

# REKK POLICY BRIEF

01  
2021

FEBRUARY 2021

BORBÁLA TAKÁCSNÉ TÓTH

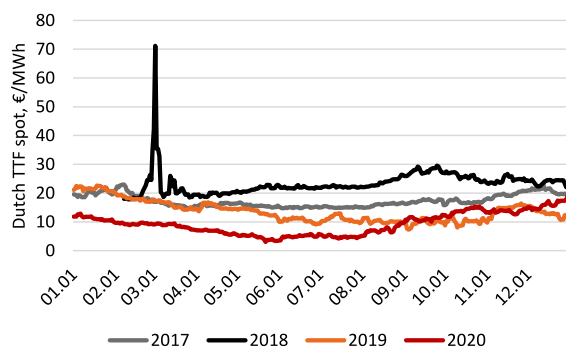
## GLOBAL, EUROPEAN AND HUNGARIAN GAS MARKETS IN 2020 AND EXPECTATIONS FOR 2021

*Key stakeholders of the gas industry elaborated the events of 2020 in the natural gas markets, and discussed the challenges of 2021.*

**Péter Kotek**, *Senior Research Associate at REKK*, highlighted the following main trends in his presentation on global gas market events:

- TTF prices well reflected the significant oversupply in 2019, which in the first half of 2020 led to unprecedented low prices in June 2020 (€ 5 / MWh) due to the corona virus shock. The balance between supply and demand was restored in the third and fourth quarters of 2020, with prices rebounding to around 15-20 € / MWh. (Figure 1)
- Based on preliminary data, we estimate that global gas demand may have fallen by 2.5-4% in 2020 compared to 2019, mainly due to the COVID containment measures; it decreased in all regions except China.
- The LNG market that was growing 10% annually in the previous period, came to a sudden halt in 2020 due to low prices. Although the year-end growth in demand in Asia somewhat restored markets, global demand for LNG stagnated. The existing oversupply market is expected to persist in the first half of the 2020s, across all scenarios.
- Russia has made great strides over the past year on plans to diversify customer and transport routes. It began selling small volumes to China on the Power of Siberia pipeline, while in Europe, which remains its main market, it focused on building routes bypassing Ukraine. TurkStream 1-2 was completed and commissioned in 2020, while Balkan Stream was built in early 2021. However, the transport capacity provided by the new routes has not yet brought Russian gas market expansion.

FIGURE 1. TTF SPOT PRICES 2017-2020 (EEX)



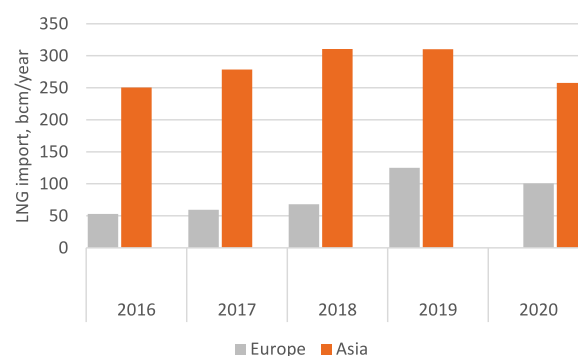
Source: EEX, presentation by Peter Kotek 01.13.2021.

