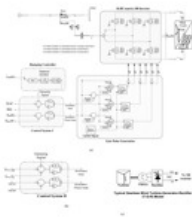
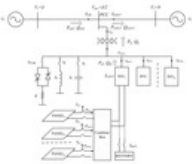
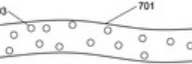
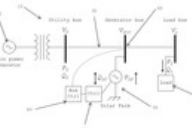
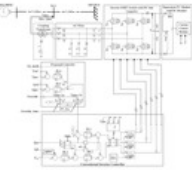
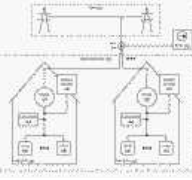
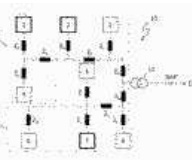
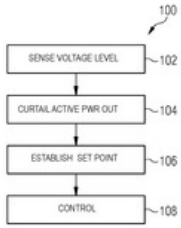
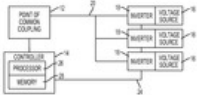
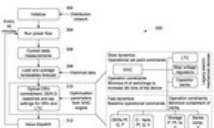
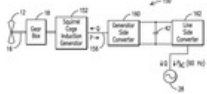
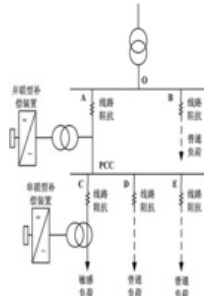
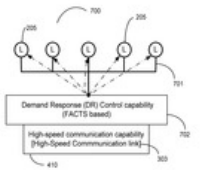


69612 results for Similar patents - Collection: FAMPAT

#	  Title	Publication number	Publ. date	Applicant/Assignee	
1.	Utilization of distributed generator inverters as statcom	EP2478610	2012-07-25	UNIVERSITY OF WESTERN ONTARIO RHAMAN SHAH ARIFUR	
The invention provides a method and system for operating a solar farm inverter as a Flexible AC Transmission System (FACTS) device - a STATCOM - for voltage control. The solar farm inverter can provide voltage regulation, damping enhancement, stability improvement and other benefits provided by FACTS devices. In one embodiment, the solar farm operating as a STATCOM at night is employed to increase the connectivity of neighbouring wind farms that produce peak power at night due to high winds, but are unable to connect due to voltage regulation issues. The present invention can also operate during the day because there remains inverter capacity after real power export by the solar farm. Additional auxiliary controllers are incorporated in the solar farm inverter to enhance damping and stability, and provide other benefits provided by FACTS devices.					
2.	Multivariable modulator controller for power generation facility	EP3005515	2016-04-13	Rajiv Kumar Walmar	
Systems, methods, and devices relating to operating a power generation facility to contribute to the stability of the power transmission system. A controller operates on the power generation facility to modulate real power or reactive power or both in a decoupled manner to contribute to the stability of the power transmission system. Real power produced by the power generation facility can be increased or decreased between zero and the maximum real power available from the PV solar panels, as required by the power system. Reactive power from the power generation facility can be exchanged (injected or absorbed) and both increased or decreased as required by the power transmission system. For solar farms, the solar panels can be connected or disconnected, or operated at non-optimal power production to add or subtract real or reactive power to the power transmission system.					
3.	Implantable devices that generate low intensity electric fields for the treatment of atherosclerotic disease and prevention of ischemic vascular events and methods of manufacture	EP2542182	2013-01-09	UNIVERSITY OF ROCHESTER	
An internal medical device for implantation into a human or animal where the internal medical device has an electric field source that may be an active source of electromotive force such as a battery or capacitor, or may be an electric field generating material such as an electret, piezoelectric, or the like.					
4.	Use of distributed generator (dg) inverters as statcoms for decreasing line losses	WO2014/022929	2014-02-13	VARMA RAJIV KUMAR	
The invention provides systems, methods, and devices relating to the provision of system-wide coordinated control voltage regulation support in power transmission and distribution networks using multiple inverter based power generation facilities, which are coupled to the power transmission and distribution networks for minimizing transmission and distribution line losses. The invention uses a novel control method of inverter based Distributed Generators as Static Synchronous Compensator (STATCOM) in a way that provides a dynamic voltage regulation/control with the inverter capacity remaining after real power generation, thereby decreasing system line losses.					
