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# Hydropower Investment Promotion Project (HIPP)

## GEORGIA

### LEGAL AND REGULATORY REVIEW OF TURKISH ELECTRICITY SECTOR

Thursday, June 10, 2010

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## **LEGAL AND REGULATORY REVIEW OF TURKISH ELECTRICITY SECTOR**

USAID HYDROPOWER INVESTMENT PROMOTION PROJECT  
(HIPP)

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DELOITTE CONSULTING LLP

IN COLLABORATION WITH BLACK & VEATCH AND PIERCE  
ATWOOD ATTORNEYS LLC.

USAID/CAUCASUS OFFICE OF ENERGY AND ENVIRONMENT

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### **DISCLAIMER:**

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# TABLE OF CONTENTS

<b>1. EXECUTIVE SUMMARY .....</b>	<b>1</b>
1.1 FINDINGS.....	1
1.2 RECOMMENDATIONS.....	2
<b>2. INTRODUCTION.....</b>	<b>2</b>
2.1 PURPOSE OF REPORT .....	2
2.2 THE TURKISH MARKET .....	4
<b>3. EXPORT-IMPORT OF HYDROPOWER TO TURKEY .....</b>	<b>7</b>
3.1 TECHNICAL ISSUES REGARDING EXPORT-IMPORT OPERATIONS .....	7
3.2 IMPORT AUTHORIZATION PROCESS .....	8
3.2.1 LEGAL ENTITIES ALLOWED TO IMPORT .....	8
3.2.2 APPLICATION PROCESS.....	13
<b>4. ALLOCATION OF INTERCONNECTION AND TRANSMISSION CAPACITY .....</b>	<b>14</b>
4.1 INTERCONNECTION CAPACITY .....	14
4.1.1 ONE-YEAR LIMIT ON INTERCONNECTION CAPACITY.....	14
4.1.2 ALLOCATION OF INTERCONNECTION CAPACITY .....	15
4.1.3 CONSTRUCTION OF NEW INTERCONNECTION CAPACITY .....	16
4.2 TRANSMISSION CAPACITY .....	17
4.2.1 ALLOCATION OF TRANSMISSION CAPACITY .....	17
4.2.2 CONSTRUCTION OF TRANSMISSION CAPACITY .....	18
<b>5. REGULATED TARIFFS AND MARKET BASED PRICING .....</b>	<b>18</b>
5.1 TRANSMISSION TARIFFS.....	18
5.2 MARKET BASED TARIFFS.....	20
5.2.1 BILATERAL NEGOTIATED PRICES .....	20
5.2.2 SPOT MARKET PRICES .....	21
5.2.3 RENEWABLE ENERGY LAW.....	23
<b>6. POTENTIAL OFFTAKERS AND TRANSACTION STRUCTURES.....</b>	<b>24</b>
6.1 TETAŞ.....	24
6.2 PRIVATE DISTRIBUTION COMPANIES .....	25
6.3 WHOLESALE COMPANIES .....	26
6.4 ORGANIZED INDUSTRIAL ZONES .....	26
6.5 RETAIL COMPANIES.....	26
6.6 ELIGIBLE CONSUMERS.....	27

<b>7. DISPUTE RESOLUTION .....</b>	<b>27</b>
7.1 HISTORICAL CONTEXT .....	27
7.2 JUDICIAL PROCESS AND ARBITRATION .....	28
<b>8. CONTRACTS.....</b>	<b>28</b>
8.1 BILATERAL CONTRACTS .....	28
8.2 MODEL CONTRACTS.....	29
<b>9. CONCLUSION AND RECOMMENDATIONS .....</b>	<b>30</b>
<b>10. NEXT STEPS .....</b>	<b>32</b>
<b>APPENDIX A.....</b>	<b>33</b>
<b>APPENDIX B.....</b>	<b>35</b>
<b>APPENDIX C.....</b>	<b>38</b>

## 1. EXECUTIVE SUMMARY

### 1.1 FINDINGS

- The business case for exports to Turkey is compelling. Demand for electricity in Turkey has picked up since the beginning of the year and is projected to reach 8.5 percent a year by the end of 2010. Even with anticipated generating capacity additions, including coal, wind, large and medium-sized hydropower, and nuclear power, demand is expected to outstrip domestic production by 2014.
- Spot market prices dropped in 2009 due to the global recession but in the past few months have risen again to pre-recession levels. While capacity additions may exercise downward pressure on market prices, the impact of new additions is expected to be intermittent and of temporary effect due to the strong increase in demand and due to the fact that planned additions include capital intensive generation such as nuclear power and the use of auctions based on the highest water tax offered by potential investors to award concessions for hydropower sites in Turkey.
- The electricity sector in Turkey is undergoing continuing restructuring. State-owned generation assets and distribution systems are being privatized, possibly with transitional contractual obligations between them. The number of eligible customers is growing at the same time that new producers are coming on line. These developments have the potential to alter the shape of the market and prices for sales into the electricity market in the future.
- The Turkish Government has shown support for the import of power from Georgian hydropower projects (“HPPs”), as demonstrated by the Memorandum of Understanding (“MOU”) executed 13 September 2007 with the Government of Georgia and the investment by the Turkish Electricity Transmission Company (“TEİAŞ”), the state-owned transmission company, in new transmission facilities to facilitate the import of power from Georgia.
- Turkey’s strategic plan for the energy sector and the reports of the Ministry of Energy and Natural Resources (“MENR”) assume imports from Georgia of 650 MW and a number of large Turkish companies have expressed an interest in investing in Georgia’s hydropower resources
- Pierce Atwood has identified a number of potential barriers to the import of hydropower from Georgia, including:
  - Future international interconnections with transmission grids that are not synchronized with the European Network of Transmission System Operators for Electricity (“ENTSO-E”) may be limited to direct current (“DC”) lines with back-to-back converters, while island or isolated operations will no longer be permitted once Turkey joins ENTSO-E;
  - The state-owned wholesaler, the Turkish Electricity Trading and Contracting Company (“TETAŞ”), may be precluded from importing hydropower, absent specific Governmental authorization;

- Capacity allocations on international interconnections are limited to one year;
- Import authorizations are restricted to limited quantities and limited terms;
- There is no preferential access for renewable energy on the high-voltage transmission system in the event of congestion; and
- Private distribution companies with retail licenses may only import power over international interconnections of 36 kV or lower.

