### Attila LENGYEL\* Energy regulation from the perspective of climate protection The climate protection milestones of the National Energy Strategy and regulatory considerations arisen from them\*\*

#### Abstract

The purpose of the Article, to make a survey on domestic energy regulation from the prospective of climate protection.<sup>1</sup> The basis of the survey is the new National Energy Strategy published in January 2020, which defines those milestones being the significant climate protection topics of the next decade from economical, technical and regulation perspective. This mean three topics. The greater utilization of solar plants, in connection with I will examine the licensing procedure of small solar power plants, the grid connection process and the first experiences of the METAR tender. The improvement of the energy efficiency, for that I will pair an inspiring austrian example. Finally, greening transport, within that I will make a fresh regulation analysis which intends to follow the lively development of electromobility.

Keywords: energy law, climate protection, environmental law, environmental protection

### 1. Introduction

The speakers and the audience have come to realize at a domestic renewable energy conference held in November 2019 that the criteria of a presentation in the topic of climate protection are new to those who carry out activities in the energy sector, while the criteria of the energy sector are decisively new for those who are active in the area of climate protection. At the conference, the main intended features of the New National Energy Strategy were presented as well, during which the common issues of the energy sector and climate protection, together with the Government's intended responses to them were outlined well.

<sup>&</sup>lt;sup>1</sup> From the theoretical works of the topic, see especially: Bányai 2014, 56–249; Fodor 2002; Fodor 2014, 103–130; Horváth 2007, 19–40; Nagy 2013, 64–77; Olajos 2012, 19–40; Turkovics 2012, 105–112.



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This event gave later the idea to prepare an article, following the publication of the new National Energy Strategy,<sup>2</sup> which provides an overview about the energy legislation from the perspective of climate protection, and which details one of the main focal points of the Strategy, solar plants, and the existing administrative constraints to the installation of such power plants.

### 2. The international and European Union requirements of carbon neutrality and the main milestones of the National Energy Strategy implementing such requirements

The first legally binding global climate change agreement was adopted at the Paris Climate Conference in December 2015 (the Paris Agreement)<sup>3</sup>. The European Union and its Member States are among the 195 parties that signed the Agreement.

According to article 2 of the Agreement,<sup>4</sup> the goal is to keep the increase of the temperature in global average well below 2°C, and to make efforts to maintain the global warming below 1,5°C if possible, and for this purpose a rapid reduction of carbon dioxide emissions<sup>5</sup> shall be undertaken so as to achieve a balance between carbon dioxide emissions and removals until the second half of the 21<sup>st</sup> century.

The European Union formally ratified the Paris Agreement on 5 October 2016. In November 2018 the European Commission published a long-term strategy for the European Union, according to which the EU shall achieve carbon neutrality by 2050. In this context, presently the greenhouse gas emissions shall be reduced by 40% compared to 1990 levels by 2030. In a resolution from March 2019, the European Parliament requested deciding on a more ambitious emission reduction target in order to reach the goal of carbon neutrality by 2050.

At the same time, the Hungarian Government started to develop the document called 'National Energy Strategy 2030, with an outlook until 2040', which was published in January 2020 and its primary objective is the decarbonization of energy production; and now we got to the topic: Energy production/regulation from the perspective of climate protection.

The main objectives of the National Energy Strategy 2030, with an outlook until 2040 (hereinafter: the Energy Strategy) are the following: "(a) strengthening energy sovereignty and energy security; (b) maintaining the results of the reduction of public utility costs; (c) decarbonization of energy production, which is possible only with applying nuclear energy and renewable energy sources together."<sup>6</sup>

<sup>&</sup>lt;sup>2</sup> Ministry of Innovation and Technology: National Energy Strategy 2030, with an outlook until 2040, January 2020.

<sup>&</sup>lt;sup>3</sup> Paris Agreement – within United Nations Framework Convention on Climate Change (UNFCCC), dealing with greenhouse-gas-emissions mitigation, adaptation, and finance, signed in 2016.

<sup>&</sup>lt;sup>4</sup> Paris Agreement.

<sup>&</sup>lt;sup>5</sup> On the topic, see: Fodor & Peine 2013, 3–52; Miskolczi Bodnár 2013, 53–73; Seres 2016, 63–95.

<sup>&</sup>lt;sup>6</sup> National Energy Strategy 2030, with an outlook until 2040.