5.	Enhanced utilization of real power generating capacity of distributed generator (dg) inverters as statcom	WO2013/163760	2013-11-07	SHARMA VINAY VARMA RAJIV KUMAR	
Systems, methods, and devices relating to the provision of system control support in the form of reactive power support or voltage control support to power transmission or distribution networks using inverter based power generation facilities that are coupled to the power transmission or distribution networks. An inverter based power generation facility, such as a photovoltaic based solar farm or a wind farm, can task all or a portion of its inverter capacity to provide reactive power support or voltage control support to the power transmission or distribution network. This invention applies to the operation of PV solar systems anytime during the day (even during peak power generation times) and other inverter based DGs during the entire 24-hour period. The power generation facility disconnects at least one of its power generation modules from the power transmission or distribution network and makes available required inverter capacity for providing system control support.					
6.	Grid network gateway aggregation	EP3164924	2017-05-10	XSLENT ENERGY TECHNOLOGIES APPARENT XSLENT ENERGY TECHNOLOGY	
Distributed grid network intelligence enables data aggregation at a local control node. In a consumer node, a meter is on a consumer side of a point of common coupling (PCC). The meter can receive one or more external grid inputs and one or more local sensor inputs. The grid inputs can come from sources outside the PCC, and the local sensor inputs monitor conditions at the PCC and/or within the PCC. The meter can identify power demand within the PCC and calculate an output power to generate with a local power converter. The calculation is not simply based on power demand, but on aggregation information, including the one or more external grid inputs, the one or more local sensor inputs, and the power demand for the local load. The local power converter can then output power in accordance with the calculated output power.					
7.	Method for minimising a network feedback of a pv park, inverter and pv park	EP3353874	2018-08-01	SMA SOLAR TECHNOLOGY SMA SOLAR TECHNOLOGY SMA SOLAR TECHNOLOGY	
The invention relates to a method for minimising a network feedback of a PV park (10) on an energy supply network connected to a network connection point, wherein the PV park (10) comprises a plurality of inverters (1-8) divided into groups (12, 13). In the method, for at least one first inverter (2, 3, 7) of each group (12, 13), a first parameter is determined which is representative of a first coupling impedance (ZT 2, ZT 3, ZT 7) between the first inverter and the network connection point, and a second parameter is determined which is representative of a second coupling impedance (ZN 2, ZN 3, ZN 7) between the group (12, 13) containing the first inverter (2, 3, 7) and the network connection point, and stored in an operation control unit of the first inverter. During a daytime operation of the PV park (10), reactive power supplied via the first inverter (2, 3, 7) in accordance with the first parameter, which corresponds to the magnitude of a reactive power received by the respective underlying first coupling impedance (ZT 2, ZT 3, ZT 7). During a night-time operation, all inverters of a group (12, 13), except the first inverter (2, 3, 7), are deactivated and reactive power is supplied via the first inverter (2, 3, 7) in accordance with the second parameter, wherein the supplied reactive power corresponds to the magnitude of a reactive power received by the respective underlying second coupling impedance (ZN 2, ZN 3, ZN 7). The invention also relates to a correspondingly configured inverter (2, 3, 7), as well as a corresponding PV park (10).					

8.	Method and controller for continuously operating a plurality of electric energy generating machines during a high voltage condition	EP2867970	2015-05-06	SIEMENS GAMESA RENEWABLE ENERGY SIEMENS	
A method and a controller for continuously operating a plurality of electric energy generating machines during a high voltage condition at a point of common coupling of the plurality of electric energy generating machines are described. The method comprises a) sensing (102) a voltage level at the point of common coupling exceeding a permitted voltage level; b) curtailing (104) an active power output of the plurality of electric energy generating machines in such a manner that a reactive capability of the plurality of electric energy generating machines is increased; c) establishing (106) a set point of an electric quantity being present at the point of common coupling in such a manner that a reactive electric component providable by the plurality of electric energy generating machines is increased; and d) controlling (108) at least one of the plurality of electric energy generating machines based on the established set point of the electric quantity in such a manner that the high voltage condition at the point of common coupling is at least partially remedied.					
