

## Energy Exchange, Association Agreement with the European Union and Legal Challenges for the Georgian Energy Law

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**Abstract:** Georgia signed an Association Agreement with the European Union in 2014, and this launched a process of approximation and harmonization with EU law. Energy law is one of the most important areas, which has to be developed and modified in accordance with the EU directives, regulations and rules of the Energy Community. Georgia took responsibility for establishing the energy exchange system and reorganizing the Georgian electricity market on a new model. In fact, these issues have not been studied, as they require, on the one hand, a very in-depth, practical knowledge of the issue and, on the other hand, erudition in the issues of legal approximation and information about the obligations assumed by the association agreement. The purpose of the article is to review the legislative regulations on the Georgian electricity market, the legal framework that defines the main principles of the market, the basis of operation, and sociopolitical and legal mechanisms of market stability. In the article, special attention will be paid to the status of the energy exchange in Georgia, its concept, its legal basis, problematic issues related to its implementation, and the future perspective. As a result of the analysis of the issues, based on the evaluation of the existing problems, the necessary legal ways of the development of energy law and the mechanisms promoting harmonization with the laws of the European Union are determined.

## 1. Introduction

A turning point in the development of Georgian law was played by the 2014 Association Agreement with the European Union, by which the state undertook legal obligations both in the direction of reforming the legal system in general and in particular fields of law.<sup>1</sup> Of course, the process of approximation is quite long and time-consuming. There are many sources of EU law to be considered, and the domestic legislation of Georgia needs to be brought into compliance with them. In this area, special importance was given to the direction of energy law, which is not only a strategically important field for the state and the European Union (both from the economic and security point of view, especially due to the current Russo-Ukrainian war and the significant dependence of Georgia's electric energy on Russia<sup>2</sup>) but also directly derives from the package of the association agreement, from the agreement with the European Atomic Energy Community and their member states. The mentioned agreement provided for Georgia's membership in the Energy Community and, accordingly, the implementation of the directives within the framework of the negotiations on the membership of the Energy Community, and in case of failure of the negotiations, within the time limits agreed with the Association Council.<sup>3</sup> It is worth noting the reference to energy-related issues in the association agreement that, in case of conflict, the provisions of the Energy Community Treaty or the provisions incorporated into EU law by virtue of the Energy Community Treaty.<sup>4</sup> Taking this into account, the ongoing and planned reform of energy law enjoys special attention and status in the process of harmonization with EU law.

Georgia has enjoyed the status of “observer” in the European Energy Union since 2007. Although it has always strived to join the European

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<sup>1</sup> See: Association Agreement between the European Union and the European Atomic Energy Community and their Member States, of the one part, and Georgia, of the other part (OJ L 261/4, 30 August 2014).

<sup>2</sup> See: “Georgia's Economic Dependence on Russia: Impact of the Russia-Ukraine War,” February 22, 2023, accessed September 25, 2023, <https://transparency.ge/en/post/georgias-economic-dependence-russia-impact-russia-ukraine-war-1>.

<sup>3</sup> Association Agreement between the European Union and the European Atomic Energy Community and their Member States, of the one part, and Georgia, of the other part (OJ L261/4, 30 August 2014), Annex XXV.

<sup>4</sup> *Ibid.*, Article 218.

family, this was facilitated by the interest expressed by the European Union itself in the Southern Energy Corridor, which made it possible for Georgia to be granted an exception after Georgia's official application to join the Energy Union in 2013. On October 14, 2016, the Protocol Concerning the Accession of Georgia to the Treaty Establishing the Energy Community was signed at the European Energy Union held in Sarajevo at the ministerial meeting, and Georgia became a member of the European Energy Union.<sup>5</sup> Regardless of political aspirations, due to its geographical location, Georgia remains isolated from the union market and does not have the opportunity to create a unified regulatory system with neighboring states. Therefore, Georgia cannot fully benefit from certain provisions of the Energy Community Agreement, which is why Georgia was allowed certain exceptions from the agreement.<sup>6</sup>

The protocol takes into account the directive on the common rules for the internal electricity market, which establishes the main principles regarding the formation of a competitive market, unhindered access to the network, unbundling, rights and duties of the regulator and market participants.<sup>7</sup> It is also necessary to take into account the European regulations, which establish the minimum requirements regarding the generation, transportation and consumption of electricity, which must be available to market participants, and also prohibit manipulations that affect the wholesale energy markets and ensure the proper functioning of these markets.<sup>8</sup>

Considering the specifics of energy law, the legal characteristics of approximation and the practical implementation of legislative changes as a result of the assumed obligations are related to a number of practical problems. One of the most important of these obligations is the establishment

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<sup>5</sup> Protocol Concerning the Accession of Georgia to the Treaty Establishing the Energy Community, 14 October 2016.

<sup>6</sup> Ibid.

<sup>7</sup> Directive of the European Parliament and of the Commission No. 2009/72/EC concerning Common Rules for the Internal Market in Electricity and Repealing Directive 2003/54/EC (OJ L 211/55, 14 August 2009).

<sup>8</sup> Commission Regulation (EU) No. 543/2013 on Submission and Publication of Data in Electricity Markets and Amending Annex I to Regulation (EC) 714/2009 (OJ L 163/1, 15 June 2013); Regulation (EU) of the European Parliament and of the Commission No. 1227/2011 on Wholesale Energy Market Integrity and Transparency (OJ L 326/1, 8 December 2011).

of the energy exchange system and the reorganization of the Georgian electricity market on a new model. In fact, these issues have not been studied, as they require, on the one hand, a very in-depth, practical knowledge of the issue and, on the other hand, erudition in the issues of legal approximation and information about the obligations assumed by the association agreement. The purpose of the article is to review the legislative regulations on the Georgian electricity market, the legal framework that defines the main principles of the market, the basis of operation, and sociopolitical and legal mechanisms of market stability. In the article, special attention will be paid to the status of the energy exchange in Georgia, its concept, its legal basis, problematic issues related to its implementation, and the future perspective. As a result of the analysis of the issues, based on the evaluation of the existing problems, the necessary legal ways of the development of energy law and the mechanisms promoting harmonization with the law of the European Union are determined.

## 2. Georgian Electricity Market

The basis for the formation of the Georgian electricity market was the Law of 27 June 1997 on Electricity and Natural Gas of Georgia and the Electricity (Capacity) Market Rules approved on the basis of this law,<sup>9</sup> which provided regulations for both electricity retail and wholesale trade.<sup>10</sup> However, the mentioned regulation was essentially different from the European market model and required the formation of a new market model.<sup>11</sup> In accordance with the European model, the energy exchange is a certain trading area, a platform where offers are collected and compared in the short term (day-ahead and intraday trading<sup>12</sup>).<sup>13</sup> The “target model” for the EC is a day-ahead market on the exchange: to allocate capacity between trading zones in

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<sup>9</sup> Order N77 of 30 August 2006 of the Minister of Energy of Georgia.

