ANALYSIS OF THE ELECTRICITY MARKET FROM THE PERSPECTIVE OF PRODUCTS OFFERED TO HOUSEHOLDS IN THE TARIFF RATE D25D IN PERIOD 2011-2016

Martina Kuncová

University of Economics, Faculty of Informatics and Statistics, Department of Econometrics, W. Churchill Sq.4, 130 67, Prague 3, Czech Republic e-mail: martina.kuncova@vse.cz

Abstract

The electricity market in the Czech Republic has been changing every year since the liberalization of the market in the year 2002 for companies and since the year 2006 for households. Although we may think that the electricity consumption must be rising due to the development of electrical equipment, in reality the consumption had been rising till the year 2008. Afterwards it fell down in connection with the financial crises; and the next rise was not as big as before in the Czech Republic. Thus, the prices of the electricity consumption should be decreasing. The situation of the electricity market and the products offered to households in the tariff rate D25d in the period 2011-2016 are analyzed in this article, in order to find out the main trends of each part of the total electricity consumption cost of households.

Keywords

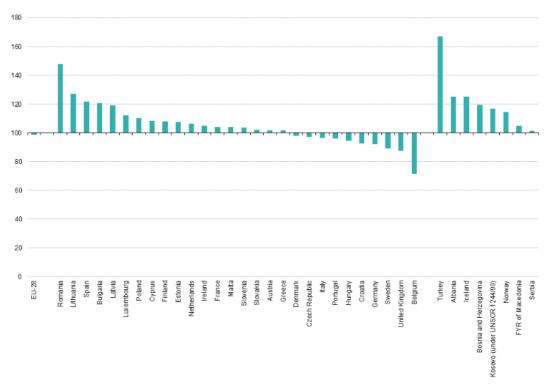
Electricity consumption; Households; D25d tariff rate; Suppliers.

Introduction

Electricity belongs to the essential commodities that have been necessary for our lives since the beginning of the last century. The development of new electrical tools might have caused the rising necessity of the electricity usage. On the other hand, the electrical equipment is more and more ecological in the sense of lower electricity consumption. Due to these facts, the trends in the electricity generation and consumption are different in different countries. When we compare the situation in Europe [1] we can see the falling electricity generation in the European Union countries in the last years. The fall is evident in majority of the EU member states but in some of them (Slovenia, Bulgaria, Romania) the net electricity generation is still rising. The trends in electricity consumption by households in the EU countries are different (Figure 1) – in the period 2004-2014 in Belgium, UK or Sweden (and also in the Czech Republic) the consumption was falling; but in Romania, Lithuania or Spain it was rising. Outside the EU the highest rise can be seen in Turkey.

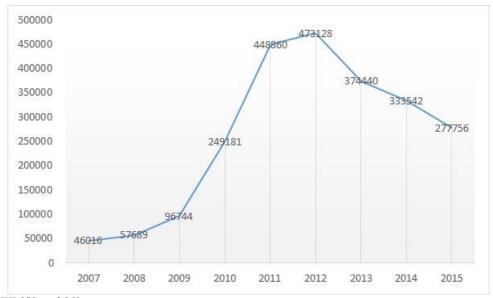
The first period of the liberalization process of the electricity markets in Europe started around the year 1990 in the United Kingdom and it initiated the possibility to choose the electricity supplier by companies [2]. The second period – from 2003 to 2009 – of the liberalization process gave the same possibility to small customers and households. Also in the Czech Republic the process of deregulation started in 2002 for companies; and since 2006 Czech households have had the possibility of choosing an electricity supplier on the retail market as well. In 2007 the liberalization of the retail market in EU was finished, and now households can freely choose an electricity supplier or switch from one to another. However, consumers' option to choose the best supplier is limited even in a transparent markets and the

switching can be also lower in the countries where the market is more stabilized and consumers are satisfied with their suppliers (like in Austria, France or Germany).



