



## CHOICE OF FUEL FOR CHP PLANTS IN LATVIA

**T. Odineca**

*Riga Technical University*

*Āzenes iela 16/20, a/k 526, LV-1048, Rīga - Latvia*

*Phone: +371 29597650*

*E-mail: [rifat1@mail.ru](mailto:rifat1@mail.ru)*

### ABSTRACT

The paper analyses the technical, economic, and ecologic indicators of different fuels used for CHP plants in Latvia.

In 2004 Latvia signed the European Parliament's CHP Directive 2004/8/EK. According to the Directive, the development of CHP (combined heat and power) sources of energy (including low-powered CHP plants) is one of the most important steps for economy of energy. Thanks to CHP supporting state program measures (obligate purchase, fixed price of electrical energy) now there are wide opportunities to create new CHP plants, or to reconstruct existing boiler houses by installing CHP equipment. Although there are several kinds of fuels, which can be used in co-generation (coal, oil, wood, bio gas), today in Latvia natural gas is considered to be the safest fuel both from the ecological and the economic point of view. However, by now natural gas is available only in 1/3 part of Latvian territory. The second most often used fuel is wood.

The analysis is performed based on different approaches concerning the estimation of fuel efficiency. The variations in the fuel efficiency indicators were considered depending on W/Q ratio (or  $\alpha$ -ratio), CO<sub>2</sub> and other pollutant emissions, availability of resources, and scenarios of growth of prices.