



(43) International Publication Date  
15 November 2012 (15.11.2012)

- (51) International Patent Classification:  
*H02J 3/36* (2006.01)      *H02J 3/38* (2006.01)
- (21) International Application Number:  
PCT/US2012/037680
- (22) International Filing Date:  
13 May 2012 (13.05.2012)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:  
61/485,384      12 May 2011 (12.05.2011)      US  
13/253,629      5 October 2011 (05.10.2011)      US  
PCT/US2011/054943  
5 October 2011 (05.10.2011)      US

AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

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- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM,

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

**Published:**

- with international search report (Art. 21(3))
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))

(88) Date of publication of the international search report:  
17 January 2013

(54) Title: HIGH VOLTAGE ENERGY HARVESTING AND CONVERSION RENEWABLE ENERGY UTILITY SIZE ELECTRIC POWER SYSTEMS AND VISUAL MONITORING AND CONTROL SYSTEMS

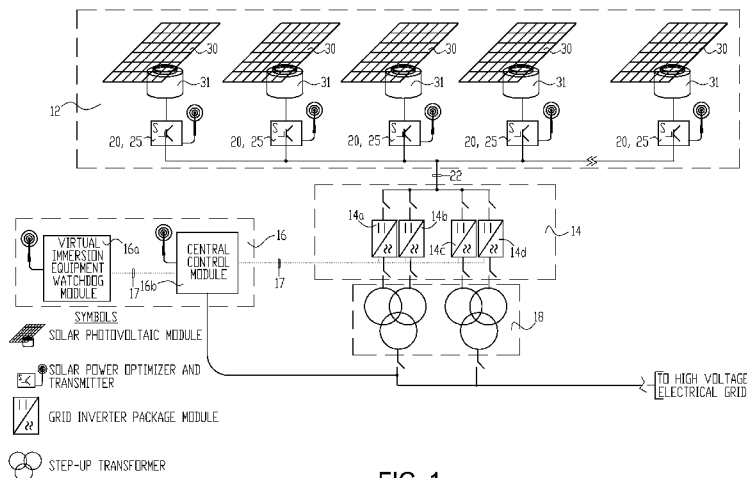


FIG. 1

(57) Abstract: A renewable energy, utility-size electric power system is provided with a high voltage, renewable energy harvesting network connected by a direct current link to a centralized grid synchronized multiphase regulated current source inverter system. The harvesting network includes distributed renewable energy power optimizers and transmitters that control delivery of renewable energy to the grid synchronized multiphase regulated current source inverter system. A visual immersion monitoring and control system can be provided for a three dimensional, visually oriented, virtual reality display, and command and control environment.

WO 2012/155126 A3

## INTERNATIONAL SEARCH REPORT

International application No.  
**PCT/US2012/037680****A. CLASSIFICATION OF SUBJECT MATTER****H02J 3/36(2006.01)i, H02J 3/38(2006.01)i**

According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)

H02J 3/36; H02M 3/335; H02J 1/10; H02J 3/38; H02M 7/44

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Korean utility models and applications for utility models

Japanese utility models and applications for utility models

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

eKOMPASS(KIPO internal) &amp; Keywords: renewable energy, inverter, DC link

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X A	KR 10-2008-0001828 A (AHN JONG BO et al.) 04 January 2008 See abstract, claims 1-4 and figures 1,2,6.	1-5, 8, 11-17, 20, 21 , 24-27 6, 7, 9, 10, 18, 19, 22 , 23
A	US 2010-0302819 A1 (O'BRIEN KATHLEEN ANN et al.) 02 December 2010 See abstract, claims 1-18 and figures 1-5.	1-27
A	US 7929325 B2 (DE ROOIJ MICHAEL ANDREW et al.) 19 April 2011 See abstract, claims 1-17 and figures 1-5.	1-27
A	US 2008-0285317 A1 (ROTZOLL ROBERT R.) 20 November 2008 See abstract, claims 1-20 and figures 1-13.	1-27

 Further documents are listed in the continuation of Box C. See patent family annex.

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Date of the actual completion of the international search

27 NOVEMBER 2012 (27.11.2012)

Date of mailing of the international search report

**28 NOVEMBER 2012 (28.11.2012)**

Name and mailing address of the ISA/KR

Korean Intellectual Property Office  
189 Cheongsu-ro, Seo-gu, Daejeon Metropolitan  
City, 302-701, Republic of Korea

Facsimile No. 82-42-472-7140

Authorized officer

Kwak In Gu

Telephone No. 82-42-481-8537



## INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

**PCT/US2012/037680**

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