

no heating sources other than natural gas, the company, together with gas distribution organizations, conducted monthly on-site inspections to check the use of gas consumption. Implementation of the company's proposals will improve the efficiency of natural gas use, reduce the need for natural gas and for subventions from the state budget for subsidies, and create the conditions for the direction of released funds to increase hydrocarbon production in Ukraine.

**Implementation of innovative energy efficiency projects.** In 2016, Ukrtransgas worked with the Institute of Engineering Thermophysics and the National Academy of Sciences of Ukraine to develop a basic solar power plant scheme for the simultaneous production of electricity and cooling at transmission system facilities. As of the date of this report the solar power plant pilot project has been launched. The power plant can generate almost 400 thousand KWh of electricity per year to satisfy the office and industrial site needs of Ukgaztehzvyazok branch facility. In addition, Naftogaz has developed a number of recycling projects designed to transform combustion heat at compressor stations (CS) and boosting compressor stations (BCS), the energy of overpressure at gas transportation system (GTS) facilities and the geothermal energy in the depleted oil and gas wells.

**Targets for 2017-2020:**

1) Promote company proposals to allow households to use the unused part of their energy subsidies for energy saving measures.

2) Continue implementation of the energy efficiency program. In 2017, as a result of implementation of the energy efficiency program, the enterprises of the company plan to save 148 thousand t in reference fuel (100.7 thousand t in oil equivalent).

3) Continue implementation of energy management systems according to the requirements of ISO 50001.

**References:**

1. In the black. Annual report, 2016. – Pp. 44–47.

## **THE ROLE OF CARGO TRANSPORTATION IN THE MODERN WORLD**

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Quite frequently, we face the necessity of goods shipping. Nowadays this process has become a routine part of life for most people. This article is devoted

to the importance of transportation the goods from one part of the world to another. We will look closely at the issues such as the significance of the transportation business and its role in the process of globalization.

We should start by saying that cargo transportation is an important part of the global economy. The international transport system was fully established only in the 20th century[4], but it is still in the process of constant development. The international transportation is carried out through several types of transport: by land (which includes road, rail transport and pipelines), by water (which includes shipping), and by air[1]. Every type of transport is really important for global logistics.

According to statistic, in the beginning of the 21st century maritime transport has become the leader in freight transport. It provides more than 60% of transportation between countries[3]. Capacity to ship an unlimited number of goods is a major advantage of water transport. No other mode of transport is capable of carrying as much cargo as waterways can. Shipping applies to all types of goods by sea. Liquid, loose, fragile and valuable goods are transported by ships[3]. This type of transport is the most advantageous for transportation, because of large capacity for long distances the price for transportation is quite low.

Rail transport is advantageous because it is able to carry any kind of cargo. There are various types of wagons for this purpose: a tank wagon is designed for liquid cargo, a hopper for bulk cargo, and a refrigerator for transporting perishable products, etc. [4] . This type of transport is resistant to weather conditions. This means that goods can be delivered to any place in the world.

International transportation by road is the most flexible. Cargo can be delivered to any place where roads exist. Because of road development and mobility, road transport can quickly deliver goods to the right place. The vehicle is able to deliver goods from the consignor's warehouse to the consignee's warehouse without additional overloads, thus saving delivery time.

Air transport is the youngest type of transportation, but it takes the first place in intercontinental traffic. This type of transport carries perishable products, flowers, electronics, machine parts[2]. Air transport is the safest mode of transport, and it is unlikely that anything can happen to cargo and it will be damaged. One of the main advantages of air transport is absolute independence from the geography of the area[4]. Airplanes can deliver goods even to the most difficult places, where other modes of transport cannot reach.

Pipeline transport also plays an important role in international trade. Pipeline transport is beneficial not only because it can be laid on the ground or underwater[1], but also because it can work effectively anywhere in the world, regardless of the climatic conditions of the area. This type of transport can work smoothly and deliver goods such as petroleum products or gas throughout the year.

Transport development affects the surrounding area. Areas with transport infrastructure become more attractive for many human activities. The largest transport hubs of international importance attract industry focused on imported raw materials and export of finished products[2].

With the development of international means and routes of communication, the nature of international trade has become global, raw materials and goods have been involved in trade exchange. The globalization process would not have been possible without goods transportation. Transport shapes international economic relations, contribute to closer ties between countries.

Transport is one of the most important business sectors of the economy. It meets the needs of the economy and the population in transportation, it is the largest component of infrastructure. Transport has a significant impact on the dynamics and economic development of countries and the world. Due to transportation, goods are moved from the place of their production to the point of consumption[2].

To conclude, we would like to note that transport connects time and space between manufacturers, buyers and sellers. Thus, transportation reduces the time and space gap between production and consumption and is the important part of the modern world and economy.

#### **References:**

1. Jean-Paul Rodrigue, Claude Comtois, Brian Slack The Geography of Transport Systems Third edition/ Jean-Paul Rodrigue, Claude Comtois, Brian Slack: Routledge, 2006.
2. Transport in the World Economy Retrieved from: <http://finuni.ru/transport-v-mirovoy-ekonomike/>
3. Transportation by Sea: features and useful information Retrieved from: <https://www.reartek.com/how-to-choose-a-company/>
4. Retrieved from: <https://ru.wikipedia.org/wiki/>

## **BASICS OF WORKING WITH THE RASPBERRY PI SINGLE-BOARD COMPUTER**

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The Raspberry Pi single-board microcomputer, developed by the British Raspberry Pi Foundation, runs on the free Linux-based Raspbian operating system. The Raspberry Pi was developed as a training manual in Computer Science, but the idea was so successful that in a few years the mini-computer won widespread popularity.