Source: Eurostat [1]

Fig. 1: Electricity consumption by households 2014 (2004=100)



Source: OTE [5] and [6]

Fig. 2: Number of executed changes of electricity supplier in the Czech Republic

The average switching rate during the years 2008-2012 in the Czech Republic was about 4% [3] but the top was reached in 2012 and since that time the number of executed changes of electricity supplier has been falling down (Figure 2). Each change of a supplier requires a new registration of the point of delivery/transfer (OPM) in the Market Operator's system which ensures recording of the electricity supplied and consumed [6]. As well as in other countries, the liberalization of the market led to an increasing number of suppliers and their products [7]

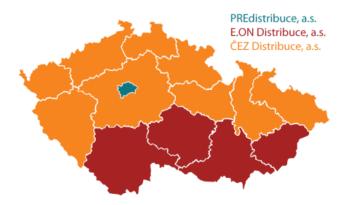
(it will be described in the next chapters). ERO has provided the licence to the distributors, to OTE (for 25 years) and also to the suppliers (for 5 years) on the basis of Act No 458/2000 on the Conditions for Business and State Administration in the Energy Industries and Amending Certain Laws ("the Energy Act") and on the Act No 165/2012 on Promoted Energy Sources and Amending Certain Laws, as amended, the Energy Regulatory Office issues its Price Decision on prices for related services [8]. Except for ERO, the Ministry of Industry and Trade controls the electricity production and distribution. Due to the limited number of significant producers, traders or distributors, the market is usually viewed as an oligopoly one. Hence, the whole market can be studied via game theory and oligopoly models such as Cournot or Stackelberg ones described in [9], [10] or in so called EMELIE model to analyse the market in Germany and the EU [11]. The three biggest distributors are connected with their distribution areas; therefore, from the distributor's point of view it is a monopoly market. The liberalisation leads to more companies as suppliers entering the market and that is why it changes from the oligopoly to more competitive one (but still there are barriers for entering this market).

This paper does not analyse the market as an oligopoly with the game theory models. It tries to describe the changes in prices from the households' point of view (as the electricity consumption cost forms a significant part of the household expenses). It continues with the analyses of the electricity market from the households' perspective and with respect to the D25d tariff rate usage. Inspired by the [12] the previous studies were aimed at the simulation model [13], [14], also multi-criteria decision making approach was published in [13] inspired by [15] and afterwards the optimization models for the supplier selection for the years 2015 and 2016 were solved in [16] and [17] and finally the disadvantages of the new conditions suggested by Energy Regulatory Office (ERO) for the year 2017 were confirmed in [18]. The optimization consisted in the search for the electricity consumption ranges for each product just to minimize the annual electricity consumption cost. The electricity consumption of one household was analyzed to compare the final prices for all suppliers and their products in all three distribution regions (CEZ, PRE, E.ON) in 2015 and 2016 when the tariff rate D25d and D02d could be used. In this paper the situation on the market with respect to the tariff rate D25d and the products offered by the suppliers is analyzed. The main aim is to find out the differences between distribution regions and to compare the changes in the components of the final costs.

1 Description of the Czech Electricity Market

The Czech electricity market can be described from various points of view. According to OTE [6], the active part in the electricity market take these subjects: balance responsible parties, suppliers, participants with an access to the balancing market, providers of ancillary services, distribution system operators, transmission system operators and producers. From the household (as a consumer) perspective, the most important subjects are suppliers, distributors, ERO and OTE. The Czech Republic is divided into three regions operated by three distributors (PRE, CEZ, E.ON.), see Figure 3.

According to the supplier's conditions, each household has its own tariff rate. The number of suppliers and their offer of the products in each tariff rate change every year. The complete list of the products with the prices can be found on the ERO web pages [7]. As the final costs of the electricity consumption are influenced not only by the electricity take-off amount and the customers region but also by the suppliers prices connected with the tariffs and circuit breaker type, it is hard to choose the appropriate product for an individual consumer.



Source: TBZ info [19]

Fig. 3: Distribution regions in the Czech republic

Generally, the price of the electricity consumption (for all tariff rates) can be divided into two components. The first one is the controlled charge for services related to electricity transport from the generator to the final customer. This charge is annually given by ERO. It covers [7]:

- monthly lease for the circuit breaker,
- price per megawatt hour (MWh) in high tariff (HT),
- price per megawatt hour in low tariff (LT),
- price per system services,
- price for the support of the renewable energy purchase,
- charges for the electricity market operator,
- electricity ecological tax (28.30 CZK per 1 MWh).

The second part of the total price is given by the electricity supplier. It covers:

- fixed monthly fee for the selected product,
- price per megawatt hour (MWh) in high tariff (HT),
- price per megawatt hour in low tariff (LT),

The final price is increased by VAT. Till 2012 it was 20%; and since 2013 it has been 21%.