## **1.2 RECOMMENDATIONS**

In order to provide comfort to both investors and lenders regarding the legal and regulatory environment in Turkey, the following recommendations are made:

- Clarifications should be sought regarding a number of issues, as further detailed in this report.
- Further analysis should be undertaken with respect to the impact on market prices resulting from the changes in market design, planned generating capacity additions, and transmission pricing.
- Certain issues, such as the changes in Turkey’s market design, assignment of long term supply agreements to privatized distribution companies, new generating capacity in Turkey and the amount of generating capacity owned by distribution companies in Turkey, should be monitored on a periodic basis, since they could have an impact on investment in HPPs in Georgia.
- The standard or “model” contracts applicable to transmission and use of TEİAŞ’ system that are not available in English should be translated and reviewed.
- An English version of the Bilateral Investment Treaty between Turkey and Georgia should be obtained and reviewed for applicability of dispute resolution provisions.
- Georgian investors wishing to export to Turkey should be advised to partner with a reputable Turkish entity that is able to navigate the Turkish regulatory environment and has sufficient market share in Turkey that it will be able to mitigate the political and regulatory risks identified in this report.

## **2. INTRODUCTION**

### **2.1 PURPOSE OF REPORT**

This report has been prepared for the Georgia Hydropower Investment Promotion Project (“HIPP”), which is funded by the U.S. Agency for International Development (“USAID”), for Georgia’s MoE. The HIPP’s objective is to support MoE’s plan to develop Georgia’s abundant hydropower resources for both export markets and to meet peak winter load, by promoting investment in 400 MW of new, run-of-the-river small and medium-sized HPPs. In the winter months, Georgia currently has to import power, or import natural gas to operate its thermal plants, but during the

summer it has excess hydropower production and occasionally has had to spill water due to the lack of domestic demand. MoE has identified 73 potential HPP sites on its website that are available to private investors on a build-own-operate (“BOO”) basis. Under MoE’s proposal, for the first ten years of operation, investors would be required to sell the entire power output of the plants for consumption inside Georgia during three winter months to be identified in an MOU with MoE. The HPP developer can choose to sell to the Electricity System Commercial Operator (“ESCO”), which is obligated to buy the power under a negotiated or formula tariff during the three winter months, or it can sell the power under a negotiated tariff to any willing buyer in Georgia. For the remaining nine months, the investor is free to sell the power within Georgia or to export it to neighboring countries, including Turkey. For the reasons explained below, Turkey is believed to be the most profitable market for Georgian hydropower, assuming that there are no legal or regulatory barriers to the export of power in Georgia or the import of power in Turkey.<sup>1</sup>

The purpose of this report is to provide potential HPP investors with an overview of the legal and regulatory framework related to importing and selling power in Turkey, and/or using the Turkish transmission network to deliver power to the European Union (“EU”), and to identify any potential barriers to such transactions. As noted in the Executive Summary and throughout the report, we have identified some areas of concern which need to be addressed and have suggested that clarifications be sought from Government officials in Turkey where the laws and/or regulations are unclear.

The report is based on a review of the major laws enacted by the Turkish Parliament, the regulations issued by MENR, and the Communiqués issued by EMRA, to the extent they were available in English, as well as numerous interviews with private market participants and their legal counsel, Government-owned companies and their legal counsel, Government officials, and consultants, who provided valuable insights into how the language of these laws, regulations and communiqués have been interpreted by decision-makers. These interviews took place over a period of several weeks in May and early June 2010. A list of the individuals with whom Pierce Atwood met is found at Appendix A and a list of the laws, regulations and reports reviewed by Pierce Atwood is attached as Appendix B, along with a link to the websites on which some of them were found. The source of reports that were not obtained from these websites is identified separately.

The authors wish to thank all of the individuals listed in Appendix A for the time they spent with us and the information they gave us. In particular, the authors wish to express their deep appreciation for the invaluable assistance and guidance provided by Uygur Yörük, Senior Manager in Energy & Resources with Deloitte Consulting, and the support provided by Ekin Niksarli, Manager, Deloitte Corporate Finance, Duygu Küçükbarar, Consultant with Deloitte Consulting, and Çilem Eratalay, Business Analyst with Deloitte Consulting.