- Based on the price signals from the large regions, we can conclude that the price convergence experienced in the beginning of 2020 ended in the second half of the year, when Asian prices rose, opening the way for US LNG.
- In 2020, European own gas production, Norwegian imports, and LNG contracted volumes stagnated, and the decline in demand was offset by reduced Russian pipeline import deliveries to the European market, from 35% in the previous year to 30%.
- LNG inflow to Europe was significant in the first half of the year, then with low TTF prices, US LNG completely dried up, not fully returning in the second half of the year despite rising prices due to growth in Asian market demand making them a more attractive destination for spot cargos.
- The fill-up rate of the storage facilities in 2019 was at a record high due to the uncertainties surrounding the Ukrainian-Russian transit contract that expired in December and LNG surplus stored in European facilities. Due to the mild winter of 2019/20 and low demand, the storage facilities started with a high fill-up level and repeated in the beginning of the 2020/21 storage year. Hungarian storage facilities followed this pattern.
- European gas exchange prices showed the usual comovement and strong price convergence, which unfortunately the CEGH and especially Hungarian CEEGEX price signals broke away from in the summer months.
- On the whole in 2020, European natural gas demand fell more than global levels by 6% as a result of the pandemic, while low gas prices allowed gas-fired power plants to grow by 5%. Compared to Europe, gas demand did not fall in Hungary, but power plant consumption also increased.
- Gazprom's new strategy is to sell short-term products through its own electronic platform, launched in September 2018. In 2019, Gazprom sold about 7% of total European sales here, rising to 18% already in

2020. It may come as a surprise that short-term volumes were cheaper than TTF and the German cross-border price. However, it can be seen that Gazprom was not able to fully maintain its market share with this strategy either.

- Significant alternative infrastructure investments in our region were completed in 2020. Deliveries began on the Trans Adriatic Pipeline (TAP) in November, which will bring Azerbaijani resources to the European market. The Krk LNG terminal in Croatia was commissioned by the end of the year and had already received the first LNG carrier in January 2021. It is fully contracted for the first 3 years of operation with a significant part of the capacity was sold for the following years.
- Russia transported essentially the same amount via Nord Stream and Yamal as the year before, with a drop in imports on the Ukrainian route. Some of the deliveries are already made through Turkey.
- New EU policy and legislation emanating from the European Green Deal will affect the natural gas industry, especially the hydrogen strategy and climate targets. The clarification of European targets, regulatory and policy ideas will be crucial for the future of natural gas, as it has become clear that if the decarbonisation targets are met, there will be very little room for natural gas in the European energy mix. In the Danube region, the cautious decarbonisation targets are coupled with projected stagnant natural gas consumption, and significant (nearly € 15 billion) gas infrastructure investment plans remain in part of national energy and climate plans. It is perhaps contradictory that 2/3 of investment plans appear in countries where declining gas consumption is expected.

FIGURE 2. HISTORICAL LNG IMPORTS AND OUTLOOK FOR 2020



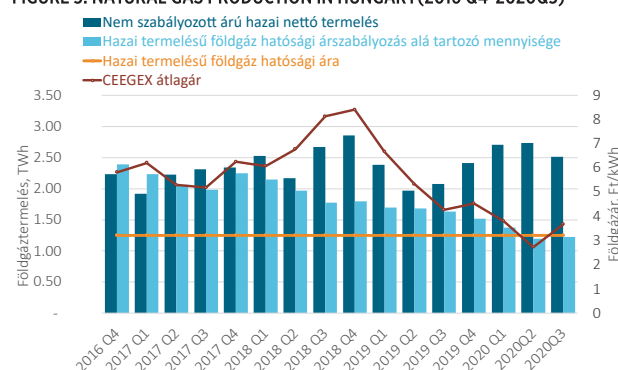
Source: REKK based on Jodigas, presentation by Peter Kotek 01.13.2021.

Based on the forthcoming annual gas market monitoring report, **Ágnes Csermely**, *Head of Department of the MEKH*, presented the main trends of the 2019/2020 gas year in the Hungarian market.

