MVM NEXT

BUSINESS NEWS

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MODEL PROJECT IN KESZTHELY: ENERGY COMMUNITY

ELECTRICITY MARKET NEWS

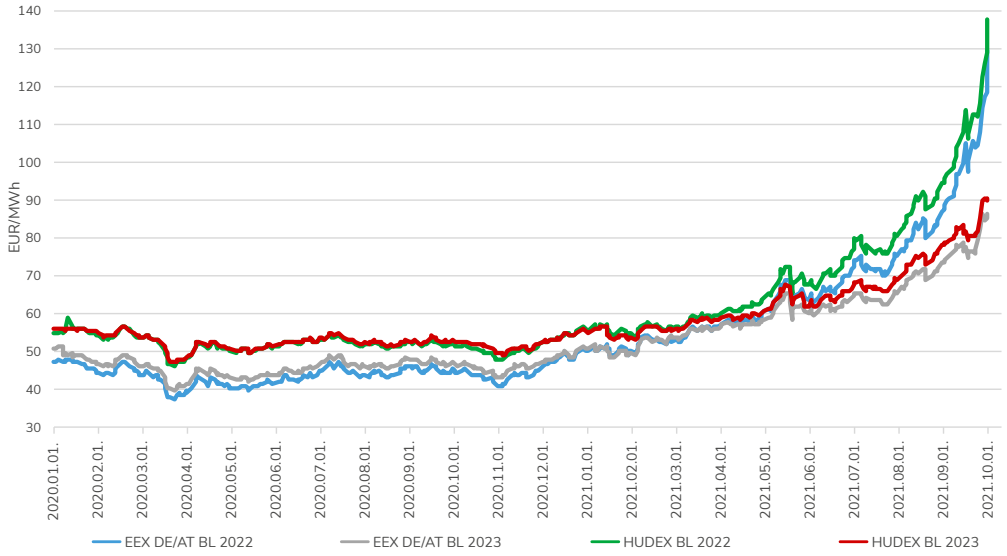
Forward market:

The prices of Hungarian and German benchmark products kept rising sharply in the futures markets in September, reaching record high levels once again. The price rise was caused by significant increases in the price of fuels, in particular that of natural gas, growing demand coupled with declining supply, and invariably high EUA quota prices.

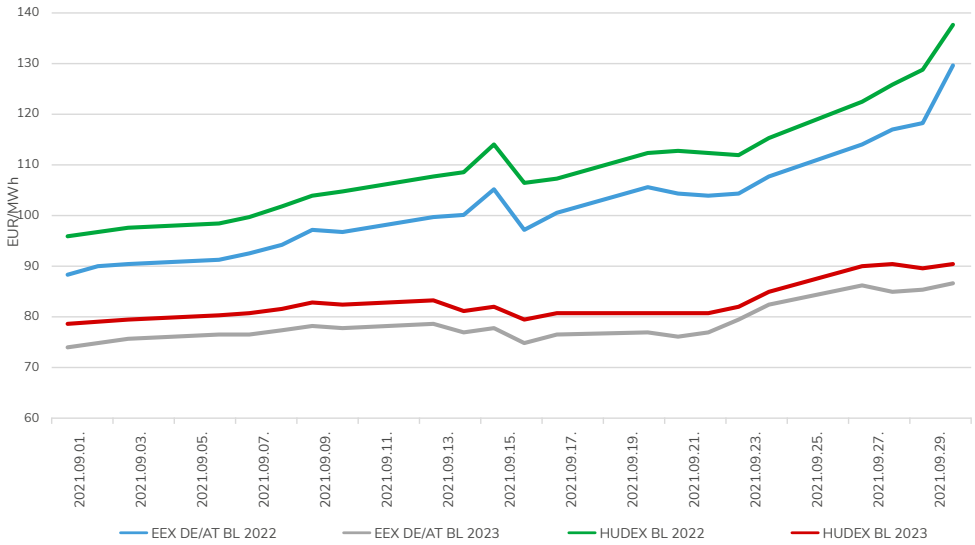
Compared to the baseload price levels seen in early September (Hungarian 95.60 EUR/MWh, German 88.33 EUR/MWh), the price increase continued. The Hungarian benchmark closed the month at 137.87 EUR/MWh, while the German annual product finished at 129.64 EUR/MWh.