The Energy Strategy subsequently stipulates that "largest part of the Hungarian electricity production shall come from two sources: nuclear energy<sup>7</sup> and renewable energy,<sup>8</sup> primary from solar power plants."<sup>9</sup>

This is followed by the outlining of the domestic energy mix, concerning which the following main target numbers can be highlighted: "(a) By the joint utilization of solar power and nuclear power, 90 percent of the Hungarian electricity production may be carbon-free by 2030. (b) Carbon-neutral nuclear energy contributes nearly half of the Hungarian electricity generation. With the Paks 2 investment, this rate is sustainable for a long-term. (c) The domestic installed photovoltaic capacity will exceed 6,000 MW by 2030 and will be close to 12,000 MW by 2040."<sup>10</sup>

It is worth adding to the above objectives, that the recently published new Energy Strategy makes the domestic priority concerning renewable energies completely clear by placing solar power plants in the primary focus.<sup>11</sup>

The National Energy Strategy thereafter determines the programs that are necessary for achieving the most important objectives within the strategic timeframe and thus necessary for the decarbonization as well. In the latter case, at an operational level it states that 'we implement the climate friendly transformation of the energy sector', as a program.<sup>12</sup> This program covers the performance of the following three strategic tasks, actions: a) the greater utilization of renewable energy, especially greater utilization of solar plants, b) improvement of energy efficiency and c) 'greening' transport.

### 3. The greater utilization of renewable energy, especially solar power

In Hungary, 13,3% of the energy consumption came from renewable energy sources in 2017. More particularly, in the field of electricity consumption, the proportion of renewable energy sources increased from 2,2% to 7,5% between 1994 and 2017, while according to the scenario targeted by the Energy Strategy, the proportion of renewable energy sources shall increase to 20% by 2030 in the field of electricity consumption.<sup>13</sup>

According to the Energy Strategy, the key element of 'greening' shall be the extension of solar-power capacities. To achieve this, it is crucial to ensure that the subsidies on production can be obtained through cost effective competitive procedures, also, it can be predicted, that in the next 10 years, 200,000 household size small power

<sup>&</sup>lt;sup>7</sup> On the legal aspects of the nuclear energy, see especially: Fodor & Bányai 2014; Kocsis 2017, 77–101; Szilágyi 2010, 181–189.

<sup>&</sup>lt;sup>8</sup> On the legal aspects of renewable energy, see particularly: Olajos & Szilágyi 2013, 441–450; Szilágyi 2013, 416–425.

<sup>&</sup>lt;sup>9</sup> National Energy Strategy 2030, with an outlook until 2040.

<sup>&</sup>lt;sup>10</sup> Ibid.

<sup>&</sup>lt;sup>11</sup> Ibid.

<sup>&</sup>lt;sup>12</sup> Ibid.

<sup>13</sup> Ibid.

plants, using primarily solar power, will be installed, the basis of which shall be the reduction of technological costs and efficiency improvement.<sup>14</sup>

Overall, the goal is to increase the share of renewable energy sources to at least 21% in the gross final energy consumption, but at the same time, the Energy Strategy makes it dependent on the rate of the available European Union investment aids and the cost-efficient system of operational subsidies (pre-published, predictable system of renewable energy subsidy (METÁR) tenders).<sup>15</sup>

To expand solar power capacities, beside the financial sources, a predictable and quick licensing procedure is essential. But what is the status of the domestic licensing procedure of solar power plants from this point of view?

#### 3.1. The licensing procedure of small solar power plants

I will now provide a brief overview about the licensing procedure of small solar power plants. According to the relevant provisions<sup>16</sup> of Act no. 86 of 2007 on the electricity (hereinafter: EA) power plants with a nominal capacity of or above 0,5 MW but less than 50 MW shall be considered as small power plants (hereinafter: Small power plant).

In connection with Small power plants, a building permit or a permit to lay electric lines shall be obtained for the following technical facilities: i) the power plant, ii) the medium-voltage producing electric line which connects the power plant to the public network and iii) the installation of a medium-voltage transformer station/switchyard, or (in case it is necessary) a high/medium voltage substation which belongs to the category of transformer equipment.

The procedure of the licensing is as follows: (a) It will be covered in a separate chapter, but the first step shall be the submission of the grid connection plan to the distribution grid operator for approval.<sup>17</sup> (b) This is followed by the specific building permit process of power plants in accordance with governmental decree no. 382/2007 (XII.23.), which shall be initiated at the local office of the competent capital/regional governmental agency at first instance (hereinafter: Authority).<sup>18</sup> (c) Subsequently, or simultaneously with the building permit process, the holder/expectant of the building permit shall initiate the permitting process for the right to lay electric line concerning the medium voltage producing electric line/transformer station, before the Authority. (d) Based on the grid connection agreement concluded with the distribution system operator, a procedure to obtain a small power plant license<sup>19</sup> shall be initiated before the Hungarian Energy and Public Utility Regulatory Authority (HEA).