<sup>10</sup> The Electricity (Capacity) Market Rules, Chapter II (Adopted by Order N77 of 30 August 2006 of the Minister of Energy of Georgia).

<sup>11</sup> Akaki Gatslerelia, “Legislative Tendencies of Europeanisation of the Georgian Electricity Market,” *Journal of Law*, no. 1 (2020): 30.

<sup>12</sup> Regulation of the European Commission No. 2015/1222 on Establishing a Guideline on Capacity Allocation and Congestion Management (OJ L 197/24, 24 July, 2015).

<sup>13</sup> Tim Schittekatte, Valerie Reif, and Leonardo Meeus, *The EU Electricity Network Codes* (Florence: European University Institute, 2020), 27.

the short term through auctions and to complement the market in a kind of forward long-term bilateral contracts insofar as they allow for adjustments from a generation or user perspective.<sup>14</sup> Trading based on bilateral agreements (OTC market) is different from trading on the exchange – the parties to the contract usually agree on a long-term period to buy and sell electricity at a fixed price under certain conditions.<sup>15</sup> For example, Germany trades through long-term bilateral agreements, unlike other European countries that prefer an organized market (exchange).<sup>16</sup> Market participants have no obligation to buy or sell electricity on the exchange, and in many cases, market participants trade on the exchange to adjust the volumes stipulated in the power contracts, as it is difficult to predict in advance the volume of electricity they will need in a particular period.

Market liquidity is determined by the ability to trade quickly (buy/sell) without significantly affecting prices.<sup>17</sup> The market of bilateral contracts in Europe is characterized by low liquidity.<sup>18</sup> In turn, market operators in national or regional markets, in cooperation with the transmission system operator (TSO), provide day-ahead and intraday trading, pairing of market participants. Their task is to receive nominations, publish prices according to the results<sup>19</sup> and settle the contracts concluded as a result of trade.<sup>20</sup> A reference price is formed on the exchange, which, in many cases, determines the price of long-term contracts.<sup>21</sup>

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<sup>14</sup> Ibid., 26.

<sup>15</sup> Fred Espen Benth, Jūratė Šaltytė Benth, and Steen Koekebakker, *Stochastic Modelling of Electricity and Related Markets* (Singapore: World Scientific Publishing, 2008), 8–11.

<sup>16</sup> *An Electricity Market for Germany's Energy Transition*, White Paper by the Federal Ministry for Economic Affairs and Energy (Berlin: Federal Ministry for Economic Affairs and Energy (BMWi), 2015), 44–5.

<sup>17</sup> Nathan Foley-Fisher, Stefan Gissler, and Stéphane Verani, *Over-the-Counter Market Liquidity and Securities Lending* (Washington, D.C.: Board of Governors of the Federal Reserve System (U.S.), 2019), 2–3.

<sup>18</sup> Ibid.

<sup>19</sup> Regulation (EU) of the European Parliament and of the Council No. 1227/2011 on Wholesale Energy Market Integrity and Transparency (OJ L326/1, 25 October 2011).

<sup>20</sup> Regulation of the European Commission No. 2015/1222 on Establishing a Guideline on Capacity Allocation and Congestion Management (OJ L197/24, 24 July 2015), Article 7.

<sup>21</sup> Tobias Paulun, “The Reference Prices Established by the Exchange Increase Transparency in the Energy Markets and Strengthen the Participants’ Confidence in the Trading Process,” accessed September 25, 2023, <https://www.eex.com/en/markets/trading-ressources/indices>.

The situation in the energy market was radically changed by the Russo-Ukrainian war, which caused a sharp rise in prices.<sup>22</sup> Regulated exchanges operating in wholesale energy markets ensure price stability and meet energy demand.<sup>23</sup> Access to transparent liquidity and price flexibility, which the energy exchange provides, is especially important in a crisis. Investors are interested in whether the market price established on the exchange is sufficient for the return on the investment.<sup>24</sup> This is crucial for existing investors in Georgia, especially for wind and solar plants that do not have a guaranteed power purchase agreement with the state.<sup>25</sup> In order to attract investors, it is recommended the state does not artificially intervene and determine the price of electricity. It is important from the state side to offer an effective mechanism to support the development of renewable energy sources.<sup>26</sup>

### 3. Creation of the Energy Exchange of Georgia

#### 3.1. Agreement Approximation and Legislative Changes

The reform of the electricity market in Georgia has been implemented since 2019.<sup>27</sup> The legislation of Georgia establishes the general legal framework for the generation, transmission, distribution, supply and trade in the electricity sector with a view to promoting the establishment, opening, development

<sup>22</sup> “Russia’s War on Ukraine Fuels Energy Crisis,” accessed September 25, 2023, [https://www.europarl.europa.eu/RegData/etudes/BRIE/2022/733643/EPRS\\_BRI\(2022\)733643\\_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/BRIE/2022/733643/EPRS_BRI(2022)733643_EN.pdf); “Impact of Russia’s Invasion of Ukraine on the Markets: EU response,” accessed September 25, 2023, <https://www.consilium.europa.eu/en/policies/eu-response-ukraine-invasion/impact-of-russia-s-invasion-of-ukraine-on-the-markets-eu-response/#energy>.

<sup>23</sup> See: Michael Pollitt, Nils-Henrik von der Fehr, Catherine Banet, and Bert Willems, *The European Wholesale Electricity Market: From Crisis to Net Zero* (Centre on Regulation in Europe Report, 2022).

<sup>24</sup> *Legal Frameworks for Renewable Energy*, Policy Analysis for Development and Emerging Countries (Hochheim am Main: W.B. Druckerei GmbH, 2012), 20.

<sup>25</sup> “Power Purchase Agreements (PPAs) and Energy Purchase Agreements (EPAs),” accessed September 25, 2023, <https://ppp.worldbank.org/public-private-partnership/sector/energy/energy-power-agreements/power-purchase-agreements>.

<sup>26</sup> Georgian Law No. 5652-6ლ of 20 December 2019 on Promoting the Generation and Consumption of Energy from Renewable Sources.

<sup>27</sup> Started with Order No. 1–1/605 of 24 December 2018 of the Minister of Economics and Sustainable Development of Georgia; Georgian Law No. 5646-6ლ on Energy and Water Supply of 20 December 2019.

and integration of a proper, transparent and competitive electricity market.<sup>28</sup> It also establishes the legal basis for further implementation of EU directives and regulations. In addition, the Law of Georgia on Competition establishes the principles for protecting free and fair competition from unlawful restrictions in order to create a basis for the development of free trade and a competitive market, as well as defines the actions unlawfully restricting free trade and competition and the legal basis for the prevention and elimination of the distortion of free trade and competition.<sup>29</sup> One of the main components of the Law on Energy and Water Supply is the concept of a new model of the electricity market, which defines the general principles of the organization and operation of the wholesale electricity market,<sup>30</sup> approved in 2020.<sup>31</sup> The establishment of organized electricity markets includes competitive electricity markets, such as a day-ahead market, intraday market, balancing and auxiliary markets,<sup>32</sup> as well as the market of bilateral agreements,<sup>33</sup> which is not a segment of the organized market in Georgia.<sup>34</sup> Trade in the organized market is regulated by the Electricity Market Rules and includes both the day-ahead and intraday electricity market rules, as well as the rules of the electricity balancing and auxiliary services market, which are approved by the Georgian National Energy and Water Supply Regulatory Commission upon submission by the relevant market operator.<sup>35</sup> The electricity market rules define the basic rules and procedures of wholesale trade, as well as detail trading on regulated day-ahead and intraday markets and financial settlements of these segments.<sup>36</sup> The day-ahead market and the balancing and ancillary services markets significantly change the rules of the game in the wholesale market and are likely to have a major impact

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<sup>28</sup> Georgian Law No. 5646-6ლ on Energy and Water Supply of 20 December 2019, Article 1.