2 Data

The comparison of the products offered to households is determined by the consumption level and the types of electrical equipment in a household which is connected with the circuit breaker amperage. A typical tariff rate for households with very low consumption level (under 1.5 MWh per year) is D01d, for higher consumption (about 2.5 MWh per year) D02d tariff rate is used [19]. These two tariff rates are so-called single tariff rates as all the consumption during the day is paid using the same price per MWh (high tariff price). Other tariff rates are connected with the electrical equipment – for example D25d is given to households where the electricity is also used for the accumulative heating and hot water heating for lower and middle yearly offtake with operative management of the validity period of the low tariff for 8 hours. It is a so-called dual tariff rate as it has 2 periods (high tariff, low tariff) during the day. Similar tariff rate with higher consumption level is D26d (when electricity can also be used for heating). Basically, regardless the tariff rate the prices for the electricity consumption differ because of the circuit breaker used (the level amperage of the circuit breaker is dependent on the electrical equipment). Due to these facts, for a general household it is not easy to understand the calculation of the final cost connected with the electricity consumption, not speaking about finding a better supplier.

As the previous analysis was aimed at the tariff rate D25d usage, this paper continues with the same type. Till the year 2016 the prices have been slightly influenced by the circuit breaker – the offer of the ERO to change that policy since 2017 was criticized and in the analysis [18] it was proved that it would increase the costs in most households. In our previous analysis [16] and [17] we compared the products for the tariff rate D25d with the electricity consumption about 10 MWh annually, 45% energy in high tariff and 55% in low tariff and with the circuit breaker 3x25A. According to the comparability of results, the same parameters were used in this article when necessary.

The formula for the annual cost calculation for each supplier's product till the year 2015 was (1) ([18] according to [7]).

$$COST_{ij} = (1 + VAT) \begin{bmatrix} 12(mf_{ij} + mf_{j}) + p_{HT}c(ph_{ij} + ph_{j}) + \\ + p_{LT}c(pl_{ij} + pl_{j}) + c(os + t) \end{bmatrix}$$
(1)

where

i - product, i = 1, ..., m,

j – distributor, j = 1, ..., 3,

VAT – value added tax,

mf – fix monthly fee,

c – annual consumption in MWh,

ph – price in high tariff per 1 MWh,

pl – price in low tariff per 1 MWh,

 p_{HT} – percentage of the consumption in high tariff,

 p_{LT} – percentage of the consumption in low tariff,

os – price for other services per 1 MWh,

t – electricity tax per 1 MWh (t = 28.3 CZK).

For the year 2016 there is a small change in the formula (1) when the price for other services is not paid per 1 MWh but a part of it is paid monthly.

The number of products offered to households changes every year and also the number of suppliers is changing. Table 1 describes the number of products in the tariff rate D25d. Although the changes in last few years seem to be minimal, the fact is that during recent years some companies have left the market and some have come into existence or fused. On these bases, the analysis of the trends for the given period can be performed, using linear regression functions.

Tab. 1: Number of products offered by suppliers in the tariff rate D25d

Year	2011	2012	2013	2014	2015	2016
Number of products	29	44	62	57	60	57

Source: Own calculations according to [7]

According to all offered products in each selected years it is possible to calculate average fees and prices for all distribution areas (Table 2). It is evident that the suppliers' monthly fee averages are nearly the same during all years. The average prices offered by suppliers in high and low tariff are decreasing as well as the distributors' prices in high tariff. The remaining prices and fees (circuit breaker monthly fee, distributors' prices in low tariff, distributors' prices for other services) are increasing. In the next part they are analyzed separately.

Tab. 2: Suppliers' average prices and fees and distributors' prices and fees in 2011-2016