<sup>14</sup> Ibid.

<sup>&</sup>lt;sup>15</sup> Ibid.

<sup>&</sup>lt;sup>16</sup> Act LXXXVI of 2007 on Electricity, point 32 of 3. §, 74. §.

<sup>&</sup>lt;sup>17</sup> Government Decree No. 382/2007 (XII.23.) on provisions of electricity industrial building authority procedures 23. §.

<sup>&</sup>lt;sup>18</sup> Ibid. 24. §.

<sup>&</sup>lt;sup>19</sup> Act LXXXVI of 2007 on Electricity 80. §.

(e) Following the completion of the installation, a process to obtain an operational license<sup>20</sup> in case of a producing line/transformer station, while in case of solar power plants, a process to obtain a license for the use<sup>21</sup> shall be initiated before the Authority. (f) At the end of the procedure, a grid use agreement shall be concluded with the distribution system operator.

In accordance with paragraph (1) of article 1 of governmental decree no. 531/2017 (XII.29.), in the administrative procedures determined in annex 1 of the mentioned decree, in connection with the special questions indicated therein, the Authority appoints the bodies listed there as specialized authorities. In the electricity building permit process, the specialized authorities to be involved are the following: (1) Minister of transport – the safety of the civil aviation; (2) Military aviation authority – the safety of state aviation (in case an above-ground line is installed); (3) Town clerk of the competent local government, or the chief town clerk in Budapest – consistency with the local urban planning instruments; (4) Local bodies of professional disaster responders / enforcement of fire safety requirements.<sup>22</sup>

Furthermore, according to paragraph (3) of article 6 of the governmental decree no. 382/2007. (XII.23.), the special issues determined in point 3 of annex 4 shall be examined by the Authority itself. Such special issues are the protection of the quality of agricultural lands, the assessment of the possible impact on forests, the impact on public roads, nature protection, landscape protection, air protection, noise protection, protection of cultural heritage, examination from geological point of view, protection of gas industrial activities and the exploitation of the mineral resources.

In addition, according to paragraph (2) of article 6 of governmental decree no. 382/2007. (XII.23.), in the building permitting processes – depending on their involvement – the public utility service providers, managers and operators determined in point 2 of annex 4 shall also provide their consent. Such entities are the following: (1) public road operators; (2) railway infrastructure operators; (3) airport operators; (4) water management associations; (5) telecommunication service provider; (6) water and channel utilities; (7) electricity network license holders; (8) gas distribution system operator; (9) district heating service providers, producers<sup>23</sup>; (10) cable-internet service provider; (11) transport companies; (12) gas transmission system operator; (13) oil transmission system operator; (14) chimney-sweeping authority, chimney-sweeping service provider, chimney-sweeping public service operator.

During the licensing process – as a precondition of that – the affected public service providers (registered in the authentic electronic registry of public service providers) and other service providers shall provide a declaration about their consent.

 $<sup>^{20}</sup>$  Government Decree No. 382/2007 (XII.23.) on provisions of electricity industrial building authority procedures 25. §–26/B. §.

<sup>&</sup>lt;sup>21</sup> Ibid. 27. §–30. §.

<sup>&</sup>lt;sup>22</sup> Government Decree No. 531/2017 (XII.29.) on appointment of specialized authorities based on imperativ reason by certain public interest.

<sup>&</sup>lt;sup>23</sup> On the connected legal aspects, see: Fodor 2016.

The application for the building permit shall be submitted to the Authority with the content determined in point 7 of annex 3, and annex 5 of governmental decree no. 382/2007. (XII.23.). The administrative time limit in the above building permit processes is 25 days.<sup>24</sup> The Authority – upon request – may conduct the process on a priority basis, in which case the administrative time limit is 15 days. In case after the beginning of the construction there is a request for the modification of the building permit due to a technical necessity, the Authority must proceed on a priority basis, they do not have any discretionary power over ordering the priority basis.<sup>25</sup>

According to the provisions of the new Act no. 150 of 2016 on the General Administrative Procedure, the remedy of the deficiencies of the application may be requested only once during the administrative time limit, and the duration necessary for the completion of the deficiencies shall be included in the administrative time limit. It is only possible to involve a specialized authority or to examine a special issue during the administrative time limit. Also, the decision of the administrative authority shall be communicated until the end of the administrative time limit. In case the authority exceeds the time limit, the administrative fee of the process shall be paid back to the client.<sup>26</sup>

The decision of the Authority becomes final after the 15 days appeal period expired, unless every affected party waive their right to appeal; in this case, the decision becomes final immediately after the waivers.