<sup>29</sup> Georgian Law No. 2159 of 21 March 2014 on Competition, Article 1(1)(2).

<sup>30</sup> Ordinance No. 246 of 16 April 2020 of the Government of Georgia, Article 1.

<sup>31</sup> *Ibid.*

<sup>32</sup> Gatsereia, “Legislative Tendencies,” 40–1.

<sup>33</sup> *Ibid.*, 46–7; Georgian Law No. 5646-6ლ on Energy and Water Supply of 20 December 2019, Article 3(3).

<sup>34</sup> Mariam Machavariani, “Formation of the Georgian Electricity Market in Accordance with the EU Standards” (PhD diss., Georgian Technical University, 2021), 100.

<sup>35</sup> Ordinance No. 46 of 11 August 2020 of the Georgian National Energy and Water Supply Regulatory Commission.

<sup>36</sup> *Ibid.*

on market pricing. The operator of day-ahead and intraday markets is JSC Georgian Energy Exchange, whose equal share owners are JSC Georgian State Electrosystem and JSC Electricity System Commercial Operator.<sup>37</sup> The owner of the licence for operating the market of balancing and auxiliary services is JSC Georgian State Electrosystem.<sup>38</sup> Relevant rules regulate participation in the balancing and auxiliary services market.<sup>39</sup> As for the market of bilateral agreements, it is one of the segments of the wholesale market, where electricity is traded between market participants on the basis of bilateral agreements concluded by them, and the rules approved by the Commission determine the general framework of the bilateral agreement market.<sup>40</sup> Retail market rules regulate the relations between market participants and retail end-users in the supply, distribution and/or consumption of electricity in the retail market.<sup>41</sup> It is worth noting that new players have appeared in electricity trading in both the wholesale and retail markets, such as the supplier of the last alternative and the universal service provider, the trader.<sup>42</sup>

The concept of the market model establishes the guiding principles of the organization and functioning of the electricity market, including the general outline of the rights and obligations of the market participants and the market structure. The concept defines the general outline of the organization of public services and the stages of market opening.<sup>43</sup> The Wholesale Public Service Organization (WPSO) is an enterprise selected by the

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<sup>37</sup> “GENEX”, accessed September 25, 2023, <https://genex.ge/ka/page/senbi>; “Extract from the Registry of Entrepreneurs and Non-entrepreneurial (Non-commercial) Legal Entities No. 404589432,” registered on 4 December, 2019, accessed September 25, 2023, [https://bs.napr.gov.ge/GetBlob?pid=400&bid=boVlyOwlsX3qmYsntmLmFLYZmXp3\]0lfKxb-FOksPW3CLfX7ttWM8m9\[n3Eq0F\]3A](https://bs.napr.gov.ge/GetBlob?pid=400&bid=boVlyOwlsX3qmYsntmLmFLYZmXp3]0lfKxb-FOksPW3CLfX7ttWM8m9[n3Eq0F]3A).

<sup>38</sup> “Balancing Market,” accessed September 25, 2023, <https://www.gse.com.ge/sabalanso-bazari>.

<sup>39</sup> Ordinance No. 46 of 11 August 2020 of the Georgian National Energy and Water Supply Regulatory Commission.

<sup>40</sup> Ibid.

<sup>41</sup> Ordinance No. 47 of 13 August 2020 of the Georgian National Energy and Water Supply Regulatory Commission.

<sup>42</sup> Eva Bochorishvili and Mariam Chakhvashvili, *Review of the Electricity Market* (Tbilisi: Galt & Taggart, 2019), 10.

<sup>43</sup> Ordinance No. 246 of 16 April 2020 of the Government of Georgia.



Government of Georgia, whose public service obligations are: support of producers participating in renewable energy and guaranteed power purchase agreements and promotion of integration of their produced electricity into the organized market; support of the universal service provider by providing stable price of electricity for purchase and promoting integration into the organized market and security of supply to customers in the occupied territory of Georgia (Autonomous Republic of Abkhazia) by purchasing electricity in the organized market.<sup>44</sup>

### 3.2. Georgian Model of Energy Exchange

The main essence of the electricity market reform lies in the separation of monopolistic and competitive activities, and its ultimate goal is to have more than one supplier in the market so the regulatory commission no longer determines the final consumer tariff.<sup>45</sup> The concept of an organized electricity market envisages the establishment of several competitive markets where participants can buy and sell electricity at a price agreed upon the day before (day-ahead market) and/or on the same trading day (intraday market).<sup>46</sup> However, the market for balancing and auxiliary services consists of services that ensure the security of supply.<sup>47</sup> In the bilateral contract market, the parties are free to negotiate the price.<sup>48</sup> It is important to develop competition in these markets and establish a competitive price, which will make the market more liquid.<sup>49</sup> For the effective and sustainable functioning of the market, it is necessary to introduce financial mechanisms that will encourage renewable energy generation facilities in Georgia to become buyers

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<sup>44</sup> Concept of Electricity Market Model, Article 10(1) (Adopted by Ordinance No. 246 of 16 April 2020 of the Government of Georgia).

<sup>45</sup> “Policy Guidelines by the Energy Community Secretariat on Increasing Competition and Liquidity of Wholesale Electricity Markets, Including Power Exchanges,” PG 01/2019 (Energy Community, 8 May 2019).

<sup>46</sup> Ordinance No. 246 of 16 April 2020 of the Government of Georgia.

<sup>47</sup> Electricity Balancing and Ancillary Services Market Rules (Adopted by Ordinance No. 46 of 11 August 2020 of the Georgian National Energy and Water Supply Regulatory Commission).

<sup>48</sup> *Ibid.*

<sup>49</sup> “Electricity Market Functions, Short Overview and Description Online Capacity-Building Material” (Energy Community, EU4Energy, March 2020), 6.

and sellers of electricity<sup>50</sup> and develop related businesses, such as solar panel manufacturing. The reform should qualitatively change the existing market model and establish such a market model that will set a reasonable and competitive price for both investors and consumers and promote the development of the green economy and the availability of green financing.

