

PATENT ASSIGNMENT COVER SHEET

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 Stylesheet Version v1.2

EPAS ID: PAT3868474

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| SUBMISSION TYPE: | NEW ASSIGNMENT | |
| NATURE OF CONVEYANCE: | ASSIGNMENT | |
| CONVEYING PARTY DATA | | |
| | Name | Execution Date |
| | ALSTOM GRID INC. | 02/06/2015 |
| RECEIVING PARTY DATA | | |
| Name: | ALSTOM TECHNOLOGY LTD. | |
| Street Address: | BROWN BOVERI STRASSE 7 | |
| City: | BADEN | |
| State/Country: | SWITZERLAND | |
| Postal Code: | 5401 | |
| PROPERTY NUMBERS Total: 1 | | |
| | Property Type | Number |
| | Application Number: | 15151984 |
| CORRESPONDENCE DATA | | |
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| ATTORNEY DOCKET NUMBER: | RPA381/GRIDP116USC | |
| NAME OF SUBMITTER: | THOMAS E. WATSON | |
| SIGNATURE: | /Thomas E. Watson/ | |
| DATE SIGNED: | 05/11/2016 | |
| Total Attachments: 5 | | |
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ASSIGNMENT OF INVENTION AND PATENT RIGHTS

For valuable consideration, the receipt and sufficiency of which is hereby acknowledged,

ALSTOM Grid Inc., a public company, having an address at 10865 Willows Road NE, Redmond, Washington 98052 ("**Assignor**")

hereby sell(s), assign(s), transfer(s), and convey(s) unto **ALSTOM Technology Ltd.**, a Swiss limited liability company, having its registered offices at Brown Boveri Strasse 7, CH-5401 Baden - Switzerland ("**Assignee**"), all rights, title, and interests that exist today and may exist in the future in and to any and all of the following items (1) through (9) below:

1. all inventions claimed *and/or* described in the Patent(s) or Application(s) (collectively, the "**Inventions**");
2. any U.S., PCT, or foreign patent application(s) prepared and filed based on said inventions;
3. the patent(s) and patent application(s) listed in the table below (the "**Application(s)**");

| Patent(s)/Patent Application Nos. | Country | Filing Date | Title |
|-----------------------------------|---------|----------------|---|
| 8,112,253 | US | June 13, 2008 | ENERGY MANAGEMENT SYSTEM THAT PROVIDES REAL TIME SITUATION AWARENESS OF A POTENTIAL ENERGY MANAGEMENT FAILURE |
| PCT/US08/70526 | WO | July 18, 2008 | ENERGY MANAGEMENT SYSTEM THAT PROVIDES REAL TIME SITUATION AWARENESS OF A POTENTIAL ENERGY MANAGEMENT FAILURE |
| 08782090.8 | EP | July 18, 2008 | ENERGY MANAGEMENT SYSTEM THAT PROVIDES REAL TIME SITUATION AWARENESS OF A POTENTIAL ENERGY MANAGEMENT FAILURE |
| 10110166.5 | HK | July 18, 2008 | ENERGY MANAGEMENT SYSTEM THAT PROVIDES REAL TIME SITUATION AWARENESS OF A POTENTIAL ENERGY MANAGEMENT FAILURE |
| 12/139,159 | US | June 13, 2008 | METHODS FOR ASSESSING POTENTIALLY COMPROMISING SITUATIONS OF A UTILITY COMPANY |
| 14/231,387 | US | March 31, 2014 | METHODS FOR ASSESSING POTENTIALLY COMPROMISING SITUATIONS OF A UTILITY COMPANY |
| PCT/US08/70537 | WO | July 18, 2008 | ENERGY MANAGEMENT SYSTEM THAT PROVIDES A REAL TIME ASSESSMENT OF A POTENTIALLY COMPROMISING SITUATION THAT CAN AFFECT A UTILITY COMPANY |