In the building permit processes the application may be submitted in an electronic way as well, in this case, the process is conducted by the Authority and the specialized authorities in the frame of electronic administration.

The overall conclusion is that in the past 10 years, the time limits of the building permit processes become unified and shorter, the number of the specialized authorities and public utility service providers to be involved in the process were reduced, however, the number of the special issues examined during the process did not become less.<sup>27</sup>

# 3.2. Options for the revision of the licensing procedure of small solar power plants to speed up the process

In order to reduce the administrative burdens of the licensing of solar power plants, I provide below two suggestions, which could be implemented faster (quickwin) and two suggestions which can be achieved in the medium term (mid-win).

One of the quick-wins could be that in case a permit to lay electric line was granted for a medium-voltage producing line, and within 2 years after such permit become final, a new producing line of a new solar power plant is installed at the same

 $<sup>^{24}</sup>$  Government Decree No. 382/2007 (XII.23.) on provisions of electricity industrial building authority procedures 7/A. §.

<sup>&</sup>lt;sup>25</sup> Ibid. 5. § (5)–(6).

<sup>&</sup>lt;sup>26</sup> Act CL of 2016 on General Administrative Procedure 44. §, 50–51. §.

<sup>&</sup>lt;sup>27</sup> License Procedure of Energy Producing Equipment based on Renewables – Energia Klub by involving Dr. Lengyel Attila Law Firm 2010.

place, with regards to the previous approval, there would be no need to apply for a new permit to lay electric line, it could be replaced by the prior notification of the Authority.

The other quick win could be if in the future the processes are conducted exclusively in an electronic way, and it would be the task of the Authority to acquire the title sheets of the real estates concerned by the process.

The suggestions to be developed for the medium-term (mid-win), for the reduction of the essential administrative burdens and the encouragement of the spectacular spread of solar power plants can be summarized as follows. Still, numerous public utility service providers could be involved in the process, and the range of special issues are also extremely wide. For their significant, but reasonable reduction, it is necessary to survey them through a new spectacle: in the legislation, it shall be determined, which special issues shall be examined, and which utility providers shall be involved in the building permitting process by all means, while in case of other special issues and utility providers, the client should be allowed to assess the necessity and to indicate in the application – in a separate declaration – which special issues and utility providers are not concerned in the given process. The authority would not need to examine the issues and utility providers mentioned in that declaration of the client, so they would not need to request a resolution in the mentioned special issues, and they would not need to call the mentioned utility providers to make a declaration. The above means that the legislation in force shall be revised in respect of the special issues and utility providers in order to achieve the 'decarbonization goals'.

# 3.3. Legislation concerning the connection of solar power plants to the grid, and the small power plant licensing process of the HEA

Below we outline the procedure necessary for the grid connection of a solar power plant to be established.

In order to transmit the electricity produced by the small power plant to be installed, the connection to the public grid through a producing line or a private line is inevitable. For the grid connection, the provisions of the EA, and governmental decree no. 273/2007 (X.19.) on the implementation of the provisions of the EA shall apply (Decree).<sup>28</sup>

(1) Conclusion of the grid connection agreement: The procedure for the conclusion of the grid connection agreement based on the Rules of the Distribution<sup>29</sup> in force, as approved by the HEA, is the following: The procedure shall start with a statement of demand by the applicant, based on which the distribution system operator shall provide technical and economic information to the applicant.

According to the EA, in case a power plant requests the establishment of a connection point with medium voltage on the border of the lot where the power plant will be installed, the distribution sytem operator is obliged to fulfill such request. In case before the conclusion of the grid connection agreements, more small power plants on neighboring premises submit demands for the connection to the distribution network,

<sup>&</sup>lt;sup>28</sup> Government Decree No. 273/2007 (X.19.) on execution of certain provisions of Act LXXXVI of 2007 on Electricity.

<sup>&</sup>lt;sup>29</sup> Rules of Distribution, Chapter 7, approved by HEA February 2019.

their grid connection points can be determined in a way, that their grid connections are included in a common switchgear, but in this case, neither of the connection points can be farther than 500 meters from the border of the lot where the small power plant will be installed.<sup>30</sup>

Based on the information received from the distribution system operator, the investor shall prepare a grid connection plan which is subject to the approval of the distribution system operator, while in case the capacity of the concerned grid is 120 kV, the grid connection plan shall be approved by the transmission system operator (MAVIR Zrt.) and the distribution system operator jointly.