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<sup>1</sup> See also Report by Econ Pöyry, Electricity Export Opportunities from Georgia and Azerbaijan to Turkey, commissioned by Ministry of Energy Georgia (undated)



## 2.2 THE TURKISH MARKET

MoE has identified Turkey as the primary market for power from Georgia's HPPs during the non-winter months for a number of reasons:

- Turkey is currently experiencing an 8.5 per cent annual growth in electricity demand and, even with planned generation additions, the state-owned Electricity Generating Company ("EÜAŞ") predicts a deficit in domestic generation by 2014.<sup>2</sup> The regions experiencing the fastest growth are in the southwest, along the Aegean and Mediterranean coast where the tourist resorts are located, and in the western part of Turkey. In both areas, summer air conditioning load is increasing and in 2009, for the first time, Turkey's peak load was in August, rather than during the December heating season.<sup>3</sup> Since Georgia's peak demand is in the winter, the non-coincident peaks work to the advantage of HPP investors in Georgia.
- Prices on the spot market in Turkey have in recent years been much higher than in Georgia. While prices fell in 2008-2009 when demand dropped due to the global economic crisis, as demand in Turkey has again risen, so have spot market prices.
- HPP developers in Georgia have a competitive advantage over developers in Turkey due to the different methods used to allocate water resources. In Turkey, DSI, the state-owned water authority, sells hydropower sites through auctions to the bidder willing to pay the highest water usage tax; these auctions have fetched extremely high prices recently. In Georgia, by contrast, there is no water usage fee. According to MENR, allocation of water rights in Turkey through imposition of a water usage tax is not likely to change because this is a revenue stream for Turkey's Treasury and Turkey's goal is to develop all potential hydro resources by the 100th anniversary of its founding (i.e. 2023).<sup>4</sup> Therefore, as long as the cost of transmission from Georgia to Turkey is less than the water usage charge paid by Turkish HPPs, Georgian HPPs will have a cost advantage over Turkish developers.
- Turkey's government has evidenced support for Georgian imports by executing an MOU with Georgia regarding the construction of a cross-border transmission facility to import up to 1000 MW of power from Georgia.<sup>5</sup> On the Georgian side, the Black Sea Energy Transmission Project involves the construction of two 500 kV links from Gardabani and Zestaponi to a new substation near the Turkish border at Akhaltsikhe. The Akhaltsikhe station will be connected to the Turkish EHV grid at Borçka asynchronously using a back-to-back HVDC link and a 25 km 400 kV overhead line from the substation to the border. The Georgian investments will be co-financed by the European

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<sup>2</sup> Meeting with Mithat Yüksel, Head of Electricity Market Department, EÜAŞ, in Ankara, 11 May 2010 ("Yüksel Meeting")

<sup>3</sup> Meeting with Uygur Yörük, Senior Manager, Deloitte Consulting, in Ankara, 10 May 2010 ("Yörük Meeting")

<sup>4</sup> Meeting with Oztürk Selvitop, Head of Division, General Directorate of Energy Affairs, Ministry of Energy and Natural Resources, in Ankara 12 May 2010 ("Selvitop Meeting")

<sup>5</sup> The transfer capacity of the line was originally intended to be 1000 MW but, for technical reasons, initially will be limited to 650 MW.

Bank for Reconstruction and Development (“EBRD”), the European Investment Bank (“EIB”) and the German KfW Bankengruppe (“KfW”), with EBRD and EIB each providing approximately €60 million and KfW providing €100 million. The remaining €40 million of the estimated €260 million construction cost will be financed by the Government of Georgia. On the Turkish side, the Borçka–Border Gate Project consists of a 130 km 400 kV line from the border to the substation at Borçka, a transmission line from Borçka to a new substation at Deriner and a transmission line south from Deriner to a planned substation at Yusufeli.<sup>6</sup> The transmission additions are financed from the state budget and are already under construction. The transmission line which will link the Deriner substation to Borçka is expected to be completed in the near future.<sup>7</sup>

- Turkey’s electricity market has undergone significant liberalization, providing independent power producers with numerous opportunities for negotiated sales. Restructuring of the market began in 2001, when the Electricity Market Law<sup>8</sup> was enacted and TEİAŞ, the state-owned generation and transmission company, was separated into three entities: TEİAŞ, the transmission company; TETAŞ, the state-owned wholesaler; and EÜAŞ, the Electricity Generating Company. Distribution was already conducted separately by the Turkish Electricity Distribution company (“TEDAŞ”). A competitive market, based on bilateral contracts with a transitional balancing and settlement mechanism, was introduced. The transitional mechanism using three settlement periods was subsequently replaced with the existing “Day Ahead Planning” system with a real-time “Balancing Power Market.” This structure will be further refined on 1 January 2011, when a European-style Day-Ahead Market (“DAM”) will be introduced, under which distribution companies with retail supply licenses will enter into bilateral contracts with producers and wholesale suppliers, such as the state-owned wholesaler TETAŞ, or private wholesalers and will be required to balance their portfolios with purchases from the DAM, with real time imbalances to be reconciled by an autonomous Market Operator. End-users consuming 100 MW annually are now free to enter into bilateral contracts with suppliers and by the end of 2011, all end-users except households will be eligible consumers. Complete market opening is scheduled for the end of 2015. Some 11 out of 21 distribution companies have been privatized through long-term concessions and more concessions are underway. State-owned generating assets, both thermal and hydropower, are also being privatized and EÜAŞ will only retain ownership of 7,800 MW of large hydropower dams. New HPPs are therefore able to sell both to distribution companies (all of which hold retail supply licenses) and eligible consumers.

