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(Co)Generating Energy Connections in Hungary

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The regulation concerning the subsidization and obligatory purchase of electricity produced in cogeneration with heat or from renewable energy sources has changed in 2008. The subsidized fund ended, but was replaced with a “green fund.” Production is now ‘purchased’ by the system operator, which sells it to the consumers, proportional to their consumption. This time an executive decree determines the fees which has to be paid for the producers who fall under obligatory purchase. An executive decree of the Ministry of Economy and Transport allows the system operator to collect the funds.

An executive decree, which was accepted in December 2007, has further increased the number of co-generating producers entitled to obligatory purchase by including large (over 50 MW) co-generating power plants. This is expected to enlarge the co-generation being under obligatory purchase by an annual amount of 1,500-2,500 GWh. Prospectively in 2008 it raises the sum which has to be collected for subsidizing the co-generating plants by 10-17 billion Ft. This is an increase of about 30-50%. According to our calculations, for 2008 the total production falling under obligatory purchase will reach the 18-20% of the net electricity consumption in Hungary. In addition, while the authority limits the amount of the obligatory purchased renewable electricity with quotas from year to year, the amount of the co-generated energy, which is also purchased obligatory, rises freely, without any restrictions.

The introduction of a schedule-giving obligation for the co-generating producers, falling under obligatory purchase, is also a new element. They have to give a forecast about their expected yearly production, and they have to develop monthly the schedule for the next month. In case of a deviation of $\pm 5\%$ the co-generating producer pays an extra regulation charge of 5 Ft/kWh. Although this amount of 5 Ft is regarded to be ad hoc and there is a lack of market for balancing energy within the day, this regulation encourages the production to be in accordance with the schedule, which raises the system stability.

More than 4,800 GWh produced electricity was purchased obligatory in 2007. Nearly three-quarters of that was co-generated and just the

REKK ENERGY POLICY BRIEF

Energiapiaci Elemzések

ISSUE BACKGROUND

A story with a moral

The radiator manufacturer and the wire manufacturer, who are former classmates, are sitting in the pub. “We are going to ski this winter, aren’t we?” asks his friend the radiator manufacturer.

“Of course,” says the wire manufacturer.

It is an old tradition for them; they spend their ski holidays together every winter.

“But what if we don’t go in separate cars this year, but with yours,” says the wire manufacturer. “The petrol is so expensive and in this way we could save a lot on the long journey.”

“It is expensive,” says the radiator manufacturer suspiciously.

“I share the petrol costs,” the wire manufacturer says encouragingly. “Fifty-fifty.”

“All right,” says the radiator manufacturer, while he is meditating a bit about amortization, but he shrugs to himself with resignation. Half of petrol, he thinks and they drink a mug of beer for the delight of the common saving.

Sitting at the wheel of his car the radiator manufacturer says, “This car sharing is glorious. We economize not only on the petrol, but we also talk through the boring kilometers on the highway.” For hours he has been

remaining was renewable energy sources. Co-generated electricity enjoys the benefits not only of the obligatory purchase, it also relies mostly on subsidized prices, resulting in higher than market prices. The size of subsidization is 10 Ft/kWh on average, which depends on the part of the day, the technical characteristics and the size of the producer and the used energy sources. Only a small amount is purchased obligatory on market prices, without subsidies. In 2007 the amount of renewable and co-generated electricity falling under obligatory purchase increased by 10%. However, while the price subsidies of the co-generated increased by 4% on average, renewables decreased by 1%, also in nominal values.

On average approximately 33.5 billion Ft was spent on the price subsidization of the obligatory purchased co-generated electricity by consumers in 2007, while only 13.5 billion for renewables. The source of that was the so-called KÁP fund, handled by the system operator. This was filled by fees proportional to consumption, ordered by the pricing authority. Counting with the net consumption of 2007 the consumers paid an average nearly 1.33 Ft after each kWh consumed into the funds. From that .93 Ft was collected to finance the subsidization of co-generated energy and only .36 Ft for renewables.

The scale of the sum, can be better understood if we recall the system-level fees paid by consumers proportional to their consumption in 2007: the transmission system operation fee was 1,074 Ft/kWh and the fee of the system-level services was 0.672 Ft/kWh. Today, the network fees are high in international comparison mainly due to the fees which cover the subsidies of the co-generated energy producers and other select groups (Oroszlány power plant, employees of the electricity industry) and not because of the transmission fees. The high network fees impact the welfare of the household consumers and the competitiveness of the industrial consumers.

