |
| DATE MAILED: 12/20/2023                                   |             |                      |                     |                  |

## Determination of Patent Term Adjustment under 35 U.S.C. 154 (b) (Applications filed on or after May 29, 2000)

The Office has discontinued providing a Patent Term Adjustment (PTA) calculation with the Notice of Allowance.

Section 1(h)(2) of the AIA Technical Corrections Act amended 35 U.S.C. 154(b)(3)(B)(i) to eliminate the requirement that the Office provide a patent term adjustment determination with the notice of allowance. See Revisions to Patent Term Adjustment, 78 Fed. Reg. 19416, 19417 (Apr. 1, 2013). Therefore, the Office is no longer providing an initial patent term adjustment determination with the notice of allowance. The Office will continue to provide a patent term adjustment determination with the Issue Notification Letter that is mailed to applicant approximately three weeks prior to the issue date of the patent, and will include the patent term adjustment on the patent. Any request for reconsideration of the patent term adjustment determination (or reinstatement of patent term adjustment) should follow the process outlined in 37 CFR 1.705.

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

## OMB Clearance and PRA Burden Statement for PTOL-85 Part B

The Paperwork Reduction Act (PRA) of 1995 requires Federal agencies to obtain Office of Management and Budget approval before requesting most types of information from the public. When OMB approves an agency request to collect information from the public, OMB (i) provides a valid OMB Control Number and expiration date for the agency to display on the instrument that will be used to collect the information and (ii) requires the agency to inform the public about the OMB Control Number's legal significance in accordance with 5 CFR 1320.5(b).

The information collected by PTOL-85 Part B is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 30 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. **DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.** Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

### Privacy Act Statement

**The Privacy Act of 1974 (P.L. 93-579)** requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. The United States Patent and Trademark Office (USPTO) collects the information in this record under authority of 35 U.S.C. 2. The USPTO's system of records is used to manage all applicant and owner information including name, citizenship, residence, post office address, and other information with respect to inventors and their legal representatives pertaining to the applicant's/owner's activities in connection with the invention for which a patent is sought or has been granted. The applicable Privacy Act System of Records Notice for the information collected in this form is COMMERCE/PAT-TM-7 Patent Application Files, available in the Federal Register at 78 FR 19243 (March 29, 2013).

<https://www.govinfo.gov/content/pkg/FR-2013-03-29/pdf/2013-07341.pdf>

Routine uses of the information in this record may include disclosure to:

- 1) law enforcement, in the event that the system of records indicates a violation or potential violation of law;
- 2) a federal, state, local, or international agency, in response to its request;
- 3) a contractor of the USPTO having need for the information in order to perform a contract;
- 4) the Department of Justice for determination of whether the Freedom of Information Act (FOIA) requires disclosure of the record;
- 5) a Member of Congress submitting a request involving an individual to whom the record pertains, when the individual has requested the Member's assistance with respect to the subject matter of the record;
- 6) a court, magistrate, or administrative tribunal, in the course of presenting evidence, including disclosures to opposing counsel in the course of settlement negotiations;
- 7) the Administrator, General Services Administration (GSA), or their designee, during an inspection of records conducted by GSA under authority of 44 U.S.C. 2904 and 2906, in accordance with the GSA regulations and any other relevant (i.e., GSA or Commerce) directive, where such disclosure shall not be used to make determinations about individuals;
- 8) another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c));
- 9) the Office of Personnel Management (OPM) for personnel research purposes; and
- 10) the Office of Management and Budget (OMB) for legislative coordination and clearance.

If you do not furnish the information requested on this form, the USPTO may not be able to process and/or examine your submission, which may result in termination of proceedings, abandonment of the application, and/or expiration of the patent.

|                               |                                      |                                        |                                |
|-------------------------------|--------------------------------------|----------------------------------------|--------------------------------|
| <b>Notice of Allowability</b> | <b>Application No.</b><br>18/952,007 | <b>Applicant(s)</b><br>Cooper, J. Carl |                                |
|                               | <b>Examiner</b><br>JOSEPH N INGE     | <b>Art Unit</b><br>2836                | <b>AIA (FITF) Status</b><br>No |

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 10/27/2023.  
☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on \_\_\_\_\_.

2. ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on \_\_\_\_\_; the restriction requirement and election have been incorporated into this action.

3. ☒ The allowed claim(s) is/are 29-44 and 72-126. As a result of the allowed claim(s), you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see [http://www.uspto.gov/patents/init\\_events/pph/index.jsp](http://www.uspto.gov/patents/init_events/pph/index.jsp) or send an inquiry to [PPHfeedback@uspto.gov](mailto:PPHfeedback@uspto.gov).

4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

**Certified copies:**  
a) ☐ All      b) ☐ Some\*      c) ☐ None of the:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.  
☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.  
Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

|                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                              |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)<br>2. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO/SB/08),<br>Paper No./Mail Date <u>10/27/2023</u> .<br>3. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material _____.<br>4. <input type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date, _____. | 5. <input type="checkbox"/> Examiner's Amendment/Comment<br>6. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance<br>7. <input type="checkbox"/> Other _____. |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|                                            |                                                 |
|--------------------------------------------|-------------------------------------------------|
| /JOSEPH N INGE/<br>Examiner, Art Unit 2836 | /HAL KAPLAN/<br>Primary Examiner, Art Unit 2836 |
|--------------------------------------------|-------------------------------------------------|

**DETAILED ACTION**

***Notice of Pre-AIA or AIA Status***

The present application is being examined under the pre-AIA first to invent provisions.

***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after allowance or after an Office action under *Ex Parte Quayle*, 25 USPQ 74, 453 O.G. 213 (Comm'r Pat. 1935). Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, prosecution in this application has been reopened pursuant to 37 CFR 1.114. Applicant's submission filed on 10/27/2023 has been entered.

***Allowable Subject Matter***

**Claims 29-44, and 72-126 are allowed.**

The following is an examiner's statement of reasons for allowance:

Claims 29-44 and 72-126 are currently believed to be in condition for allowance. While the prior art of record discloses similar power systems with subsequent load control in order to prevent potential overloads, the prior art of record fails to appropriately teach or suggest, "a non-utility type power source comprising an inverter... the power source having at least one maximum output power parameter which if exceeded causes an overload of the power source, the output A.C. power having an A.C. frequency, which frequency is controlled in response to the timely amount of the output A.C. power; b) a power sensing circuit... is responsive to the

timely amount of the output A.C. power, the power source operating in response to the power sensing circuit to control the frequency of the output A.C. power to have a first frequency when the power source is not overloaded and a second frequency when the power source is overloaded or is near to being overloaded; c) a processor circuit comprising one or more processors responsive to the output A.C. power, the processor circuit operating in response to the occurrence of the second frequency to control the amount of output A.C. power consumed by at least one load of the one or more loads thereby helping to prevent or alleviate an overload of the power source” as presented within independent claim 29, and similarly recited within the remaining independent claims of the application.

For example, while prior art Lasseter et al. (U.S. Patent Publication Number 2004/0051387) discloses a non-utility type power source comprising an inverter, as well as a power sensing circuit, and a processor circuit (see, for example, Fig. 3, voltage source PWM inverter 450, voltage controller 330, power controller 340, etc., paragraphs 0055-0056, 0060, 0066, etc.), Lasseter fails to teach the power source operating in such a manner so as to control the frequency of the output AC power to have a first frequency when the power source is not overloaded and a second frequency when the power source is overloaded or near to being overloaded in addition to a processor circuit operating in response to the occurrence of the second frequency to control the amount of AC output power consumed by at least one load. Said limitations, when taken into consideration with the claim language in its entirety, appear to be directed towards a non-obvious improvement over the prior art of record. For these reasons, inter alia, the claims are currently believed to be in condition for allowance. Claim 29,

deemed to be the representative claim, is presented below.

**Claim 29:** A power system which provides A.C. power with a controlled A.C. frequency to assist in managing the loading thereof, the power system comprising:

- a) a non-utility type power source comprising an inverter which provides single or multiple phase output A.C. power to one or more of a plurality of loads, the power source having at least one maximum output power parameter which if exceeded causes an overload of the power source, the output A.C. power having an A.C. frequency, which frequency is controlled in response to the timely amount of the output A.C. power;
- b) a power sensing circuit which may be part of the power source or otherwise and is responsive to the timely amount of the output A.C. power, the power source operating in response to the power sensing circuit to control the frequency of the output A.C. power to have a first frequency when the power source is not overloaded and a second frequency when the power source is overloaded or is near to being overloaded;
- c) a processor circuit comprising one or more processors responsive to the output A.C. power, the processor circuit operating in response to the occurrence of the second frequency to control the amount of output A.C. power consumed by at least one load of the one or more loads thereby helping to prevent or alleviate an overload of the power source.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JOSEPH N INGE whose telephone number is (571)270-7705. The examiner can normally be reached 9:00-5:00 EST.