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<sup>6</sup> See TEİAŞ Map of Turkish Transmission System; meeting with Hüseyin Onay, Head of Load Dispatch Department, TEİAŞ, 12 May 2010 (“TEİAŞ Onay Meeting”)

<sup>7</sup> TEİAŞ Onay Meeting

<sup>8</sup> Law No. 4628 (enacted 3 March 2001), amended by Law No. 4646 (18 April 2001), Law No. 4694 (27 June 2001), Law No. 5307 (2 March 2005), Law No. 5015 (4 December 2003), Law No. 5398 (3 July 2005), Law No. 5496 (10 May 2006)

- Turkish companies with an intimate knowledge of Turkey's market structure are potential investors in Georgia's HPPs. There are a number of large companies that have expressed an interest in Georgian HPPs. One with which the authors met is Nurol Group, a leading Turkish construction company and defense contractor. Nurol signed an MOU in 2009 with Georgia's MoE with regard to development of the 450 MW Namakhvani cascade in a joint venture with the Korea Electric Power Corp. ("KEPCO") and SK Engineering & Construction Co., Ltd., also of the Republic of Korea. Nurol intends to create a wholesale trading company in Turkey in partnership with Özalpin Energy Generation Company and is also pursuing downstream investment in distribution and upstream investment in Turkish hydropower. Other Turkish companies have also expressed interest in Georgian hydropower sites.
- Another potential market for Georgian HPP investors that has been identified by the HIPP Team is the European Union ("EU"). Access to the EU would be possible using Turkey's transmission system after TEİAŞ joins ENTSO-E. Peak demand in Europe is two hours behind Georgia and eastern Turkey, which could free up capacity for transit to Europe. Georgian HPPs could both sell power to the EU and sell carbon credits to buyers operating under the EU Emissions Trading System ("EU ETS"). The EU ETS was designed to help member states comply with their obligations under the Kyoto Protocol by putting a price on carbon emissions and promoting the trading of emissions reduction credits to facilitate the most economically effective reduction in greenhouse gas emissions. A revised EU ETS Directive takes effective in 2013 and requires a reduction in EU emissions of at least 20% by 2020 compared with 1990 levels, and by 30% provided that other industrialized countries commit to comparable efforts in the framework of a global agreement to combat climate change post-2012.<sup>9</sup> A companion Directive on the promotion of renewable energy sources specifically contemplates that imports from third countries outside the EU can be taken into account in measuring compliance with that Directive as long as the generation project becomes operational after 25 June 2009.<sup>10</sup>

The laws and regulations governing Turkey's electricity market operations and access to Turkey's transmission grid are therefore of critical interest to potential investors in Georgia's HPPs. The following sections of this report provide an analysis of the legal, regulatory and business environment related to market operations and transmission access and, in addition, touch on past investment disputes and their resolution. However, analyses of carbon credits as a potential financing tool for HPP investments in Georgia and of the EU as a potential market for Georgian hydropower are not covered as they are beyond the scope of this report.

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<sup>9</sup> Directive 2009/29/EC of the European Parliament and of the Council, 23 April 2009, amending Directive 2003/87/EC so as to improve and extend the greenhouse gas emission allowance trading scheme of the Community ("Directive 2009/29/EC")

<sup>10</sup> Directive 2009/28/EC of the European Parliament and of the Council of 23 April 2009 on the promotion of the use of energy from renewable sources ("Directive 2009/28/EC")

### 3. EXPORT-IMPORT OF HYDROPOWER TO TURKEY

#### 3.1 TECHNICAL ISSUES REGARDING EXPORT-IMPORT OPERATIONS

The Electricity Market Import and Export Regulation (“Import-Export Regulation”) specifies four “conditions” under which international interconnections for imports or exports can take place<sup>11</sup>:

- Operating the electricity systems of the two countries “in a parallel and synchronized manner;”
- Operating a generation facility or a unit of a generation facility in the electricity system of another country in parallel to the Turkish electricity system “as per the provisions of the Grid Regulation and/or Distribution Regulation;”
- Feeding an isolated region “formed via interconnection lines;”<sup>12</sup> and
- Asynchronous parallel connection.

Since the electricity systems of Georgia and Turkey are not currently synchronized, transmission of power between the two countries can only be done through one of the three other types of operations. The first is through “asynchronous parallel (DC) connection”<sup>13</sup> or interposing a direct current line between the two grids with back-to-back AC/DC converters. As noted above, Turkey and Georgia have entered into a MOU related to the construction of a cross-border transmission project with back-to-back converters and the Akhaltsikhe to Borçka line therefore fulfills the International Interconnection Condition of the Import-Export Regulation.

The second scenario envisaged by the Import-Export Regulation involves redirecting one or more generating units in Georgia towards Turkey and operating the facilities in parallel to the Turkish national electricity system “as per the provisions of Grid Regulation and/or Distribution Regulation.”<sup>14</sup> However, it was explained to the authors that this type of operation can only be done if the generating units are close to the border and do not involve long transmission distances.<sup>15</sup>

The third modality is to isolate an area of Turkey adjacent to the border, disconnecting it from the Turkish grid and connecting the isolated area to the Georgian grid. An existing 220 kV line between Hopa in Turkey to Batumi in Georgia is currently used by TETAŞ to import 75 MW of power from Georgia into an isolated area in Turkey. The area can be expanded or contracted as needed and power flows can be reversed when consumption patterns change.

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<sup>11</sup> Import-Export Regulation, Article 4(40)

<sup>12</sup> Article 6 describes the methods to be applied for import and export activities separately and, in the English language version, the method of isolating a region is not listed as an option for imports, only for exports from Turkey to another country.

