MVM

MVM NEXT

BUSINESS NEWS

VOLUME 5 • NO. 6
JUNE-JULY 2022

THE MVM GROUP IS BUILDING 28 NEW SOLAR POWER PLANTS NATIONWIDE

ELECTRICITY MARKET NEWS

Forward market

In May 2022 a further strong if not historic price rise could be observed in the futures market. This is because market players still try to price the negative price effects of the market embargoes imposed and planned due to the Russian-Ukrainian war. In the period under review the Hungarian benchmark product for 2023 was traded in the range of 210–245 EUR/MWh.

Compared to the baseload price levels seen in April, the price kept increasing in May. The Hungarian benchmark price for 2023 closed the month at 245.54 EUR/MWh, while the German 2023 product ended up at 239.50 EUR/MWh. The spread between the two closing prices decreased steadily, the difference changing from 10.04 EUR/MWh at the beginning of the month to only 6.04 EUR/MWh by the end of the month.

This was significantly due to the fact that the two countries have markedlydifferent production structures and, as a result, the global market price of coal affects the German market more than its Hungarian counterpart. In the middle of the month, we could see a significant increase in the market of API2 coal, while there was a decrease in the Hungarian-German spread.

The Hungarian baseload product for June decreased from 216.08 EUR/MWh to 215.5 EUR/MWh during the month while the price for July rose from 218.74 EUR/MWh to 241.69 EUR/MWh. A fluctuation could be observed in the price during the month.

EUA's dominant Dec-22 contract closed May at 84.02 EUR/t, a minimum decrease of 0.45% on a monthly basis. However, the month by no means lacked events: volatility rose right at the beginning of the period as the dynamics of prices was determined by the near average traded volume, as well as the current news of the war, the atmosphere on the money market and uncertainty around French nuclear power plant production.

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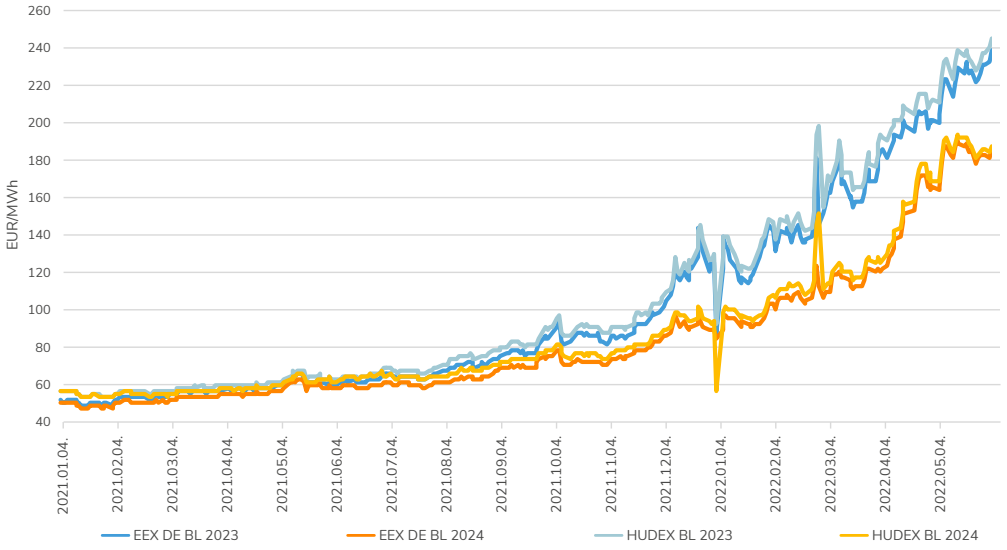
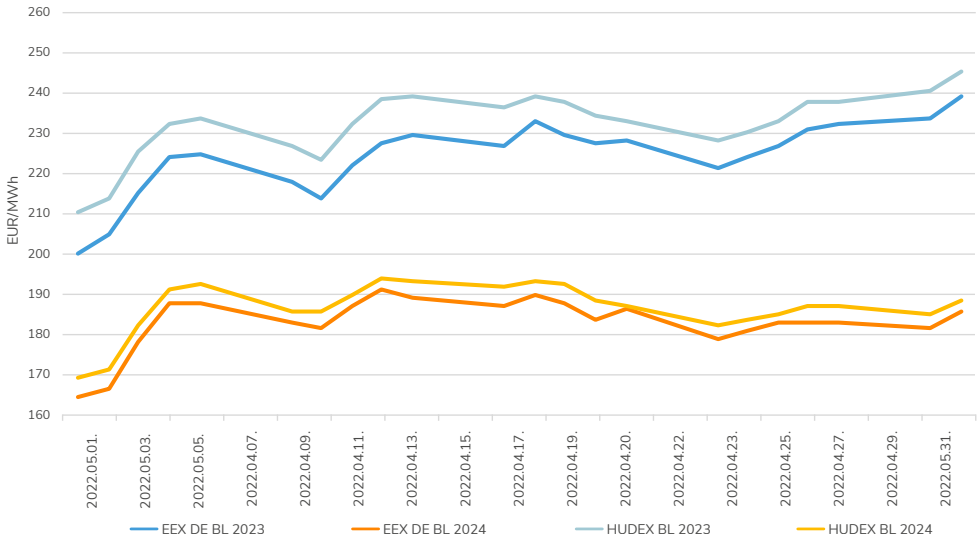
HUDEX/EEX DE YR-23 and YR-24 baseload products