The concept of the market model creates the basis for the first time in the history of Georgia to determine the price of electricity in free, competitive market conditions. According to the concept, some of the generation objects are obliged to trade in a mandatory manner, and some – voluntarily.<sup>51</sup> Day-ahead and intraday markets operate through a trading platform, the main advantage of which is the minimization of manipulations by market participants.<sup>52</sup> All market participants are on equal terms, and the price of electricity must be determined in a fair and non-discriminatory manner. The transparent price is a prerequisite for the construction of infrastructure connecting Europe and, accordingly, the possibility of trading on European markets.

The implementation of the support mechanism for the development of renewable energy sources is related to the implementation of the organized electricity market; in particular, the Georgian government offers the investor to add to the wholesale price fixed for the relevant hour in the organized market for each kilowatt. The amount of USD 0.015 per hour of electricity, if the wholesale (equilibrium) price recorded for 1 kWh of electricity generated by the station in a given hour during the support period and sold on the organized electricity market, is less than USD 0.055.<sup>53</sup> The mentioned scheme has existed since 2020 and is one of the mechanisms for determining the price of electricity for the investor. However, it is not effective since the organized market has not been implemented yet, which is confusing for the investor and prevents the inflow of investments. How good

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<sup>50</sup> “Policy Guidelines by the Energy Community Secretariat.”

<sup>51</sup> “Recommendation of the Energy Community Regulatory Board on Regulatory Measures Supporting Early Implementation of Day-ahead Market Coupling in the Energy Community Contracting Parties,” ECRB, 2019.

<sup>52</sup> Anne Kirkegaard, “Would Power Exchanges Be Exempt from Competition Regulations,” *European Energy Journal* 4, no. 2 (2014): 64–5.

<sup>53</sup> Support Scheme for the Production and Use of Energy from Renewable Sources, Article 5 (Adopted by Ordinance No. 403 of 2 July 2020 of the Government of Georgia).

the mechanism is and whether it will be attractive to the investor is also difficult to say. However, setting the upper limit (USD 0.055) for investors may not be attractive enough, and additional support mechanisms from the state may be required; some categories may be given different support mechanisms to encourage the development of renewable energy sources.

The concept of the market model includes a number of innovations. However, one of the critical issues for the development of renewable energy sources and for investors remains the so-called determination of the base price (reference price), which is significant for market segments.<sup>54</sup> Each participant must have a qualified sales representative who has the relevant knowledge, i.e. has been granted certification.<sup>55</sup> However, how ready they will be to trade in the market and act on a specific manipulation can only be assessed after the launch of the exchange. The energy exchange has been operating in test mode since July 1, 2020.<sup>56</sup> The delay in full implementation has led to a delay in investment and a significant reduction in the pace of development of renewable energy sources. Persons interested in the construction of a new generation facility, including wind and solar plants, as well as existing generation facilities that have not entered into a power purchase agreement with the state, have difficulty predicting the price of electricity: whether the price will be competitive and whether they will be able to recover their investments.<sup>57</sup>

The concept of the market model provides for another significant innovation, self-dispatching, which implies the determination of hourly schedules of electricity production and consumption, as well as means of electricity production/consumption and their load by the persons responsible

<sup>54</sup> Zorana Božić et al., “Power Exchange Prices: Comparison of Volatility in European Markets,” *Energies* 13, no. 21 (2020): 3–15; “Methodology on Calculation of Reference Price for Energy Generated from RES,” Methodology ERO/NO. 01/2020, Pristina, 2020.

<sup>55</sup> Day-ahead and Intraday Market Trading Rules, Article 14(1) (Adopter by Ordinance No. 46 of 11 August 2020 of the Georgian National Energy and Water Supply Regulatory Commission).

<sup>56</sup> “Test Mode for Day-Ahead Market,” July 13, 2020, accessed September 25, 2023, [https://genex.ge/ka/News/energetikuli\\_birjis\\_momavali\\_sakartveloshi](https://genex.ge/ka/News/energetikuli_birjis_momavali_sakartveloshi).

<sup>57</sup> “Interview with Irina Milorava,” November 21, 2021, accessed September 25, 2023, <https://bm.ge/ka/article/energetikuli-birja-rogorc-investiciebis-mozidvis-meqanizmi--ra-quotsh-ishebiquot-aqvt-investorebs/95900>.

for their planning.<sup>58</sup> In accordance with the rules of day-ahead and intraday market trading, only a person who is a member of the balancing group and registered as a participant will be able to trade on the exchange.<sup>59</sup> Imbalance liability is particularly relevant for renewable energy sources, for which it is impossible to predict the forecast of the electricity generated by them with pinpoint accuracy.<sup>60</sup> They are required to join a balancing group; otherwise, they cannot be traded on the exchange.<sup>61</sup> A market participant must register as a person responsible for balancing or join a balancing group whose balancing responsibility will be taken by another person.<sup>62</sup> Renewable energy sources such as solar, wind and hydroelectric power stations working on the flow of the river have variable generation, thus making it difficult to predict their electricity generation with high accuracy days in advance.<sup>63</sup> They have a high risk of being out of balance with actual output, which increases cost and reduces revenue. If this cost is high, they may be less competitive with traditional energy sources, and investment may be reduced. Government support for the development of renewable energy sources is vital, but the interest of the consumer must also be taken into account. The state should develop a fair mechanism, taking into account how appropriate it is to reflect the imbalance cost in the customer's tariff. According to the Energy Union report, there are different approaches in individual contracting states.<sup>64</sup> For example, in Ukraine, all market participants are responsible for balancing and have the option to join a balancing group to reduce their financial liability.<sup>65</sup> In Albania, all existing renewable power plants were exempted from balancing responsibility until 2022 or

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<sup>58</sup> Electricity Balancing and Ancillary Services Market Rules, Article 3(1)(cc) (Adopted by Ordinance No. 46 of 11 August 2020 of the Georgian National Energy and Water Supply Regulatory Commission).

<sup>59</sup> *Ibid.*, Article 11.

<sup>60</sup> Božić et al., "Power Exchange Prices," 3–15.

<sup>61</sup> Reinhard Madlener and Markus Kaufmann, *Power Exchange Spot Market Trading in Europe: Theoretical Considerations and Empirical Evidence* (OSCOGEN Discussion Paper no. 5, 2002), 6–7.

<sup>62</sup> *Ibid.*

<sup>63</sup> *Advanced Forecasting of Variable Renewable Power Generation Innovation Landscape Brief* (Abu Dhabi: International Renewable Energy Agency, 2020), 6–7.

<sup>64</sup> "Annual Implementation Report," Energy Community Secretariat, November 1, 2021.