Meanwhile the district-heating market, which is often the biggest consumer of the heat from co-generating power plants, fails to receive noticeable financial benefits from this subsidy scheme. The cost reduction of the energy source achieved through the co-generation of electricity and heat should result in the price reduction of both products, and at a minimum, one product. The system operator purchases electricity from co-generating producers not on a lower price as would be expected, since it receives subsidies, but at a price higher than even the open market price. It is unfathomable how the benefits from a subsidy scheme are not passed to the consumers of district-heating, particularly since there is greater efficiency with the cooperation of co-generators. In addition, there is no money for modernization, for the installation of consumption meters, therefore the price separation continues.

There is a discontent between high heating prices and high consumption. It would seem there is a leak within this subsidy scheme. It's alarming, that the authority isn't stimulated to revise the regulation by the anomalies of the co-generated heat use. The current district-heating prices refer to situations of dominance position in heat sale, while the representative heat investments (plaza ice-rinks, garage heating in office centers) hint at the over-subsidization of co-generated electricity.

listening to the wire manufacturer who doesn't like silence. Now he is just talking about things, he says they are doing good not only for themselves with the petrol savings, but also for the polar bears, the climate, the future generations, for everybody. Except for the oil industry workers and shareholders, tries the radiator manufacturer, but his friend isn't joking.

"Do you know, how much CO₂ emission we are saving," asks the wire manufacturer? He could never calculate such things.

"Roughly 15 kilos with a speed of 100 km/h, so there and back on the whole way about 150 kilos, a whole 3 € at current prices," says the radiator manufacturer. "It's a beer in the hostel, he adds with a grin."

"That's not so easy, it's about principles," says the wire manufacturer.

Upon their return they are sitting in the same pub with their friends and explain why, after their trip they convinced the government to give them subsidies to share a car.

"First, we receive state subsidies because we save petrol. At first we had to explain it also for the bureaucrats, but they soon realized the benefits for CO₂. So now we receive a subsidy for the costs of the saved petrol, minus the cost of taxes. It's not that much money," they say without irony. "Listen, it's not from the state budget, but from the car drivers, so it's OK. It only comes from the small tax on petrol. It's so small, people don't even recognize it. There's not a penny from the tax-payers, only car owners. Oh, they also give us another subsidy but only for buying a new car every year or two." But, they say after sipping their beer, "it's important to remember there are conditions for the government helping us. We can only use the car for justifiable reasons. But, to tell you the truth, they do not really check what we

The obligatory purchase of co-generation withdraws not only energy but also capacities from the Hungarian power plant market. It is particularly significant during off-peak periods, when less generation is available for the system operator. This situation is worsened by the fact, that some further big power plant units are put under obligatory purchase. These machines could offer a significant regulated capacity for the system operator. This is in addition to the relatively flexible heat generating tasks at night; however they are not encouraged to be available because of the obligatory purchase.

Now it is also possible to receive state subsidies from KEOP for co-generated heat and electricity production. In addition to the usual reasoning (saving primary energy) a new voice can be more and more often heard about climate protection considerations and CO₂ savings. It's alarming that nobody comments on the following: the obligatory purchased co-generating production displaces such power plant production from the network, which have already received CO₂ quotas. In this way a given CO₂ saving is two times admitted by the regulation. Meanwhile the co-generated production from renewable energy sources, of which the net CO₂ output may really be near zero, was explicitly excluded from obligatory purchase. Although it is widely known, that electricity can mostly be produced only with a low efficiency from renewables. From renewables heat or heat co-generated with electricity can be produced with an acceptable efficiency.

The subsidization system of co-generated electricity was in need of transformation already in 2007. In 2008 the regulation was modified in the wrong direction and has become more unreasonable and much more expensive.

do with the cars. Of course we only use it for our health and for sport so we don't place a burden on the health system. For instance, sometimes we go for a spin to Milan to the opera or for a hockey match. We only stop to shop on the way home. It's totally worth it, because we are sharing a car and contributing to the public good. The government was also nice enough to say that we don't need to buy any highway stickers because we save so much petrol. Also, on the highway the other drivers must give way since we are contributing to the public good. It's the only right thing to do because the whole country benefits by us sharing."

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