## CONSUMPTION

- Contrary to European trends, Hungarian gas consumption did not fall in the previous gas year. An important factor in this is that household consumption has been stagnant for several years, which taking into account the mild weather, leads to increasing consumption. The growth of the housing stock has accelerated, partly due to social policy benefits, demographic trends and rising real incomes. In 2018/19, twice as many apartments were sold than in 2015/16. In new homes, the primary choice is still natural gas.
- Rising incomes and declining relative gas prices encourage gas consumption rather than conservation. Next year, it will be worth examining how work from home, which becomes more pronounced as a result of the pandemic, will affect residential gas consumption.
- Due to clean spark and clean dark spreads, gas-fired power plants were already ahead of coal-fired power plants in the merit order in 2019, triggering a very significant coal-gas substitution across Europe. The year 2020 turned out differently: although electricity prices fell very significantly in the first period of the pandemic, clean-spark spreads remained positive. At the same time, in many Western European countries (such as Britain, France, and Spain), substitution has taken place to such an extent that there was no more room to replace coal with gas, leaving only gas, which was impacted during declining electricity demand. Looking at the Western European market as a whole, the production of gas-fired power plants is declining. However, there is still room for coal-gas substitution in our region, including Germany, so gas-fired power plants are profitable. Gas-fired power plants have been running in Hungary since the summer of 2019 without interruption even during the greatest restrictions.

FIGURE 3. NATURAL GAS PRODUCTION IN HUNGARY(2016 Q4-2020Q3)

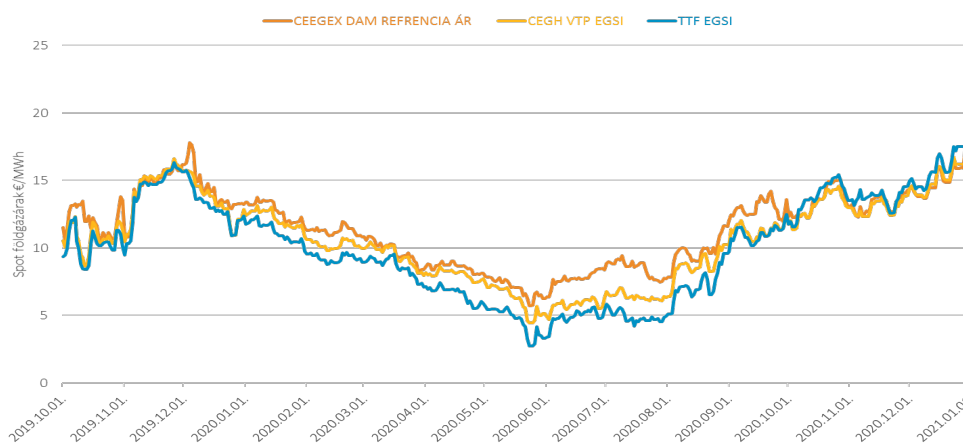


Source: presentation by Ágnes Csermely.

## SUPPLY

- 2019 was unusual because of the uncertainty surrounding Ukrainian transit, Hungarian storage facilities were stored for precautionary reasons, leading to much higher than usual net imports and net stocks. This process continued into the new gas year. Despite the start of the heating season, in the last quarter of 2019, the accumulated storage stocks were not used, and an import-based supply model operated. From January 2020, imports to Ukraine declined and storage supplies were slightly above normal, but not to the extent that previously accumulated precautionary stocks had fallen to normal levels by the end of the winter. Thus, in 2020, due to high fill-up rates, domestic storage facilities were full again. In August 2019, the strategic inventory level increased thanks to government action, the universal service storage pattern did not change, so the surplus came from market inventories. These market stocks did not decline in 2020. At the start of precautionary stockpiling, an extremely favorable storage design was also developed for traders, giving them more flexibility in how to manage these stocks. They also needed this, as the market prices experienced in 2020 did not support the depletion of stocks, and even additional gas volumes were needed, fully utilizing the storage capacity.

FIGURE 4. HUNGARIAN (CEEGEX), AUSTRIAN (CEGH) AND DUTCH (TTF) NATURAL GAS EXCHANGE PRICE



Source: presentation by Ágnes Csermely.