The spread between the two closing prices grew slightly, the difference between the two products being 8.23 EUR/MWh at the end of the month.

HUDEX/EEX DE/AT YR-22 and YR-23 baseload products



HUDEX/EEX DE/AT YR-22 and YR-23 baseload products / September 2021



The main contract of the EUA closed September at 61.74 EUR/t, 0.98 EUR/t or 1.6 percent higher than the August closing price.

Events in the natural gas market played the greatest role in the rise in electricity prices: besides low LNG deliveries, Russian gas supplies fell short of expectations, the fill level of European gas storage facilities remained low; moreover, tensions between the EU and Russia kept intensifying in the debate over the North Stream 2 pipeline.

The significant price movements characteristic of other elements of the energy mix, previously also experienced in the case of the EUA, were not present, and the contract fluctuated in the range of 60-65 EUR/t throughout the month.

The price of short-term products also kept rising. The price of the Hungarian product in October 2021 grew by 42.90 EUR/MWh compared to early September, and ended up at 164.27 EUR/MWh.

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The price of the German equivalent of the product also kept rising, reaching 160.68 EUR/MWh at the end of September.
As we see it, the evolvement of gas market prices will continue to play a decisive role for long-term prices. The prospects also depend on this, but whether more natural gas can be sourced in the market, which is also of growing political interest in Europe, or not (which may lead to intolerably higy prices, bankruptcies, factory close-downs, drastically falling demand and another wave of recession), long-term (HU Y+1 baseload) prices cannot remain permanently at the price level of around 160-180 EUR/MWh, which has been seen in intraday trading in recent weeks.

Spot market

Due to the drastic rise in raw material prices, never-before-seen monthly average prices occurred at stock exchanges in September.
At German EPEX, records were broken daily in September, with the baseload price finally rising to 128.37 EUR/MWh after a monthly increase of 45.68 EUR/MWh. Compared to August, the average domestic price grew by 26.08 EUR/MWh to 135.10 EUR/MWh, which meant the highest ever monthly average price in Hungary, similarly to the German stock exchange.
Compared to August, German wind power production, a determining factor for the whole of Europe, declined significantly, leading to the higher weight of increasingly expensive fossil fuel production, raising prices even further. The increase in EUA quota prices was less spectacular: after a hike in early September, it did not exceed EUR 65/t during the rest of the month.The Hungarian network load hardly changed in September on the previous month (3.30 TWh consumption); we saw a minimal increase (0.2%). In this part of the year temperature plays a much smaller role in the development of consumption as it is not so cold as to increase the heating demand, while the operation of air conditioning equipment is no longer necessary either.
Low precipitation levels worsened the hydrological situation in the Balkans. Compared to the previous month, hydropower production in the Balkan countries kept declining. As forecast for October says dry weather will still dominate the area, we do not expect any improvement here.

Raw material prices will keep rising in early October, which will have a further price driving effect not only on futures markets but also on day-ahead markets. Nuclear power plant maintenance work also continues (Kozloduy – Bulgaria, Paks Nuclear Power Plant Block 2), further raising the already high domestic electricity prices.

NEW CEO HEADING MVM GROUP

Andrea Mager, Minister without Portfolio for the Management of National Assets, appointed Dr. Gábor Czepek to head MVM Group as of 1st October 2021. György Kóbor, former President and CEO, will leave the company by mutual agreement.

Dr. Gábor Czepek asced as the CEO of Szerencsejáték Zrt. from December 18, 2018. The organizational structure of the national lottery company was renewed under his leadership, primarily by shifting to a more efficient and competitive sales organisation model. In the past almost three years, the company's sales revenue has kept growing by almost 40% in total, expectedly reaching a record high gross sales revenue of more than HUF 670 billion by the end of 2021. Led by him, Szerencsejáték Zrt. managed the negative effects of the pandemic with success and introduced the unique Network Protection and Development Action Plan, which provided the nearly 2,100 micro-entrepreneur lottery partners of the company and thus 10,000 employees with additional funds to cope with the difficulties caused by the pandemic. Under the leadership of Dr. Gábor Czepek, the company, the employer of nearly 1,800 people, won the awards of the Best Workplace and the Disability Friendly Workplace.
Under the helm of **György Kóbor,** MVM achieved unique results in both the domestic and regional markets. Following the construction of NKM National Public Utilities and its integration into MVM Group, the company became a full-scale energy provider. With the leadership of György Kóbor, the new business strategy of the group was developed and introduced, the sales revenue increased by almost 60%, the number of customers reached 8 million and the number of employees reached 18 thousand. He is associated with the diversification of the financing of the MVM Group, the acquisition of ÉMÁSZ under the implementation of the contract concluded with E.ON Group, and of Innogy Česká Republika, as well as the receipt of international credit ratings and the preparation of MVM for listing. He contributed to the creation of a new long-term Russian gas contract and the acquisition of the LNG terminal in Croatia. Thanks to his professional work, MVM is the 4th largest company in Hungary and the 13th largest in Central and Eastern Europe today, as well as an unavoidable economic player in the region.