<sup>13</sup> Import-Export Regulation, Article 6(c)

<sup>14</sup> *Id.*, Article 6(b)

<sup>15</sup> Meeting with Uygur Yörük, Senior Manager, Deloitte Consulting, in Ankara, 10 May 2010 (“Deloitte Yörük Meeting”)

Both of these latter two types of operations are technically challenging and require investment in the transmission system by operators on both sides of the border. In addition, both of these operations would require approval from ENTSO-E once TEİAŞ becomes a member of that organization. Turkey is expected to be synchronously interconnected to the European network in September 2010.<sup>16</sup> According to TEİAŞ' Head of Load Dispatch Department, Hüseyin Onay, and Energy Experts in the Electricity Department at EMRA<sup>17</sup>, redirecting units and operations in island mode are only permitted under limited circumstances by ENTSO-E and the current exchange of power on the 220 kV line would likely not be permitted to continue after TEİAŞ joins ENTSO-E. TEİAŞ' representative also stated that, following synchronous interconnection with Europe, the existing 220 kV line would be required to connect through the Akhaltsike back-to-back converter to continue exporting to Turkey.<sup>18</sup> The Electricity Energy Market and Supply Security Strategy Paper approved by Resolution of the Prime Ministry states that, in connection with non-UCTE countries (UCTE was the predecessor organization to ENTSO-E until July 2009), direct current connections will be "principally" applied.<sup>19</sup> In addition, the MOU between Turkey and Georgia anticipates that isolated region imports will be replaced by asynchronous interconnection using back-to-back converters once the new AC/DC line is completed. It would appear, therefore, that "clustering" small HPPs in Georgia and redirecting them to Turkey or isolating a border region in Turkey and disconnecting it from the Turkish grid, may no longer be possible. Whether Turkey would allow the "clustering" of small HPPs should be further investigated with Turkish authorities.

## **3.2 IMPORT AUTHORIZATION PROCESS**

### **3.2.1 LEGAL ENTITIES ALLOWED TO IMPORT**

Article 2(f) of the Electricity Market Law provides that the import and/or export of electricity to or from countries that meet the international interconnection requirements described above can be performed by TETAŞ, private sector wholesale companies, retail companies and distribution companies holding retail licenses, "subject to Board approval, in accordance with the provisions of this Law, applicable regulations, their respective licenses, grid code and distribution code." The right to import power thus excludes end-users and generators and is limited to three groups of licensees and TETAŞ. Article 5(a) of the Import-Export Regulation elaborates on the conditions for import and export of electricity and stipulates that: "Import and/or export activities ... are regulated under [the legal entities'] respective wholesale or retail licenses and do not require a separate license."

The creditworthiness of these potential counterparties and the feasibility of entering in to long-term contracts with them will be discussed in greater detail in the Section 5

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<sup>16</sup> TEİAŞ Onay Meeting

<sup>17</sup> Meeting with Oytun Alici and Ilker Üçler, Energy Experts, EMRA, in Ankara, 11 May 2010 ("EMRA Meeting")

<sup>18</sup> TEİAŞ Onay Meeting

<sup>19</sup> Resolution no. 2009/11 of the Secretariat of the Higher Board of Planning, Undersecretariat of State Planning Organization, Prime Ministry, dated 18/5/2009 ("Strategy Paper")

of this report dealing with Potential Offtakers and Transaction Structures; this section will be limited to an examination of their import capabilities.

### 3.2.1.1 TETAŞ

Under Article 5(b) of the Import-Export Regulation, TETAŞ and private wholesale companies are authorized to engage in either the import and/or export of electricity. According to MENR, TETAŞ, the state-owned wholesale supplier, could act as a wholesale buyer and aggregator of power from HPPs in Georgia.<sup>20</sup> It currently buys from EnergoPro in Georgia, which is aggregating supply from small Georgian HPPs.

However, even though this requirement is not stated in the law, the authors of this report were informed in a meeting with the Head of TETAŞ' Legal Department, Asuman Dogan, one of the Department's attorneys, and two of TETAŞ' outside counsel,<sup>21</sup> that TETAŞ could not import power unless it is authorized to do so by an international agreement, ratified by Parliament. As noted above, there is currently an MOU in place between Georgia and Turkey which may<sup>22</sup> provide the requisite support for the imports currently being conducted through the 220 kV line from Batumi to Hopa and for the purchase of power by TETAŞ from EnergoPro Georgia, a Czech company. EnergoPro owns a number of HPPs in the region close to the border and is currently the only exporter to Turkey. Notwithstanding this agreement, the authors were told that TETAŞ is buying the power only because it is cheaper than other sources of supply and as a gesture of goodwill towards Georgia because Turkey currently has excess generating capacity.<sup>23</sup>

Under Article 2(d) of the Electricity Market Law, TETAŞ' wholesale role is limited to (i) taking over the existing energy sale and purchase agreements from TEAŞ and TEDAŞ (the former state-owned generation and distribution utilities); and (ii) purchasing from EÜAŞ solely to meet commitments assumed from TEDAŞ and distribution companies pursuant to the transfer of operating rights agreements prior to 31 October, 2001, unless a more economical supply is available or "in the case the electricity supply shortage continues," in which case "it may enter into energy purchase agreements provided that the term of such contracts do not exceed one year and are approved by" EMRA.<sup>24</sup> That one-year limit can, however, be waived by international agreements. This was demonstrated by MENR's announcement that on 11 May 2010, Turkey and Russia signed an agreement under which Russia will build a 5,000 MW nuclear power plant in Turkey under a Build-Own-Operate arrangement and TETAŞ will buy the output of the plant under a 15-year Power Purchase Agreement ("PPA").<sup>25</sup>

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<sup>20</sup> Selvitop Meeting

<sup>21</sup> Rasit Sarikaya and Serdar Çirak of RS Sarikaya Law Office, 20 May 2010, Ankara ("Sarikaya Meeting")

<sup>22</sup> The authors were informed by the MoE in Georgia that, while Georgia has completed the formalities needed to make the MOU between Turkey and Georgia effective, Turkey has not yet done so.