<sup>65</sup> *Ibid.*

until the launch of the balancing market, and balancing costs were reflected in the distribution tariff.<sup>66</sup> In Serbia, all market participants are responsible for balancing.<sup>67</sup>

The fourth energy package obliges member states to develop a unified approach to regulating the balancing liability of renewable power plants and to impose imbalance liability on all power plants.<sup>68</sup> It should be noted that in countries where the renewable power plant is not responsible for its own imbalance, this responsibility is assigned to the transmission or distribution system operator (Germany, France),<sup>69</sup> to the market operator (Slovenia, Slovakia)<sup>70</sup> or to the special company/person responsible for balancing (Greece, Austria).<sup>71</sup> In such a case, the imbalance costs are reflected in the green energy component of the consumer tariff.<sup>72</sup> It is important for the state to propose a fair mechanism of responsibility for the imbalance. In the first stage of the exchange's implementation, it should be possible to be exempted from liability for imbalance with a fair margin.

It is recommended that the issue of granting an imbalance benefit to wind and solar should be decided individually by the state, and in case of such a decision, JSC Electricity System Commercial Operator should be responsible for the imbalance. The country should make it a priority to increase the share of renewable energy in the energy sector to a certain level annually. In pursuing a consistent state policy, priority should be given to the sale of electricity obtained from renewable energy sources, and the purchase of electricity from other stations should be made only in case of necessity. The mentioned mechanism will encourage the development of renewable energy sources, and the thermal power stations will be in

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<sup>66</sup> Ibid.

<sup>67</sup> Ibid.

<sup>68</sup> Regulation (EU) of the European Parliament and of the Council No. 2019/943 on the Internal Market for Electricity (OJ L158/54 14 June 2019), Article 5.

<sup>69</sup> Jour Mois Annee, "Roadmap on French Electricity Balancing," 2017, accessed September 25, 2023, [https://eepublicdownloads.entsoe.eu/clean-documents/mc-documents/balancing\\_ancillary/2017-12-07/20171207\\_French\\_Roadmap\\_on\\_Electricity\\_Balancing\\_3.pdf](https://eepublicdownloads.entsoe.eu/clean-documents/mc-documents/balancing_ancillary/2017-12-07/20171207_French_Roadmap_on_Electricity_Balancing_3.pdf).

<sup>70</sup> Božić et al., "Power Exchange Prices," 4.

<sup>71</sup> Ibid.

<sup>72</sup> Jaquelin Cochran et al., *Integrating Variable Renewable Energy in Electric Power Markets: Best Practices from International Experience, Summary for Policymakers* (U.S. Department of Energy Office of Scientific and Technical Information, April 2012).

guaranteed capacity (reserve capacity) mode.<sup>73</sup> The promotion of renewable energy by the state will reduce the investor's economic risk and help to effectively recover capital costs, as well as the maximum production of electricity from renewable energy sources and its sale.

### 3.3. Creation of JSC “Georgian Energy Exchange” and Its Functions

In 2019, JSC Georgian Energy Exchange was established in order to fulfill the commitment made by Georgia to the Energy Community,<sup>74</sup> which in 2020 received a licence by the decision of the Georgian National Energy and Water Supply Regulatory Commission to operate the electricity market,<sup>75</sup> and it is a licensed operator of the day-ahead and intraday market. The main functions of JSC Georgian Energy Exchange are the operation of the day-ahead market, operation of the intraday market, operation of the bilateral contracts market and management of the settlement system for the day-ahead and intraday markets.<sup>76</sup> The mission of the energy exchange is “to ensure transparent and competitive markets and to provide accurate price signals to existing and potential market participants through efficient operation of the electricity markets”.<sup>77</sup> The principles of electricity trading are hourly trading and the responsibility of market participants for the imbalance caused by them in each hour, as well as self-dispatch<sup>78</sup> and wholesale public service.<sup>79</sup>

The concept of the electricity market also defines the stages of transition to the target model, the transition period and the stage of development

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<sup>73</sup> Maka Partsvania, “Guaranteed Capacity,” in *Lado Chanturia 55*, ed. Dimitry Gegenava (Tbilisi: Prince David Institute for Law Publishing, 2018), 142–55.

<sup>74</sup> “Extract from the Registry of Entrepreneurs and Non-entrepreneurial (Non-commercial) Legal Entities No. 404589432,” registered on December 4, 2019, accessed September 25, 2023, [https://bs.napr.gov.ge/GetBlob?pid=400&bid=boVlyOwlsX3qmYsntmLmFLYZmX-p3J0lfKxbFOksPW3CLfX7ttWM8m9\[n3Eq0F\]3A](https://bs.napr.gov.ge/GetBlob?pid=400&bid=boVlyOwlsX3qmYsntmLmFLYZmX-p3J0lfKxbFOksPW3CLfX7ttWM8m9[n3Eq0F]3A).

<sup>75</sup> Decision No. 39/2 of 28 May 2020 of the Georgian National Energy and Water Supply Regulatory Commission.

<sup>76</sup> “Report of the Georgian Energy Exchange,” Tbilisi, 2020, 3.

<sup>77</sup> *Ibid.*

<sup>78</sup> Concept of Electricity Market Model, Article 2 (Adopted by Ordinance No. 246 of 16 April 2020 of the Government of Georgia).

<sup>79</sup> *Ibid.*, Article 10.

of the competitive market.<sup>80</sup> Exchange trading rules include day-ahead and intraday market rules and balancing and ancillary services market rules adopted by the Georgian National Energy and Water Supply Regulatory Commission and establish all important provisions for trading on the exchange, including admission to the exchange, application placement, pricing, financial Settlement, etc.<sup>81</sup> The price determined by the exchange is significant for both the investor and the electricity buyer, therefore, this price should be transparent and economically justified. Considering this importance, according to the market rules, the regulatory commission took into account that the participant who trades on the exchange is obliged to pass the qualification test: the right to trade on the exchange is granted to the trading representative of the market participant who has successfully passed the test organized by the exchange operator and which is organized by the energy exchange systematically, with the periodicity determined by market rules.<sup>82</sup>

## 4. From Commitments to Execution

### 4.1. Difficulty of Launching the Exchange

The energy exchange, which was supposed to be launched on July 1, 2023,<sup>83</sup> was postponed for one year, namely, until July 1, 2024.<sup>84</sup> This was preceded by the postponement of what was planned for September 1, 2022<sup>85</sup> until March 31, 2023.<sup>86</sup> Before that, the launch of the exchange was postponed twice: initially, it was supposed to start functioning on July 1, 2021,<sup>87</sup> then this period was extended until January 1, 2022,<sup>88</sup> later – until March 1,

<sup>80</sup> Ibid., Articles 16–19.

<sup>81</sup> Ordinance No. 46 of 11 August 2020 of the Georgian National Energy and Water Supply Regulatory Commission.

<sup>82</sup> Day-ahead and Intraday Market Trading Rules, Article 14 (Adopted by Ordinance No. 46 of 11 August 2020 of the Georgian National Energy and Water Supply Regulatory Commission).

<sup>83</sup> Ordinance No. 126 of 28 March 2023 of the Government of Georgia.

<sup>84</sup> Ordinance No. 239 of 29 June 2023 of the Government of Georgia.

