contact network with consistently included with her customers can be used as the charger. As the battery must be constantly recharged, the charger consumes energy all the time, regardless to the mode of operation of the electrified vehicles. Such scheme of work of subsidiary electric equipment is not rational from the point of view of power consumption by rolling stock because it leads to additional consumption.

At present to extend the range of economic regulation speed of the rolling stock of public electric transport with DC motors it is used the field weakening by reducing the values of the magnetic flux. Usually the stage of excitation regulation is based on the current reduction in serial windings of traction engine. Structurally, this is done by including sections of active resistance in the range of windings, which leads to additional costs of energy.

These drawbacks can be partially corrected by applying modern frequency converters of energy. With this purpose the parallel with accumulator battery to turn the battery ultracapacitor particular capacity, which can be recharged using a DC-DC converters, during rheostatic braking and field weakening has been suggested. This allows excluding additional power supply for charging the battery.

Due these innovations at the rolling stock, public electric transport can save up to 8 % of electricity in the overall consumption.

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INTERNATIONAL MECHANISM OF INTERNATIONAL COOPERATION IN THE FIELD OF RENEWABLE ENERGY SOURCES

Active use of renewable energy sources in the world for the last decades is connected in great measure with solving the problems of energy security of the states–importers of energy carriers against the background of high and unstable prices for the fossil fuels and the global company on climate change mitigation and reduction of greenhouse gas emissions into atmosphere.

Meanwhile national programs for renewable energy development at present have been adopted in more than 60 countries of the world, as the use of renewable energy sources are often the most rational solution of the energy saving problems in far distant human settlements and regions where the development of centralized heat and power supply is economically unreasonable.

Renewable energy sources today are widely used in the whole world covering about 14% of world energy balance. For the last decade the essential growth of using nontraditional renewable energy sources has been marked: solar and geothermal energy, energy of wind and waste, small hy-

dropower plants, tidal and wave energy of ocean which has been caused by great price decreasing for renewable energy technologies and price increasing for organic fuel.

The countries of the European Union, the USA and Japan, China and India and others have achieved the greatest success in using nontraditional types of renewable energy. According to some prognoses renewable energy development rates can be rather high under conditions of implementing reasonable policy of its support in the most countries of the world.

The main challenge lies both for developed and developing countries in the development, utilization and dissemination of renewable energy technologies on a scale wide enough to significantly contribute to energy for sustainable development.

International cooperation is the only way to resolve the problem of renewable energy sources effectively on the global level.

The proposal for an international agency dedicated towards renewable energy was made in 1981 at the United Nations Conference on New and Renewable Sources of Energy in Nairobi. The idea was further discussed and developed by major organisations in the field of renewable energy, in particular Eurosolar.

Since then, the global interest in renewable energy has been increasing: Several international meetings such as the World Summit for Sustainable Development 2002 in Johannesburg (WSSD) or the G-8 Gleneagles Dialogue addressed renewable energy, and the 2004 Bonn International Renewable Energy Conference in Bonn, as well as the 2005 Beijing International Renewable Energy Conference were a response of governments towards the increasing demand for further international cooperation on renewable energy policies, financing, and technologies.

It is important to recall that the International Conference for Renewable Energies in Bonn 2004, supported by the International Parliamentary Forum on Renewable Energies called for the establishment of the International Renewable Energy Agency (IRENA) in its concluding resolution. Only a few years later, and through combined efforts of governments across the world, the idea had come to life.

With a rapidly growing energy demand on the one hand, and climate change associated with current patterns of energy use on the other, the meeting of the "IRENA Initiative" took place at a critical juncture. 170 representatives from 60 states expressed their overall support for the founding of an International Renewable Energy Agency as early as possible - the political momentum was with the "IRENA Initiative" now. Whilst the basic instruments of such an Agency were to be agreed upon at a later stage, the objective was clear: IRENA should be become the very first intergovernmental organisation on a global scale dedicated towards the promotion of renewable energy.

The International Renewable Energy Agency was officially founded in Bonn on 26 January 2009. The founding of IRENA was a significant milestone for

world renewable energy deployment and a clear sign that the global energy paradigm was changing as a result of the growing commitments from governments. At the Founding Conference 75 States from all over the world signed IRENA's Statute.

As of June 2013, 112 States and the European Union are Members of IRENA, and 51 States are IRENA Signatories/applicants for membership. Signatories include almost all European and African countries, and also major economies such as the United States, India, Japan, and Australia.

IRENA also seeks to cooperate with the UN and associated organisations like UNESCO, the World Bank, GEF, UNIDO, UNDP, UNEP, and WTO in the areas of education and training, financing, access to energy, potential studies and trade.

According to its Statute, IRENA: a) collects renewable energy related information and knowledge, and analyses and disseminates current renewable energy practices, including policies and incentives, available technologies, and examples of best operational practice; b) fosters international exchanges about renewable energy policy and its framework conditions; c) provides relevant policy advice and assistance; d) improves renewable energy knowledge that facilitates technology transfer and promotes the development of local capacity and competence: e) promotes capacity building services such as training and education; f) provides information and advice on the financing mechanisms available for renewable energy projects; g) stimulates and encourages research (including on socio-economic issues), by fostering research networks to undertake joint research, development and deployment of technologies; h) provides information about the development and deployment of national and international technical standards in relation to renewable energy, based on a sound understanding through an active presence in the relevant fora, and i) disseminates knowledge and information and increase public awareness on the benefits and potential offered by renewable energy.

Various international organisations work in the field of renewable energy. But IRENA is the only one dedicated to the promotion of 100% renewable energy worldwide. Precisely this intergovernmental organization is an integral and major component in the mechanism of international cooperation in the field of renewable energy source.