

Rapid deployment of renewable energy and energy efficiency is resulting in significant energy security, climate change mitigation, and economic benefits. In international public opinion surveys there is strong support for promoting renewable sources such as solar power and wind power.

The Russian Wind Energy Association predicts that if Russia achieves its goal of having 4.5% of its energy come from renewable sources by 2020, the country will have the total wind capacity of 7 GW. The first Russian solar plant was opened in Belgorod Oblast in November 2010. The southern parts of Russia, especially the North Caucasus, have the greatest potential for solar energy. Russia plans to set up an overall solar capacity of 150 MW by 2020.

At the national level, at least 30 nations around the world already have renewable energy contributing more than 20 percent of energy supply. National renewable energy markets are projected to grow strongly in the coming decade.

ПРИМЕНЕНИЕ ПАРОВОЙ ТУРБИНЫ

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A steam turbine is a device that extracts thermal energy from pressurized steam and uses it to do mechanical work on a rotating output shaft. Its modern manifestation was invented by Sir Charles Parsons in 1884.

Because the turbine generates rotary motion, it is particularly suited to be used to drive an electrical generator – about 90% of all electricity generation in the United States (1996) is by use of steam turbines. The steam turbine is a form of heat engine that derives much of its improvement in thermodynamic efficiency from the use of multiple stages in the expansion of the steam, which results in a closer approach to the ideal reversible expansion process.

An ideal steam turbine is considered to be an isentropic process, or constant entropy process, in which the entropy of the steam entering the turbine is equal to the entropy of the steam leaving the turbine. No steam turbine is truly isentropic, however, with typical isentropic efficiencies ranging from 20-90% based on the application of the turbine. The interior of a turbine comprises several sets of blades or buckets. One set of stationary blades is connected to the casing and one set of rotating blades is connected to the shaft. The sets intermesh with certain minimum clearances, with the size and configuration of sets varying to efficiently exploit the expansion of steam at each stage.

Steam turbines are used to transfer energy to drive a machine. They are used to create electricity from various energy sources that produce the raw material steam. These energy sources include fossil fuel, nuclear energy, geothermal energy and even solar power. Steam turbines have also been used to power locomotives and ships. Steam turbines convert heat energy into kinetic energy and from there can create electric energy via a generator.

The steam turbine system is used to create over 80 percent of the world's electricity supply. In order for the turbines to work, steam must first be created from an energy source.

СТАНОВЛЕНИЕ ГОСУДАРСТВЕННОЙ СЛУЖБЫ

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The history of the public service comprises several centuries. Its survival in the difficult geopolitical conditions depended on the service of all social groups.

The system of departments called «Prikaz» was created during the reign of Ivan the Terrible. They carried out management of individual branches of government. The beginning of the Russian bureaucracy is associated with the era of Peter the First. The Table of Ranks was approved on the 24th of January. It became the basic law on the procedure for the public service in the Russian Empire and lasted until the revolution of 1917.

The beginning of the professional public service is associated with Speranskiy. He was the first who touched upon the problem of the education and training of officers of government machine.

The ranks of the public service were cancelled after the October Revolution of 1917. Then the system of the recruitment and placement was accepted.

«The regulation of the federal public service of the Russian Federation» was approved in 1993 by President's decree. It revealed the general concepts and constitutional principles of public service. The system of public service has undergone several changes during reforming. These changes are connected with the emergence of a priority to improve the professionalism of public service and the efficiency of interaction of the executive authorities and civil society, the creation of new personal services and educational institutions. Let's take, Komsomolsk-on-Amur State Technical University. It is an example of such establishment. The priority of our university is to training technical personnel. But there are also humanities in our university. «The public administration» is among them. It shows that our state needs reliable and well-trained public officers. I think our university can provide these highly qualified personnel.

Reforming in this sphere is conducted taking into account the new social realities, national traditions and specific features of state structures. Specialists in the sphere of public administration consider that reforming should have a positive impact on the activity of the state apparatus.

ВОЗРОЖДЕНИЕ ТИТАНИКА

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One of the richest people in Australia, billionaire Clive Palmer will realize his dream and build the exact copy of the cruise liner «The Titanic» that down down during her first flight on April 14, 1912 after the fatal collision with an iceberg in the Atlantic Ocean. She will be more beautiful and glorious than the original one, assured the 58-years-old businessman [1, 59].

«But the «stuffing» will be new; she will be equipped with navigation and security systems according to the latest technology.» According to Palmer's plan the new vessel will be similar like two drops to her predecessor, which was launched on the shipyard «Harland and Wolfe» in Northern Ireland, Belfast over a century ago. However, bear in mind the sad fate of «The Titanic», the new version of the passenger liner is decided to equip with the most modern marine equipment. So, cabins will be equipped with air conditioning, a small hospital and a helipad will be presented on board of the ship. But Palmer wishes there was not Internet and TV on board.

According to the multimillionaire's plan passengers will be able to find clothes in the style of early XX century in each cabin, which will allow them to «experience on board the original liner». The new ship will have cabins of three classes as well as «The Titanic» had. The gymnasium and swimming pool are expected to be identical to those areas that were on the ship in 1912. However, «modern