## Our objective is 100% energy self-sufficiency for the entire WSS system managed by Sofiyska Voda

**A conversation with Stanislav Stanev, Operations and Maintenance Director in Sofiyska Voda AD**

**Mr. Stanev, at the beginning we would like you to tell us about the facilities, which are part of the water supply system in the Municipality of Sofia, focusing on why it is important installations to be energy-efficient?**

Sofiyska Voda manages the facilities along the entire route of water on the territory of MoS – from the dams and the river catchment, through 4 potable water treatment plants, 12 pumping stations for potable water, more than 300 pressure boosting installations for the high buildings, 4,000 km of water mains and 1,700 km of sewers, as well as 2 wastewater treatment plants.

We are lucky to manage a system, which from the very beginning was designed to be efficient by using the relief so that potable water could reach our homes with minimum energy consumption and wastewater could be conveyed to the treatment plants by a gravity drainage system. Naturally, the systems and facilities that were built in the 80's and 90's of the last century do not meet the modern energy-efficiency standards and our role is to choose our priorities wisely so that we reduce the operational costs for the company. We have committed to the challenging goal to be among the very few companies worldwide, which operate thanks to the green energy that they generate. And it is very important. First of all, because it is cost-effective – the saved money is allocated for implementation of innovations and technologies. As result of it, the people enjoy the immediate benefits – they are supplied with high-quality services and nature and the living conditions are protected.

**Tell us about the implemented measures and innovative solutions, through which you have been able to optimize the energy costs in the treatment facilities.**

The project we are extremely proud of is the installation of modern turbo blowers in Kubratovo Wastewater Treatment Plant, which regulate the air fed on the basis of the data from the treatment process. These facilities operate autonomously, as in 2017 they provided 11% of the electricity savings. The blowers replaced our 34-year-old machines and allowed us to significantly improve efficiency.

At the same time, we invested in a system which captures the energy in the fumes of the co-generators at the site, as in this way we increased by more than 500 kW the installed heat energy capacity. In the winter months that additional heat which we were losing in the atmosphere is now used for heating the buildings and maintaining optimal temperature of the treatment process on the territory of the treatment plant.

For wastewater treatment, where the key element is Kubratovo WWTP, solely for 2018 over 4 mln. BGN of investments have been planned.

It is no accident that at the Water and Energy Exchange (WEX) Global Summit Awards, which took place in March in Lisbon, Kubratovo WWTP received an award for a significant contribution to the WSS sector, with a special accent on innovation in the reduction of the energy consumption and the circular economy. I am saying that not as flaunting on our part, but because that is a one-of-a-kind excellent international rating of what we managed to achieve in Bulgaria. And I am thinking that not only we at Sofiyska Voda, which is part of the international company Veolia, have an occasion to be proud of, but also the entire Bulgarian team working on the project. This shows that even if we are not the most technologically advanced country, when we have the desire and goal we could achieve everything and we could serve as an example even on a global scale.

### What are the options for the production of more energy?

At present we produce around 30% more energy versus the needs of the treatment plant, which makes us one of the global leaders in terms of efficiency. Nevertheless, we have further possibilities to upgrade our capacity. We expect to commission another anaerobic digester in 2019, which will allow us to process the increased volumes of wastewater and sludge corresponding to the planned sewer network extension.

We also work on a process with EU funding at the amount of 1 M EUR to optimize the aeration system and thermal insulation of the buildings at the wastewater treatment plant.

We do not follow practices already established but we create new ones. We think a few steps ahead, we plan the system for our future needs as well, so we are ready for the expansion of the network capacity, and thus we avoid seeking solutions when the load has already become a fact.

### What objectives have you set?

Our objective for 2019 is to achieve 100% energy self-sufficiency for the entire WSS system, which Sofiyska Voda operates. The major repair of our cogeneration installation, which we have planned for the summer months of 2018 will help us for that. We will focus also on a number of small improvements which are expected to help as well: for example, such are the heating systems at our sites, the optimization of our pumping stations based on the monitoring we carry out, the replacement of inefficient engines, etc. The total investment program of our company will reach 51.7 M BGN in 2018, which is 5.9 M BGN higher compared to last year.

If we manage, and we work seriously in this direction, within a few years we will be the first WSS operator in Bulgaria, and one among the few worldwide, to achieve 100% energy self-sufficiency.