<sup>23</sup> Deloitte Yörük Meeting

<sup>24</sup> This language is repeated in the Electricity Market Licensing Regulation ("Licensing Regulation"), at Article 29

<sup>25</sup> Selvitop Meeting. According to an article in an on-line news outlet, TETAŞ committed to buying 70 percent of the plant's output. *Russia to Build Nuclear Power Plant in Turkey*, Rianovosti, 8 June 2010

Therefore, in order for TETAŞ to be a viable offtaker for hydropower from Georgia under a long-term PPA, an agreement similar to the one executed with Russia would need to be concluded with Georgia. Otherwise, for the reasons stated above and in Section 6 of this report dealing with Potential Offtakers and Transaction Structures, TETAŞ is unlikely to be the best counterpart for investors in Georgia's HPPs.

### 3.2.1.2 PRIVATE WHOLESALERS

A wholesale company is defined as “any legal entity engaged in the wholesale, import, export, trade and sale to eligible consumers of electricity and/or capacity.”<sup>26</sup> Private wholesale licensees are authorized to engage in the wholesale of electricity and/or capacity and in direct sales to eligible consumers, and may perform import and export activities in the market if their licenses contain the relevant provisions.<sup>27</sup> The Electricity Market Law requires EMRA to obtain an “opinion in respect of technical constraints” from TEİAŞ<sup>28</sup> before granting import or export authorization to a private wholesaler and TEİAŞ is required to respond within forty-five (45) days, together with its justification for its response.<sup>29</sup> The provisions concerning import and export “are applicable only for limited quantities and for a limited term.”<sup>30</sup> These limits on term and quantity need further investigation to know if they would create problems for commercial financing of HPPs in Georgia, since lenders will want to be assured of terms for offtake agreements that are co-extensive with debt service terms.

The requirement to have an international agreement in order to engage in imports or exports does not apply to private sector wholesale companies. While the market share of private wholesalers, together with that of their affiliates, may not exceed ten percent (10%) of the total electricity consumed in the market in the preceding year,<sup>31</sup> this should not create a problem for imports from Georgia, given the size of the Turkish market. Even if a single wholesaler were to import all 4,000 MW of new hydropower from Georgia, the imports are unlikely to exceed the ten percent limit for a single wholesaler. Installed capacity is currently around 44,500 MW and, as discussed in more detail in Section 5, dealing with Regulated Tariffs and Market Based Pricing, Turkey is expected to add tens of thousands of MW in the next few years to meet peak load.

Private wholesale companies could therefore be potential importers and offtakers for Georgian hydropower, assuming the limits placed on the volume they can import and the term of their import authorization do not reduce the possibility of commercial financing. It is possible that the existence of an international agreement, such as the MOU between Georgia and Turkey, could provide sufficient grounds for obtaining

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<sup>26</sup> Licensing Regulation, Article 4(45)

<sup>27</sup> While the Licensing Regulation does not specifically state that only private wholesalers may import or export electricity, the Electricity Market Law (at Article 2(f)) and the Import-Export Regulation (at Article 5(a)) make it clear that only “private” wholesale companies may engage in such activities.

<sup>28</sup> Electricity Market Law, Article 3(c)(4)

<sup>29</sup> Licensing Regulation, Article 22(f)

<sup>30</sup> *Id.*

<sup>31</sup> Electricity Market Law, Article 2(d)(2)



longer terms and larger import quantity approvals. This issue needs to be explored further.

### 3.2.1.3 DISTRIBUTION COMPANIES HOLDING RETAIL LICENSES

A distribution company is defined as “[a]ny legal entity engaged in electricity distribution in a certain geographical region.”<sup>32</sup> Unlike for wholesale licensees and retail licensees wanting to import or export power, the Electricity Market Law does not state that such activities are only applicable for limited quantities or for a limited term; nor does the law restrict distribution companies to importing power at below transmission voltage, as it does with retail licensees.<sup>33</sup> The Import-Export Regulation issued by MENR does, however, restrict distribution companies holding retail licenses to the “import of electricity at 36 kV and lower voltage levels...”<sup>34</sup> It is unclear whether the omission of the restriction in the Electricity Market Law to imports at 36 kV or below was an error that was “corrected” by the Import-Export Regulation or whether MENR added the restriction to comport with that on other retail licensees. What this restriction means in practice should be explored for the reasons discussed below.

There are currently no international interconnections at 36 kV or below transmission voltage between Georgia and Turkey. The region close to the Georgian border is rural and sparsely populated and any growth in demand would likely be met by new HPPs being built in the region. The growth in demand in the tourist resorts in the south-west, and in the regions around Istanbul and Ankara, are far from the border of Turkey. Therefore the scope of the restriction imposed by the Import-Export Regulation could have a significant impact on the export opportunities for Georgian hydropower developers, depending on how the Import-Export Regulation is interpreted.

The Import-Export Regulation could mean that the distribution company wanting to import power would be required to construct an international interconnection at 36 kV, or it could mean that the import takes place at the point of interconnection between the distribution system and TEİAŞ’ transmission system; the differing consequences of the two divergent interpretations are significant. The Electricity Market Law states that TEİAŞ “engages in *international interconnection activities* in line with the decision of the Ministry.”<sup>35</sup> The Licensing Regulation also specifies that, in addition to common provisions to be included in all licensees’ licenses, TEİAŞ’ license includes the authority to undertake “international interconnection activities.”<sup>36</sup> These provisions appear to contemplate construction of international interconnections. There is no equivalent provision in the Licensing Regulation dealing with distribution companies’ licenses which authorizes distribution companies

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<sup>32</sup> *Id.* Article 1(22)

<sup>33</sup> *Id.*, Article 3(c)(5)

<sup>34</sup> Import-Export Regulation, Article 5(b)

<sup>35</sup> Electricity Market Law, Article 2(b) (emphasis added)

<sup>36</sup> Licensing Regulation, Article 22(n)



with retail licenses to engage in international interconnection activities.<sup>37</sup> This omission would support the interpretation that only TEİAŞ can construct international interconnections and that the “import” by local distribution companies with retail licenses “takes place” at the point of interconnection between TEİAŞ and the distribution companies’ networks.