Examiner interviews are available via telephone, in-person, and video conferencing using a USPTO supplied web-based collaboration tool. To schedule an interview, applicant is encouraged to use the USPTO Automated Interview Request (AIR) at <http://www.uspto.gov/interviewpractice>.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rexford Barnie can be reached on 571-272-7492. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of published or unpublished applications may be obtained from Patent Center. Unpublished application information in Patent Center is available to registered users. To file and manage patent submissions in Patent Center, visit: <https://patentcenter.uspto.gov>. Visit <https://www.uspto.gov/patents/apply/patent-center> for more information about Patent Center and <https://www.uspto.gov/patents/docx> for information about filing in DOCX format. For additional questions, contact the Electronic

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Art Unit: 2836

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Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO

Customer Service Representative, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/JOSEPH N INGE/  
Examiner, Art Unit 2836

/HAL KAPLAN/  
Primary Examiner, Art Unit 2836

|                                   |                                       |                                                               |             |
|-----------------------------------|---------------------------------------|---------------------------------------------------------------|-------------|
| <b>Notice of References Cited</b> | Application/Control No.<br>16/952,007 | Applicant(s)/Patent Under<br>Reexamination<br>Cooper, J. Carl |             |
|                                   | Examiner<br>JOSEPH N INGE             | Art Unit<br>2836                                              | Page 1 of 1 |

**U.S. PATENT DOCUMENTS**

| * |   | Document Number<br>Country Code-Number-Kind Code | Date<br>YYYY-MM-DD | Name                | CPC Classification | US Classification |
|---|---|--------------------------------------------------|--------------------|---------------------|--------------------|-------------------|
| * | A | US-20040051387-A1                                | 2004-03-18         | Lassejer, Robert H. | H02J3/381          | 307/80            |
| * | B | US-20080212343-A1                                | 2008-09-04         | Lassejer, Robert H. | H02J3/30           | 363/39            |
| * | C | US-20090216386-A1                                | 2009-08-27         | Wedel; Francis X.   | H02J9/06           | 700/295           |
| * | D | US-7715950-B2                                    | 2010-05-11         | Lassejer, Robert H. | H02P9/04           | 701/99            |
| * | E | US-7847434-B2                                    | 2010-12-07         | Wakitani; Tsutomu   | H02J9/062          | 307/65            |
| * | F | US-20120179929-A1                                | 2012-07-12         | CHEN; KAI-FU        | G06F1/28           | 307/29            |
| * | G | US-20130270908-A1                                | 2013-10-17         | Wedel; Francis X.   | H02J3/14           | 307/39            |
|   | H |                                                  |                    |                     |                    |                   |
|   | I |                                                  |                    |                     |                    |                   |
|   | J |                                                  |                    |                     |                    |                   |
|   | K |                                                  |                    |                     |                    |                   |
|   | L |                                                  |                    |                     |                    |                   |
|   | M |                                                  |                    |                     |                    |                   |

**FOREIGN PATENT DOCUMENTS**

| * |   | Document Number<br>Country Code-Number-Kind Code | Date<br>YYYY-MM-DD | Country | Name | CPC Classification |
|---|---|--------------------------------------------------|--------------------|---------|------|--------------------|
|   | N |                                                  |                    |         |      |                    |
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|   | T |                                                  |                    |         |      |                    |

**NON-PATENT DOCUMENTS**

| * |   | Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages) |
|---|---|-------------------------------------------------------------------------------------------|
|   | U |                                                                                           |
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|   | W |                                                                                           |
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\*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)  
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U.S. Patent and Trademark Office  
PTO-892 (Rev. 01-2001)

**Notice of References Cited**

Part of Paper No. 20231213

|                                                                                                          |                         |                                         |
|----------------------------------------------------------------------------------------------------------|-------------------------|-----------------------------------------|
| <b>Search Notes</b><br> | Application/Control No. | Applicant(s)/Patent Under Reexamination |
|                                                                                                          | 16/952,007              | Cooper, J. Carl                         |
|                                                                                                          | Examiner                | Art Unit                                |
|                                                                                                          | JOSEPH N INGE           | 2836                                    |

| CPC - Searched* |            |          |
|-----------------|------------|----------|
| Symbol          | Date       | Examiner |
| H02J 3/00       | 08/15/2023 | Jl       |
| H02J 9/00       | 08/15/2023 | Jl       |
| H02J 3/00       | 12/13/2023 | Jl       |
| H02J 9/00       | 12/13/2023 | Jl       |

| CPC Combination Sets - Searched* |      |          |
|----------------------------------|------|----------|
| Symbol                           | Date | Examiner |
|                                  |      |          |

| US Classification - Searched* |          |      |          |
|-------------------------------|----------|------|----------|
| Class                         | Subclass | Date | Examiner |
|                               |          |      |          |

\* See search history printout included with this form or the SEARCH NOTES box below to determine the scope of the search.

| Search Notes        |            |          |
|---------------------|------------|----------|
| Search Notes        | Date       | Examiner |
| Inventor Search     | 08/15/2023 | Jl       |
| PE2E Search         | 08/15/2023 | Jl       |
| Updated PE2E Search | 12/13/2023 | Jl       |

|                                            |                                                 |
|--------------------------------------------|-------------------------------------------------|
| /JOSEPH N INGE/<br>Examiner, Art Unit 2836 | /HAL KAPLAN/<br>Primary Examiner, Art Unit 2836 |
|--------------------------------------------|-------------------------------------------------|

|                                                                                                          |                                              |                                                                   |
|----------------------------------------------------------------------------------------------------------|----------------------------------------------|-------------------------------------------------------------------|
| <b>Search Notes</b><br> | <b>Application/Control No.</b><br>16/952,007 | <b>Applicant(s)/Patent Under Reexamination</b><br>Cooper, J. Carl |
|                                                                                                          | <b>Examiner</b><br>JOSEPH N INGE             | <b>Art Unit</b><br>2836                                           |

| Interference Search |                       |            |          |
|---------------------|-----------------------|------------|----------|
| US Class/CPC Symbol | US Subclass/CPC Group | Date       | Examiner |
| H02J                | 3/00                  | 08/15/2023 | Jl       |
| H02J                | 9/00                  | 08/15/2023 | Jl       |
| H02J                | 3/00                  | 12/13/2023 | Jl       |
| H02J                | 9/00                  | 12/13/2023 | Jl       |

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|--------------------------------------------|-------------------------------------------------|

|                                                                                                                  |                                              |                                                                   |
|------------------------------------------------------------------------------------------------------------------|----------------------------------------------|-------------------------------------------------------------------|
| <b>Issue Classification</b><br> | <b>Application/Control No.</b><br>16/952,007 | <b>Applicant(s)/Patent Under Reexamination</b><br>Cooper, J. Carl |
|                                                                                                                  | <b>Examiner</b><br>JOSEPH N INGE             | <b>Art Unit</b><br>2836                                           |

| CPC    |   |   |   |    |      |            |
|--------|---|---|---|----|------|------------|
| Symbol |   |   |   |    | Type | Version    |
| H02J   | / | 9 | / | 00 | F    | 2013-01-01 |
| H02J   | / | 3 | / | 00 | A    | 2013-01-01 |
| H02J   | / | 1 | / | 00 | A    | 2013-01-01 |

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| Symbol               |   |  |   | Type | Set | Ranking | Version |
|                      | / |  | / |      |     |         |         |

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|-----------------------------------------------------------------------|----------------------------|------------------------------------|------------------------|
| /JOSEPH N INGE/<br>Examiner, Art Unit 2836<br>(Assistant Examiner)    | 13 December 2023<br>(Date) | <b>Total Claims Allowed:</b><br>71 |                        |
| /HAL KAPLAN/<br>Primary Examiner, Art Unit 2836<br>(Primary Examiner) | 13 December 2023<br>(Date) | O.G. Print Claim(s)<br>29          | O.G. Print Figure<br>4 |

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| <b>Issue Classification</b><br> | <b>Application/Control No.</b><br>16/952,007 | <b>Applicant(s)/Patent Under Reexamination</b><br>Cooper, J. Carl |
|                                                                                                                  | <b>Examiner</b><br>JOSEPH N INGE             | <b>Art Unit</b><br>2836                                           |

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|-------------------------------------|---|---|----|
| <b>INTERNATIONAL CLASSIFICATION</b> |   |   |    |
| <b>CLAIMED</b>                      |   |   |    |
| H02J9/00                            | 7 | 9 | 00 |
| H02J3/00                            | 7 | 3 | 00 |
| <b>NON-CLAIMED</b>                  |   |   |    |
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| <b>US ORIGINAL CLASSIFICATION</b> |                 |
| <b>CLASS</b>                      | <b>SUBCLASS</b> |
|                                   |                 |

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|----------------------------|------------------------------------------|--|--|--|--|--|
| <b>CROSS REFERENCES(S)</b> |                                          |  |  |  |  |  |
| <b>CLASS</b>               | <b>SUBCLASS (ONE SUBCLASS PER BLOCK)</b> |  |  |  |  |  |
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| /HAL KAPLAN/<br>Primary Examiner, Art Unit 2836<br>(Primary Examiner) | 13 December 2023<br>(Date) | O.G. Print Claim(s)<br>29          | O.G. Print Figure<br>4 |