The grid connection agreement shall be signed subsequently, and it shall determine the technical/economic conditions of the grid connection and the specification of the intangible asset which is embodied by the right to use the capacity available for the power plant.

The grid connection agreement shall enter into force when the final building permit of the small power plant was presented to the distribution system operator. In case the permit is not presented within 2 years, the grid connection agreement shall terminate.

The Rules of Distribution does not determine a time limit for the distribution system operator's process.

(2) Small power plant license issued by HEA: According to the EA, in case the nominal capacity of a solar system reaches or higher than 0,5 MW, it is subject to authorization requirement as a small power plant, and in order to start operations, the power plant needs a small power plant license from the HEA. The small power plant license is issued in one consolidated process, and it entitles the applicant to start the installation of the power plant and to produce electricity as well. This means, that in case a small power plant license is granted, the applicant will not need to obtain a separate license for the operation. The license is valid for a definite term which can be extended. The HEA – based on the data provided by the applicant – determines the deadline for the construction in the license.<sup>31</sup>

(3) Grid use agreement: Before starting the use of the public grid after the construction is finished, a grid use agreement shall be concluded with the distribution system operator, and a balancing membership agreement is necessary as well.

The costs of the procedure for the grid connection consist of a basic fee, a fee for the establishment of a connection line (only in case of users who are connected at low voltage) and a fee for the establishment of a public line. The rules for bearing the costs – including the cases of exemption – are determined in ministerial decree no. 76/2011. (XII.21.) NFM on the financial and technical conditions of connection to the public grid.

<sup>&</sup>lt;sup>30</sup> Act LXXXVI of 2007 on Electricity 27. § (2a)–(2b).

<sup>&</sup>lt;sup>31</sup> Ibid. 80. §.

## 3.4. Possibilities for the modification of the legislation concerning the grid connection of solar power plants in order to speed up the connection

Two thoughts in advance: firstly, the number of the new grid connection demands increases constantly and significantly, and there is an increase in the number of the solar plants with higher, 20-50 MW capacity as well, which already have approved grid connection plans. Consequently, the number and volume of the demands is on the rise, and with regards to the goals determined in the Energy Strategy, this tendency is expected to remain unchanged.

Secondly, according to the conclusion of the Energy Strategy in the subject, "In order to prevent the obstruction of the grid connection of renewable energy producers by capacity allocations blocked by 'low-quality', uncompleted power plant projects, the level of transparency and the economic efficiency shall be increased in connection with the allocation of connection capacities."<sup>32</sup>

In order to increase transparency, one suggestion is to reduce the term determined in the legislation for the presentation of the final building permit as a condition for the grid connection agreement's entry into force, to 1 year. In case it does not happen within the 1 year term, the grid connection agreement shall terminate. In parallel or as an alternative to the above mentioned, periodically published capacity auctions could be introduced.

At the same time, in the spirit of transparency, on the mid-term, it would be reasonable to lay down the main elements of the grid connection procedure in the legislation, and the procedural rules (e.g. administrative time limit, conditions of the conclusion of the grid connection agreement, the development of a digitized platform) shall be determined in a way, which would enable the semi- automated management of such requests in a digitized framework. This would ensure, that a digitized system developed for such purpose could generate automatic response for unproblematic requests, or requests with serious deficiencies.

# 3.5. Operational subsidy – Comments concerning the first METÁR tender for premium funds

In accordance with the European Union rules, as from 2020, power plants using renewable energy sources, thus solar power plants may only receive premium-type subsidy, while only experimental technologies and pilot-projects may receive subsidy in the feed in tariff system. The premium system is regulated by the EA,<sup>33</sup> and on the level of implementation, by governmental decree no. 299/2017. (X.17.) at first place. The instrument for the subsidy is tendering (METÁR tender).<sup>34</sup>

In the METÁR tender, in case of successful tenderers the market selling prices shall be expanded to the extent of the price offered by the successful tenderer, but the producers shall manage the sale of the electricity by themselves, and they have strict

<sup>&</sup>lt;sup>32</sup> National Energy Strategy 2030, with an outlook until 2040.

<sup>&</sup>lt;sup>33</sup> Act LXXXVI of 2007 on Electricity 9–13. §.

<sup>&</sup>lt;sup>34</sup> NFM decree No. 62/2016 (XII.28.) on limits of subsidy for electricity production based on renewable energy source and on tender process regarding premium type subsidy.

scheduling and schedule-maintaining obligations. Thus, in the frame of METÁR tender, the lowest subsidy requests are accepted.

