

Examples of calculating the dynamic transmission fee

The transmission fee is based on price difference between the Finnish area price and the price in North-West Russia (FreeFlowZone 27). In addition, the formula of the transmission fee depends on whether the hour is a peak load hour or not in Russia. During the peak load hours, consumption and export are obliged to pay a capacity payment fee. The peak hours are defined by the Russian System Operator.

If the dynamic fee is lower than so called ITC fee, only ITC fee will be charged. The ITC fee is used in power trade between EU's internal electricity market and third countries according to EU regulation 838/2010 Annex A section 7. The amount of ITC fee might change annually, and for example in 2015 the ITC fee was 0,60 €/MWh. The transmission fee is always at least the amount of the ITC fee.

Non-peak load (capacity payment free) hour

In this example calculation of the dynamic fee for a capacity payment free non-peak load hour, the values are from 2 November 2015 at 09 UTC.

On a non-peak hour, the fee is calculated as follows:

$$k_{noncap} \cdot (P_{t,fi} - P_{t,ru} \cdot ExcRate),$$

where

$$k_{noncap} = 0,35$$

$$P_{t,fi} = 41,83 \text{ EUR /MWh}$$

$$P_{t,ru} = 1332,86 \text{ RUB /MWh}$$

$$ExcRate(t) = 70,569 \text{ RUB/EUR}$$

Hence the fee is:

$$0.35 * \left(41.83 \frac{EUR}{MWh} - 1332.86 \frac{RUB}{MWh} * \frac{1}{70.569} \frac{EUR}{RUB} \right) = 8.03 \text{ EUR/MWh.}$$

The fee is 8.03 €/MWh.

Peak load hour with capacity payment

In this example calculation of the dynamic fee for a peak load hour, the values are from 3 November 2015 at 15 UTC.

On a peak hour, the fee is calculated as follows:

$$k_{cap} (P_{t,fi} - P_{t,ru} \cdot ExcRate) - k \left(\frac{P_{cap}}{h_{cap}} \cdot MDCap \cdot ExcRate \right),$$

where

$$k_{cap} = 0,35$$

$$k = 1$$

$$P_{t,fi} = 55,51 \text{ EUR/MWh}$$

$$P_{t,ru} = 1367,25 \text{ RUB/MWh}$$

$$ExcRate(t) = 70,726 \text{ RUB/EUR}$$

$$P_{cap} = 428825 \text{ RUB/MW, } k_k$$

$$h_{cap} = 240$$

$$MDCap = 1,088$$

Hence the fee is:

$$0.35 * \left(\left(55.51 \frac{EUR}{MWh} - 1367.25 \frac{RUB}{MWh} * \frac{1}{70.726 RUB} \frac{EUR}{RUB} \right) - \left(1 * \frac{428825 RUB}{240} * 1.088 * \frac{1 EUR}{70.726 RUB} \right) \right) = 3.04 EUR/MWh.$$

The fee is 3.04 €/MWh.