This interpretation, however, is inconsistent with other provisions in the Import-Export Regulation, which specifically contemplates that “TEİAŞ or distribution licensees” use revenues received from congestion management pricing for “establishing new *interconnection lines*” and for “strengthening transmission and distribution systems for increasing NTC values of existing *interconnection lines*.”<sup>38</sup> (emphasis added) The definition of “interconnection” in that regulation clearly states that it means connection to “another country.”<sup>39</sup> The Import-Export Regulation therefore envisages construction of international distribution interconnections.

Whether this means that the distribution company’s network must be located near the international border, or whether a distribution company at some distance from the border can build a distribution interconnection with step-up transformers and then connect to TEİAŞ’ transmission grid and use the grid to transmit the power to its own distribution network, is unclear. Assuming, however, that they must physically import across a 36 kV line, they would need to meet the requirements for international interconnection in the Import-Export Regulation, which would require an asynchronous parallel interconnection, redirecting the units or operating in island mode. Even though the Electricity Market Law and Import-Export Regulation specifically contemplate all three of these operations, as noted above, membership in ENTSO-E may impose limitations on the last two. The scope of the 36 kV limitation imposed by the Import-Export Regulation needs to be further discussed with EMRA.

All distribution companies in Turkey have retail licenses and Turkey has allowed distribution companies to engage in retail sales in addition to performing their distribution functions.<sup>40</sup> According to the Strategy Paper, however, distribution companies which perform “distribution, production and retail sales activities together, will separate these functions by January 1, 2013.”<sup>41</sup> EMRA is required to make any amendments to secondary legislation to implement this change by 2012. Whether the “separation” is functional only, or will require legal separation as well, and how this will affect the ownership of Georgian HPPs by Turkish distribution companies should be clarified with EMRA.

Private distribution companies may also construct generation facilities or purchase power from generation facilities that they own under certain conditions, “provided that they obtain a generation license and keep separate accounts” and that the

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<sup>37</sup> *Id.*, Article 23

<sup>38</sup> Import-Export Regulation, Article 19 (emphasis added)

<sup>39</sup> *Id.* Article 4(13)

<sup>40</sup> Electricity Market Law, Article 2(c)

<sup>41</sup> Strategy Paper, Section 3.3, at p. 7

purchase price not exceed the “country average wholesale price.”<sup>42</sup> Among the conditions that private distribution companies would need to meet are entering in to a “transmission control agreement” with TEİAŞ in order to maintain “the operational integrity and stability of the transmission system.”<sup>43</sup> Another pre-condition to constructing generation or buying from their own generation facilities is the requirement to “amend their existing contracts according to the provisions of [the Electricity Market] Law that allow for free competition.”<sup>44</sup> Private distribution companies would therefore be required to allow eligible customers to purchase from other retail suppliers and to provide non-discriminatory access to their distribution system.<sup>45</sup> They would also be prohibited from purchasing from their own generation or that of their affiliates “more than twenty percent [20%] of the total annual electricity amount distributed by them in their authorized region in the previous year.”<sup>46</sup> It is unclear whether these provisions are applicable to construction of generating facilities, or purchasing from affiliated generation units, in another country. This issue also would benefit from further discussions with EMRA and, more importantly, with MENR.

#### **3.2.1.4 RETAIL SALE COMPANIES**

A retail company is any “legal entity engaged in the import of electricity and/or capacity and retail sale to consumers, excluding those directly connected to the transmission system, and in providing retail sale services to consumers.”<sup>47</sup> Retailers, like wholesalers and distribution companies, apparently do not need an international agreement to be in place in order to import power. As noted above, however, retailers may only import power at 36 kV or below<sup>48</sup> and, like wholesale licensees, only in limited quantities for a limited term.<sup>49</sup> As with wholesalers, this limitation potentially limits their attractiveness as potential offtakers for imported hydropower, unless longer terms and sufficient volumes can be authorized through the vehicle of an MOU between Georgia and Turkey. Also as discussed below, retail sale companies without significant assets are also less likely to be creditworthy counterparties Georgia’s HPP developers.

#### **3.2.2 APPLICATION PROCESS**

The application process for authorization to import power is relatively straightforward; however, as with all sovereign states, transmission across a national boundary has political implications. The Government of Turkey, through MENR, is therefore heavily involved in the decision-making process. Applicants wanting to engage in the import of electricity can request a condition in their license at the time they apply for the license or at any time thereafter, but in either case EMRA must obtain “the

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<sup>42</sup> Electricity Market Law, Article 3(c)(3)

<sup>43</sup> *Id.*, Article 2(b)

<sup>44</sup> *Id.*

<sup>45</sup> Electricity Market Law, Article 3(b)(2)

<sup>46</sup> Licensing Regulation , Article 25(i)

<sup>47</sup> Electricity Market Law, Article 4(35)

<sup>48</sup> Import-Export Regulation, Article 5(b)

