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ENERGY MANAGEMENT

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Under the conditions of transition to a market economy, the constant growth of the energy component in the costs of production as well as services, special relevance on the basis of modern views on the process of energy consumption requires energy management.

Energy management is a set of organizational and technical measures that make it possible to implement the economically resonable potential of reducing the energy intensity for commercial products and fixed costs of energy resources that do not depend on the volume of products. The target of energy consumption is to help organizations establish systems and processes that improve energy efficiency and meet the modern requirements, to adapt application and ratio of the consumed energy. A systematic approach can be used to perform tasks such as reducing greenhouse gas emissions and other environmental impacts including energy costs.

Addressing to energy efficiency issues within the framework of energy management leads not only to a reduction in energy costs but also allows to increase profitability, competitiveness, and to get additional investments.

In conclusion, today saving fuel and energy resources should be considered globally. Countries are interested in efficient use of resources, in the production costs reduction, as well as concerned about the climate change. This is also relevant for Ukraine, so the strategic line of our state policy in economic and social development aims to increase energy saving. These actions will result in high economic efficiency and competitiveness among the European countries.

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SIMULATION OF S-ORBITALS OF HYDROGEN IN A CLOSED SYSTEM

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Hydrogen is a chemical element with atomic number 1, which belongs to the 1st group, the 1st period of the periodic table of chemical elements, and is the first and simplest representative of all chemical elements in general and the most common element of the universe. In a hydrogen atom, the electron's orbital has a spherical (spherical) shape, which we will need to model.

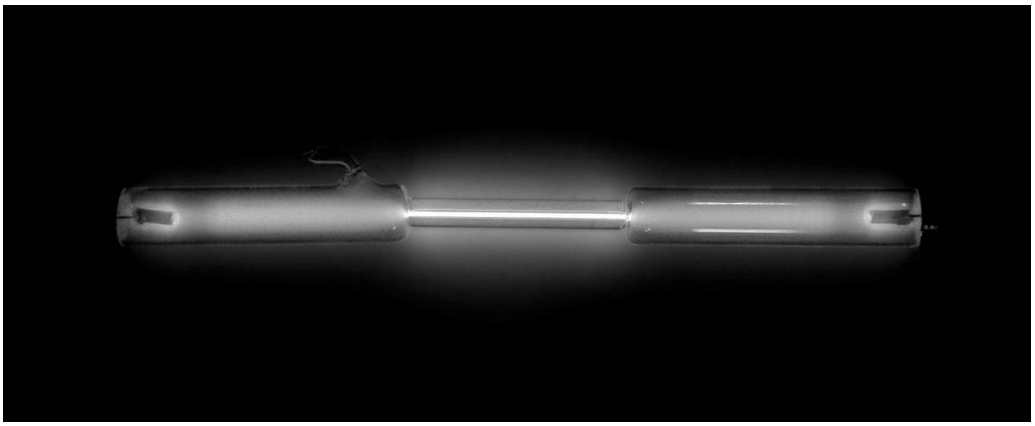

Figure 1. Spectral radiation of hydrogen in a gas discharge tube

In 1926, Erwin Schrödinger derived the famous wave equation that relates the energy of a system to its wave properties. Its application to the hydrogen atom is rather difficult, so first, we use the wave equation to solve the problem of "modelling the S-orbital of H in a closed system" (Lvovsky, 2019). Expressed in one-dimensional space, the Schrödinger wave equation has the form: