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The challenging issues of water and sewage entities' production costs analysis

Problem statement. Analysis and control of production costs is getting increasingly relevant in the context of economy reforms aimed to ensure the competitiveness of the enterprise, i. e. profitability, increased production capacity and market expansion. The process of reforming the state sector of economy, namely, water and sewage enterprises, is rather slow, and the valid sub-sector management system does not fully meet current requirements.

Water and sewer enterprises belong to municipal sector of economy and unfortunately the currently existing government management system doesn't meet the demands of these days showing slow trends in reforming of the industry.

Analysis of the costs of the services provided by the water and sewage enterprises aims to identify the possibility of rational use of production resources, information support and comprehensive assessment of cost optimization results achieved. Thus, service net cost analysis is an important cost management tool that enables generalized evaluation of the effectiveness of the production resources and discovering the reserves to increase the enterprise's profitability and reduce service unit price.

Review of recent publications. The works of the scholars, such as D. Nekhaychuk and N. Reshetylo research the specific features of the production and economic activities of water and sewage enterprises. In his studies, N. Reshetylo focused solely on the profit and the sources thereof¹. Net cost and structural and functional model of cost analysis in the water and sewage enterprises is examined in the works of O. Dymchenko and P. Hubenko. However, very little attention is paid to the development of cost optimization measures.

The goal of this research is to identify the opportunities for cost reduction, rational and efficient use of production resources and decrease in the unit price of the services provided by the water and sewage enterprises.

Key research findings. Water and sewage enterprises play a special part in the utilities sector.

¹ Решето. Н. В. Особливості виробничо – господарської діяльності підприємств комунального сектора. // Економічні науки, 2012 // nauka.kushnir.mk.ua.

D. Nekhaychuk¹ states that, as compared to other economy sectors, water and sewage enterprises differ in terms of the composition and structure, assessment of utilization standards and indicators, the manner and the sources of financing fixed and current assets due to specific production processes and financial activities.

The scientists researching production costs of water and sewage enterprises have noted the relevance of the detailed grounded high-probability answers to the next questions: What do we lose? Where do we lose? Who and to what extent is damaged? What are the consequences²?

The expenditure level for water supply and sewerage as well as the effectiveness of the resource application in the industry forms the index of cost price.

The cost price (of work, services) characterizes the effectiveness of all the productive process at the enterprise, as well as it reflects the productive arrangement level, technical one and the labour productivity.

Net cost of the works or services produced or provided by water and sewage enterprises includes all costs of drinking water extraction, production and supply to the consumers, water collection, drainage and purification for further use or release into the water ponds (including hot water and water purified in the municipal buildings)³. Net cost is calculated by type of production process (water lifting, supply to water network, treatment and supply to the consumers) and type of services — water supply and sewage. Water and sewage enterprises, in addition to standard costing items, introduce Purchase Water item. These item costs are included in the net cost of work at the production cost of water.

In accordance with the data issued by the Ministry of Statistic of Ukraine.

In compliance the research results of statistic data we have found that the price cost for water supply services dramatically depends upon variable and mixed costs e. g. the ratio of fuels and power resources makes large expenditures. At the circumstances the output increase will cause the price cost increase correspondently as the absolute means changes the same way as the output. The trend shows the core issue to find the ways in reduce dependence of the resources.

¹ Нехайчук Д. В. Про методики визначення собівартості послуг та економічно обґрунтованого тарифу на послуги водогосподарських підприємств/Д. В. Нехайчук// Держава та регіони. Науково-виробничий журнал. – 2007. – № 4. – С. 178–183. С.179.

² Бубенко П. Т., Димиченко О. В. Екологіко – економічний аспект системного розвитку підприємств водопровідно – каналізаційного господарства.//Комунальне господарство міст. Науково – технічний збірник. – 2013. – № 108. – с. 3–11.//economy.kname.edu.ua С.10.

³ Наказ «Про затвердження Методичних рекомендацій з планування, обліку і калькулювання собівартості робіт (послуг) на підприємствах і в організаціях житлово-комунального господарства» від 06.03.2002 – № 47, із змінами та доповненнями//zakon.rada.gov.ua.

The costs structure of sewage despite of the water supply depends upon mixed costs mostly consist expenditures for service, management and other items to cover economic activity.

Analysis of the statistical data shows that the real volume of the water consumption and sewage overcomes the standards manifolds. Therefore the issue responsible for implementation of new standards close to real ones will allow to increase total volume of sales and come to optimal costs level. So the compensation of the costed related to the service provision within the industrial segment depends on the set tariffs for services of water supply and sewage and the set economically right tariffs will reduce the level on non-productive costs appeared of non-well-arranged service provision process.

Effective management of water and sewage enterprises' production costs requires prompt receipt of information and administrative response to the state of water and sewage, operation of pumping stations, treatment plants, water supply and distribution networks. These activities are covered by process control systems¹. At the same time, water and sewage enterprises' accounting system also requires such control and information support, particularly in relation to production costs and net cost of services.

Conclusions and research perspectives. The results of the research are leading us to the following conclusions. As well as the reserves of spending cuts are set for each costing item, therefore by eliminating unnecessary cost overruns and unproductive ones in overhead costs, such as savings of fuel and lubricants, lighting, reserves of service cost reduction is energy savings through the implementation of organizational and technical measures in compliance with the production process. Also, the replacement of existing tariffs for water supply and sewerage in favor for new economically justified ones that are appropriate in the current economic conditions, management of water supply and sanitation leads to reduction of costs associated with providing operating company, profits and improve competitive ability of enterprises to future.

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¹ Агаджанов А. Г. Економіка водопровідно-каналізаційних підприємств: навч. посіб. Харк. нац. акад. міськ. госп-ва. – 2-е вид., перероб. та доп. – Х.: ХНАМГ, 2010. – 392 с Наказ «Про затвердження Методичних рекомендацій з планування, обліку і калькулювання собівартості робіт (послуг) на підприємствах і в організаціях житлово-комунального господарства» від 06.03.2002 – № 47, із змінами та доповненнями//zakon.rada.gov.ua. С.312.

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