<sup>85</sup> Ordinance No. 89 of 28 February 2022 of the Government of Georgia

<sup>86</sup> Ordinance No. 438 of 29 August 2022 of the Government of Georgia.

<sup>87</sup> Ordinance No. 246 of 16 April 2020 of the Government of Georgia (Redaction of 21.04.2020–31.05.2021).

<sup>88</sup> Ordinance No. 244 of 31 May 2021 of the Government of Georgia.

2022,<sup>89</sup> and subsequently – until September 1, 2022.<sup>90</sup> Each delay had certain reasons. Initially, this was related to the balancing and auxiliary services market, which is also a novelty and should be launched together with the exchange. Testing these two markets revealed some flaws.<sup>91</sup> It was also important to develop the necessary skills for trading on the exchange, as the exchange offers market participants electricity day-ahead and intraday trading. The reason for the second postponement was the lack of readiness of the market participants and certain technical flaws within the test regime. However, other components of the reform implementation, including the entry of additional large companies to the free market, were not postponed.<sup>92</sup> However, the testing, in turn, covers not only trading on the exchange but also on other markets, such as the bilateral contracts market and the market of balancing and auxiliary services, so an additional six months for the test regime was considered appropriate.<sup>93</sup> The reason for the subsequent postponement was again the reduced willingness of the market participants and the fear of the market participants' responsibility for the imbalance related to hourly trading, which involves accounting, forecasting the next day's consumption and generation.<sup>94</sup>

The draft law was prepared by the National Regulatory Commission on Imbalance Issues, according to which the government is authorized to make a different decision regarding the imbalance responsibilities for specific groups, in particular, certain generation facilities, such as small stations, solar and wind stations, are temporarily exempted from liability within the limit.<sup>95</sup> Imbalance refers to a situation where the power plant generated and delivered to the system less than the amount of electricity sold on the exchange and within the framework of the bilateral agreement,

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<sup>89</sup> Ordinance No. 547 of 24 November 2021 of the Government of Georgia.

<sup>90</sup> Ordinance No. 89 of 28 February 2022 of the Government of Georgia.

<sup>91</sup> "Is Energy Exchange Ready to Start Trading on January 1?" November 13, 2021, accessed September 25, 2023, <https://bm.ge/ka/article/mzad-aris-tu-ara-energetikuli-birja-1-ianvri-dan-vachrobis-dasawyebad/95378>.

<sup>92</sup> "Why Was the Launch of the Energy Exchange Delayed?," May 26, 2021, accessed September 25, 2023, <https://businessformula.ge/News/2935>.

<sup>93</sup> Ibid.; Bochorishvili and Chakhvashvili, *Review of the Electricity Market*, 8.

<sup>94</sup> "Is Energy Exchange Ready?"

<sup>95</sup> Ibid.



and the difference must be filled with reserve capacities provided by the Georgian State Electrosystem, and the amount of electricity must be paid by the operator responsible for supplying a specific capacity.<sup>96</sup> Responsibility for imbalances, which are related to making hourly forecasts, is a novelty of the new market model and a challenge for market participants. Under the old legislation, accountability for imbalances is the responsibility of the Georgian State Electrosystem, as monthly trading does not oblige market participants to make hourly forecasts, and therefore, they are also not responsible for incorrect forecasts.<sup>97</sup> With the exception provided for the first stage, renewable energy plants, including wind, solar, small hydropower plants and hydropower plants located on melioration canals, will enjoy benefits for a certain time. However, this does not mean that they are exempted from forecasting – they will forecast normally, but they will be exempted from responsibility due to imbalance. However, it is advisable to set a high limit of imbalance, a percentage, at the initial stage, slowly reducing this percentage until reaching the final goal, within which it will be possible to be released from responsibility for imbalance. Another major challenge market participants face with the new model is arranging accounting.<sup>98</sup> In the current model, the market operator receives data on a monthly basis, while in the new model, the counters should be read hourly, and the relevant information should be transferred to the balance market operator.<sup>99</sup> Accounting turned out to be particularly painful for some new market participants, whose accounting node did not meet the standard required by law: Regulated hydropower plants and thermal power plants, as well as HPPs, which have signed agreements for the guaranteed power purchase, have an obligation to trade on the energy exchange.<sup>100</sup> They are obliged to organize the accounting node in accordance

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<sup>96</sup> Electricity Balancing and Ancillary Services Market Rules, Article 6 (Adopted by Ordinance No. 46 of 11 August 2020 of the Georgian National Energy and Water Supply Regulatory Commission).

<sup>97</sup> “Part of the Business Once Again Asks to Postpone the Launch of the Energy Exchange,” January 20, 2022, accessed September 25, 2023, <https://businessformula.ge/News/6599>.

<sup>98</sup> Electricity Distribution Network Rules, Article 17 (Adopted by Ordinance No. 19 of 28 June 2021 of the Georgian National Energy and Water Supply Regulatory Commission).

<sup>99</sup> *Ibid.*, Article 61.

<sup>100</sup> Ordinance No. 246 of 16 April 2020 of the Government of Georgia.

with the current legislation, which is associated with a significant financial cost on their part.

On the exchange platform, market participants will have the opportunity to trade on an hourly basis, which creates a high probability that the cost of electricity will be higher during the day and lower at night.<sup>101</sup> Surely, for the transition to a new model, technical readiness and the presence of a corresponding accounting node are crucial so that the exchange can work at full capacity and relevant information can be provided to the balance market operator. The exchange could not be launched on September 1, because the regulatory framework needed to operate the exchange still needs to be refined. A premature or unprepared launch is inadvisable under the conditions of this large-scale reform. It is worth mentioning the fact that due to the scale of the reform, it is essential that the market participants and citizens are ready for these changes. It is for this purpose that the simulation mode has been running since 2020. The energy exchange has purchased new software for EUR 1,149,000 (GEL 4,230,273), with which day-ahead and intraday energy deals will be concluded.<sup>102</sup> The reform is truly unprecedented, and there was no such market in Georgia or the entire region (except for the Turkish market, which is quite developed in terms of the energy market<sup>103</sup>). It is vital that the reform is carried out successfully and that the preparatory period is adequate to the challenges.

It is interesting to see how ready the enterprises are, trading on the exchange and the energy exchange itself, to launch the platform. As mentioned, the energy exchange purchased new software from the company Nord Pool, which is a trading system established by electricity transmission companies in Scandinavia and the Baltics<sup>104</sup> and operates in 16 European

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<sup>101</sup> Steven Braithwaite, “Residential TOU Price Response in the Presence of Interactive Communication Equipment,” in *Pricing in Competitive Electricity Market*, eds. Ahmad Faruqui and Kelly Eakin (Boston, London: Kluwer Academic Publishers, 2000), 360–2.

<sup>102</sup> “Energy Exchange Buys Software for a Million Euros,” September 2, 2021, accessed September 25, 2023, <https://bm.ge/ka/article/energetikuli-birja-milioni-evros-programul-uz-runvelyofas-yidulobs/90079/>.