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| <b>Issue Classification</b><br> | <b>Application/Control No.</b><br>16/952,007 | <b>Applicant(s)/Patent Under Reexamination</b><br>Cooper, J. Carl |
|                                                                                                                  | <b>Examiner</b><br>JOSEPH N INGE             | <b>Art Unit</b><br>2836                                           |

|                                                                                                                                                                                   |          |       |          |       |          |       |          |       |          |       |          |       |          |       |          |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|-------|----------|-------|----------|-------|----------|-------|----------|-------|----------|-------|----------|-------|----------|
| <input type="checkbox"/> Claims renumbered in the same order as presented by applicant <input type="checkbox"/> CPA <input type="checkbox"/> T.D. <input type="checkbox"/> R.1.47 |          |       |          |       |          |       |          |       |          |       |          |       |          |       |          |
| <b>CLAIMS</b>                                                                                                                                                                     |          |       |          |       |          |       |          |       |          |       |          |       |          |       |          |
| Final                                                                                                                                                                             | Original | Final | Original | Final | Original | Final | Original | Final | Original | Final | Original | Final | Original | Final | Original |
| -                                                                                                                                                                                 | 1        | -     | 17       | 5     | 33       | -     | 49       | -     | 65       | 26    | 81       | 42    | 97       | 58    | 113      |
| -                                                                                                                                                                                 | 2        | -     | 18       | 6     | 34       | -     | 50       | -     | 66       | 27    | 82       | 43    | 98       | 59    | 114      |
| -                                                                                                                                                                                 | 3        | -     | 19       | 7     | 35       | -     | 51       | -     | 67       | 28    | 83       | 44    | 99       | 60    | 115      |
| -                                                                                                                                                                                 | 4        | -     | 20       | 8     | 36       | -     | 52       | -     | 68       | 29    | 84       | 45    | 100      | 61    | 116      |
| -                                                                                                                                                                                 | 5        | -     | 21       | 9     | 37       | -     | 53       | -     | 69       | 30    | 85       | 46    | 101      | 62    | 117      |
| -                                                                                                                                                                                 | 6        | -     | 22       | 10    | 38       | -     | 54       | -     | 70       | 31    | 86       | 47    | 102      | 63    | 118      |
| -                                                                                                                                                                                 | 7        | -     | 23       | 11    | 39       | -     | 55       | -     | 71       | 32    | 87       | 48    | 103      | 64    | 119      |
| -                                                                                                                                                                                 | 8        | -     | 24       | 12    | 40       | -     | 56       | 17    | 72       | 33    | 88       | 49    | 104      | 65    | 120      |
| -                                                                                                                                                                                 | 9        | -     | 25       | 13    | 41       | -     | 57       | 18    | 73       | 34    | 89       | 50    | 105      | 66    | 121      |
| -                                                                                                                                                                                 | 10       | -     | 26       | 14    | 42       | -     | 58       | 19    | 74       | 35    | 90       | 51    | 106      | 67    | 122      |
| -                                                                                                                                                                                 | 11       | -     | 27       | 15    | 43       | -     | 59       | 20    | 75       | 36    | 91       | 52    | 107      | 68    | 123      |
| -                                                                                                                                                                                 | 12       | -     | 28       | 16    | 44       | -     | 60       | 21    | 76       | 37    | 92       | 53    | 108      | 69    | 124      |
| -                                                                                                                                                                                 | 13       | 1     | 29       | -     | 45       | -     | 61       | 22    | 77       | 38    | 93       | 54    | 109      | 70    | 125      |
| -                                                                                                                                                                                 | 14       | 2     | 30       | -     | 46       | -     | 62       | 23    | 78       | 39    | 94       | 55    | 110      | 71    | 126      |
| -                                                                                                                                                                                 | 15       | 3     | 31       | -     | 47       | -     | 63       | 24    | 79       | 40    | 95       | 56    | 111      |       |          |
| -                                                                                                                                                                                 | 16       | 4     | 32       | -     | 48       | -     | 64       | 25    | 80       | 41    | 96       | 57    | 112      |       |          |

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| /JOSEPH N INGE/<br>Examiner, Art Unit 2836<br>(Assistant Examiner)    | 13 December 2023<br>(Date) | <b>Total Claims Allowed:</b><br>71 |                        |
| /HAL KAPLAN/<br>Primary Examiner, Art Unit 2836<br>(Primary Examiner) | 13 December 2023<br>(Date) | O.G. Print Claim(s)<br>29          | O.G. Print Figure<br>4 |

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Part of Paper No.: 20231213

Receipt date: 10/27/2023

16/952,007 - GAU: 2836

Doc code: IDS

Doc description: Information Disclosure Statement (IDS) Filed

PTO/SB/08a (02-18)

Approved for use through 11/30/2020. OMB 0851-0031

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|-----------------------------------------------------------------------------------------------------|------------------------|-------------------|------------|--|
| <b>INFORMATION DISCLOSURE<br/>STATEMENT BY APPLICANT</b><br>( Not for submission under 37 CFR 1.99) | Application Number     |                   | 16952007   |  |
|                                                                                                     | Filing Date            |                   | 2020-11-18 |  |
|                                                                                                     | First Named Inventor   | J. Carl Cooper    |            |  |
|                                                                                                     | Art Unit               | 2836              |            |  |
|                                                                                                     | Examiner Name          | Inge, Joseph N.   |            |  |
|                                                                                                     | Attorney Docket Number | JCC_5-12_Div_2020 |            |  |

| U.S.PATENTS                                                                                 |         |                    |                        |                  |                                                 |                                                                        | Remove |
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| Examiner Initial*                                                                           | Cite No | Patent Number      | Kind Code <sup>1</sup> | Issue Date       | Name of Patentee or Applicant of cited Document | Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear |        |
|                                                                                             | 1       | 9281715            | B2                     | 2016-03-08       | Lim et al.                                      | All                                                                    |        |
| If you wish to add additional U.S. Patent citation information please click the Add button. |         |                    |                        |                  |                                                 |                                                                        | Add    |
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|                                                                                             | 1       | 20040051387        | A1                     | 2004-03-18       | Lasseter et al.                                 | All                                                                    |        |
|                                                                                             | 2       | 20050067900        | A1                     | 2005-03-31       | Bailey                                          | All                                                                    |        |
|                                                                                             | 3       | 20100017045        | A1                     | 2010-01-21       | Nesler et al.                                   | All                                                                    |        |
|                                                                                             | 4       | 20100207448        | A1                     | 2010-08-19       | Cooper                                          | All                                                                    |        |
|                                                                                             | 5       | 20110298285        | A1                     | 2011-08-19       | Lim et al.                                      | All                                                                    |        |

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ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /J.N.I/

**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**  
( Not for submission under 37 CFR 1.99)

|                        |                   |
|------------------------|-------------------|
| Application Number     | 16952007          |
| Filing Date            | 2020-11-18        |
| First Named Inventor   | J. Carl Cooper    |
| Art Unit               | 2836              |
| Examiner Name          | Inge, Joseph N.   |
| Attorney Docket Number | JCC_5-12_Div_2020 |

|   |             |    |            |               |     |
|---|-------------|----|------------|---------------|-----|
| 6 | 20010010032 | A1 | 2001-07-26 | Ehlers et al. | All |
| 7 | 20090027932 | A1 | 2002-01-29 | Haines et al. | All |

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| Examiner Signature | /JOSEPH N INGE/ | Date Considered | 12/13/2023 |
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\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> See Kind Codes of USPTO Patent Documents at [www.USPTO.GOV](http://www.USPTO.GOV) or MPEP 901.04. <sup>2</sup> Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>3</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>4</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. <sup>5</sup> Applicant is to place a check mark here if English language translation is attached.

**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**  
( Not for submission under 37 CFR 1.99)

|                        |                   |
|------------------------|-------------------|
| Application Number     | 16952007          |
| Filing Date            | 2020-11-18        |
| First Named Inventor   | J. Carl Cooper    |
| Art Unit               | 2836              |
| Examiner Name          | Inge, Joseph N.   |
| Attorney Docket Number | JCC_5-12_Div_2020 |

**CERTIFICATION STATEMENT**

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

- ☐ That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

**OR**

- ☐ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

- ☐ See attached certification statement.
- ☐ The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.
- ☒ A certification statement is not submitted herewith.