HUDEX/EEX DE YR-23 andYR-24 baseload products / May 2022



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In the second half of May unexpected news about regulations were in the limelight, once again making market players more cautious as the weekly change in prices was 15%; trading activity also declined partly due to the effect of the holiday period.

As for the expectations, the most likely scenario is a continuing upward trend as dry and warm weather may prevail in the coming weeks. Uncertainty remains significant in the long run due to the supply problems caused by the Russian-Ukrainian conflict, to which the market currently reacts to with a significant premium.

Spot market

In May 2022 prices increased in most European day-ahead electricity markets compared to the previous month. The price of the German EPEX baseload product rose by EUR 11.75 to 177.48 EUR/MWh on a monthly basis while the average monthly price of HUPX was up by EUR 15.66 to 204.84 EUR/MWh from April to May.

In the first week of the month, when German wind power production was far below the seasonal average, German and Hungarian prices moved together as hourly prices levelled off between the two markets almost hourly. Afterwards, as German wind production got stronger, the German price fell behind the Hungarian market price and towards the end of the month the hourly prices were negative in the German market several times as German wind production over 20 GWh/h coinceded with Holy Thursday, a public holiday in Germany, resulting in price differences well over 100 EUR/MWh between German and Hungarian baseload prices between 26–28th May.

The delivery day of 11th May also saw a spread of over EUR 100/MWh between EPEX DE and HUPX. This was due to a technical failure in Slovakia, which led to a partial disconnection affecting the following day's market connection and the SK-HU cross-border line was also disconnected among other things, significantly reducing Hungary's import opportunities on that day.

It was only on this day during the month that Hungary became a net exporter. Although we made the most of our daily capacity from the direction of Austria, the strong import demand from the Balkan countries and the disconnection on the Slovak-Hungarian border made us exporters. For this delivery day the price of the HUPX baseload was 268.50 EUR/MWh, which meant a record high of the past one and a half months on the Hungarian stock exchange.

The Hungarian system load decreased to 4491 MWh/h (-6.0%) in May compared to the previous month, which meant 38 MWh/h below the seasonal standard, while it was close to the level it had reached in the same period of the previous year. The decline in May is in line with the seasonal effects as the continuously increasing temperature is less able to raise consumption at this time of year.