<sup>103</sup> See: Selahattin Murat Sirin and Berna N. Yilmaz, “The Impact of Variable Renewable Energy Technologies on Electricity Markets: An Analysis of the Turkish Balancing Market,” *Energy Policy*, no. 151 (2021).

<sup>104</sup> *Electricity Market Reform in Norway*, eds. Eivind Magnus and Atle Midttun (London: Macmillan Press, 2000), 54–5.

countries.<sup>105</sup> What is more, 360 companies from 20 countries trade on the Nord Pool market, including the Northern European and Baltic regions, Great Britain, Central and Western Europe (Austria, Belgium, France, Germany, Luxembourg and the Netherlands) and Poland.<sup>106</sup> Its market has a European pricing algorithm, which is used to calculate the price in most European countries.<sup>107</sup> However, this does not exclude the risks of manipulation, which is especially dangerous for a small market and which market participants expect and fear, although the risk of manipulation is also a problem of the European market.<sup>108</sup> The risk of manipulation will be more sensitive for the small Georgian market, as a seemingly insignificant event may change the market price, and one of the monitoring tools is to check the market on an hourly basis and react immediately if necessary.<sup>109</sup> Despite the rather expensive and reputable program, it is vital to minimise the possible manipulation risks, which should be eliminated by immediate intervention and response.

The Georgian National Energy and Water Supply Regulatory Commission has established the service fee for JSC Georgian Energy Exchange of the operator of day-ahead and intraday markets, as well as for JSC Georgian State Electrosystem, the tariff of the operator of the electricity balancing and auxiliary services market, therefore, in case of activation of these markets, they will be able to perform their functions.<sup>110</sup> Another important market participant is the Electricity System Commercial Operator (ESCO), which trades exclusively in balancing electricity and guaranteed capacity according to seasonal needs, imports and exports electricity, inspects wholesale metering nodes and guarantees the purchase of electricity produced by newly built power plants.<sup>111</sup> Within the framework of the new model, for

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<sup>105</sup> “Nord Pool: About Us,” accessed September 25, 2023, <https://www.nordpoolgroup.com/en/About-us/>.

<sup>106</sup> Ibid.

<sup>107</sup> *Electricity Market Reform in Norway*, 58–9.

<sup>108</sup> Regulation (EU) of the European Parliament and of the Council No. 1227/2011 on Wholesale Energy Market Integrity and Transparency (OJ L326/1, 25 October 2011).

<sup>109</sup> Ibid.

<sup>110</sup> Ordinance No. 33 of 4 December 2008 of the Georgian National Energy and Water Supply Regulatory Commission, Article 5<sup>1</sup> and Article 5<sup>2</sup>.

<sup>111</sup> “Electricity Market Operator (ESCO): About Us,” accessed September 25, 2023, <https://esco.ge/ka/chvens-shesakheb>.

ESCO to fully develop its functions, it is crucial to create the wholesale public service implementation rules, the organization's operating rules, the special fund calculation methodology, and the commission to prepare the wholesale public service fee calculation methodology and determine the fee. A challenge for the state electrosystem remains the lack of reserves, i.e. certain capacities reserved for the reliability of the system, which is caused by the increase in consumption and also by the slowing pace of construction of power plants.<sup>112</sup> Reserves are especially important during the winter, when electricity prices are high, and the supply of Abkhazia is added to this, which is also a big challenge for the state electrosystem.<sup>113</sup> Within the framework of the new model, the primary task is to maintain the reliability of the system and to implement technical measures to solve this challenge, which is possible by purchasing quick regulation reserves and arranging an automatic generation control system at certain stations in addition to Enguri, at another regulating station, as a result of which the supply sources of reserves will increase. It is also essential to have an appropriate agreement with the neighboring systems, in case of a shortage or an aggravated regime, regarding the detection of an emergency or other types of mutual assistance from their side.<sup>114</sup>

The launch of the energy exchange was postponed several times in order to finally eliminate the flaws and surprises revealed during the simulation. According to the last change, the exchange should be launched on July 1, 2024, despite the fact that, technically, the system is ready for opening and the basic rules have been established. However, due to the geopolitical situation, in particular, Russia's invasion of Ukraine, as well as the sharp increase in electricity prices on the Turkish market, it was considered appropriate to postpone the launch of the exchange. Added to this is the deficit in the autumn-winter period, when expensive imports are carried out in the country, and the price of energy in the market is

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<sup>112</sup> "Is the Market Ready for Energy Exchange Trading?," July 20, 2022, accessed September 25, 2023, <https://commerciant.ge/ge/post/ratom-gadaido-energetikuli-birjis-amqmedeba-da-ramdenad-mzad-xvdeba-bazari>.

<sup>113</sup> Ibid.

<sup>114</sup> Ibid.

high.<sup>115</sup> The increased price in the world has caused an energy crisis<sup>116</sup> and the state has had to introduce subsidies even in countries where the exchange operates.<sup>117</sup> The energy crisis was considered a risky period for the operation of the exchange, although there was an opinion that March was a better period because, at this time, the export of electricity begins, and the Engurhesi reservoir is filled for pre-export and, therefore, the price is relatively low.<sup>118</sup>

#### 4.2. Perspective and Legal Challenge

The energy exchange is a prerequisite for the establishment of a competitive market for European countries. However, despite many years of experience, there are also problems.<sup>119</sup> On the one hand, the state needs to be less involved in the process, but for the reform to succeed, it is crucial for market participants to conduct training and develop trading skills. Regarding the energy exchange, the role of Engur HPP is interesting. As it is also an important participant in the market, and compared to other stations in the country, the electricity generated by it is cheap.<sup>120</sup> Engurhesi is the most potent

<sup>115</sup> “Why Was the Launch of the Energy Exchange Postponed? – Narmania’s Explanation,” October 2022, accessed September 25, 2023, <https://bm.ge/ka/article/ratom-gadavadda-energetikuli-birjhis-amoqmedeba---narmanias-ganmarteba/118021/>.

<sup>116</sup> “Will Europe’s Sanctions on Russian Diesel Cause a Bang or a Whimper,” January 27, 2023, accessed September 25, 2023, <https://www.bloomberg.com/graphics/europe-energy-crisis-updates/?leadSource=uverify%20wall>.

<sup>117</sup> “European Governments Splurging €500bn to Cushion Energy Crisis: Report,” September 22, 2022, accessed September 25, 2023, <https://www.euractiv.com/section/energy/news/european-governments-splurging-e500bn-to-cushion-energy-crisis-report/>.

<sup>118</sup> “I Think March Is a Better Period for Launching the Energy Exchange – Mariam Chakhvashvili,” September 1, 2022, accessed September 25, 2023, <https://bm.ge/ka/article/quotvfiqrob-energetikuli-birjhis-asamoqmedeblad-marti-uketesi-periodiaquot---mariam-chakhvashvili/115753/>.