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| 08782095.7 | EP | July 18, 2008 | ENERGY MANAGEMENT SYSTEM PROVIDING REAL TIME ASSESSMENT OF A POTENTIALLY COMPROMISING SITUATION AFFECTING UTILITY COMPANIES |
| 10109923.1 | HK | July 18, 2008 | ENERGY MANAGEMENT SYSTEM PROVIDING REAL TIME ASSESSMENT OF A POTENTIALLY COMPROMISING SITUATION AFFECTING UTILITY COMPANIES |
| 8,321,804 | US | June 13, 2008 | METHODS FOR ASSESSING RELIABILITY OF A UTILITY COMPANY'S POWER SYSTEM |
| 13/590,321 | US | August 21, 2012 | METHODS FOR ASSESSING RELIABILITY OF A UTILITY COMPANY'S POWER SYSTEM |
| PCT/US08/70544 | WO | July 18, 2008 | METHODS FOR ASSESSING POTENTIALLY COMPROMISING SITUATIONS OF A UTILITY COMPANY |
| 08796327.8 | EP | July 18, 2008 | METHODS FOR ASSESSING POTENTIALLY COMPROMISING SITUATIONS OF A UTILITY COMPANY |
| 10110165.6 | HK | July 18, 2008 | METHODS FOR ASSESSING POTENTIALLY COMPROMISING SITUATIONS OF A UTILITY COMPANY |
| 8,321,800 | US | June 13, 2008 | METHODS FOR CREATING DYNAMIC LISTS FROM SELECTED AREAS OF A POWER SYSTEM OF A UTILITY COMPANY |
| 13/658,489 | US | October 23, 2012 | METHODS FOR CREATING DYNAMIC LISTS FROM SELECTED AREAS OF A POWER SYSTEM OF A UTILITY COMPANY |
| PCT/US08/70547 | WO | July 18, 2008 | METHODS FOR CREATING DYNAMIC LISTS FROM SELECTED AREAS OF A POWER SYSTEM OF A UTILITY COMPANY |
| 08782097.3 | EP | July 18, 2008 | METHODS FOR CREATING DYNAMIC LISTS FROM SELECTED AREAS OF A POWER SYSTEM OF A UTILITY COMPANY |
| 10109924.0 | HK | July 18, 2008 | METHODS FOR CREATING DYNAMIC LISTS FROM SELECTED AREAS OF A POWER SYSTEM OF A UTILITY COMPANY |
| 8,078,332 | US | June 13, 2008 | METHODS FOR MANAGING HIGH OR LOW VOLTAGE CONDITIONS FROM SELECTED AREAS OF A POWER SYSTEM OF A UTILITY COMPANY |
| PCT/US08/70551 | WO | July 18, 2008 | METHODS FOR MANAGING HIGH OR LOW VOLTAGE CONDITIONS FROM SELECTED AREAS OF A POWER SYSTEM OF A UTILITY COMPANY |
| 08796333.6 | EP | July 18, 2008 | METHODS FOR MANAGING HIGH OR LOW VOLTAGE CONDITIONS FROM SELECTED AREAS OF A POWER SYSTEM OF A UTILITY COMPANY |

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| 10110224.5 | HK | July 18, 2008 | METHODS FOR MANAGING HIGH OR LOW VOLTAGE CONDITIONS FROM SELECTED AREAS OF A POWER SYSTEM OF A UTILITY COMPANY |
| 12/139,118 | US | June 13, 2008 | ENERGY MANAGEMENT SYSTEM THAT PROVIDES A REAL TIME ASSESSMENT OF A POTENTIALLY COMPROMISING SITUATION THAT CAN AFFECT A UTILITY COMPANY |
| PCT/US08/70552 | WO | July 18, 2008 | METHODS FOR ASSESSING RELIABILITY OF A UTILITY COMPANY'S POWER SYSTEM |
| 08796334.4 | EP | July 18, 2008 | METHODS FOR ASSESSING RELIABILITY OF A UTILITY COMPANY'S POWER SYSTEM |
| 10109925.9 | HK | July 18, 2008 | METHODS FOR ASSESSING RELIABILITY OF A UTILITY COMPANY'S POWER SYSTEM |
| 8,538,593 | US | July 2, 2010 | METHOD FOR INTEGRATING INDIVIDUAL LOAD FORECASTS INTO A COMPOSITE LOAD FORECAST TO PRESENT A COMPREHENSIVE SYNCHRONIZED AND HARMONIZED LOAD FORECAST |
| 14/012,853 | US | August 28, 2013 | METHOD FOR INTEGRATING INDIVIDUAL LOAD FORECASTS INTO A COMPOSITE LOAD FORECAST TO PRESENT A COMPREHENSIVE, SYNCHRONIZED AND HARMONIZED LOAD FORECAST |
| 12/830,038 | US | July 2, 2010 | SYSTEM TOOLS FOR INTEGRATING INDIVIDUAL LOAD FORECASTS INTO A COMPOSITE LOAD FORECAST TO PRESENT A COMPREHENSIVE SYNCHRONIZED AND HARMONIZED LOAD FORECAST |
| 12/830,004 | US | July 2, 2010 | METHOD FOR EVALUATING OPERATIONAL AND FINANCIAL PERFORMANCE FOR DISPATCHERS USING AFTER THE FACT ANALYSIS |
| 12/830,011 | US | July 2, 2010 | SYSTEM TOOLS FOR EVALUATING OPERATIONAL AND FINANCIAL PERFORMANCE FROM DISPATCHERS USING AFTER THE FACT ANALYSIS |
| 12/830,019 | US | July 2, 2010 | MULTI-INTERVAL DISPATCH METHOD FOR ENABLING DISPATCHERS IN POWER GRID CONTROL CENTERS TO MANAGE CHANGES |
| 12/830,023 | US | July 2, 2010 | MULTI-INTERVAL DISPATCH SYSTEM TOOLS FOR ENABLING DISPATCHERS IN POWER GRID CONTROL CENTERS TO MANAGE CHANGES |
| 14/601,838 | US | January 21, 2015 | MULTI-INTERVAL DISPATCH SYSTEM TOOLS FOR ENABLING DISPATCHERS IN POWER GRID CONTROL CENTERS TO MANAGE CHANGES |