The total Hungarian electricity production had not changed significantly from April to May, remaining around 3.4 GWh/h. On a more detailed level, the share of solar energy production had increased on a monthly basis, while the production of wind farms had declined significantly. The production of domestic solar power plants set a new monthly record as the average monthly production was around 0.48 GWh/h, which meant a 22.4% increase compared to the previous month, while the ascent is 37.3% on an annual basis. The share of domestic solar production in the energy mix ranked third behind nuclear and gas-fired power plantsin May. The production of the gas and lignite-fired power plants had not changed significantly compared to April while the production of Paks Nuclear Power Plant decreased slightly as its machine unit 7 was shut down for two days on 19 May and machine unit 8 was also shut down on 21 May; the return of the latter was modified a number of times during the month and it will not return to the system until June 19th based on current information.

The hydrological situation deteriorated in the region in May due to extremely low rainfall. Low rainfall not only occurred during May but the amount of precipitation has been far less than the usual throughout the year, making the period of January–May the fifth driest since 1901. As a result, the production of flow-through power plants declined in both Romania and Serbia. The water flow of the Danube was significantly lower than the usual water flows (7250 m^3/s) at this time of the year, dropping under 5000 m^3/s for a significant part of the month while it was 4554 m^3/s on average.

As for the expectations, we expect a highly volatile market at high price levels in June, especially given the fact that the embargo on the natural gas market, which is more difficult to implement than the oil market embargo adopted at the end of May, is still on the table.

OIL, NATURAL GAS AND FOREIGN EXCHANGE MARKET NEWS

Oil markets strengthened significantly in May. The North American West Texas Intermediate (WTI) started the month at 105.17 USD/barrel and increased to the price level of 114.67 USD/barrel after an ascending tendency with only minor corrections throughout the month. The price of the North Sea Brent oil, dominant in Europe, followed a similar course as its price rose from 107.58 to 122.84 USD/barrel. China stands behind the weakness of the demand side as the Chinese demand for oil has dropped in recent months due to the restrictions introduced as a consequence of the latest wave of the coronavirus epidemic.

On the supply side, there are concerns about a significant decline in Russian production due to the EU sanctions imposed against Russia. Up till now 36 percent of the oil imports of the EU have come from Russia; however, the oil embargo immediately applies to two-thirds of oil imports from Russia according to the sanctions adopted at the end of the month. The President of the European Commission, President Ursula von der Leyen, said the restrictive measures will have reduced oil trade from Russia to the European Union by about 90 percent by the end of the year. The prohibition does not yet apply to crude oil transported via the pipeline so Hungary, Slovakia and the Czech Republic can continue to buy Russian oil but the countries concerned have committed to closing the northern wing of the Friendship oil pipeline by the end of the year. In early June OPEC+ agreed to increase its oil supply by about 50 percent to compensate for missing Russian volumes. Thus its leaders approved an increase in oil production by 648,000 barrels per day for July and August, a significant increase from the previous monthly level of 432,000 barrels per day.

The decline continued in European natural gas markets in May. In the dominant Dutch TTF market, the day-ahead price for natural gas decreased from 96,225 EUR/MWh at the beginning of the month to 85.9 EUR/MWh at the end of the month.