9.	Power system stabilization using distributed inverters	US20140032000	2014-01-30	SIEMENS	
A power grid of renewable sources is stabilized. Inverters for connecting power sources, such as wind turbines, batteries, or photovoltaics, to a grid are used to damp grid oscillations. The damping is distributed to the inverters, but based on measurements for the grid rather than local measurements. The control of the damping is based on grid wide analysis, and the damping is performed proportionately by already existing inverters distributed throughout the grid.					
10.	Methods and systems for controlling an electric network	EP2863285	2015-04-22	GENERAL ELECTRIC	
A method and system for use in controlling an electric network are provided. The system includes an Integrated Volt-VAr Control (IVVC) component configured to determine optimization parameters for slow dynamics electromechanical devices and fast dynamics DER devices coupled to the network. The slow dynamics devices are controlled by a present state of the electric network and a voltage rise table that is adaptively updated in real-time using a command output, or a power flow-based complete optimization routine that generates optimal setpoints for the traditional controllable assets and for at least some of the fast dynamics DER devices. The fast dynamics devices are controlled locally using a control algorithm that uses a reactive power contribution based on IVVC settings, based on photo-voltaic (PV) plant active power variations, based on power factor, or based on a voltage of the local electric network.					
11.	Power oscillation damping employing a full or partial conversion wind turbine	EP2499714	2012-09-19	SIEMENS GAMESA RENEWABLE ENERGY SIEMENS SIEMENS ENERGY	
A wind turbine (8) for controlling power oscillations on a grid of a power system (28). The wind turbine (8) comprises rotor blades (12) for turning by the wind, an electric generator (20) rotatably coupled to the rotor blades (12), a power converter (24) responsive to electricity generated by the electric generator (20), the power converter (24) for converting the generated electricity to a frequency and voltage suitable for supply to the power grid (28), and the power converter for regulating voltage on the grid supplemented by modulating real power for damping the power oscillations.					
12.	Method and system for operating and controlling a wind turbine to prevent excitation of subsynchronous oscillations within the wind turbine	WO2012/159989	2012-11-29	SIEMENS GAMESA RENEWABLE ENERGY SIEMENS	
A full converter connected to a series compensated transmission line. The full converter comprises a generator side converter, a DC link connected across an output of the generator side converter, a line side converter connected across an output of the DC link, and a converter controller configured to control the full converter to mitigate effects of subsynchronous oscillations present on the series compensated transmission line.					
13.	Scattered type power quality regulation system	CN105703362	2016-06-22	GUANGDONG UNIVERSITY OF TECHNOLOGY	
The invention discloses a scattered type power quality regulation system. The scattered type power quality regulation system comprises one or more series-wound type compensation apparatus and shunt-wound type compensation apparatus, wherein each of the series-wound type compensation apparatuses and shunt-wound type compensation apparatuses comprises a central control unit; and direct current buses are not shared between the series-wound type compensation apparatuses and shunt-wound type compensation apparatuses. When the multiple series-wound type compensation apparatuses and shunt-wound type compensation apparatuses are jointly used, a management center is provided, wherein the management center judges power grid fault types by sampling power grid voltages and load current information so as to realize coordinated operation of the respective series-wound type compensation apparatuses and the shunt-wound type compensation apparatuses.					
14.	Control of power system using distributed impedance injection modules and actuator devices within the power grid	EP3414811	2018-12-19	SMART WIRES SMART WIRE	
A system architecture and method for enabling hierarchical intelligent control with appropriate-speed communication and coordination of control using intelligent distributed impedance / voltage injection modules, local intelligence centers, other actuator devices and miscellaneous FACTS coupled actuator devices is disclosed. Information transfer to a supervisory utility control is enabled for responding to integral power system disturbances, system modelling and optimization. By extending the control and communication capability to the edge of the HV power grid, control of the distribution network through FACTS based Demand response units is also enabled. Hence an integrated and hierarchical total power system control is established with distributed impedance / voltage injection modules, local intelligence centers, connected other actuator devices, miscellaneous FACTS coupled devices and utility supervisory all networked at appropriate speeds allowing optimization of the total power system from generation to distribution.					