- The production of natural gas with official prices open before 1998, is falling. At the same time, the market segment is becoming more and more important. (Figure 3) with markedly more new entrants. Following international trends, it is remarkable that Hungarian production has not decreased. We can also see a marginal increase in biogas production. This segment is still small today (1 TWh), but its importance will grow.
- After the outstanding year of 2019, the volume of imports delivered through the Hungarian system returned to normal. Due to the high degree of uncertainty surrounding Ukraine transit, the previous capacity bookings featured greater demand for the Austrian feed-in direction which exceeded the capacity, prompting traders to book capacity on the alternative Slovakia-Austria route, which was sometimes utilized up to 70%. In terms of exports, the quantities passing through Hungary did not fall. One of the reasons for this is that the Ukrainians have announced a very favorable storage service scheme, which combines storage, shorted tariffs with favorable long-term storage options. This possibility has attracted the attention of European traders in the oversupplied market, and compared to other TSOs, the FGSZ was quick to announce its tariff in accordance with the CAM network code in the direction of Ukraine, making it the prime candidate for flows through the Hungarian system to Ukraine storage facilities.
- The commissioning of the new infrastructures (TAP, Croatian LNG terminal, southern entry point for Serbia) in 2021 will preclude a significant decline in the Hungarian transit.
- The dynamic development of CEEGEX in recent years came to a halt, with a turnover of about 25 TWh, with 25 active traders. CEEGEX's prices responded immediately to the temporary surge in local demand during the summer, which shows that the market depth is not well developed yet. CEEGEX prices remained permanently below the TTF in the final weeks of 2020 due to a supply shock contrary to Western European trends: while supply in Europe narrowed in response to Asian demand for LNG, a temporary oversupply situation occurred in our region due to changing transit volumes. (Figure 4)
- Concentration in the Hungarian retail segment increased further last year, with the number of active players retreating from 27 to 22. At the same time, there is a significant competition among limited commercial licensees, which is well reflected by the several rounds of auctions for cross-border capacity commitments.

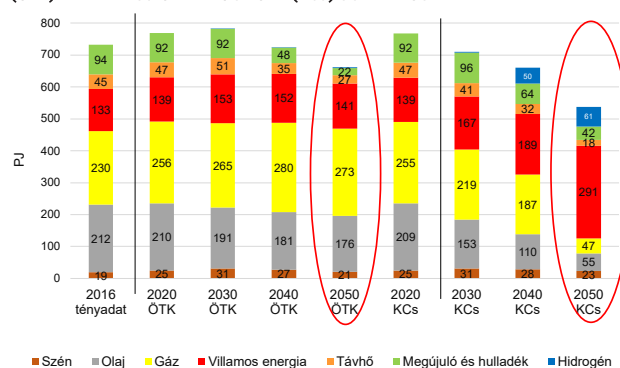
## PANEL DISCUSSION

Reflecting on the recent period, **Péter Kaderják**, (former Secretary of State for Energy and Climate Action, ITM) said that from October 2019 to the end of 2020, it was as if the golden age of gas had arrived in Hungary. Preparations for the Ukrainian uncertainty have proved successful with storage facilities operating at full capacity, the infrastructural developments of the last ten years have been completed, the Krk LNG terminal has started its operation, and the spreads in the wholesale market are as we had previously hoped: in recent weeks, the Hungarian price was below the TTF. In addition, on the retail market, offers are very competitive for industrial consumers. In the case of the households, it is worth asking ourselves how to proceed: is a further reduction in household consumer prices a good step or shall there be a creation of a reserve in preparation for a possible increase in prices? Hydrogen, figuratively speaking, exploded into this picture, and surprisingly, in addition to coal, natural gas has also been blacklisted in Europe. The joint action of our region on the European stage is aimed at recognizing the transitional role of gas.

Summing up the challenges of the future, he reported that the long-term decarbonisation vision for 2050 was examined in a year-round work at the request of the ministry by the Global Green Growth Institute, with the participation of REKK. The conclusion of the study is that the long-term vision of gas depends primarily on the credibility and consistency of the implementation of decarbonisation policies. In his view, natural gas had two serious competitors: one was clean electricity produced on a renewable basis, and the other was carbon-free hydrogen. In his view, gas will still play an important role in the domestic energy supply for the next 20 years. The soon-to-be-discussed National Clean Development Strategy presents a BAU scenario with 273 PJ of gas in 2050, and in a more ambitious emission reduction scenario gas could be reduced by up to 47 PJ. (Figure 5)

Households and transport are the two most affected sectors. In the "emission reduction" scenario, gas is fully replaced by green electricity in households, with a drastic drop in demand. We can also see very different visions in transport, where it is conceivable that gas will play an important role, but even its complete elimination as a result of electrification is possible.