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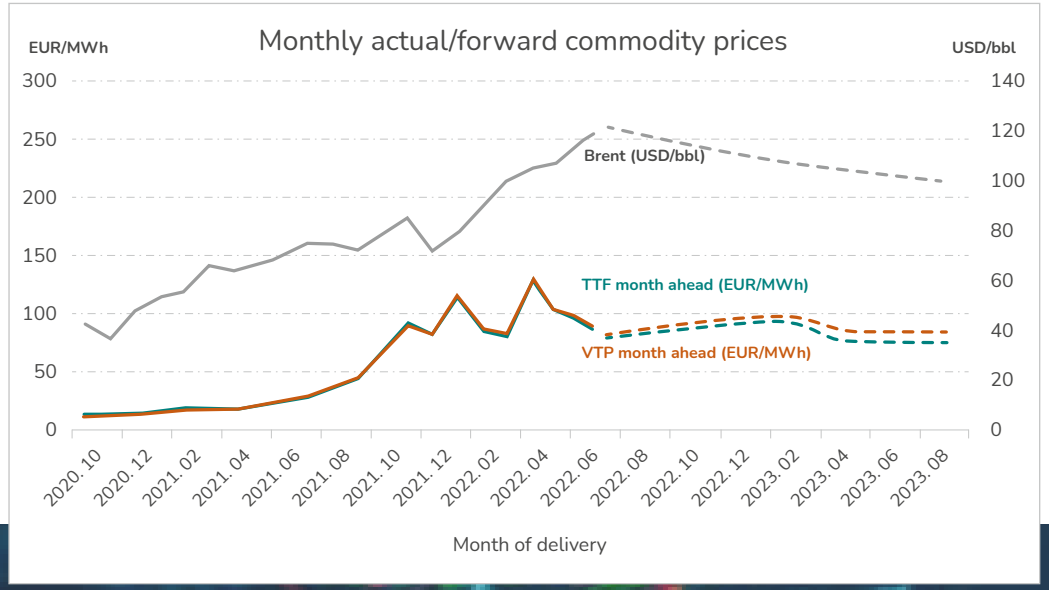