**SIGNATURE**

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

|            |                  |                     |            |
|------------|------------------|---------------------|------------|
| Signature  | /J. Carl Cooper/ | Date (YYYY-MM-DD)   | 2023-10-27 |
| Name/Print | J. Carl Cooper   | Registration Number | 34568      |

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

## Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

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2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

# PE2E SEARCH - Search History (Prior Art)

| Ref # | Hits | Search Query                                                                                                                                                                                                                                                                                                                                                                                          | DBs               | Default Operator | Plurals | British Equivalents | Time Stamp          |
|-------|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|------------------|---------|---------------------|---------------------|
| L1    | 0    | "13481804"                                                                                                                                                                                                                                                                                                                                                                                            | (US-PGPUB; USPAT) | OR               | ON      | ON                  | 2015/09/15 11:46 AM |
| L2    | 0    | "13481804"                                                                                                                                                                                                                                                                                                                                                                                            | (US-PGPUB; USPAT) | OR               | ON      | ON                  | 2015/09/15 11:47 AM |
| L3    | 29   | ("20070053123" "6313632" "20050216131" "20050109387" "20070222294" "20070276547" "8159084" "20130116487" "20130159738" "20070222295" "8248058" "20040078153" "20050116814" "20060018069" "20070008076" "7356384" "20100134073" "20100328850" "7692332" "20130158726" "20060276938" "7338364" "7015599" "20020072868" "20050216131" "20070010916" "7379778" "7053497" "20040075343" "20100225167").PN. | (US-PGPUB; USPAT) | OR               | ON      | ON                  | 2015/09/15 11:48 AM |
| L4    | 0    | "13481804"                                                                                                                                                                                                                                                                                                                                                                                            | (US-PGPUB; USPAT) | OR               | ON      | ON                  | 2015/09/15 11:49 AM |
| L5    | 130  | "6528957"                                                                                                                                                                                                                                                                                                                                                                                             | (US-PGPUB; USPAT) | OR               | ON      | ON                  | 2015/09/15 11:55 AM |
| L6    | 1    | "6528957".pn.                                                                                                                                                                                                                                                                                                                                                                                         | (US-PGPUB; USPAT) | OR               | ON      | ON                  | 2015/09/15 11:55 AM |
| L7    | 1    | "20060164773"                                                                                                                                                                                                                                                                                                                                                                                         | (US-PGPUB; USPAT) | OR               | ON      | ON                  | 2015/09/15 11:56 AM |
| L8    | 0    | "13481804"                                                                                                                                                                                                                                                                                                                                                                                            | (US-PGPUB; USPAT) | OR               | ON      | ON                  | 2016/02/17 05:14 PM |
| L9    | 0    | "13481804"                                                                                                                                                                                                                                                                                                                                                                                            | (US-PGPUB; USPAT) | OR               | ON      | ON                  | 2016/02/18 12:47 PM |
| L10   | 143  | "6528957"                                                                                                                                                                                                                                                                                                                                                                                             | (US-PGPUB; USPAT) | OR               | ON      | ON                  | 2016/02/18 01:02 PM |
| L11   | 35   | "6528957" and management with control with system                                                                                                                                                                                                                                                                                                                                                     | (US-PGPUB; USPAT) | OR               | ON      | ON                  | 2016/02/18 01:02 PM |
| L12   | 1    | "5196982".pn.                                                                                                                                                                                                                                                                                                                                                                                         | (US-PGPUB; USPAT) | OR               | ON      | ON                  | 2016/02/18 02:58 PM |
| L13   | 29   | ("20070053123" "6313632" "20050216131" "20050109387" "20070222294" "20070276547" "8159084" "20130116487" "20130159738" "20070222295" "8248058" "2                                                                                                                                                                                                                                                     | (US-PGPUB; USPAT) | OR               | ON      | ON                  | 2016/02/19 02:02 PM |

|     |      |                                                                                                                                                                                                                                                                                                                                                                                                       |                   |    |    |    |                     |
|-----|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|----|----|----|---------------------|
| L14 | 6    | 0040078153 "20050116814 "20060018069 "20070008076 "7356384 "20100134073 "20100328850 "7692332 "20130158726 "20060276938 "7338364 "7015599 "20020072868 "20050216131 "20070010916 "7379778 "7053497 "20040075343 "20100225167").PN.                                                                                                                                                                    | (US-PGPUB; USPAT) | OR | ON | ON | 2016/02/19 02:02 PM |
| L15 | 522  | ("20070053123 "6313632 "20050216131 "20050109387 "20070222294 "20070276547 "8159084 "20130116487 "20130159738 "20070222295 "8248058 "20040078153 "20050116814 "20060018069 "20070008076 "7356384 "20100134073 "20100328850 "7692332 "20130158726 "20060276938 "7338364 "7015599 "20020072868 "20050216131 "20070010916 "7379778 "7053497 "20040075343 "20100225167").PN. and (automobile vehicle car) | (US-PGPUB; USPAT) | OR | ON | ON | 2016/02/19 02:21 PM |
| L16 | 1140 | h02j1/10                                                                                                                                                                                                                                                                                                                                                                                              | (US-PGPUB; USPAT) | OR | ON | ON | 2016/02/19 02:22 PM |
| L17 | 1774 | h02j3/00                                                                                                                                                                                                                                                                                                                                                                                              | (US-PGPUB; USPAT) | OR | ON | ON | 2016/02/19 02:22 PM |
| L18 | 0    | "13481804"                                                                                                                                                                                                                                                                                                                                                                                            | (US-PGPUB; USPAT) | OR | ON | ON | 2016/06/23 11:30 AM |
| L19 | 29   | ("20070053123 "6313632 "20050216131 "20050109387 "20070222294 "20100134073 "20070276547 "8159084 "20130116487 "20130159738 "20070222295 "8248058 "20050116814 "7015599 "20040078153 "20050116814 "20060018069 "20070008076 "7356384 "20100134073 "20100328850 "7692332 "20130158726 "20060276938 "7338364 "701559                                                                                     | (US-PGPUB; USPAT) | OR | ON | ON | 2016/06/23 12:06 PM |

|     |   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                   |    |    |    |                        |
|-----|---|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|----|----|----|------------------------|
| L20 | 5 | 9 "20020072868 "20050216131 "20070010916 "7379778 "7053497 "20040075343 "20100225167").PN.<br>(("20070053123 "6313632 "20050216131 "20050109387 "20070222294 "20100134073 "20070276547 "8159084 "20130116487 "20130159738 "20070222295 "8248058 "20050116814 "7015599 "20040078153 "20050116814 "20060018069 "20070008076 "7356384 "20100134073 "20100328850 "7692332 "20130158726 "20060276938 "7338364 "7015599 "20020072868 "20050216131 "20070010916 "7379778 "7053497 "20040075343 "20100225167").PN. and memory and processor and ((back adj up) backup) near2 power | (US-PGPUB; USPAT) | OR | ON | ON | 2016/06/23<br>12:13 PM |
| L21 | 1 | (("20070053123 "6313632 "20050216131 "20050109387 "20070222294 "20100134073 "20070276547 "8159084 "20130116487 "20130159738 "20070222295 "8248058 "20050116814 "7015599 "20040078153 "20050116814 "20060018069 "20070008076 "7356384 "20100134073 "20100328850 "7692332 "20130158726 "20060276938 "7338364 "7015599 "20020072868 "20050216131 "20070010916 "7379778 "7053497 "20040075343 "20100225167").PN. and memory same parameter\$1 and processor and ((back adj up) backup) near2 power                                                                             | (US-PGPUB; USPAT) | OR | ON | ON | 2016/06/23<br>12:14 PM |

|     |      |                                                                                                                                                                                                                                       |                   |    |    |    |                        |
|-----|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|----|----|----|------------------------|
| L22 | 19   | (307/29.ccls.<br>h02j1/00.cpc.<br>h02j3/00.cpc.) and<br>memory same<br>parameter\$1 and<br>processor and ((back<br>adj up) backup) near2<br>power                                                                                     | (US-PGPUB; USPAT) | OR | ON | ON | 2016/06/23<br>12:15 PM |
| L23 | 2    | "20100146333"                                                                                                                                                                                                                         | (US-PGPUB; USPAT) | OR | ON | ON | 2016/06/23<br>12:19 PM |
| L24 | 1277 | power same load\$1 and<br>((back adj up) backup<br>auxiliary secondary)<br>with power with source<br>and (controller<br>processor) same<br>memory with stor\$3<br>with (information<br>parameter) and<br>switch\$3                    | (US-PGPUB; USPAT) | OR | ON | ON | 2016/06/23<br>12:24 PM |
| L25 | 122  | power same load\$1 and<br>((back adj up) backup<br>auxiliary secondary)<br>with power with source<br>and (controller<br>processor) same<br>memory with stor\$3<br>with (information<br>parameter) and<br>switch\$3 and<br>"307".clas. | (US-PGPUB; USPAT) | OR | ON | ON | 2016/06/23<br>12:24 PM |
| L26 | 2    | "20060184810"                                                                                                                                                                                                                         | (US-PGPUB; USPAT) | OR | ON | ON | 2016/06/23<br>12:40 PM |
| L27 | 2    | "20110064445"                                                                                                                                                                                                                         | (US-PGPUB; USPAT) | OR | ON | ON | 2016/06/23<br>12:42 PM |
| L28 | 54   | "6188182"                                                                                                                                                                                                                             | (US-PGPUB; USPAT) | OR | ON | ON | 2016/06/24<br>02:56 PM |
| L29 | 1    | "6188182".pn.                                                                                                                                                                                                                         | (US-PGPUB; USPAT) | OR | ON | ON | 2016/06/24<br>02:56 PM |
| L30 | 2427 | (process\$3 control\$3)<br>same memory with<br>stor\$3 with<br>(parameter\$1<br>information) with power<br>near2 source\$1                                                                                                            | (US-PGPUB; USPAT) | OR | ON | ON | 2016/06/24<br>03:06 PM |
| L31 | 215  | (process\$3 control\$3)<br>same memory with<br>stor\$3 with<br>(parameter\$1<br>information) with<br>(auxiliary secondary<br>backup (back adj up))<br>with power near2<br>source\$1                                                   | (US-PGPUB; USPAT) | OR | ON | ON | 2016/06/24<br>03:07 PM |
| L32 | 1    | "7423355".pn. and                                                                                                                                                                                                                     | (US-PGPUB; USPAT) | OR | ON | ON | 2016/06/24             |