<sup>119</sup> Directive of the European Parliament and of the Council No. 2009/72/EC on Concerning Common Rules for the Internal Market in Electricity and Repealing Directive 2003/54/EC (OJ L211/55, 14 July 2009).

<sup>120</sup> Ordinance No. 33 of 4 December 2008 of the Georgian National Energy and Water Supply Regulatory Commission, Article 3.

power plant<sup>121</sup> owned by the state<sup>122</sup> and has an obligation to trade on the exchange with bona fide commercial interests.<sup>123</sup> It needs to be considered what impact the cheap energy will have on the exchange and whether it will reduce the final price set on the exchange to such an extent that trading there may no longer be attractive for them.

Import of electricity and thermal power plants is also a challenge for the new market. Imports are carried out from all four neighboring states through respective cross-border lines.<sup>124</sup> Imports carry political risks, and this has been well demonstrated by recent events. However, from an economic point of view, the price of imported electricity may be low enough to replace local generation or vice versa. It is essential that the mentioned risks are also taken into account in the market rules. After the launch of the exchange, there is a danger that the prices will increase while the electricity and gas tariffs are subsidised.<sup>125</sup> Maybe for the operation of the thermal power plants that consume the so-called social gas,<sup>126</sup> in the conditions of shortage, it will be necessary to purchase gas at a commercial price, which, naturally, will increase the price of electricity generated by them and then taking it to the exchange at an increased price will cause some changes. It will be possible to determine the market price for gas after the gas market is launched<sup>127</sup>, and only then should the gas market price be taken into account in the energy sector.

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<sup>121</sup> “Engurhesi: The Operation,” accessed September 25, 2023, <https://www.engurhesi.ge/en/page/25-The-Operation>.

<sup>122</sup> “Extract from the Registry of Entrepreneurs and Non-entrepreneurial (Non-commercial) Legal Entities No. 251716371,” registered on October 6, 1999, accessed September 25, 2023, <https://bs.napr.gov.ge/GetBlob?pid=400&bid=boVlyOwlsX3qmYsntmLmFBt5V7i7fzvR-Shob2DyBOYPS5oeKiBl0nakZC8LNNs4L>.

<sup>123</sup> Day-ahead and Intraday Market Trading Rules, Article 7(6) (Adopted by Ordinance No. 46 of 11 August 2020 of the Georgian National Energy and Water Supply Regulatory Commission).

<sup>124</sup> “Activity Report of 2020 of the Georgian National Energy and Water Supply Regulatory Commission,” Tbilisi, 2021, 38.

<sup>125</sup> See: Murman Margvelashvili et al., *Energy Market Reform and Protection of Vulnerable Consumers* (Tbilisi: World Experience for Georgia, 2020).

<sup>126</sup> *2021 Energy Transparency Index*, 2<sup>nd</sup> International Edition (Tbilisi: DiXi Group, 2021), 18.

<sup>127</sup> Ordinance No. 447 of 2 September 2021 of the Government of Georgia.

It is significant that JSC Georgian Energy Exchange continues testing with potential participants of both the market platform and the platform of bilateral agreements. For the success of the reform, JSC Georgian State Electrosystem should provide testing of the balancing market platform with potential participants in a simulation mode. For the functioning of the market, it is necessary to produce a unified accounting base. It is recommended that JSC Electricity System Commercial Operator (ESCO) develop the necessary tools for the organization of wholesale public services and continue testing with potential participants and market operators in a simulation mode.

## 5. Conclusion

Georgia's aspiration to integrate into the European energy community cannot happen without a modern, competitive energy market. The new model of the energy market will allow each family and business to make economical and effective decisions and thereby control costs. The reform must be carried out correctly, which is a prerequisite for the further development of the market and which should ensure a stable and reliable electricity supply from its own clean and renewable energy sources, which, in turn, will reduce the dependence on imports. An intraday market and hourly pricing are an incentive for investors and will encourage the construction of new generation facilities, which will reduce electricity shortages. A competitive market should create an attractive environment for investors and provide new employment opportunities and continuous development of the energy sector. For the development of economically attractive and clean green energy projects in the energy sector, it is necessary for the state to offer appropriate mechanisms to attract investments. Considering the Georgian reality, the electricity market cannot be similar to the markets in the EU countries since the challenges and the state of the existing energy resources are completely different. From this point of view, the state cannot be completely distanced from the market, and legal acts should ensure its function as a policymaker and investor motivator. This is particularly important in terms of legal foreseeability and the predictive function of law.

On the way of legal approximation, it is essential to take into account the energy security challenges of Georgia, the occupied region of Abkhazia and Engurhesi, as one of the main generators of renewable energy in

Georgia during legislative changes. In order to create a valid model of the energy exchange, it is necessary to have appropriate legal guarantees, which concern not only the principles of the exchange itself, the structure and the manner of its activity, but also the provision of the possibility of competition in the electricity market, and in the case of such a physical impossibility, the establishment of appropriate state regulation of natural monopolists, the main purpose of which will be to protect consumers from unjustifiably high prices. Only after that it will be possible for the first time in the history of Georgia to determine the price of electricity, taking into account free, competitive market conditions.

The energy exchange is a licensed day-ahead and intraday market operator; its main purpose is to provide a transparent and competitive environment. Therefore, without its implementation, it is practically impossible to successfully complete the reform in the field of energy law. The importance and complexity of the issue are emphasized by the repeated postponement of the energy exchange and the fact that it has not been implemented yet. In order to activate the energy exchange of Georgia, it is necessary to introduce legislative changes and consider the best European practices relevant to Georgia; retrain the main actors of the exchange and conduct training in preparation for the practical operation of the exchange; implement appropriate software program and minimise the risks; stimulate the growth of the number of players, encouraging them with legal incentives and creating legal guarantees for the existence of a real competitive environment; otherwise, the entire energy law reform will be formal and, along with natural monopolies, will also create economic monopolies, at the expense of consumer rights. The first victim of the non-competitive environment will be the consumer, who will be completely defenceless when faced with the challenge of high prices. The legal status of Engurhesi and its role in the reformed electricity market must be determined; otherwise, its monopoly status will never allow the development of the electricity market and the competition in this market will be only formal. It is noteworthy that ESCO should establish the necessary tools for the organization of wholesale public services, with appropriate legal mechanisms, and continue testing.

If the exchange is completely deregulated, it will not be completely transparent, and its essence and meaning will be lost. However, on the other hand, a transparent and deregulated exchange creates certain dangers



in our region, which is why the exchange is not activated. On the other hand, the launch of the exchange is essential and crucial for the investor. However, the managed exchange will not be attractive for the investor, and it is an unnecessary expense and administrative resource for the existing generation facilities and the customer. It is likely that the opening of the exchange will increase the price of electricity, and the state will not be able to control it. Also, in the conditions of the Russo-Ukrainian war and the geographical situation of Georgia, at this stage, it may be necessary for the country to better prepare for the challenges associated with the launch of the exchange, and the exchange should be launched fully deregulated and transparent in line with European values.

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