Year	Distribution region	Suppliers monthly fee average	High tariff average price per 1 MWh	Low tariff average price per 1 MWh	Circuit- breaker monthly fee	Distributor's high tariff price per 1 MWh	Distributor's low tariff price per 1 MWh	Distributor's other services price per 1 MWh
2011	E.ON	44.241	1722.172	1022.966	105	1846.39	27.63	
	PRE	48.069	1666.310	1046.759	98	1582.83	19.90	530.15
	CEZ	42.483	1716.241	1008.897	120	1978.50	32.85	
	E.ON	40.295	1794.136	1098.864	98	1667.65	27.63	
2012	PRE	47.886	1730.114	1139.091	98	1553.79	19.90	569.97
	CEZ	40.295	1786.886	1087.886	120	1972.84	32.89	
	E.ON	43.468 1674.666 1021.78	1021.788	98	1697.42	30.08		
2013	PRE	50.983	1598.650	1059.587	105	1650.04	25.49	722.75
	CEZ	42.532	1659.016	1017.321	120	1991.98	37.36	
2014	E.ON	43.616	1508.339	893.272	90	1592.04	30.59	
	PRE	50.500	1462.345	896.622	98	1563.66	24.45	621.8
	CEZ	44.675	1484.310	886.743	105	1731.93	36.38	
2015	E.ON	43.092	1396.748	862.512	95	1518.43	29.99	
	PRE	46.708	1376.031	859.079	102	1508.54	24.37	607.21
	CEZ	43.925	1382.631	856.546	110	1727.62	36.94	
2016	E.ON	41.134	1288.873	844.495	104	1479.08	68.78	78.96
	PRE	43.763	1278.178	840.399	113	1466.12	67.22	This price is per 1 month, not per
	CEZ	42.096	1279.310	838.870	121	1647.54	60.96	1 MWh.

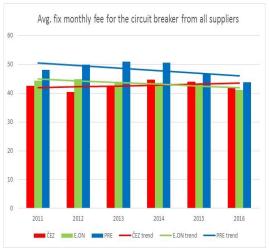
Source: Own calculations according to [7]

3 Results and Discussion

The comparison may start with the monthly fee given by each supplier. When we calculate the average from all the suppliers' offers we can see the differences among the regions in Figure 4 – left. In this factor the PRE region is the most expensive but the trend is decreasing; while in other two regions the average fees are nearly the same (for ČEZ the trend is rising a little, the linear regression model estimates it by 0.317 CZK per year).

Figure 4 – right shows similar situation but there are the fix monthly fees for the circuit breaker given by the distributor. Therefore, it is clear that they are nearly two times higher and that the most expensive region is ČEZ distribution area.

These prices seem not to be so high but they are important in a situation with very low (nearly zero) consumption. For the hypothetical case of the zero consumption according to formula (1) the annual cost ranged between 1500-2700 CZK in 2011, 1300-2500 CZK in 2013 and 1800-3000 CZK in 2016. Hence, it is evident that the choice of the worse product could nearly double the cost.



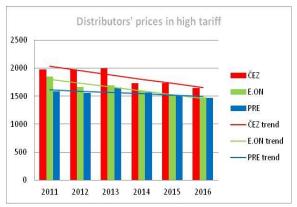


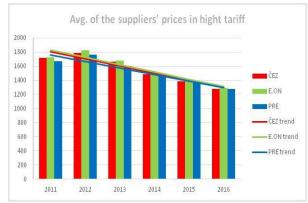
Source: Own calculations according to [7]

Fig. 4: Average monthly fee for the circuit breaker given by the suppliers and the trends in each distribution regions (left) and monthly fee for the circuit breaker given by the distributor and the trends for each distributor (right)

Different trends can be seen in the high tariff prices comparison in Figure 5 – left. The most expensive distributor is again ČEZ, but compared to the previous trends the prices have been decreasing since 2013. According to the linear regression results, the decrease per one year is equal to 75.7 CZK for ČEZ, 68.2 CZK for E.ON and 23 CZK for PRE distributor.

The situation of the prices in high tariff offered by suppliers seem to be similar in all three distribution areas – the average prices are nearly equal in Figure 5 – right and the trends are decreasing. The change in average prices is about 100 CZK per each year (linear regression functions). The histograms for each year (ČEZ area as example in Figure 6) confirm the change in averages (but the prices are not always normally distributed in each year).





Source: Own calculations according to [7]

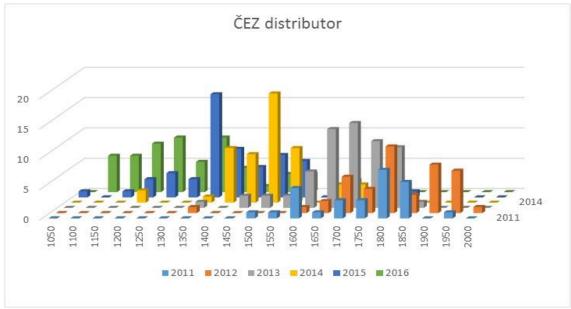
Fig. 5: Distributors' prices in high tariff per 1 MWh (left) and average prices per 1 MWh in the suppliers products in high tariff (right)

The last analyzed issue is connected with the low tariff prices. The situation is similar with previous cases till 2015 (again ČEZ area was the most expensive distributors' region) but the prices were slightly increasing. It differs in the year 2016 when the distributors' prices doubled (Figure 7 – left). With respect to this fact, the trends expressed by the linear regression lines are increasing. The reason for the rise could be connected with the change in other parts of the final electricity consumption costs. As it is mentioned in Table 2, the distributors' prices of other services were decreasing in the period 2013-2015 but they are incomparable with the same ones in 2016 as in this year the price is not dependent on the

consumption (price is per 1 month) so the final effect can be dissimilar in different households.