|     |   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                   |    |    |    |                                    |
|-----|---|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|----|----|----|------------------------------------|
| L33 | 2 | memory<br>"20060133181"                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | (US-PGPUB; USPAT) | OR | ON | ON | 03:13 PM<br>2016/06/24<br>03:17 PM |
| L34 | 0 | ("20070053123" "63136<br>32" "20050216131" "20<br>050109387" "20070222<br>294" "20100134073" "2<br>0070276547" "8159084<br>" "20130116487" "2013<br>0159738" "2007022229<br>5" "8248058" "2005011<br>6814" "7015599" "2004<br>0078153" "2005011681<br>4" "20060018069" "200<br>70008076" "7356384" "2<br>0100134073" "201003<br>28850" "7692332" "201<br>30158726" "200602769<br>38" "7338364" "701559<br>9" "20020072868" "200<br>50216131" "200700109<br>16" "7379778" "705349<br>7" "20040075343" "201<br>00225167" "201002251<br>67").PN. and memory<br>with (parameter\$1<br>information) with<br>(backup auxiliary<br>secondary second<br>(back adj up)) near2<br>power near2 source | (US-PGPUB; USPAT) | OR | ON | ON | 2016/06/24<br>03:20 PM             |
| L35 | 0 | ("20070053123" "63136<br>32" "20050216131" "20<br>050109387" "20070222<br>294" "20100134073" "2<br>0070276547" "8159084<br>" "20130116487" "2013<br>0159738" "2007022229<br>5" "8248058" "2005011<br>6814" "7015599" "2004<br>0078153" "2005011681<br>4" "20060018069" "200<br>70008076" "7356384" "2<br>0100134073" "201003<br>28850" "7692332" "201<br>30158726" "200602769<br>38" "7338364" "701559<br>9" "20020072868" "200<br>50216131" "200700109<br>16" "7379778" "705349<br>7" "20040075343" "201<br>00225167" "201002251<br>67").PN. and memory<br>same (parameter\$1<br>information) with<br>(backup auxiliary<br>secondary second                                               | (US-PGPUB; USPAT) | OR | ON | ON | 2016/06/24<br>03:21 PM             |

|     |          |                                                                                                                                                                                                     |                   |    |     |     |                        |
|-----|----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|----|-----|-----|------------------------|
| L36 | 260      | (back adj up)) near2<br>power near2 source<br>memory with stor\$3<br>with (parameter\$1<br>information) with<br>(backup auxiliary<br>secondary second<br>(back adj up)) near2<br>power near2 source | (US-PGPUB; USPAT) | OR | ON  | ON  | 2016/06/24<br>03:40 PM |
| L37 | 10850291 | memory with stor\$3<br>with (parameter\$1<br>information) with<br>(backup auxiliary<br>secondary second<br>(back adj up)) near2<br>power near2 source<br>@ad>="2011"                                | (US-PGPUB; USPAT) | OR | ON  | ON  | 2016/06/24<br>03:45 PM |
| L38 | 260      | memory with stor\$3<br>with (parameter\$1<br>information) with<br>(backup auxiliary<br>secondary second<br>(back adj up)) near2<br>power near2 source<br>and @ad>="2011"                            | (US-PGPUB; USPAT) | OR | ON  | ON  | 2016/06/24<br>03:46 PM |
| L39 | 2        | "20120179929"                                                                                                                                                                                       | (US-PGPUB; USPAT) | OR | ON  | ON  | 2016/06/24<br>03:50 PM |
| L40 | 1        | "7787339".pn.                                                                                                                                                                                       | (US-PGPUB; USPAT) | OR | ON  | ON  | 2016/06/24<br>03:57 PM |
| L41 | 3071     | (307/29.ccls.<br>h02j3/00.cpc.<br>h02j1/10.cpc.)                                                                                                                                                    | (US-PGPUB; USPAT) | OR | ON  | ON  | 2016/06/24<br>07:01 PM |
| L45 | 0        | "13481804"                                                                                                                                                                                          | (US-PGPUB; USPAT) | OR | ON  | ON  | 2016/12/20<br>08:17 PM |
| L51 | 0        | "13481804"                                                                                                                                                                                          | (US-PGPUB; USPAT) | OR | ON  | ON  | 2017/04/03<br>11:27 AM |
| L52 | 3        | ("5381554" "5315161"<br>"4611289").pn.                                                                                                                                                              | (US-PGPUB; USPAT) | OR | ON  | ON  | 2017/10/06<br>09:58 AM |
| L53 | 0        | "13481804"                                                                                                                                                                                          | (US-PGPUB; USPAT) | OR | ON  | ON  | 2017/10/06<br>10:04 AM |
| L54 | 11       | 2011/0298286                                                                                                                                                                                        | (US-PGPUB; USPAT) | OR | OFF | OFF | 2017/11/14<br>09:47 AM |
| L55 | 2        | "20110298286"                                                                                                                                                                                       | (US-PGPUB; USPAT) | OR | OFF | OFF | 2017/11/14<br>09:47 AM |
| L56 | 2        | "20110298285"                                                                                                                                                                                       | (US-PGPUB; USPAT) | OR | OFF | OFF | 2017/11/14<br>09:48 AM |
| L57 | 1        | "20100019574"                                                                                                                                                                                       | (US-PGPUB; USPAT) | OR | OFF | OFF | 2017/11/14<br>09:49 AM |
| L58 | 1        | "20120204584"                                                                                                                                                                                       | (US-PGPUB; USPAT) | OR | OFF | OFF | 2017/11/14<br>09:50 AM |
| L59 | 1        | "20100019574"                                                                                                                                                                                       | (US-PGPUB; USPAT) | OR | OFF | OFF | 2017/11/14<br>09:50 AM |

|     |      |                                                                                  |                   |    |     |     |                        |
|-----|------|----------------------------------------------------------------------------------|-------------------|----|-----|-----|------------------------|
| L60 | 2    | "20060072262"                                                                    | (US-PGPUB; USPAT) | OR | OFF | OFF | 2017/11/14<br>09:50 AM |
| L61 | 2    | ("6172432"<br>"5583419").pn.                                                     | (US-PGPUB; USPAT) | OR | OFF | OFF | 2017/11/14<br>09:51 AM |
| L62 | 0    | "13481804"                                                                       | (US-PGPUB; USPAT) | OR | OFF | OFF | 2017/11/14<br>11:35 AM |
| L63 | 27   | "5583419"                                                                        | (US-PGPUB; USPAT) | OR | ON  | ON  | 2017/11/22<br>08:07 AM |
| L64 | 1    | "20020024332"                                                                    | (US-PGPUB; USPAT) | OR | ON  | ON  | 2017/11/22<br>08:08 AM |
| L65 | 2    | "20110254370"                                                                    | (US-PGPUB; USPAT) | OR | OFF | OFF | 2017/11/22<br>08:10 AM |
| L66 | 2    | "20120146417"                                                                    | (US-PGPUB; USPAT) | OR | OFF | OFF | 2017/11/22<br>08:10 AM |
| L67 | 1    | "20030075982"                                                                    | (US-PGPUB; USPAT) | OR | OFF | OFF | 2017/11/22<br>08:13 AM |
| L68 | 2    | "20090121547"                                                                    | (US-PGPUB; USPAT) | OR | OFF | OFF | 2017/12/21<br>03:44 PM |
| L69 | 2    | "20060072262"                                                                    | (US-PGPUB; USPAT) | OR | OFF | OFF | 2017/12/21<br>04:01 PM |
| L70 | 1330 | (h02j9/066 h02j9/08<br>y10t307/438<br>y10t307/636).cpc.                          | (US-PGPUB; USPAT) | OR | OFF | OFF | 2017/12/21<br>04:28 PM |
| L71 | 1902 | (307/68 307/31<br>307/35).ccls.                                                  | (US-PGPUB; USPAT) | OR | OFF | OFF | 2017/12/21<br>04:28 PM |
| L72 | 529  | L70 and L71                                                                      | (US-PGPUB; USPAT) | OR | OFF | OFF | 2017/12/21<br>04:28 PM |
| L73 | 74   | L72 and (overload (over<br>adj load))                                            | (US-PGPUB; USPAT) | OR | OFF | OFF | 2017/12/21<br>04:28 PM |
| L78 | 1    | "20020024332"                                                                    | (US-PGPUB; USPAT) | OR | OFF | OFF | 2018/02/26<br>07:33 PM |
| L79 | 2    | "20110254370"                                                                    | (US-PGPUB; USPAT) | OR | OFF | OFF | 2018/02/26<br>07:40 PM |
| L80 | 1    | "6172432".pn.                                                                    | (US-PGPUB; USPAT) | OR | OFF | OFF | 2018/02/26<br>07:58 PM |
| L81 | 0    | "13481804"                                                                       | (US-PGPUB; USPAT) | OR | OFF | OFF | 2018/02/28<br>10:46 AM |
| L82 | 8775 | (h02j9/\$\$ y10t307/438<br>y10t307/636).cpc.                                     | (US-PGPUB; USPAT) | OR | OFF | OFF | 2018/02/28<br>10:48 AM |
| L83 | 829  | (h02j9/\$\$ y10t307/438<br>y10t307/636).cpc. and<br>overload                     | (US-PGPUB; USPAT) | OR | OFF | OFF | 2018/02/28<br>10:48 AM |
| L84 | 67   | (h02j9/\$\$ y10t307/438<br>y10t307/636).cpc. and<br>over adj load                | (US-PGPUB; USPAT) | OR | OFF | OFF | 2018/02/28<br>10:48 AM |
| L85 | 868  | (h02j9/\$\$ y10t307/438<br>y10t307/636).cpc. and<br>(over adj load)<br>overload) | (US-PGPUB; USPAT) | OR | OFF | OFF | 2018/02/28<br>10:50 AM |
| L86 | 87   | (h02j9/\$\$ y10t307/438<br>y10t307/636).cpc. and                                 | (US-PGPUB; USPAT) | OR | OFF | OFF | 2018/02/28<br>10:50 AM |

