

SETTING THE SCENE: THE ENERGY MARKET AND EFFECTS ON UTILITIES IN THE DANUBE REGION

It was definitely the morning after the night before: On Tuesday evening an estimated 200 out of 200 Forum participants had celebrated their reunion after more than two years of pandemic-related isolation. Accordingly, the Wednesday morning session was off to a slightly sluggish start, but quickly picked up speed when IAWD President Walter Kling introduced the day's first keynote speaker Katharina Gassner, Senior World Bank Energy Economist in the Eastern Europe and Central Asia Region, who gave the audience a proper wake-up call with her online presentation on the ongoing energy crisis.

"Energy prices have skyrocketed in the past six months, not only in the Danube region, but across the world," she started her introduction, noting that after the historic price level lows of the recent years, a correction was to be expected. "Yet the amplitude of the increase is something nobody could possibly foresee."

Looking ahead, the energy economist sees some relief on the horizon: "Prices are expected to moderate somewhat in 2023, however the price level will not go back to anywhere near the long-term average." She notes that due to the current turbulences, 2024 is hard to predict, but her safe guess is that we all are in for a difficult winter: "At least for the coming heating season we will have a similar tight and expensive supply situation as last winter."

Ms. Gassner then proceeded to show a summary of an extensive World Bank analysis of the vulnerability of countries to the current energy shocks focusing on the countries of the western Balkan region, noting that they show a very low vulnerability to gas price shocks and a fairly low vulnerability to high priced electricity imports.

Without detailing the special situation of the water sector, Ms. Gassner then walked the audience through the different ways the current price shocks affect different countries and different groups of stakeholders, pointing out that electricity utilities have literally fallen off a financial cliff, incurring huge, unexpected costs. Even more severe impacts are felt by industrial consumers that operate in unregulated markets, but those have the option to pass at least some of the high upstream costs on to their consumers, which in turn is a major contributor to regional and global inflation.

Private households, on the other hand, are most vulnerable to price increases, with about 10% of household budgets going to energy bills in many places, even before the onset of the crisis. To mitigate this impact, governments across the region have immediately introduced protective measures to protect households: “Regulator prices have risen either not at all or in very small increments over the last six months,” reported Ms. Gassner.

The arsenal of mitigation measures ranges from direct financial support to the energy sector over tax reductions, price caps and social assistance programs for vulnerable consumers, to subsidized credits and liquidity loans for industry and small/medium-sized enterprises. It also includes measures to reduce the energy demand by, e.g., awareness-raising campaigns and introducing block tariffs.

Ms. Gassner also mentioned the various crisis-related recommendations issued by the EU Commission, the most recent and also most hefty document being Repower EU. She finished by reminding the audience that the World Bank does not see a return to former price levels: “This is really a long-term structural change.” – Which in turn calls for long-term strategies and measures: “What we see on the energy side is an increased turning away from fossil fuels, a rapid scaleup of renewables, an increased effort to foster international markets and integrate across regions, and a growing interest in new technologies like hydrogen.”

Following up on this general overview, water consultant and manager Radoslav Russev threw light on the implications of rising energy costs for water sector in a presentation that was co-authored by UBP Ukraine Hub Coordinator Viktoria Iskova. He took the stage with the stated intention to introduce a provocative thought: “I want to point out today that there is a weird and cynical paradox in our sector.”

Mr. Russev mentioned out that in his home country Bulgaria and also in most other countries of the region, the water sector contributes 2% to the whole national energy consumption, that before the onset of the crisis energy made up between 20% and 25% of the running costs of an average utility, and that the share is now 30% and more: “Almost everywhere in the region electricity is second largest cost component in utilities, and in some it is now the biggest.”

At this point he turned to the above-mentioned paradox, presenting two examples for utility companies with exceptionally high electricity consumption, industrial scale pump systems, huge transmission systems, huge system pressure – and more than 80% non-revenue water.

These are not isolated outliers: “We have lot of examples for places where ironically the highest energy intensity and the highest non-revenue water rates occur hand in hand. Why? Typically, these companies operate in environments of high institutional instability. Managers are frequently sacked, even prosecuted. High OPEX for energy typically means low OPEX for salaries. And their only answer to high water losses in the networks is putting in higher pump capacities, in the end creating a huge mess. This is not necessarily the norm, but quite frequent in the region.”

Remarking that measured in kW/h per m³ water produced, some of these companies run on energy intensity levels normally seen in desalination, Mr. Russev turned to a diagram of an exemplary network with one reservoir, several sources and four pump stages. Here, he pointed out the questions that utilities should ask when entering an energy efficiency project, including future communal water demand projections, possibilities to intensify use of less, and reduce use of more energy-intensive water sources, prioritizing non-revenue water reduction measures at the points of the greatest losses, improving energy efficiency at the pump and motor level,

introducing onsite energy generation and working out cost-reducing energy use patterns with the energy provider: “In other words – create an efficient energy package!”

Asking rhetorically why energy efficiency programs are not already happening at scale, Mr. Russev points to lacks of appropriate finding and guarantee mechanisms, lack of motivation on the management level of utilities and lack of expertise: “In the utilities, we have the expertise for pump management - but energy efficiency is now much bigger than simple pump replacement, it involves load management, playing the free energy market, introducing onsite generation... - in one word: COMPLEXITY!”