OIL, NATURAL GAS AND FOREIGN EXCHANGE MARKET NEWS AND EVENTS

The oil market experienced a steady rise in September. Both the North American West Texas Intermediate (WTI) and the North Sea Brent-type rates grew during the period under review, with both prices reaching a 3-year record in early autumn. WTI started at 68.59 USD/barrel in early September, from where prices hiked to 75.03 by the end of the month, and at the time of writing, the price of the raw material is already above 80 USD. Brent followed a similar pattern, starting the month at 71.59, from where it rose continuously to 78.52 by the end of the month, while in October the black gold was traded above 83 USD/barrel. The oil price increase was mainly caused by the limited supply because although the extended Organization of Petroleum Exporting Countries (OPEC+) is gradually increasing its production and plans to raise the limit by 400,000 barrels a day, this does not yet prove to be enough. In addition, the oil reserves in the US can be considered below average and shale oil producers have not yet returned to the market in large numbers. It may exert further pressure on prices that, in addition to the continuously increasing gas prices, the switch from natural gas to coal and even from natural gas to oil has begun, which means further additional demand. The price of Brent-type oil has risen by more than 50 percent since the beginning of the year or 90 percent in the past year. The trouble was worsened by Hurricane Ida, which limited oil and gas supplies in the Gulf of Mexico throughout September.

Fear and trembling dominated the natural gas market. The heating season now starts in the northern hemisphere and Europe's "natural gas shortage" has had a domino effect on global energy markets before the winter season. In early September the dominant Dutch TTF market was still at 49.675 EUR/MWh for the day-ahead price of natural gas, from where it exceeded 85.40 EUR/MWh by the end of the month. The craze continued in the first week of October, when the day-ahead prices were at a record high of 116 EUR/MWh (even reaching the level of 160 EUR/MWh during the day in the market).

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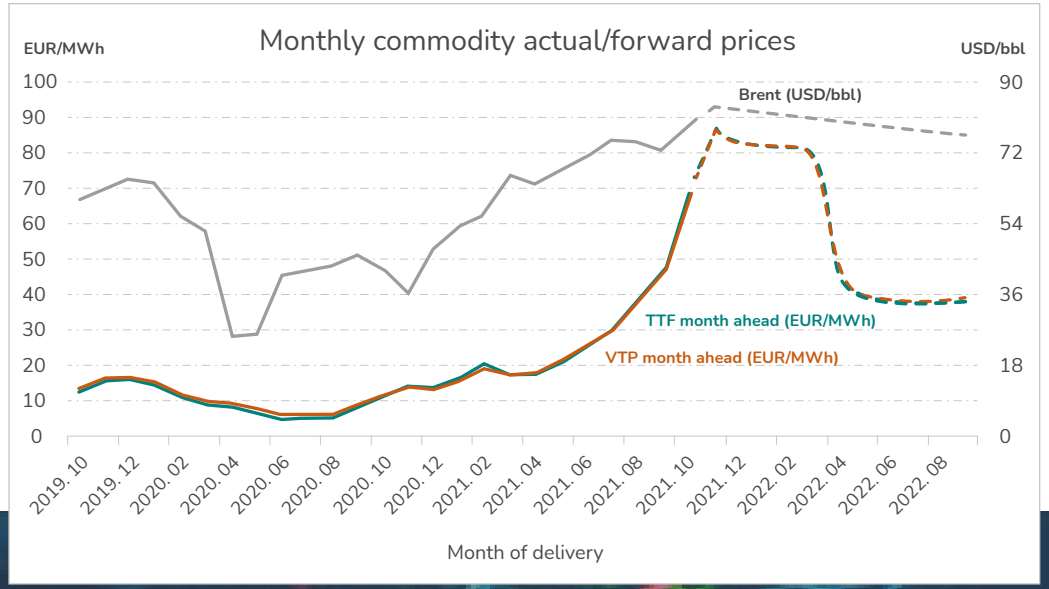