According to the relevant legislation, in the tender, power plants to be established as new investment, and already existing power plants, which will be renewed from an amount that is more than 50% of the value of the original investment, may participate.<sup>35</sup> The duration of the subsidy is limited to maximum 20 years. The maximum amount of the offer price shall be determined by HEA, within the frameworks specified by annex 1 and 2 of governmental decree no. 299/2017. (X.17.). The annual maximum amount of the subsidy to be allocated was 1 billion HUF in 2019, while from 2020 until 2026 the yearly amount will be 2,5 billion HUF.

The first METÁR tender was conducted in 2019 on a pilot basis, the tender was published on 2 September 2019, and 2 December 2019 was the deadline for the submission of the applications.

The main features of the first METÁR tender<sup>36</sup> were the following: (a) Maximum amount of the subsidy: 1 billion HUF; (b) Quantity of subsidized electricity: 200 GWh/year; (c) Two tender categories were defined: (c1) Power plant units with a nominal capacity higher than 0,3 MW, but lower than 1 MW; (c2) Power plant units with at least 1 MW, but not more than 20 MW nominal capacity; (d) The offer (technical-economic information document) of the competent distribution system operator issued to the name of the applicant concerning the grid connection was a precondition. (e) The deadline for the start of the commercial operation was uniformly 3 years after the grant decision became final; (f) Only applicants who plan to produce electricity on Hungarian premises were entitled to receive subsidy; (g) Maximum amount of the offer price: 26.08 HUF/kWh; (h) The duration of the subsidy was determined in 15 years, which is shorter than the 20 year maximum according to the legislation; (i) The applications were sorted by offer prices in ascending order. This is the only sorting aspect, except in case the offer prices are the same. Based on the experiences of the first METÁR tender, it would be expedient and it would increase transparency, if in accordance with paragraph 3 of Article 6 of the relevant new European Union directive (RED II.)37 an approximate tender-schedule was published, which indicates tenders planned to be launched in the given calendar year, together with their planned launch dates.

The extension of the duration of the subsidy to more than 15 years should also be considered for the first part (first trimester) of the 10-year period of the Energy Strategy, with regards to solar energy technology's cost-reduction tendency.

<sup>&</sup>lt;sup>35</sup> Ibid.

<sup>&</sup>lt;sup>36</sup> Tender Process Document – Subsidy of electricity produced from renewable energy sources in the frame of green premium tender system 2 September 2019.

<sup>&</sup>lt;sup>37</sup> Directive (EU) 2018/2001 of the European Parliament and of the Council of 11 December 2018 on the promotion of the use of energy from renewable sources.

#### 4. Improvement of energy efficiency – inspiration from a Viennese example

Encouraging energy saving and the improvement of energy efficiency is a priority area of the Energy Strategy. In the near future, the most important instrument of the aforementioned shall be the implementation of the principle 'energy efficiency first' in the everyday decision-making. This shall mean, that before energy planning or investment decisions it has to be examined, if such decisions can be replaced by cost efficient, technically, economically and environmentally adequate energy efficiency measures.<sup>38</sup> The application of the principle shall be introduced among local governments, public institutions. This is especially so, as it would also help the implementation of the action called 'large-scale spread of renewable energy'.

Let's see an example in connection with the above, which could illustrate the potentials of the principle. In October 2015, Vienna University of Technology won an Austrian state prize in environmental protection and energy technologies. The building of the University of Technology – a tower block, built in the 1960s – stands in the city center of Vienna, and before the renewal it was far behind its age taking into consideration both energy balance and infrastructure. The building has 11 stories and a floor area of 13,500 m<sup>2</sup>. The owner, Bundesimmobiliengesellschaft m.b.H – the manager of the real estates owned by the Austrian state –, and the tenant of the building, the University of Technology decided about the complete renewal, under the name '2015 modernization project'. The goal of the owner and the university was not only a large-scale reduction of energy consumption, but to turn the old tower block into an 'energy-positive' building. The scientific staff of the university and a research-development team were also involved into the realization of the renewal, the latter analyzed more than 9,300 tools and components, recorded the energy consumption of each and they chose the most efficient for the development.<sup>39</sup>

As the outstanding results of the renewal, only energy efficient computers and coffee machines are available for the personnel and the students, the application of a dedicated energy management system was introduced, the application of the intelligent building-management software of the company SAUTER was introduced, the waste heat of IT servers are used for the building's heating, energy is recovered from the elevator-system, and a solar energy system was installed on the top and to the facade of the building with a surface of 2,199 m<sup>2</sup>, which fulfills the primary electricity demand of the building. As a result, the energy consumption of the building decreased by 88%.<sup>40</sup>

The above example provides an impulse to the enforcement of the energy efficiency targets and to the actions concerning the implementation of the wide spread of solar energy systems as well. But first, let's see briefly the directions of the Energy Strategy. The Energy Strategy proposes to ensure a cost efficient way of energy savings by the introduction of an energy efficiency obligation system, in the frame of which the companies (energy distributor, retail energy supplier companies) shall take care of the generation of certified energy savings by themselves. It is up to the companies concerned to decide in which segment of their customer base (retail, public, industrial,

<sup>&</sup>lt;sup>38</sup> National Energy Strategy 2030, with an outlook until 2040.