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| 12/830,042 | US | July 2, 2010 | METHODS THAT PROVIDE DISPATCHERS IN POWER GRID CONTROL CENTERS WITH A CAPABILITY TO MANAGE CHANGES |
| 12/830,049 | US | July 2, 2010 | SYSTEM TOOLS THAT PROVIDES DISPATCHERS IN POWER GRID CONTROL CENTERS WITH A CAPABILITY TO MAKE CHANGES |
| 61/954,563 | US | March 17, 2014 | EBOSS- ETERRA BUSINESS OPERATION AND SUPERVISION SUITE |
| 61/954,565 | US | March 17, 2014 | EBOSS- ETERRA OUTAGE AND SWITCH MANAGEMENT MODULE |
| 61/333,838 | US | May 12, 2010 | GENERALIZED GRID SECURITY FRAMEWORK |
| 61/606,071 | US | March 2, 2012 | DISPATCHING VEHICLE-TO-GRID ANCILLARY SERVICES WITH DISCRETE SWITCHING |
| 61/764,463 | US | February 13, 2013 | A SYNCHROPHASOR BASED FAULT LOCATION METHOD FOR DISTRIBUTION SYSTEMS |

4. all rights with respect to the Invention, including all United States patents or other governmental grants or issuances that may be granted with respect to the Inventions or from any direct or indirect divisionals, continuations, continuations-in-part, non-provisionals or other patent applications claiming priority rights from the Application(s) ("**Potential Patents**");

5. all reissues, reexaminations, extensions, or registrations of the Potential Patents;

6. all non-United States patents, patent applications, and counterparts relating to any or all of the Invention, the Application(s), and the Potential Patents, including, without limitation, certificates of invention, utility models, industrial design protection, design patent protection, and other governmental grants or issuances ("**Foreign Rights**"), and including the right to file foreign applications directly in the name of Assignee, its successors and assigns;

7. all rights to claim priority rights deriving from the Application(s);

8. all causes of action and remedies related to any or all of the Application(s), the Invention, the Potential Patents, and the Foreign Rights (including, without limitation, the right to sue for past, present, or future infringement, misappropriation or violation of rights related to any of the foregoing and the right to collect royalties and other payments under or on account of any of the foregoing); and

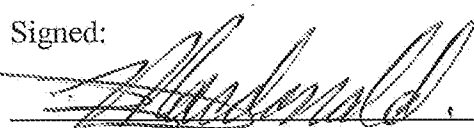
9. any and all other rights and interests arising out of, in connection with, or in relation to the Application(s), the Invention, Potential Patents, and the Foreign Rights.

Assignor will not sign any document or do any act conflicting with this Assignment, and, without further compensation, will sign all documents and do such additional acts as Assignee, its successors, legal representatives, and assigns deem necessary or desirable to perfect

enjoyment of the Rights, conduct proceedings regarding the Rights (including any litigation or interference proceedings), or perfect or defend title to the Rights. Assignor requests the respective patent office or governmental agency in each jurisdiction to issue any and all patents, certificates of invention, utility models, or other governmental grants or issuances that may be granted upon any of the Rights in the name of the Assignee, as the assignee to the entire interest therein.

Assignor hereby authorizes, requests and grants power to Assignee and Assignee's authorized representative to insert on this Assignment the filing date(s) and Patent Application Numbers in the table above when known.

The terms and conditions of this Assignment will inure to the benefit of Assignee, its successors, legal representatives, and assigns and will be binding upon Assignor, their successors, legal representatives and assigns.

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| <p>Signed:  _____ Doug Macdonald, Unit Managing Director on behalf of ALSTOM Grid Inc.</p> | <p>Date: <u>2/6/15</u></p> |
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