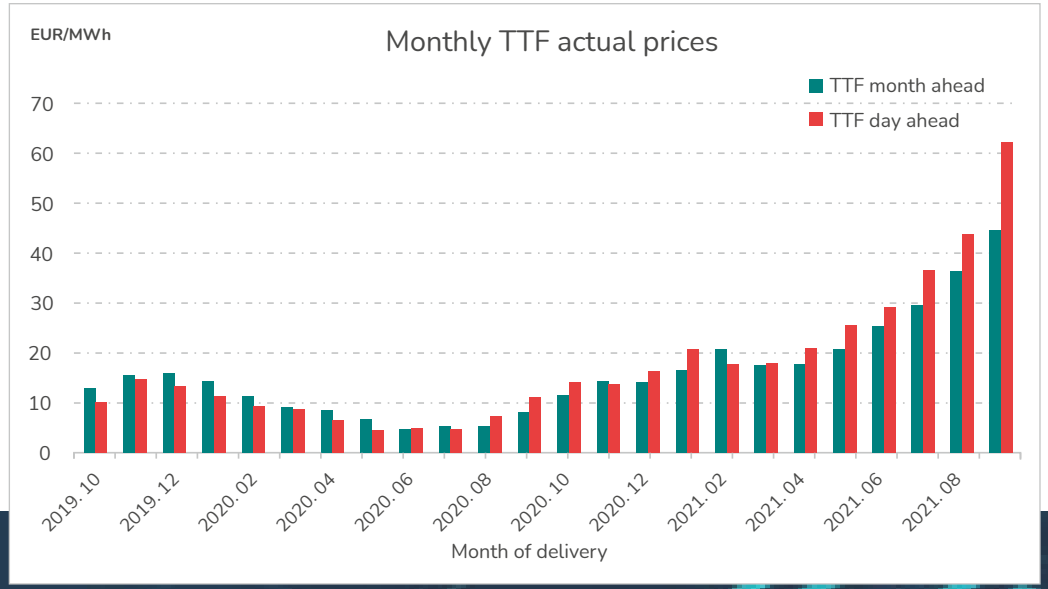

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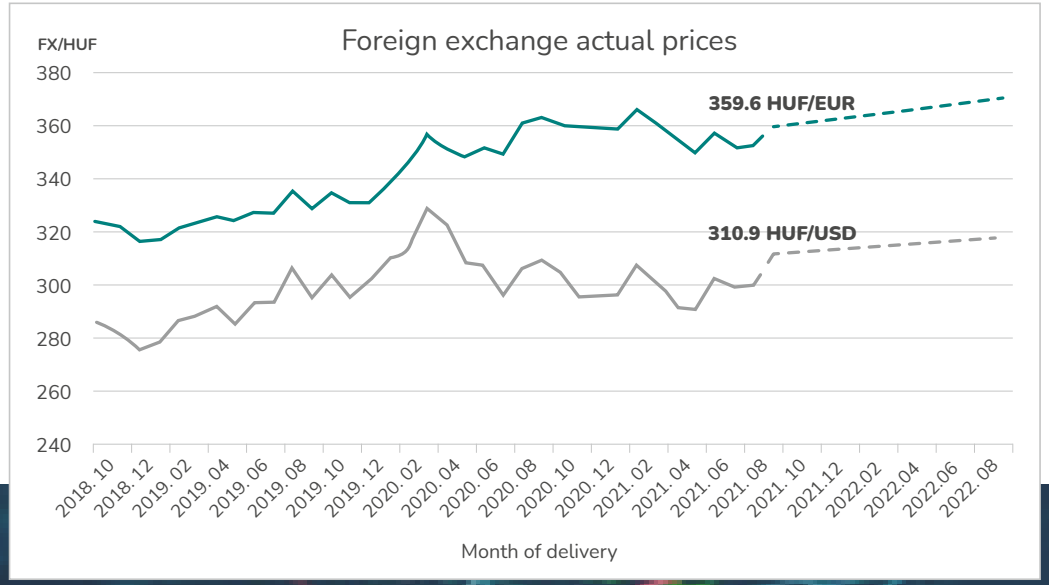
The gas futures averages for 2021/22 are also soaring: while they reached only 39.44 EUR/MWh in early September, they stood at 58.36 EUR/MWh by the end of the month, which means an increase of almost 20 euros in a month. Several factors can be identified behind the price change. On the one hand, the increase in demand in Asia is such that it can strongly absorb liquefied natural gas (LNG) from the world market, which affects Europe (and thus also Hungary). The price of Asian LNG has risen to more than 40 USD, the highest price ever (the rate of S&P Global Japan-Korea-Marker [JKM], which is increasingly used as a benchmark for Asian spot shipments). Another significant factor is that there have been serious issues about Nord Stream 2 in recent months, and the common EU policy has failed to resolve the dilemma. The third factor is the rise in CO_2 quota prices, with a significant impact on the EU's green energy transition.