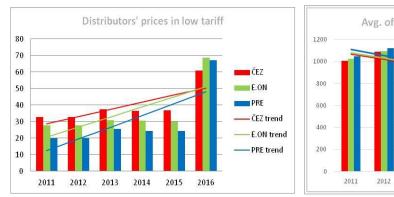
The situation of the suppliers' prices of the low tariff is similar to the high tariff – since 2012 the average prices has been decreasing. This part is the only one where the ČEZ distribution region is not the most expensive one (Figure 7 – right). On the basis of the linear regression function it is possible to say that the average prices are cut at about 50 CZK each year.

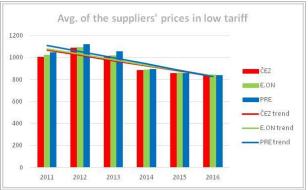
Except of the change in low tariff on the distributors' side, all the other prices are decreasing. The reasons for this trends might be various – higher competition on the market from the suppliers point of view, easier change of the supplier or the legislative changes connected with electricity and the ERO policy [6]. The effect for the final customer is positive in the sense of lower annual electricity consumption cost.



Source: Own calculations according to [7]

Fig. 6: Histograms for the suppliers' high tariff rate prices for the period 2011-2016





Source: Own calculations according to [7]

Fig. 7: Distributors' prices in low tariff per 1 MWh (left) and average prices per 1 MWh in the suppliers products in low tariff (right)

The analysis described above can be seen from the microeconomic point of view as the oligopoly models described and studied in [9], [10] and [11]. The distribution of the electricity is provided solely by three companies. This condition fulfils the definition of the oligopoly where only few subjects on the market can influence prices. As there is no competition among the distributors, they might influence prices. In the described tariff rate the

decrease of the high level prices given by distributors is much slower than in case of the suppliers' high prices; the trends in low prices are different. Distributors have a local monopoly in their distribution areas and so the role of ERO as the regulator of the market is important. The situation with the suppliers is more competitive – there are more companies offering similar products, nowadays consumers can change the supplier easier than before. Because of the specific product, there are still barriers for the companies to enter the market. As the electricity consumption in the last years was nearly constant as well as the number of households, the higher number of suppliers leads to lower suppliers' prices on the market. To be able to explain other changes and trends on the market, deeper analysis of the electricity consumption is needed. This will be a subject of another research.

Conclusion

The situation on the Czech electricity market from the households' perspective has been changing since 2006. With respect to the tariff rate D25d conditions it is possible to say that the total costs had been increasing till 2012 and then they were decreasing (despite of the higher VAT). The analysis of each part of the total electricity cost formula showed that the trends were not similar not only in the components of the total costs but also between distributors and suppliers. The fixed monthly fees were nearly stable on both sides (suppliers' and distributors'), the prices of the electricity consumption in high tariff were falling down also in the suppliers' products and distributors' conditions. The distributors' prices of other services (given by ERO) were more or less decreasing. The main difference in trends can be seen in low tariff prices where the distributors doubled the price in the year 2016; while the suppliers were still cutting it down as in previous years. The distribution region ČEZ is the most expensive one almost in all prices and fees. Due to these facts the arrangement of the contract fixing the prices for more than one year can be disadvantageous for the Czech households as it can increase the annual electricity consumption cost (when D25d tariff rate is used). This is valid especially for higher consumption. The final effect of the changed prices is dependent on the consumption level – for the consumption close to zero MWh per year the total cost might be increasing.

Acknowledgements

This work was supported by the grant No. F4/54/2015 of the Faculty of Informatics and Statistics, University of Economics, Prague.