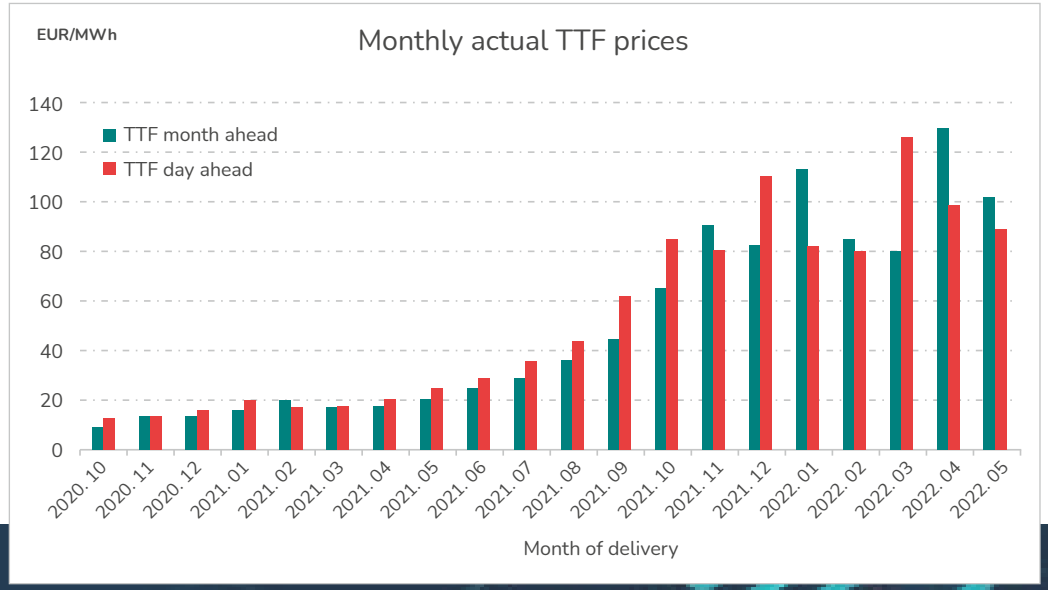

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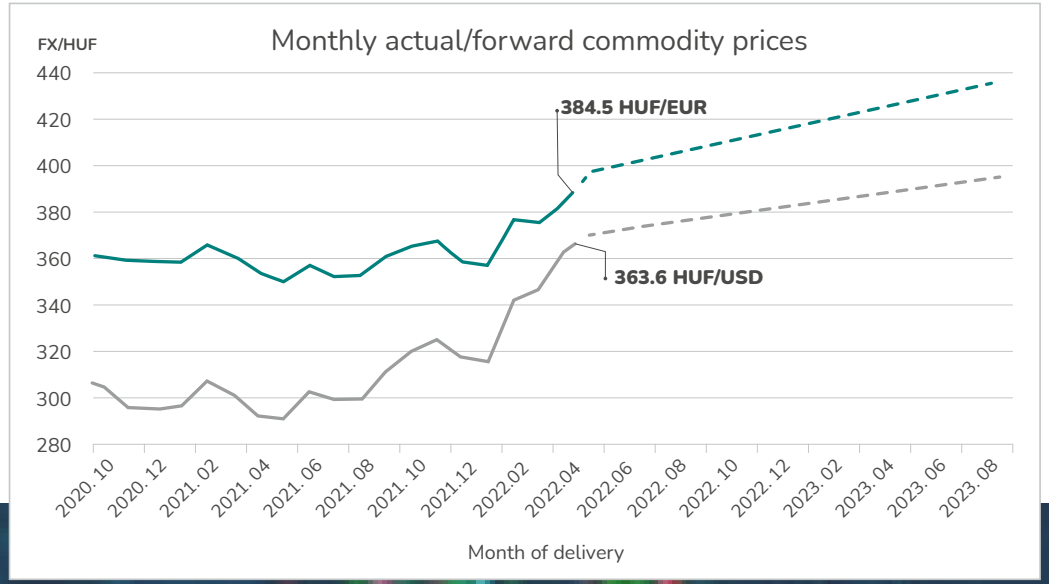
On average, the Hungarian market was 7.75 EUR/MWh more expensive than the Dutch prices of the same maturity during the period under review. Russian and Norwegian natural gas supplies have been largely stable and uninterrupted in the recent period. The decline of the exchange rate is caused by the decline in European demand due to warm weather and the short-term increase in supply in the LNG market due to the reorganisation caused by the weakening Asian demand.

The European Commission continues to explore the possibility of avoiding Russian natural gas; therefore, Ursula von der Leyen intends to negotiate with Middle Eastern countries to boost natural gas imports from the Eastern Mediterranean in order to facilitate disconnection from Russian gas imports. The two main target countries are Egypt and Israel; the former presently exports relatively small amounts of natural gas to the EU, but Israel is already a major gas exporter; however, both countries expect to increase production and exports in the coming years.



The forint received a huge blow in May. The exchange rate started the month at 378.14, from where the domestic currency weakened to the level of 394.05 by the end of May; the course evolved similarly against the dollar as the forint weakened from 359.14 to 367.31. According to the official statistics data, inflation was already 10.7% in May, in response to which the Hungarian National Bank was forced to increase the base interest rate to 5.90% on 1st June 2022. The accelerating inflation was due to the high international commodity and energy prices, failing global supply chains, the prolonged Russian-Ukrainian conflict and the deteriorating global economic outlooks, which could only slightly be offset by domestic official price caps introduced on fuel and basic food products. However, raising interest rates is a double-edged sword as it severely brakes down the real economy and discourages investments, the signs of which are already visible in the real estate market.

Due to the budgetary and commercial impacts of the coronavirus pandemic and the war in Ukraine, there may be a record high number of economies in the global emerging region that struggle with both high government deficit and current account deficit this year. So far in 2022 the international rating agency Fitch Ratings has downgraded the sovereign ratings of nine economies in the emerging regions; this is more than the number of downgrades carried out all last year. Not only has there been strong pressure in emerging economies but there has also been little economic growth in the United States this year, which was coupled by strong price increases.
The Federal Reserve, acting as the U.S. central bank, is now starting to reduce its USD 9 trillion assets in its reserves, as well as raising interest rates in order to fight inflation levels not seen in the U.S. for more than 40 years. Meanwhile, the European Central Bank is also forced to follow a course interest rate hikes while adjusting its economic growth outlook downwards and its inflation forecast upwards. The dollar strengthened further against the euro in May; the rate was 1.10504 at the beginning of the month and the greenback rate was 1.0733 by the end of the month.