The Hungarian National Bank (MNB) raised the key interest rate to a lesser extent than expected by 15 basis points in September, after the 30-basis-point tightening pace of recent months. This is probably because the repeated interest rate hikes could only achieve a temporary strengthening of the forint. Meanwhile, fluctuating inflation carries serious risks. Experts say government subsidies due this year and next year pose additional risks regarding the pace of price increases. In addition to the above negative effects, the upgrade of Moody's is a positive one. The credit rating agency's move was seen by many as a surprise; although there was a chance based on the positive outlook, the risks due to the coronavirus and high government spending supported maintaining the earlier rating. However, the upgrade had almost no effect on the exchange rate owing to the many effects against the forint. The exchange rate of the forint against the euro started at 348.43 in September and reached 360.52 by the end of the month. The exchange rate of the dollar against the forint was 294.88 early in September, from where it moved to 310.66 by the end of the month, thus the forint weakened by more than 5% against the dollar in one month.

The month of September was clearly about the strengthening of the dollar in the foreign exchange market as the US currency also strengthened against the euro by 2.2 percent. This was primarily due to the fact that, according to investors, the US Federal Reserve will start the policy of tightening sooner, and recently the Federal Reserve (Fed), acting as central US bank, has clearly stated that the asset purchase program is coming to an end. Regarding the Covid crisis, the Fed launched its asset purchase program in March 2020, under which it now buys 120 billion USD a month in bonds. Critics say the central bank has largely contributed to the price increase. The labour market situation is still worse than before the crisis and employment grows only slowly while inflation is high, the latter also posing a marked effect on European economies. The strengthening of the dollar is generally bad news for emerging market currencies as the US currency has become an important measure of market sentiment in recent years: when the sentiment worsens and risk-taking decreases, the dollar usually strengthens as a sort of safe haven. The EUR/USD exchange rate was only 1.1837 in early September but the market rate had risen to 1.1581 by the end of the month.



MVM GROUP TESTING TOMORROW'S ENERGY STORAGE FACILITIES

Three energy storage facilities of a total capacity of 2,000 kWh is tested on the network of MVM Démász.

Connecting solar energy production capacities to the grid means a significant extra task and cost for electricity network companies. The energy produced in this way has to be received and distributed without letting the level of supply decrease or any changes be caused to consumers by the introduction of renewable electricity into the network. The production of weather-dependent renewable units, hardly predictable in many cases, becomes even more volatile due to the effects of climate change, which poses a challenge to ensuring a balanced service. Meanwhile, the electricity consumption is constantly rising in the world and in Hungary. Energy storage may be one of the most effective solutions to the problem; however, the large-scale application of technologies available in theory or practice needs to be preceded by thorough tests.

For this purpose, MVM Démász Áramhálózati Kft. has launched three energy storage pilot projects. The goal of the pilot systems applied in the network company of the MVM Group is to improve the quality of service and to stabilise the voltage of electricity networks.

Two energy storage facilities of the company are connected to a low-voltage (0.4 kV) network and one is linked to a medium-voltage (22 kV) network. The low-voltage storage facilities, units with a capacity of 30 kW and 140 kWh each, were constructed in Kecel and Zsombó. Their goal is to stabilise the network anomaly caused by an increasing number of small household-sized power plants connected to the low-voltage network. The medium-voltage storage facility was built on the outskirts of Földeák, with the capacity of 500 kW and 1600 kWh, through which the network energy peaks of the more powerful solar power plants can be smoothed.