|     |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                   |    |     |     |                     |
|-----|----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|----|-----|-----|---------------------|
| L87 | 39 | ((over adj load) overload) and process\$3 same memory same (parameter\$3 information)<br>(h02j9/\$\$ y10t307/438 y10t307/636).cpc. and ((over adj load) overload) and process\$3 same memory same (parameter\$3 information) and generator\$1                                                                                                                                                                                                                   | (US-PGPUB; USPAT) | OR | OFF | OFF | 2018/02/28 10:51 AM |
| L88 | 59 | (h02j9/\$\$ y10t307/438 y10t307/636).cpc. and ((over adj load) overload) and process\$3 same memory same (parameter\$3 information) and ((back adj up) backup generator\$1)                                                                                                                                                                                                                                                                                     | (US-PGPUB; USPAT) | OR | OFF | OFF | 2018/02/28 10:51 AM |
| L89 | 1  | "20050116814"                                                                                                                                                                                                                                                                                                                                                                                                                                                   | (US-PGPUB; USPAT) | OR | OFF | OFF | 2018/02/28 10:54 AM |
| L90 | 1  | "6891478".pn.                                                                                                                                                                                                                                                                                                                                                                                                                                                   | (US-PGPUB; USPAT) | OR | OFF | OFF | 2018/03/02 09:56 AM |
| L91 | 35 | ("20100019574" "20110254370" "20110298286" "6172432" "6671586" "6891478" "20050216131" "20070222294" "7356384" "8248058" "20040075343" "20070222295" "20130116487" "20130158726" "20130159738" "7015599" "7053497" "7692332" "8159084" "20020072868" "20040078153" "20050109387" "20050116814" "20060018069" "20060276938" "20070008076" "20070010916" "20070053123" "20070276547" "20100134073" "20100225167" "20100328850" "6313632" "7338364" "7379778").PN. | (US-PGPUB; USPAT) | OR | OFF | OFF | 2018/03/06 08:37 AM |
| L92 | 2  | "20140167727"                                                                                                                                                                                                                                                                                                                                                                                                                                                   | (US-PGPUB; USPAT) | OR | OFF | OFF | 2018/03/14 10:07 AM |
| L93 | 1  | "6445088".pn.                                                                                                                                                                                                                                                                                                                                                                                                                                                   | (US-PGPUB; USPAT) | OR | OFF | OFF | 2018/03/14 01:00 PM |

|      |    |                                                                                                                                                                                                                                                   |                             |    |     |     |                        |
|------|----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|----|-----|-----|------------------------|
| L97  | 1  | "20020024332"                                                                                                                                                                                                                                     | (US-PGPUB; USPAT)           | OR | OFF | OFF | 2018/03/16<br>01:04 PM |
| L102 | 3  | ("9088180" "8736103"<br>"8350405").pn.                                                                                                                                                                                                            | (US-PGPUB; USPAT)           | OR | OFF | OFF | 2018/05/17<br>02:58 PM |
| L103 | 2  | "20110175450"                                                                                                                                                                                                                                     | (US-PGPUB; USPAT)           | OR | OFF | OFF | 2018/05/17<br>02:58 PM |
| L104 | 2  | "20130270908"                                                                                                                                                                                                                                     | (US-PGPUB; USPAT)           | OR | OFF | OFF | 2018/05/17<br>02:58 PM |
| L105 | 2  | "20110175450"                                                                                                                                                                                                                                     | (US-PGPUB; USPAT)           | OR | OFF | OFF | 2018/06/09<br>01:40 PM |
| L106 | 2  | "20130270908"                                                                                                                                                                                                                                     | (US-PGPUB; USPAT)           | OR | OFF | OFF | 2018/06/09<br>01:50 PM |
| L107 | 3  | ("9088180" "8736103"<br>"8350405").pn.                                                                                                                                                                                                            | (US-PGPUB; USPAT)           | OR | OFF | OFF | 2018/06/09<br>01:52 PM |
| L108 | 7  | ("20050216131"  <br>"20070021874"  <br>"20070222295"  <br>"6172432"   "6510369"  <br>"7356384").PN. OR<br>("8350405").URPN.                                                                                                                       | (US-PGPUB; USPAT;<br>USOCR) | OR | OFF | OFF | 2018/06/09<br>01:52 PM |
| L109 | 15 | ("20050216131"  <br>"20060229768"  <br>"20070010916"  <br>"20070021874"  <br>"20070222295"  <br>"20080258558"  <br>"20110298285"  <br>"4324987"   "5536976"  <br>"6172432"   "6510369"  <br>"6813525"  <br>"7356384").PN. OR<br>("9088180").URPN. | (US-PGPUB; USPAT;<br>USOCR) | OR | OFF | OFF | 2018/06/09<br>01:53 PM |
| L110 | 0  | "13481804"                                                                                                                                                                                                                                        | (US-PGPUB; USPAT)           | OR | OFF | OFF | 2018/06/09<br>02:09 PM |
| L111 | 1  | "20020024332"                                                                                                                                                                                                                                     | (US-PGPUB; USPAT)           | OR | OFF | OFF | 2018/11/16<br>02:13 PM |
| L112 | 2  | "20110298286"                                                                                                                                                                                                                                     | (US-PGPUB; USPAT)           | OR | OFF | OFF | 2018/11/16<br>02:16 PM |
| L113 | 1  | "20020024332"                                                                                                                                                                                                                                     | (US-PGPUB; USPAT)           | OR | OFF | OFF | 2018/11/19<br>01:07 PM |
| L114 | 2  | "20110298286"                                                                                                                                                                                                                                     | (US-PGPUB; USPAT)           | OR | OFF | OFF | 2018/11/19<br>01:08 PM |
| L115 | 1  | "20100019574"                                                                                                                                                                                                                                     | (US-PGPUB; USPAT)           | OR | OFF | OFF | 2018/11/19<br>01:09 PM |
| L116 | 2  | "20060072262"                                                                                                                                                                                                                                     | (US-PGPUB; USPAT)           | OR | OFF | OFF | 2018/11/19<br>01:10 PM |
| L117 | 1  | "8324755".pn.                                                                                                                                                                                                                                     | (US-PGPUB; USPAT)           | OR | OFF | OFF | 2018/11/19<br>01:11 PM |
| L118 | 1  | "20090216386"                                                                                                                                                                                                                                     | (US-PGPUB; USPAT)           | OR | OFF | OFF | 2018/11/19<br>01:11 PM |
| L119 | 1  | "8222548".pn.                                                                                                                                                                                                                                     | (US-PGPUB; USPAT)           | OR | OFF | OFF | 2018/11/19<br>01:14 PM |