EFFECTIVE COOPERATION – MVM NEXT ZRT. AND MVM ESCO ZRT.

In April we launched our article series in which we offer an insight behind the scenes and present our cooperation with our individual member companies. This month we asked Imre Fodor, the Corporate Sales Director of MVM Next Energiakereskedelmi Zrt., and Csaba Attila Kiss, the CEO of MVM ESCO Zrt., about the relationship between MVM Next and MVM ESCO.

– How can the two companies cooperate? What does one offer the other and how do they help each other?

Imre Fodor: The managers of the Corporate Sales Directorate "fight" for the approval of customers in the competitive market. As the business processes in this field have become more complex over the years, so our clientele has become better-versed.
Today a business negotiation is no longer just about the price or the security of supply. If we provide energy for the operation of a business, it means a relationship of trust; thus, in addition to the possible optimisation of energy costs, consulting the options of financing also becomes inevitable. Our cooperation with MVM ESCO responds to these expectations, which is why the availability of additional services and energy efficiency investments is becoming an increasingly exciting topic in addition to our basic products.

Csaba Attila Kiss: We laid the foundations of the cooperation between the two companies at the start of MVM ESCO. The dialogue was continuous and open at all levels, which is essential when a new business or service is launched. MVM ESCO has received immense professional support and encouragement from MVM Next and, in return, MVM ESCO has involved the employees of MVM Next in the development of its offers for customers. Whenever it was possible, we also held negotiations with the clients together. The division of work between the two companies was very simple: MVM ESCO relies on the sales network of MVM Next while MVM Next increases its competitive advantage by supplementing its offers with an investment service linked to financing.

– How can you harmonise your processes?

CS. A. K. : When we integrate a new company into the operations of MVM Group, in particular if the companies work with a common customer base in parallel, it is of high significance that the companies' processes, including their decision-making processes, are aligned as this is the only way to ensure that employees can cooperate smoothly. However, there is no hard and fast recipe to do this as everything depends on the ability of decision makers to have an open and sincere dialogue even on topics where a conflict of interest may arise. In our case, this is exactly what happened, which is why we are very grateful to Imre and his entire team.

Csaba Attila Kiss and Imre Fodor

I. F.: In short: it is not simple. All such harmonisation processes are determined by existing and assumed customer needs. We have to integrate these needs into the extremely diverse operations of MVM Group: examining the existing operations and processes, as well as reconciling short-term and long-term returns because our profitability is not an end in itself; it is at least as important for our customers and owners who want to trust in us and in our operation.
I agree with Csaba; it is worth dealing with this so that at the end of the day we can say along with the customers that it was worth it.

– How can you help each other's work with regards to processes, tasks and professional challenges?

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I. F.: I think I could best illustrate this with an analogy: the managers of the corporate area are the waiters; they are the faces of our restaurant. They communicate with the guest, explain the menu to them, recommend dishes as, fortunately, most of our customers are satisfied regulars, so we know their needs. However there are a lot of people working in the background, too, e.g. in the kitchen, in their own fields, so that this offer can stay up-to-date, high-quality and reliable. As a result, we are constantly expanding our menu in order to be prepared for such presently non-existent customer needs that we can already predict e.g. from market trends. I will go further: it is indeed our job to shape these needs in order to keep serving the interests of our customers in the future.