FIGURE 5. FUEL MIX OF FINAL ENERGY CONSUMPTION IN BUSINESS-AS-USUAL (ÖTK) AND "EMISSION REDUCTION" (KCS) SCENARIOS



Source: Comment by Péter Kaderják

**Gábor Hiezl** (CEO, MVM Next Energy Trading Ltd.): Asked about the impact on the retail sector, he said the newly introduced energy efficiency obligation scheme has been the subject of many panels recently and there are still many open issues. There are a lot of important details missing along with the catalog itself, more specifically how some measures can be counted in the new system of obligations with large one already in 2021. Most of the liability comes from household consumption, at least for MVM. In his opinion, the population is also special because universal service dominates here, and in addition to the current regulatory system it is not clear how the additional burdens arising from the obligation could be enforced. That is why MVM does not think in segments but seeks solutions in accordance with the full extent of the obligation in the entire customer base, be it electricity or gas. Thus, from the point of view of the energy efficiency obligation scheme, the households do not appear as a separate target segment.

**Gergely Szabó** (CEO, MET Hungary): Referring to the wholesale processes of the previous year, he said that 2020 was completely different from the previous years' trends. He highlighted the changes in many fundamental factors that brought spectacularly high volatility. Now, in January 2021, JKM (the market price signal for Japanese LNG) has reached unprecedented heights, while in April 2020 it was at an unprecedented lows. This poses a huge challenge for the market actors. By 2021, he expects this "non-trend-fitting" phenomenon to continue. In addition to the unpredictability of the market situation, the new European regulations will also bring major changes. In Hungary, the aforementioned pricing system will bring about a fundamental change in the current pricing logic that the market can achieve, though it could also be too challenging for some traders.

According to **Pál Ságvári** (Vice President for International Relations, MEKH), 2020 was the year of the green turn globally. At the beginning of the year, the EU, then the Chinese and at the end of the year the US also turned green. The impact on the gas market could even be beneficial in the short term, as CO2 prices are also very high. According to him, the displacement of coal-fired power plants will benefit gas in the short term, which will be further strengthened by the growing need for flexibility due to the expansion of renewables. The coming years may be the long-awaited years favorable for the gas market, when the strengthening of the "bridging fuel" role may lead to a temporary increase in demand. The other major and unforeseen challenge in 2020 was the COVID pandemic. Related to the pandemic, it turned out that flexibility and adaptability also play a very important role. He considers that it is important to emphasize that the Hungarian traders recognized the opportunity, which was open for a few months, when it was possible to book capacity at the Krk terminal on a market basis, which demonstrates the value of this diversification project. He also sees a settling and rearrangement in the LNG market: from the four major players, Qatar and Russian have gained an advantage over the USA and Australia. The Americans were quite affected by COVID and the resulting of the oil price crash.

Very serious steps have been taken related to the decarbonisation "roadmap", however energy efficiency has always been the stepchild of this question. In his view, the energy efficiency obligation scheme is a significant element of regulatory intervention, without which we would not rethink gas consumption.

**László Fritsch** (CEO, MFGK): Stressed that although green goals are becoming more topical at all levels, gas will still play a very important role in this region in the future (in the next 20 years).

LNG was the biggest adventure of 2020 for MFGK. They actually entered the global market through the Krk terminal. In his view, of course, LNG will also have an impact on the Hungarian and regional markets, but the region is still dominated by Russian gas. At the same time, LNG will undoubtedly improve MVM's position.