|      |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                   |    |     |     |                        |
|------|-------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|----|-----|-----|------------------------|
| L120 | 1     | "7948117".pn.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | (US-PGPUB; USPAT) | OR | OFF | OFF | 2019/06/24<br>02:05 PM |
| L121 | 0     | "13481804"                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | (US-PGPUB; USPAT) | OR | OFF | OFF | 2019/06/25<br>09:28 PM |
| L122 | 49    | ("20120242145" "59144<br>67" "6181028" "668654<br>7" "7208850" "7402766"<br> "20090216386" "82225<br>48" "8324755" "201101<br>75450" "20130270908"<br>"8350405" "8736103" "9<br>088180" "20100019574<br>" "20110254370" "2011<br>0298286" "6172432" "6<br>671586" "6891478" "20<br>050216131" "20070222<br>294" "7356384" "82480<br>58" "20040075343" "20<br>070222295" "20130116<br>487" "20130158726" "2<br>0130159738" "7015599<br>" "7053497" "7692332" "<br>8159084" "2002007286<br>8" "20040078153" "200<br>50109387" "200501168<br>14" "20060018069" "20<br>060276938" "20070008<br>076" "20070010916" "2<br>0070053123" "2007027<br>6547" "20100134073" "2<br>0100225167" "201003<br>28850" "6313632" "733<br>8364" "7379778").PN. | (US-PGPUB; USPAT) | OR | OFF | OFF | 2019/06/26<br>04:13 PM |
| L123 | 0     | "13481804"                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | (US-PGPUB; USPAT) | OR | OFF | OFF | 2020/01/30<br>11:34 AM |
| L124 | 37534 | (h02j1/\$\$ h02j3/\$\$<br>h02j9/\$\$).cpc.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | (US-PGPUB; USPAT) | OR | OFF | OFF | 2020/01/30<br>02:56 PM |
| L125 | 39    | L124 and ((power near2<br>source\$1) generator\$1)<br>with manufacturer\$2<br>near2 power                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | (US-PGPUB; USPAT) | OR | OFF | OFF | 2020/01/30<br>02:57 PM |
| L126 | 148   | generator\$1 same<br>maximum with (output<br>power) same circuit<br>near break\$3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | (US-PGPUB; USPAT) | OR | OFF | OFF | 2020/01/30<br>03:00 PM |
| L127 | 0     | power near2<br>generator\$1 same<br>maximum near2 (output<br>power) with less near2<br>than with (overload\$3<br>trip\$1 tripp\$3)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | (US-PGPUB; USPAT) | OR | OFF | OFF | 2020/01/30<br>03:20 PM |
| L128 | 0     | power near2<br>generator\$1 same<br>(output power) with less<br>near2 than with                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | (US-PGPUB; USPAT) | OR | OFF | OFF | 2020/01/30<br>03:20 PM |

|      |      |                                                                                                                              |                   |    |     |     |                     |
|------|------|------------------------------------------------------------------------------------------------------------------------------|-------------------|----|-----|-----|---------------------|
| L129 | 37   | (overload\$3 trip\$1 tripp\$3)<br>power near2 generator\$1 same (output power) with less with (overload\$3 trip\$1 tripp\$3) | (US-PGPUB; USPAT) | OR | OFF | OFF | 2020/01/30 03:20 PM |
| L130 | 81   | power near2 generator\$1 same (output power) with (less\$2 small\$2) with (overload\$3 trip\$1 tripp\$3)                     | (US-PGPUB; USPAT) | OR | OFF | OFF | 2020/01/30 03:20 PM |
| L131 | 0    | generator\$1 same surge near2 watts same running near2 watts                                                                 | (US-PGPUB; USPAT) | OR | OFF | OFF | 2020/01/30 03:31 PM |
| L132 | 935  | home near2 generator\$1                                                                                                      | (US-PGPUB; USPAT) | OR | OFF | OFF | 2020/01/30 03:47 PM |
| L133 | 281  | L132 and (preset pre\$set manufacturer\$1 specific specified) with (output power)                                            | (US-PGPUB; USPAT) | OR | OFF | OFF | 2020/01/30 03:48 PM |
| L134 | 152  | L133 and @ad<="20110526"                                                                                                     | (US-PGPUB; USPAT) | OR | OFF | OFF | 2020/01/30 03:51 PM |
| L135 | 2    | "20140191033"                                                                                                                | (US-PGPUB; USPAT) | OR | OFF | OFF | 2020/01/30 03:52 PM |
| L136 | 1    | "20060087784"                                                                                                                | (US-PGPUB; USPAT) | OR | OFF | OFF | 2020/01/30 04:00 PM |
| L137 | 3482 | generator\$1 same maximum near2 (watt\$3 power) same output near2 power                                                      | (US-PGPUB; USPAT) | OR | OFF | OFF | 2020/01/30 04:14 PM |
| L138 | 42   | generator\$1 same maximum near2 (watt\$3 power) same output near2 power same (break\$3 (circuit near2 breaker\$1))           | (US-PGPUB; USPAT) | OR | OFF | OFF | 2020/01/30 04:15 PM |
| L139 | 18   | L138 and @ad<="20110526"                                                                                                     | (US-PGPUB; USPAT) | OR | OFF | OFF | 2020/01/30 04:16 PM |
| L140 | 24   | L138 not L139                                                                                                                | (US-PGPUB; USPAT) | OR | OFF | OFF | 2020/01/30 04:19 PM |
| L141 | 1    | "7418314".pn.                                                                                                                | (US-PGPUB; USPAT) | OR | OFF | OFF | 2020/03/13 11:52 AM |
| L142 | 2    | "20090121547"                                                                                                                | (US-PGPUB; USPAT) | OR | OFF | OFF | 2020/03/13 12:26 PM |
| L143 | 0    | "13481804"                                                                                                                   | (US-PGPUB; USPAT) | OR | OFF | OFF | 2020/06/30 04:21 PM |
| L144 | 1    | "20100019574"                                                                                                                | (US-PGPUB; USPAT) | OR | OFF | OFF | 2020/07/15 02:04 PM |
| L145 | 1    | "12435329"                                                                                                                   | (US-PGPUB; USPAT) | OR | OFF | OFF | 2020/07/27 08:03 PM |

|      |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                             |    |     |     |                        |
|------|-----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|----|-----|-----|------------------------|
| L146 | 2   | ("6172432"<br>"7119457").pn.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | (US-PGPUB; USPAT)           | OR | OFF | OFF | 2020/07/27<br>08:03 PM |
| L147 | 1   | "4888495".pn.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | (US-PGPUB; USPAT)           | OR | OFF | OFF | 2020/09/01<br>02:25 PM |
| L148 | 2   | "20120056474"                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | (US-PGPUB; USPAT)           | OR | OFF | OFF | 2020/09/01<br>03:09 PM |
| L149 | 0   | "16952007"                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | (US-PGPUB; USPAT)           | OR | ON  | ON  | 2022/10/07<br>09:49 AM |
| L150 | 2   | ("11522365"<br>"11183843").pn.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | (US-PGPUB; USPAT)           | OR | ON  | ON  | 2023/08/14<br>10:41 AM |
| L151 | 110 | ("4888495"   "5914467"<br>  "6172432"   "6181028"<br>  "6285178"   "6313632"<br>  "6671586"   "6686547"<br>  "6891478"   "7015599"<br>  "7053497"   "7208850"<br>  "7338364"   "7356384"<br>  "7379778"   "7402766"<br>  "7692332"   "7863867"<br>  "8159084"   "8222548"<br>  "8248058"   "8324755"<br>  "8350405"   "8410633"<br>  "8569912"   "8653679"<br>  "8736103"   "9088180"<br>  "9281715"   "9312665"<br>  "9362845"   "9876343"<br>  "9887546"   "9979337"<br>  "10069331"  <br>"10554074"  <br>"20020024323"  <br>"20020072868"  <br>"20020084697"  <br>"20030036822"  <br>"20040007876"  <br>"20040051387"  <br>"20040075343"  <br>"20040078153"  <br>"20040117330"  <br>"20040267386"  <br>"20050109387"  <br>"20050116814"  <br>"20050216131"  <br>"20060018069"  <br>"20060071554"  <br>"20060072262"  <br>"20060208574"  <br>"20060276938"  <br>"20070008076"  <br>"20070010916"  <br>"20070053123"  <br>"20070222294"  <br>"20070222295"  <br>"20070276547"  <br>"20070282547"  <br>"20080093851"  <br>"20080203820" | (US-PGPUB; USPAT;<br>USOCR) | OR | ON  | ON  | 2023/08/14<br>10:42 AM |

|      |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                             |    |    |    |                        |
|------|----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|----|----|----|------------------------|
|      |    | "20080212343"<br>"20090027932"<br>"20090150100"<br>"20090216386"<br>"20090224690"<br>"20090299540"<br>"20090326724"<br>"20100007300"<br>"20100019507"<br>"20100019574"<br>"20100038966"<br>"20100090532"<br>"20100134073"<br>"20100225167"<br>"20100328850"<br>"20110062888"<br>"20110064445"<br>"20110112704"<br>"20110175450"<br>"20110198928"<br>"20110210606"<br>"20110254370"<br>"20110298286"<br>"20120053744"<br>"20120056436"<br>"20120065786"<br>"20120158196"<br>"20120242145"<br>"20120292920"<br>"20130066482"<br>"20130103223"<br>"20130116847"<br>"20130158726"<br>"20130159738"<br>"20130270908"<br>"20140097683"<br>"20140111006"<br>"20150180236"<br>"20150180367"<br>"20150180393"<br>"20150311843"<br>"20160181861"<br>"20170008413"<br>"20170168516"<br>"20170214225"<br>"20190027933"<br>"20190273393").pn. OR<br>("11522365").urpn.<br>AND (PGPB   USPT  <br>USOC).dbnm. |                             |    |    |    |                        |
| L152 | 12 | ("2013/0270908").urpn.<br>AND (PGPB   USPT  <br>USOC).dbnm.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | (US-PGPUB; USPAT;<br>USOCR) | OR | ON | ON | 2023/08/14<br>04:37 PM |
| L153 | 3  | "20070010916"                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | (US-PGPUB; USPAT;<br>USOCR) | OR | ON | ON | 2023/08/14<br>04:43 PM |
| L154 | 0  | "16952007"                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | (US-PGPUB; USPAT;<br>USOCR) | OR | ON | ON | 2023/08/14<br>05:03 PM |

|      |    |                                                                                                                                                             |                             |    |    |    |                        |
|------|----|-------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|----|----|----|------------------------|
| L155 | 56 | ("2004/0051387").urpn.<br>AND (PGPB   USPT  <br>USOC).dbnm.                                                                                                 | (US-PGPUB; USPAT;<br>USOCR) | OR | ON | ON | 2023/08/15<br>03:28 PM |
| L156 | 3  | "11681024"                                                                                                                                                  | (US-PGPUB; USPAT;<br>USOCR) | OR | ON | ON | 2023/08/15<br>03:29 PM |
| L157 | 8  | ("20010010032" OR<br>"20040051387" OR<br>"20050067900" OR<br>"20090027932" OR<br>"20100017045" OR<br>"20100207448" OR<br>"20110298285" OR<br>"9281715").pn. | (US-PGPUB; USPAT)           | OR | ON | ON | 2023/12/13<br>12:21 PM |