<sup>&</sup>lt;sup>39</sup> 2019/02/Bildung\_Facts33\_Technischen-Universität-Wien-Österreich.

<sup>&</sup>lt;sup>40</sup> Ibid.

service sector) they will accomplish the goals concerning the reduction of the volume of the energy provided. With regards to the above described example, I would like to focus on public institutions in the following. The domestic stand consists of 12,000-15,000 public institutions, which means ca. 960,000 buildings, where the potential of energy savings is significant. To realize this potential, stricter regulatory obligations are required.<sup>41</sup>

But which proposals for legislative amendment could be appropriate? Public institutions are obliged to procure high energy efficient products and services in case of investments with a value of or above the EU threshold in accordance with Act no. 57 of 2015. The way forward could be if at an appropriate point of the public procurement procedures, the accomplishment of the energy efficiency aspect was evaluated and measured. In view of the above practical example, it shall be considered to enforce the aspect of energy-efficiency during the assessment of public procurement procedures, in a way that is in line with the requirements of the act on public procurement procedures concerning the assessment criteria, thus in case of such investments, the preliminary examination of the energy efficiency aspect would be an assessment criterion, and the promised improvement of energy efficiency shall be accompanied in the contract with a penalty and the sanction of disclosing the contract breach. Wienstrom-case (C-448/01) has shown, that regarding public procurement procedures, the contract is an uthority shall place at least as much emphasis on the promised assessment criteria as on the control of their fulfillment during performance.<sup>42</sup>

On the other hand, based on the overview of the domestic legislation concerning energy efficiency it is clear, that energy efficiency regulation is already extended by several valuable and positive legal instruments (energy specialist adviser, energy audit obligation in certain cases). However, controlling compliance with the legislation, and the consistent imposition of legal consequences concerning the obligations to be fulfilled shall be revised by all means.

#### 5. Greening transport – regulatory directions

According to the Energy Strategy, "the transport sector contributes to ca. 20% of the total emission, and road transport contributes to 98% of such emission."<sup>43</sup> According to the renewable energy directive of the EU (RED II.), fuel distributors shall ensure, that by 2030, at least 14% of the total energy consumption of the transport sector shall come from renewable energy.<sup>44</sup> This could be achieved basically from the results of two areas. The expansion of biofuels on the one hand, and the increase of the utilization of electricity in transport on the other would enable it.

<sup>&</sup>lt;sup>41</sup> National Energy Strategy 2030, with an outlook until 2040.

<sup>&</sup>lt;sup>42</sup> Court decision on 4 December 2003. EVN AG and Wienstrom GmbH versus Republik Österreich. Preliminary decision request: Bundesvergabeamt – Austria. Directive 93/36/EGK – Public procurement for obtaining goods – Directive 89/665/EGK; Case no.C-448/01.

<sup>&</sup>lt;sup>43</sup> National Energy Strategy 2030, with an outlook until 2040.

<sup>&</sup>lt;sup>44</sup> Directive (EU) 2018/2001 of the European Parliament and of the Council of 11 December 2018 on the promotion of the use of energy from renewable sources.

In connection with the expansion of biofuels, the Energy Strategy expressly declares, that in order to accomplish the above reduction of emission, the share of the so called first generation biofuels, originating from foodstuff and fodder crop shall be increased to around 7 %, while the share of the so called second generation biofuels produced from waste and biogas shall be increased to 3,5% in the final energy consumption of transport.<sup>45</sup>

Governmental decree no. 186/2019. (VII.26.) adopted by the Government in 2019 ensures, that by the end of 2020, the proportion of biocomponents in fuel shall increase to 8,2% (specifically 6,1 % in case of petrol).<sup>46</sup>

Furthermore, the Government accepted the Green Bus program, which enables the acquisition and commission of 1300 environment friendly buses until 2029, first by the acquisition of CNG and EURO-6 classified, modern diesel buses, and as from January 2022, by using vehicles powered electronically. The program affects municipalities with population over 25,000, and the Government finances the 20% of the total costs of the program, while the remaining shall be funded by local governments and local transport companies. The government support shall be covered from the incomes of the sale of carbon-dioxide quotas.<sup>47</sup>

The Jedlik Ányos Plan 2.0. (Strategy of Domestic Electromobility)<sup>48</sup> enhances the expansion of electrical vehicles and their infrastructure. However, the conditions required for the insertion of electric cars to the electricity system shall be created at the same time. Within the above frame, I provide an overview about the type of licensees in the field of electromobility established by governmental decree adopted at the end of 2019.