Literature

- [1] EUROSTAT: *Electricity production, consumption and market overview.* [online]. 2016. [accessed 2016-05-18]. Available from WWW: http://ec.europa.eu/eurostat/statistics-explained/index.php/Electricity production, consumption and market overview
- [2] NEWBERY, D.: Evolution of the British Electricity Market and the Role of Policy for the Low-Carbon Future. *Evolution of Global Electricity Markets*. Elsevier Inc. 2013, pp. 3-30. ISBN 978-0-12-397891-2.
- [3] WILSON, CH., M., WADDAMS PRICE C.: Do consumers switch to the best supplier? *Oxford Economic Papers*. 2010, Vol. 62, Issue 4, pp. 647-668, ISSN 1464-3812.
- [4] ACER/CEER: Annual Report on the Results of Monitoring the Internal Electricity and Natural Gas Markets in 2013. [online], 2015. [accessed 2016-05-18]. Available from WWW:
 - http://www.europarl.europa.eu/meetdocs/2014_2019/documents/itre/dv/acer_market_m onitoring_report_2014_/acer_market_monitoring_report_2014_en.pdf

- [5] OTE: Year Report on the Electricity and Gas Market in the Czech Republic for 2012 [online]. 2013 [accessed 2014-04-30]. Available from WWW: http://www.ote-cr.cz/ospolecnosti/soubory-vyrocni-zprava-ote/rocni-zprava-2012.pdf
- [6] OTE: Year Report on the Electricity and Gas Market in the Czech Republic for 2015 [online]. 2016. [accessed 2016-05-20]. Available from WWW: http://www.ote-cr.cz/ospolecnosti/soubory-vyrocni-zprava-ote/Rocni-zprava-2015.pdf
- [7] ERO: *Energy Regulatory Office Price calculator*. [online]. 2016. [Accessed 2016-05-30]. Available from WWW: http://kalkulator.eru.cz/VstupniUdaje.aspx
- [8] ERO: *Electricity*. [online]. 2016. [Accessed 2016-11-17]. Available from WWW: https://www.eru.cz/en/elektrina
- [9] JING-YUAN, W., SMEERS, Y.: Spatial oligopolistic electricity models with Cournot Generators and regulated transmission prices. *Operations Research*. 1999. Vol. 47, Issue 1, pp.102-112. ISSN 1526-5463.
- [10] KUBÁT, J.: *Model trhu s elektřinou v ČR*. Doctoral Dissertation. University of Economics, Prague, Department of Econometrics, 2010.
- [11] LISE, W. et al.: Strategic Action in the Liberalised German Electricity Market. Fondazione Eni Enrico Mattei. [online]. 2003. [Accessed 2016-11-17]. Available from WWW: http://www.feem.it/NR/rdonlyres/C6A572D4-6466-4277-9D18-DB91E092F367/763/32003.pdf
- [12] HEGAZY, Y.G., SALAMA, M.M.A., CHICKHANI, A.Y.: Adequacy assessment of distributed generation systems using Monte Carlo Simulation. *Power Systems IEEE Transactions*. 2003. Vol. 18, Issue 1, pp. 48–52. ISSN: 0885-8950.
- [13] KUNCOVÁ, M.: Methods for the Electricity Supplier Selection Case Study of the Czech Republic. *International Journal of Mathematical Models and Methods in Applied Sciences*. 2015. Vol. 9, pp. 714–720. ISSN: 1998-0140.
- [14] KUNCOVÁ, M., SEKNIČKOVÁ, J.: Analysis of the efficiency of the electricity supplier selection depending upon the price changes. *Proceedings of the 32th Mathematical Methods in Economics Conference*. Palacký University in Olomouc. 2014. pp. 542–547, ISBN 978-80-244-4209-9.
- [15] DIAKOULAKI, D., KARANGELIS, F.: Multi-criteria decision analysis and costbenefit analysis of alternative scenarios for the power generation sector in Greece. *Renewable and Sustainable Energy Reviews*. 2007. Vol.11, Issue 4, pp. 716–727. ISSN: 1364-0321.
- [16] KUNCOVÁ, M., SEKNIČKOVÁ, J.: Optimization Models Used for the Electricity Supplier Selection. *Proceedings of the 33rd Mathematical Methods in Economics 2015 Conference*. West-Bohemia University, Cheb, 2015, pp. 443–448. ISBN 978-80-261-0539-8.
- [17] KUNCOVÁ, M.: Analysis of the impact of the electricity tariff rate change on the customers' annual cost and optimization model application. *Proceedings of the Conference Quantitative Methods in Economics (Multiple Criteria Decision Making XVIII)*. EU Bratislava, 2016. pp. 216–223. ISBN 978-80-972328-0-1.
- [18] KUNCOVÁ, M.: Cost Minimization and Electricity Consumption Growth in the Czech Households in Case of the New Conditions. *Proceedings of the 34rd Mathematical Methods in Economics 2016 Conference*. Technical University of Liberec, 2016. pp. 483–488. ISBN 978-80-794-296-9.