"The storage facilities are built on an experimental basis for the moment and our company will decide on their wider application based on the collection and evaluation of operational data. The results so far are encouraging and their wider expansion can be realised in case of the availability of appropriate financing and a change in the market environment. They can definitely mean a breakthrough in renewable production as well" – said Zoltán Alkér, Director for Infrastructure of MVM Zrt.

The innovative pilot project of MVM presents serious experiences to the entire industry in the coming period.

MVM PARTNER KEEPS EXPANDING IN ABROAD

MVM Partner Zrt. has entered three new foreign electricity markets

As part of the expansion strategy it started a decade ago, the company extended its operations in the Belgian, Dutch and Greek electricity markets from the end of August. Thus MVM Partner Zrt., the electricity wholesaler of MVM Group, is now present in the electricity markets of 20 European countries and 11 electricity exchanges including the Hungarian market.

The sales volume of MVM Partner realised on international markets already exceeded 47 terawatt hours (TWh) in 2020, forming almost 40 percent of the total annual trading volume of 122 TWh at the time.

The company has been expanding in regional markets since 2011. It first entered the markets of Germany and the neighbouring countries in Central and Eastern Europe (Austria, Slovakia, Romania, Serbia, Croatia and Slovenia) to reach the French, Czech, Polish, Bulgarian and North Macedonian markets by 2015. The company's second wave of market expansion can be put down to 2018, after which MVM Partner also appeared in the Italian, Swiss, Montenegrin and Spanish markets, followed by its appearance in the Belgian, Dutch and Greek markets this year.

The value of trading companies with a large market presence has grown as a result of European market integration, the spread of renewable energy and climate change. International trade has also become a primary factor in exploiting the beneficial business opportunities resulting from periodic price differences between countries and in the management

MODEL PROJECT IN KESZTHELY: ENERGY COMMUNITY

MVM Optimum Zrt. and the municipal government, in cooperation with the local population and the SMEs and supported by the Ministry of Innovation and Technology, creates one of Hungary's first energy communities operating with a solar park and battery energy storage facility in Keszthely.

An EU law has made it possible to set up non-profit energy communities. The main goal of the energy community is to ensure its members the possibility to purchase renewable, as well as various flexibility and regulatory services for the electricity grid, thus presenting quantifiable financial, energy efficiency, social and environmental benefits to its members. Besides, participants in the energy community ensure themselves the electricity self-sufficiently where possible, or may even sell it, using the infrastructure of the energy community.

MVM Optimum Zrt. obtained funding at a tender by the Ministry of Innovation and Technology (ITM) for the development of a renewable energy production and storage system and energy community consisting of a solar park and energy storage. MVM Optimum and the Municipal Government of Keszthely concluded a cooperation agreement to implement the model project (2020-3.1.4-ZFR-EKM-2020-00003), so the facility will be built on the outskirts of Keszthely in the area provided by the municipality. The pioneering project provides an opportunity and assistance to achieve the city's climate strategy goals. Given its innovative content, the project also provides the city with the knowledge needed to obtain additional funding through tenders and subsidies.

The energy community to be established under the project will be implemented with the involvement of 20 household users, 5 small and medium enterprises and the municipal government of Keszthely. Renewable energy is provided for the energy community by a community solar park and the connected battery. The electricity generation and storage systems are connected to a smart grid that makes it possible to use the produced renewable energy at the appropriate time, which may lead to the reduction of energy costs.

ITM provides more than HUF 235 million in support for the implementation of the model project, while the company participates with its own funding of HUF 169 million in the construction of the solar park and the battery capacity. During the pilot project, which runs until March 2023, a business model will also be developed as to how an emerging energy community can be created and operated.

The MVM Optimum pilot project is of paramount importance for MVM Group as it strives to promote such innovative and guiding investments as a large domestic energy company, thus facilitating the transition to a sustainable future.

The agreement was signed by CEO Ádám Szörényi, Mayor Bálint Nagy and Smart City and Energy Community Director Krisztián Huber

THE NEW EKR CATALOGUE LARGELY HELPS THE FULFILMENT OF ENERGY SAVING OBLIGATIONS

The president of the Hungarian Energy and Utilities Regulatory Authority has published the list of energy efficiency measures based on the authorisation of the act on energy efficiency.