#### PE2E SEARCH - Search History (Interference)

| Ref # | Hits | Search Query                                                                                                                                                                     | DBs               | Default Operator | Plurals | British Equivalents | Time Stamp             |
|-------|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|------------------|---------|---------------------|------------------------|
| N42   | 3071 | (307/29.ccls.<br>h02j3/00.cpc.<br>h02j1/10.cpc.)                                                                                                                                 | (US-PGPUB; USPAT) | OR               | ON      | ON                  | 2016/06/24<br>07:01 PM |
| N43   | 37   | (307/29.ccls.<br>h02j3/00.cpc.<br>h02j1/10.cpc.) and<br>(process\$3 controll\$3)<br>same (backup (back adj<br>up) auxiliary secondary)<br>near power near source<br>same load\$1 | (US-PGPUB; USPAT) | OR               | ON      | ON                  | 2016/06/24<br>07:02 PM |
| N44   | 168  | ((process\$3 controll\$3)<br>same (backup (back adj<br>up) auxiliary secondary)<br>near power near source<br>same load\$1).clm.                                                  | (US-PGPUB; USPAT) | OR               | ON      | ON                  | 2016/06/24<br>07:03 PM |
| N46   | 3308 | (307/29.CCLS.<br>H02J1/10.CPC.<br>H02J3/00.CPC.)                                                                                                                                 | (US-PGPUB; USPAT) | OR               | ON      | ON                  | 2016/12/30<br>12:16 PM |
| N47   | 24   | (307/29.CCLS.<br>H02J1/10.CPC.<br>H02J3/00.CPC.) and<br>(process\$3 and power<br>and load\$1 and<br>invert\$3).clm.                                                              | (US-PGPUB; USPAT) | OR               | ON      | ON                  | 2016/12/30<br>12:17 PM |
| N48   | 14   | (307/29.CCLS.<br>H02J1/10.CPC.<br>H02J3/00.CPC.) and<br>(process\$3 and power<br>and load\$1 and invert\$3<br>and switch\$3).clm.                                                | (US-PGPUB; USPAT) | OR               | ON      | ON                  | 2016/12/30<br>12:17 PM |
| N49   | 831  | (process\$3 and power<br>and load\$1 and invert\$3<br>and switch\$3).clm.                                                                                                        | (US-PGPUB; USPAT) | OR               | ON      | ON                  | 2016/12/30<br>12:17 PM |
| N50   | 9    | (307/29.CCLS.<br>H02J1/10.CPC.                                                                                                                                                   | (US-PGPUB; USPAT) | OR               | ON      | ON                  | 2016/12/30<br>12:18 PM |

|      |       |                                                                                                                                                  |                   |    |     |     |                     |
|------|-------|--------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|----|-----|-----|---------------------|
| N74  | 237   | H02J3/00.CPC.) and (process\$3 and power and load\$1 and invert\$3 and switch\$3 and communicat\$3).clm.                                         | (USPAT)           | OR | OFF | OFF | 2017/12/21 03:40 PM |
| N75  | 397   | (power and (backup (back adj up) auxiliary secondary) and (control\$3 process\$3) and (overload (over adj load))).clm.                           | (US-PGPUB; USPAT) | OR | OFF | OFF | 2017/12/21 03:40 PM |
| N76  | 264   | (power and (backup (back adj up) auxiliary secondary) and (control\$3 process\$3) and switch\$3 and (overload (over adj load))).clm.             | (US-PGPUB; USPAT) | OR | OFF | OFF | 2017/12/21 03:41 PM |
| N77  | 144   | (power and (backup (back adj up) auxiliary secondary) and (control\$3 process\$3) and switch\$3 and load\$1 and (overload (over adj load))).clm. | (US-PGPUB; USPAT) | OR | OFF | OFF | 2017/12/21 03:41 PM |
| N94  | 19    | (vehicle and inverter and transfer near2 switch\$3 and generator\$1).clm.                                                                        | (US-PGPUB; USPAT) | OR | OFF | OFF | 2018/03/14 08:43 PM |
| N95  | 3     | (vehicle and inverter and transfer near2 switch\$3 and generator\$1 and grid).clm.                                                               | (US-PGPUB; USPAT) | OR | OFF | OFF | 2018/03/14 08:43 PM |
| N96  | 4     | (vehicle and inverter and transfer near2 switch\$3 and generator\$1 and (utility grid)).clm.                                                     | (US-PGPUB; USPAT) | OR | OFF | OFF | 2018/03/14 08:44 PM |
| N98  | 0     | "200200224332"                                                                                                                                   | (US-PGPUB; USPAT) | OR | OFF | OFF | 2018/03/16 01:03 PM |
| N99  | 0     | "2002000224332"                                                                                                                                  | (US-PGPUB; USPAT) | OR | OFF | OFF | 2018/03/16 01:04 PM |
| N100 | 0     | "200200224332"                                                                                                                                   | (US-PGPUB; USPAT) | OR | OFF | OFF | 2018/03/16 01:04 PM |
| N101 | 0     | "20020224332"                                                                                                                                    | (US-PGPUB; USPAT) | OR | OFF | OFF | 2018/03/16 01:04 PM |
| N102 | 42756 | (h02j3/\$\$ h02j9/\$\$).cpc.                                                                                                                     | (US-PGPUB; USPAT) | OR | ON  | ON  | 2023/08/15          |

|      |    |                                                                                                                                                                             |                   |    |    |    |                                    |
|------|----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|----|----|----|------------------------------------|
| N103 | 8  | N102 AND (frequenc\$3 AND (overload\$3 over\$1load\$3) AND maximum AND load\$1 AND (prevent\$3 mitigat\$3 alleviat\$3 eliminat\$3)).clm.                                    | (US-PGPUB; USPAT) | OR | ON | ON | 05:21 PM<br>2023/08/15<br>05:22 PM |
| N104 | 9  | (h02j1/\$\$ h02j3/\$\$ h02j9/\$\$).cpc. AND (frequenc\$3 AND (overload\$3 over\$1load\$3) AND maximum AND load\$1 AND (prevent\$3 mitigat\$3 alleviat\$3 eliminat\$3)).clm. | (US-PGPUB; USPAT) | OR | ON | ON | 2023/12/13<br>12:47 PM             |
| N105 | 54 | (frequenc\$3 AND (overload\$3 over\$1load\$3) AND maximum AND load\$1 AND (prevent\$3 mitigat\$3 alleviat\$3 eliminat\$3)).clm.                                             | (US-PGPUB; USPAT) | OR | ON | ON | 2023/12/13<br>12:47 PM             |

## Bibliographic Data

Application No: 16/952,007

Foreign Priority claimed: ☐ Yes ☒ No

35 USC 119 (a-d) conditions met: ☐ Yes ☒ No ☐ Met After Allowance

Verified and Acknowledged: /JOSEPH N INGE/

Examiner's Signature

Initials

Title:

Power Source Load Control

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| FILING or 371(c) DATE | CLASS | GROUP ART UNIT | ATTORNEY DOCKET NO. |
|-----------------------|-------|----------------|---------------------|
| 11/18/2020            | 307   | 2836           | JCC_5-12_Div_2020   |
| RULE                  |       |                |                     |

### APPLICANTS

### INVENTORS

J. Carl Cooper, Reno, NV, UNITED STATES

### CONTINUING DATA

This application is a DIV of 13481804 05/26/2012 PAT 10879727

13481804 has PRO of 61624360 04/15/2012

13481804 has PRO of 61598564 02/14/2012

13481804 has PRO of 61552722 10/28/2011

13481804 has PRO of 61490253 05/26/2011

### FOREIGN APPLICATIONS

### IF REQUIRED, FOREIGN LICENSE GRANTED\*\*

11/30/2020

\*\* SMALL ENTITY \*\*

### STATE OR COUNTRY

UNITED STATES

### ADDRESS

J. CARL COOPER

900 Whites Creek Lane

Reno, NV 89511

UNITED STATES

### FILING FEE RECEIVED

\$930