CS. A. K.: When an investment is prepared, it is essential that we know all the expectations of the client or else our work will have no effect. No one can read the thoughts of our customers better than the sales staff of MVM Next so it is not worth starting a complex project without involving them. On the other hand, we cannot underestimate the fact that, if MVM ESCO successfully implements an energy efficiency investment with a customer and enters into a contractual relationship with it for up to 10 years, the customer will specifically strive to source its energy needs from MVM Next. What is more, our experience shows that customers find it reassuring if, in addition to MVM ESCO, a representative of Next is also involved in the preparation of the investments as this way they feel that their energy supply is secure, despite the fact that a drastic change may occur in the energy supply system.

The whole interview can be read **here**

MVM GROUP TO CONSTRUCT 28 NEW SOLAR POWER STATIONS THROUGHOUT THE COUNTRY

MVM Zöld Generáció Kft. is building 28 photovoltaic power stations nationwide as part of an investment of around 7 billion forints.

The opening event of the project was held in Oroszlány as the highest number of 0.5 MW units will be installed there; 15 in the slurry reservoir of the power plant in an area that cannot be used in agriculture. The power plants may generate 69,000 GJ of electricity a year, which will be enough to meet the annual electricity needs of more than 8,000 households, while the country's CO_2 emissions may be reduced by 19,000 tons a year. The nominal capacity of the system will be 13.911 MW. The total planned cost of the investment is HUF 6.7 billion, for which the European Union's Environmental and Energy Efficiency Operational Programme provides a non-refundable grant of HUF 2.098 billion. Each power plant unit will occupy an area of one and a half hectares.

MVM Zöld Generáció Kft., the subsidiary of MVM Group dealing with renewable energy production, typically builds the sites in the form of brownfield investment on unused power plant areas and on properties leased from municipal governments. The power plants will be housed by ten towns: Berettyóújfalu, Dánszentmiklós, Dorog, Kunszállás, Nyírcsaholy, Oroszlány (15 units), Pécs (5 units), Pusztaföldvár, Sükösd and Vésztő. According to the plans, the power plants can begin commercial operation in summer 2023, with a projected lifespan of 25 years. The project will be implemented as part of the Széchenyi 2020 programme.

MVM LUMEN MODERNISES PUBLIC LIGHTING IN MAKÓ

MVM Lumen Fényszolgáltató Kft. installed a total of 459 new, modern and energy-efficient public lighting units in the period of three months, thus modernising and expanding the public lighting network of Makó.

The public lighting network of Makó required modernisation regarding its operation and cost efficiency. Therefore, the municipal government of the city decided to develop local public lighting and entrusted the task to MVM Lumen.

In the first phase of the work, MVM Lumen Kft. modernised 342 public lighting luminaires while the public lighting network of the city was also expanded with further 79 luminaires. In the second phase, completed in the first half of June, around 25 public lighting luminaires were modernised and 13 new luminaires were installed in Makó. Modernisation was performed at a total of 367 locations and 92 new locations received public lighting in different parts of the city during the two phases. As part of the development and expansion of modern public lighting, the company has installed state-of-the-art, energy-efficient luminaires made with LED technology in the locations concerned.

The main goal of the modernisation was to improve the quality of public lighting and to achieve cost-effectiveness of operation. In the locations where the company replaced the luminaires, the amount of energy used for public lighting has decreased, while the lighting in public areas has improved significantly.

MVM Lumen Kft. is planning to develop the public lighting of other towns throughout the country in the future.

DOMESTIC GAS STORAGE FACILITIES FILLED CONTINUOUSLY

According to the Hungarian Energy and Public Utilities Regulatory Authority (MEKH), domestic gas storage facilities are currently being filled. The amount of emergency natural gas reserves is also on the increase to ensure the security of supply.

As communicated by the Hungarian Energy and Public Utilities Regulatory Authority, the volume of natural gas was 1.599 billion cubic meters in Hungarian underground gas storage facilities in mid-May, which means they were 25.27 percent full. Compared to mid-April, the stored volume had increased by 383 million cubic meters.