Hungary introduced an Energy Efficiency Obligation System (EKR) as of 1st January 2021. Under the plans, the system is to contribute about a quarter of the new end-user energy savings required annually until 2030 to realise the national energy efficiency target. The EKR catalogue will make it easier to calculate recognisable energy savings and faster to announce the implemented investments and measures. The costs and risks of the obliged parties and the certification bodies will already be lower this year as the recognisable savings are defined and the required documentation is described.

The EKR catalogue lists such types of measures that can be recognised in a simplified way that may contribute to the achievement of end-user energy savings. The data sheets for each type of measure contain, among others, a precise description of the measure; the method and content of recording the initial state and the state following the measure; recognisable lifetime and the extend of obsolescence; the description of the performance factors and the principles of their calculation, the formula for calculating the annual savings; the documents to be submitted and other relevant information in support settlement.

The list of measures is based on Annex 1 to the MEKH Decree 17/2020 (XII.21.) on the provision of data on end-user energy savings. (XII. 21.).

The legal regulation can be accessed by clicking here.

NIGHT OF POWER PLANTS 2021

Power plants and heating plants open to the public at 36 locations countrywide at this year's Night of Power Plants.

By presenting the behind-the-scenes secrets of energy and district heating production, the goal of the event organised by the Hungarian Energy and Utilities Regulatory Authority (MEKH) on 8th October is to draw attention to the necessity of managing our resources wisely for the protection of our environment.

At the opening of the event, Zsolt Scherer, spokesman for MEKH, said at the Information and Visitor Center of Paks Nuclear Power Plant that about 3,000 people have registered for the free program nationwide this year. The Night of Power Plants is not only about technology but also about sustainable environment and the conscious user. If we learn about the processes of energy production, we may treat our energy sources more cleverly and carefully, which will also protect our environment, emphasised the MEKH spokesman.

Visitors were greeted with a number of interesting programs and professionally guided tours at each venue, where they could also see the gigantic equipment up close. They could get an insight into the processes of energy production, visit power plants using nuclear, biomass, waste, lignite, solar or even hydro-based technology. From this year onwards, the Day of District Heating and the Night of Power Plants are closely linked so visitors could also learn about the operation of district heating plants.

Of course, MVM also participated in the event. On the Night of the Power Plants, Bakony Gas Turbine Power Plant, North Buda Cogeneration Heating Power Plant, Litér Gas Turbine Power Plant and Sajószöged Gas Turbine Quick Start Power Plant of MVM Balance Zrt. could be visited; as well as Mátra Power Plant of MVM Mátra Energia Zrt.; Combined Cycle Small Power Plant, Gas Engine Small Power Plant and Heating Plant of MVM MIFŐ; as well as MVM Paks Nuclear Power Plant.

FOUR NEW NAMES ON THE WALL OF GLORY OF ETERNAL CHAMPIONS

Hungarian Canoe Federation, receiving key support from MVM, has celebrated its best athletes.

Four new names have been added to the wall of glory of the Hungarian Canoe Federation, where they wish to commemorate their eternal champions. The title can be awarded to anyone who obtains at least five World Championship titles or a gold medal at the Olympics or Paralympics. Four athletes have succeeded in this with the conclusion of the Olympic Games in Tokyo.

This year Bálint Kopasz, Sándor Tótka and Anna Kárász, as well as Paralympic gold medallist Pál Péter Kiss are to be inducted to the wall of glory, and the five rings were placed on the marble plaque next to the name of Dóra Bodonyi, already an eternal champion.
According to Gábor Schmidt, president of the Canoe Federation, the Tokyo Olympics meant the association's second most successful performance. The athletes collected three gold, two silver and a bronze medal. The first Paralympic gold was also won in Tokyo. There are now 58 names on the wall of eternal champions.

Another sponsorship contract was also signed at the ceremony: MVM continues to support the work of the Hungarian Canoe Federation and the preparation of its excellent athletes.

FINA WORLD CUP

Members of the Hungarian National Swimming Team competed excellently at the FINA World Cup organised at Duna Arena on 7-9th October.

Our athletes, competing before home spectators at the event of excellent atmosphere, obtained a total of 15 medals.
As a key sponsor of the Hungarian Swimming Association, MVM Zrt. is proud of each Hungarian medallist, finalist and participant and we wish lots of success for their further preparation and races!