Noting that some companies in the region are already doing a great job, reaching beyond conventional good practices to explore new ground and becoming energy independent, Mr. Russev remarked that the technical complexity is mirrored in an institutional complexity: There is a huge variety of enablers we as a sector need to work on, on every level, institutional, utilities, associations... - I want to stress that associations can play quite a role here, especially in politically sensitive countries with frequently changing governments. Someone has to help companies and projects to bypass the political hassle and keep working systematically.”

Mr. Russev and Ms. Gassner were then joined by fellow panelists Christian Minelli of WAREG, the Association of European Regulators in the drinking water and wastewater sector, Ndrim Shani, Chair of the National Regulatory Commission of the Water Regulatory Authority in Albania, Elisabeta Poci, Executive Director of SHUKALB, the Water Supply and Sewerage Association of Albania, Gazmend Daci, Senior Energy Specialist at the World Bank office in Tirana, and György Sugar, General Manager of the PUC “Waterworks and Sewerage” Subotica.

Asked by panel moderator Walter Kling about the role and reach as an enabler in mitigating and adapting, WAREG Vice President Christian Minelli called short-term management of energy prices the elephant in room: “Regulators have a powerful lever. Wisely used it can generate both the necessary mitigation and motivation to raise efficiency in the sector.”

Reminding the audience that interventions are only possible as long as regulators have access to correct data, Mr. Minelli reports on the Italian regulation approach that is based on a reference price band inside which utility companies can fully recover their costs through approved tariffs. To address the energy question in the long term, Mr. Minelli advocates strong institutions and collaborations that offer win-win situations for all stakeholders while introducing necessary measures.

Next, Ndrim Shani described the active approach of the Albanian Regulatory Authority to crisis mitigation: “We don’t have to be spectators for sure.” His organization analyzed six water companies that accounted for more than 60% of the compiled energy bill of Albania’s water sector, taking a close look at the justification of incurred costs and the energy efficiency problems individual companies need to solve, typically involving non-revenue water. Generally, companies that today apply for tariff approval are legally required to hand in detailed energy efficiency reports.

Next to take the microphone, SHUKALB Executive Director Elisabeta Poci elaborated on the role of utility associations: “A big chunk of what we can contribute is dedicated to human resources, including training, capacity building and peer exchange.” Ms. Poci mentions the lack of dedicated, competent energy efficiency managers in utility companies: “We see a shortage of professionals in the sector. We point out the need to attract young people and capacitate them, and once you have them on board, please make sure you retain them.”

Beyond that, Ms. Poci sees an important role of associations in awareness raising, public outreach, and promoting behavioral change on the society level: “We need to start educating young kids from kindergarten level on the basics of how to conserve water and energy. Also, on the university level we should stop teaching isolated subjects. Students need to understand the water-energy-food nexus and the concept of circular economy.”

György Sugar, General Manager of the PUC Waterworks and Sewerage Subotica, then reported on the difficulties even a well-managed plant faces in these turbulent days: After the issue of exploding electricity costs was solved by a government cap on prices, the company now wrestles with inflation- and supply chain-related problems in the procurement of essential materials, especially chemicals used in the water and waste water treatment. To get a grip on the rising costs, the company is currently looking at expanding on-site energy production which currently covers 40% of the company’s demand and could soon reach 80% or even 100%.

All these difficulties are well-known to the World Bank, replied World Bank Senior Energy Specialist Gazmend Daci then, elaborating on the threefold task of fighting climate change, securing supply and keeping life’s basics affordable for consumers: “For the Bank there are two approaches to solving these issues. You either regulate prices or you manipulate the incomes of firms and households, and we would prefer directly supporting incomes over distorting price levels. Seeing no green light for price reductions in the immediate future, the World Bank recommends keeping prices up to encourage energy efficiency, and to directly support companies, households and producers for short-term stabilization and long-term growth.

Approaching the end of the discussion, moderator Walter Kling mused on the very slow reaction of the water sector to long-known infrastructure issues and questioned the readiness to rethink things: “Will we continue business as usual after the initial shock has passed? Or will this serve as a trigger for change?” To which Rado Russev replied that the most reliable indicator for change would be the presence of chief energy officers in the management teams of utilities: “Any big water company I have seen in the region, no matter how bad its overall performance may be, would inevitably have a good, committed laboratory manager, typically a lady and one expert treatment plant manager, typically a guy, both these quality responsible people would be top notch in level of qualification, salary, experience, motivation. These people are on the spot. But if you ask who takes care of energy, that might turn out to be the maintenance guy, SCADA engineer, control room manager, if there is one. But energy efficiency is not only maintenance of pumps, not only purchasing of energy, not only balancing consumption patterns, it is all of that and more. In two or three years, when prices have hopefully normalized and you have a chat with an executive team and see that there is an energy guy or girl on board - that would be a sign that they started to take the situation seriously.”

To which Katarina Gassner added in the sessions final statement that in case of staff shortages, energy management could also be outsourced: “You don’t necessarily have to find and train somebody. There are excellent energy service and consultant firms now. Also, diagnostics in preparation of efficiency projects can be done by outside experts as well. There are so many opportunities we have seen emerge recently - repurposing of land for windpower, rooftop solars, better maintenance – there are so many opportunities, and you don’t necessarily have to navigate the complexity all on your own.”