He expects a significant change from the fact that the Russian transport route has changed from north to south. He expects that Hungary will increasingly belong to the Balkans in terms of pricing. Regarding Ukrainian storage, he drew attention to the fact that the current package price for services can only be maintained in the short term.

The overturning of the VTP TTF provision at the end of 2020 (see slide 12 by Ágnes Csermely) may not have been very favorable for the position of traders. In the Romanian direction, there was also a very surprising development with gas coming from an unusual direction. He highlighted as an important lesson from the past year that we already must think here at a regional level, not in islands. As a result, MFGK is also planning with a regional focus and has expanded its activities to neighboring countries.

In terms of storage, in 2019 and 2020 indeed, the geopolitical situation and the evolution of spreads also helped us to rediscover storage services. However, demand for storage will be very volatile in the future. An important and open question is whether traders prefer contractual or physical flexibility of storage facilities. The massive storage boom of the past two years is unlikely to persist, but he does not expect storage to return to very low levels either.

**Szabolcs I. Ferencz** (Chairman and CEO, FGSZ): 2020 was outstanding for FGSZ with transit of 25 bcm across the system for a 10 bcm Hungarian market, the sign of a very liquid market situation. The hard work of the previous ten years has slowly paid off, and the result of 2020 is that both the Romanian and Croatian systems now accept an inward capacity of 1.75 bcm/year. A bilateral gas quality agreement has also been reached with Romania, and negotiations are still ongoing for the Slovak and Ukrainian routes.

The long held goal was achieved in 2020 with the concentration of the entire Hungarian system under singular control with the acquisition of MGT. The main question for the future for FGSZ is, what will change with the start of the southern route? In his view, there is no doubt that the volume of transit will decrease, but it is a question of how much. In the first days of January, three-quarters of Serbian transit

and five-sixths of Croatian transit disappeared. At the same time, the success story of Ukrainian storage facilities in 2020 is reassuring. It is also encouraging that Romanian extraction will increase by 1 bcm next year. The outward flows to Slovakia mark a new era made possible by spreads. All-in-all, a well-developed and flexible infrastructure can serve these new market situations very well. To sum up, he hopes that there will be new deliveries that will partially offset the massive reduction in transit in early January. According to the MEKH decision, the southern entry point should be completed by October 2021. He is not yet sure how much of the 6 billion cubic meters that may come from the south will remain in the country and how much of it will leave in transit.

In his speech, **Dániel Garai** (CEO, CEEGEX) emphasized that the issue of market integration with Croatia may now be realized, as capacities have multiplied compared to the demand of the Croatian market. In the same way, Hungarian storage capacities are also valuable to the region, in higher demand because of the Croatian market. Their exploitation may improve during the market integration process. The emergence of new sources at CEEGEX, and good infrastructure with proper market design, creates several opportunities for liquidity.

## EXPECTATIONS FOR 2021

The participants of the panel agreed that the biggest challenges for the Hungarian gas market in 2021 are the renegotiation and conclusion of the Russian long-term contract, the drastic change of flow directions related to the southern entry point and the management of risks arising from market volatility. In the long run, the industry needs to prepare for the challenges of decarbonization, which can be helped by creating a predictable regulatory environment in 2021 as soon as possible. The regional level is becoming increasingly important: short- and medium-term regulatory harmonization plans (e.g. Croatian-Hungarian market integration), system operation cooperation (with neighboring countries on gas quality) and corporate expansion plans all have a regional focus.

## REKK FOUNDATION

*The goal of the REKK Foundation is to contribute to the formation of sustainable energy systems in Central Europe, both from a business and environmental perspective. Its mission statement is to provide a platform for open-ended, European-wide dialogue between government and business actors, infrastructure operators, energy producers and traders, regulators and consumers, professional journalists and other interested private entities. The Foundation will develop policy briefs and issue papers with forward-looking proposals concerning challenges posed by energy and infrastructure systems and organize regional forums allowing stakeholders to become familiar with the latest technological and regulatory developments within the industry.*