The provisions of governmental decree no. 243/2019. (X.22.) on certain aspects of electromobility service distinguishes between the operator, who installs and operates the charging device and the electromobility service provider, who provides services concerning the charging device and keeps in contact with the client. The two functions may as well be managed by the same entity.

Electric charger operational activity may be carried out based on a permit issued by the HEA upon application for such permit. The application shall be submitted to the HEA at least 75 days before the planned start of the operation. The holder of the permit has 18 months after the permit became final to install and start the operation of the charger, otherwise the permit to install the charger at the given place is lapsed. In case the number of the changes concerning the chargers' number, or the type of the operated chargers reaches 20, the amendment of the permit shall be requested from the HEA, at least 75 days before the planned change.<sup>49</sup>

<sup>&</sup>lt;sup>45</sup> National Energy Strategy 2030, with an outlook until 2040. On the legal aspects of waste management law, see: Csák 2014, 48–61; Olajos 2016, 91–102; Szurovecz 2015, 5–18.

<sup>&</sup>lt;sup>46</sup> Government Decree No. 186/2019 (VII.26.) on modification of Government Decree No. 279/2017 (IX.22.) on sustainability requirements and verification on biofuels and bio energy source.

<sup>&</sup>lt;sup>47</sup> Hungarian Bus Info 23 January 2020.

<sup>&</sup>lt;sup>48</sup> Ministry of Innovation and Technology: Strategy of Domestic Electromobility, Jedlik Ányos Plan 2.0. – July 2019.

<sup>&</sup>lt;sup>49</sup> Government Decree No. 243/2019 (X.22.) on certain issues of electromobility service.

The operator shall ensure continuous operation with at least 90 % availability on a yearly basis, except in case of force majeure. The priority tasks of the operator are to ensure the grid connection of the charger, to purchase the electricity necessary for the propulsion of electric cars, furthermore, to ensure the appropriate technical conditions to serve the clients. The operator is entitled to involve a contributor only in cases determined in the governmental decree (e.g. to purchase the electricity for the charging), after the prior written notification of the HEA.<sup>50</sup>

As from 1 July 2020, the holder of the permit will be obliged to ensure the technical conditions necessary for the identification of the user, the collection of data required for accounting, and the operational accounting tasks.<sup>51</sup>

The activity of electromobility service providers is not subject to a permit, but the HEA shall be notified at least 75 days before the commencement of such activity. The entity that fulfills the regulatory conditions will be registered by the HEA as electromobility service provider. The notifier – in case they are involved into the provision of the electromobility service by the operator of the charging device – shall prove their legal relationship with the operator of the charging device and they shall provide the technical identification data of the public charging devices. The electromobility service provider is the one who concludes contract with the user. The electromobility service provider ensures the access to the charging device via the operator, in cooperation with it.<sup>52</sup>

The task of invoicing concerning each charging shall be managed by the electromobility service provider as from 1 July 2020. The invoice shall contain the account unit price, the quantity of the electricity used (kWh) and the amount to be paid.<sup>53</sup> The data necessary for accounting shall be forwarded between the operator of the charging device and the electromobility service provider, in case of occasional charging immediately after the availability, while in case of a continuous legal relationship, at latest within 24 hours from the availability. The price of the used electricity and other fees and costs connected to the operation shall be paid by the electromobility service provider to the operator of the charging device based on the agreement between them, against an invoice. The operator of the charging device service, and the actual data necessary for accounting.<sup>54</sup>

In my point of view, the more detailed regulation of the separation of the activities and responsibilities of the two type of licensees will be forced by the issues emerging during operational functioning, just like it happened a decade ago in case of the separation of the activities between natural gas distribution system operators and natural gas traders.<sup>55</sup>

<sup>&</sup>lt;sup>50</sup> Ibid.

<sup>&</sup>lt;sup>51</sup> Ibid.

<sup>52</sup> Ibid.

<sup>53</sup> Ibid.

<sup>54</sup> Ibid.

<sup>&</sup>lt;sup>55</sup> On the topic, see: Kaziáner 2009, 3–9.

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