MEKH decides on the amount of natural gas reserves to be stored directly or indirectly by the universal service provider in the domestic natural gas storage facilities, taking into account the highest winter consumption measured in the service area of the given provider in the last 120 months. The universal service provider is to achieve the storage of 1.87 billion cubic meters of natural gas by this autumn.

In order to ensure security of supply, the amount of emergency natural gas reserves also increases from 900 million cubic meters to 1.2 billion cubic meters. The missing 300 million cubic meters are to be stored by 1st October. The Hungarian storage licensees operate storage facilities in Hajdúszoboszló, Zsana, Pusztaederics, Kardoskút and Algyő. The total Hungarian storage capacity is 6.33 billion cubic meters.

The diagram showing the development of the filling level of natural gas storage facilities in Hungary can be viewed **here**.

THE WINNERS OF THE 2022 MVM EDISON STARTUP COMPETITION ANNOUNCED

This year's competitors were more innovative than ever.

MVM Group believes that start-up communities are important drivers of innovative solutions. MVM Edison startup competition was launched in 2016 in order to support this and it has been held every year since. The goal this year was once again that the competition should embrace innovative ideas in the fields of energy, homes and cities of the future, digital infrastructure, fintech revolutionising finances, as well as customer service and product innovation, with a separate "miscellaneous" category. The organisers were inviting ideas offering solutions to real problems while making users' everyday life easier and turning the energy sector more efficient.

Photo: Misi Kondella

A professional panel selected the 11 most promising out of the 186 applications received in 2022, with 7 teams in the early stage of the idea phase and 4 teams in the mature phase reaching the finals. Before the competition held in May, the finalists participated in a two-month professional mentoring programme, where they were assisted by experts from MVM Smart Future Lab, MVM Group's incubator company. Among other things, they learned about the methodology of business planning and rapid prototype planning, as well as the tricks of managing patents. Another important goal was that the inventors would receive help to develop their ideas and actually enter the market.

As in recent years, the finals of MVM Edison were held online and watched live on MVM's video-sharing site this year.

In the idea phase, the platform of Diverzum connecting students with their favourite brands finished on the highest step of the podium, with the second position taken by MikroKert, realising automated home gardening, and the bronze medal was received by the team of GreenMap encouraging smart waste management.

Out of the developments of mature phase, CityRoom, the mobile phone escape room application interactively introducing cities ranked first, followed by RoboKaland, which creates an eco-conscious digital community workshop for young people in the second place and the third position was achieved by the team of Green Assistance, providing assistance service to electric cars that run out of power.

Based on the decision brought by the professional panel, winners of the mature and idea phases received the primary award of 5 million forints while the teams finishing in the second and third positions won 3 or 1 million forints, respectively. Besides, the teams reaching one of the top three positions in the finals also have the opportunity to win a seed investment of up to 50 million forints thanks to MVM Smart Future Lab.

You can view the finals at the YouTube channel of MVM.

Further information is available on the website mvmedison.hu.

Photo: Misi Kondella

SUMMER PROGRAMME OFFER

The summer months once again offer numerous cultural programmes that are realised thanks to the support by MVM.

Between 27th June and 3rd July audiences are welcome at fifty concerts held at five locations at the **Gastroblues Festival in Paks.** The event is also supported by MVM Paksi Atomerőmű Zrt.

Between 11th and 16th July this year's concerts of the renowned **VeszprémFest** are organised. The main sponsor of the event is MVM Next.

In July and August the music festival titled **Klassz a pARTon** will entertain the audiences in love with or wishing to familiarise with classical music on the banks of Lake Balaton. Then the **31st Zemplén Festival** will open its gates in August.

The programmes titled **Museum+** of the Museum of Fine Arts continue, focusing on the theme of the natural environment: how we can behave responsibly and how sustainability can interweave our everyday lives.

The **Borszerda** events of the Hungarian National Gallery will also welcome their visitors in the summer months, offering them not only guided tours of the exhibitions but also fine wines.