[19]	TBZinfo: Nejčastější dotazy z oblasti cen paliv a energie. [online]. 2015. [Accessed 2016-05-25]. Available from WWW: http://www.tzb-info.cz/ceny-paliv-a-energii#
Ing. M	Martina Kuncová, Ph.D.

Analýza trhu s elektřinou z pohledu produktů nabízených domácnostem v tarifu D25d v období let 2011-2016

Trh s elektřinou se v České republice mění zejména od roku 2002 s počátkem jeho liberalizace. Od této doby mohly firmy volně volit dodavatele elektřiny. Domácnosti mají tuto možnost od roku 2006. Ačkoli lze předpokládat, že spotřeba elektřiny by měla stoupat vzhledem k rozvoji nových elektrospotřebičů, ve skutečnosti spotřeba v České republice rostla pouze do roku 2008, následně ve spojitosti s ekonomickou krizí poklesla a další nárůst již je velmi mírný. Vzhledem k této skutečnosti by i ceny spojené se spotřebou elektřiny měly být spíše klesající. Tento článek je zaměřen na situaci na trhu s elektřinou z pohledu nabídky produktů domácnostem v tarifu D25d v období let 2011-2016. Cílem je popsat trendy ve vývoji jednotlivých složek celkových nákladů domácnosti spojených se spotřebou elektřiny.

Analyse des Strommarktes aus der Sicht der Produkte, welche den Haushalten (Tarif D25d) im Zeitraum von 2011-2016 angeboten wurden

Der Strommarkt befindet sich seit dem Jahre 2002, als dessen Liberalisierung einsetzte, in einem Prozess der Veränderung. Seit dieser Zeit können die Firmen den Stromanbieter frei wählen. Die Haushalte haben diese Möglichkeit erst seit dem Jahre 2006. Obschon man davon ausgehen kann, dass der Stromverbrauch im Hinblick auf die Entwicklung neuer elektrischer Geräte steigen wird, stieg er de facto lediglich bis zum Jahr 2008. Hernach sank er im Zusammenhang mit der Wirtschaftskrise und der weitere Anstieg fiel sehr mäßig aus. In Anbetracht dieser Tatsache wäre eigentlich ein sinkender Strompreis zu erwarten. Dieser Artikel befasst sich mit der Situation auf dem Strommarkt aus der Sicht des den Haushalten unterbreiteten Produktangebots (Tarif D25d) im Zeitraum zwischen 2011 und 2016. Er hat sich zum Ziel gesetzt, die Trends in der Entwicklung einzelner Komponenten der Gesamtkosten der Haushalte zu beschreiben, die sich aus dem Stromverbrauch ergeben.

Analiza rynku energii elektrycznej z punktu widzenia produktów oferowanych gospodarstwom domowym w taryfie D25d w okresie 2011-2016

Rynek energii elektrycznej w Republice Czeskiej zmienia się od 2002 roku wraz z zapoczątkowaniem jego liberalizacji. Od tego czasu firmy mogły swobodnie wybierać sobie dostawców energii. Gospodarstwa domowe mają taką możliwość dopiero od 2006 roku. Choć można by się spodziewać, że zużycie energii elektrycznej powinno stale rosnąć, ze względu na rozwój nowych urządzeń elektrycznych i sprzętu AGD, to w rzeczywistości zużycie w Republice Czeskiej rosło tylko do 2008 roku a następnie w związku z kryzysem gospodarczym spadło, a kolejny wzrost jest już minimalny. Ze względu na to, ceny związane ze zużyciem energii elektrycznej powinny również raczej maleć. W niniejszym artykule opisano sytuację występującą na rynku energii elektrycznej z punktu widzenia oferty produktów dla gospodarstw domowych w taryfie D25d w latach 2011-2016. Celem jest przedstawienie trendów w rozwoju poszczególnych składowych całkowitych kosztów gospodarstw domowych związanych ze zużyciem energii elektrycznej.