<sup>49</sup> Electricity Market Law Article 3(c)(5)

opinion” of MENR and, “on technical matters,” that of TEIAŞ<sup>50</sup> and/or the relevant distribution licensee.<sup>51</sup> The information to be provided includes the country of export, the type of fuel used in generating the electricity, maximum capacity and annual volumes, duration of the import, the border crossing point, the “method to be used” for importing and, if available, the import agreement.<sup>52</sup> In the event that the two national electricity grids are not synchronously interconnected, MENR’s opinion as to whether an import or export can be undertaken is decisive.<sup>53</sup> Thereafter approval is granted by EMRA upon submission of a copy of the purchase agreement,<sup>54</sup> the interconnection agreement, and payment of the license amendment fee within sixty (60) days of notification by EMRA.<sup>55</sup> Once these conditions have been met, the permission to engage in imports is incorporated into the license and the approval is posted on EMRA’s website.<sup>56</sup>

## **4. ALLOCATION OF INTERCONNECTION AND TRANSMISSION CAPACITY**

### **4.1 INTERCONNECTION CAPACITY**

#### **4.1.1 ONE-YEAR LIMIT ON INTERCONNECTION CAPACITY**

On paper, at least, the Import-Export Regulation may represent the most significant hurdle for commercial financing of HPPs in Georgia because the allocation of interconnection capacity to a single user is limited to one year, regardless of any “agreements concluded with other country representatives of legal entities in other countries” by applicants seeking interconnection capacity.<sup>57</sup> Thus, even if the HPP developer and the importer have entered into a long-term power purchase agreement (“PPA”), the importer could be restricted to a one-year allocation of capacity on the interconnection. There is no set term for the import condition in an applicant’s license and the import authorization itself could theoretically be equivalent to the term of the license,<sup>58</sup> which for wholesalers, distribution companies and retailers can be up to forty-nine (49) years.<sup>59</sup> As noted above, whether the restriction on imports by wholesalers and retail licensees to a “limited term” would allow such a long term needs to be further explored with EMRA. The allocation of international interconnection capacity, however, is limited to a year. The result is that there could be a significant disconnect between the terms of both the import authorization and PPA, on the one hand, and the term of the interconnection allocation on the other hand.

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<sup>50</sup> TEIAŞ is required to provide its opinion to EMRA within forty-five (45) days: Licensing Regulation , Article 22(f)

<sup>51</sup> Import-Export Regulation, Article 8 (a) through (g)

<sup>52</sup> *Id.*, Article 7

<sup>53</sup> *Id.*, Article 8.

<sup>54</sup> It is unclear whether by “interconnection agreement” the regulation is referring to interconnection of the generation unit to the grid in the exporting country or if it referring to an interconnection agreement with TEIAŞ to use the international interconnection. This needs to be clarified with EMRA.

<sup>55</sup> Import-Export Regulation, Article 9

<sup>56</sup> *Id.*

<sup>57</sup> *Id.* Article 16

<sup>58</sup> *Id.* Article 11

<sup>59</sup> Licensing Regulation , Articles 27, 24 and 31

The reality may be, however, that the one-year capacity right is “rolled over” every year. Pierce Atwood was told by Asuman Dogan, Head of TETAŞ’ Legal Department, and two outside counsel for TETAŞ,<sup>60</sup> that the capacity allocation is routinely reauthorized every year and that a longer term could be authorized in the license; however, they could not point to any supporting provisions in the law or regulation that would allow a longer term. It is noteworthy, also, that in conversations with Pierce Atwood, potential investors in Georgian HPPs and private independent power project (“IPP”) developers in Turkey, such as Independent Power plc, Nuro Energy Production & Marketing Inc., Borusan EnBW Enerji, Yuksel Insaat A.S., and Alarko Contracting Group, did not appear to be concerned about the one-year capacity allocation restriction. Whether this provides sufficient assurance to commercial lenders is a different question. At a minimum, it needs to be determined whether EMRA has ever refused to authorize a “roll over” on any international interconnection and on what grounds it did so, or might do so in the future (assuming there is no congestion).

#### 4.1.2 ALLOCATION OF INTERCONNECTION CAPACITY

The governing principles in the Import-Export Regulation generally applicable to allocation of interconnection capacity are also applicable to non-synchronous interconnections unless the agreements under which the interconnection takes place differs from TEİAŞ’ or the distribution licensee’ rules. The last paragraph of Article 20 states that, in the event interconnecting systems are not synchronously interconnected, TEİAŞ or the distribution licensee allocate capacity in accordance with “the provisions of formerly signed agreements for calculation regarding interconnection line capacity, necessary regulations concerning interconnection capacity allocation, congestion management and inspection of the lines.”<sup>61</sup> Thus the requirements of the Import-Export Regulation, such as non-discrimination, development of competition and ensuring the appropriateness of the method in keeping with liberal markets,<sup>62</sup> as well as the free allocation of capacity when there is no congestion<sup>63</sup> and the use-it-or-lose-it rule<sup>64</sup> also apply to non-synchronous interconnections unless the agreement states otherwise.

It is unclear, however, how capacity is allocated in the event of congestion. Article 17 of the Import-Export Regulation, which is entitled “Rules concerning congestion management price,” discusses only what happens if there is *no* congestion, rather than what happens if there is congestion.<sup>65</sup> Article 19 of the Import-Export Regulation discusses the uses to which revenues received from congestion management can be used, which implies a form of allocation based on price. Moreover, the uses to which such revenues can be put—either establishing new interconnection lines, strengthening transmission and distribution system to increase

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<sup>60</sup> Sarikaya Meeting

<sup>61</sup> *Id.*, Article 20

<sup>62</sup> Import-Export Regulation, Article 16

<sup>63</sup> *Id.*, Article 17

<sup>64</sup> *Id.* Article 18

<sup>65</sup> It is possible that a paragraph was left out of the English translation, as the lack of congestion management description in the Import-Export Regulation is puzzling.

net transfer capacity, or for such other purposes as may be approved by EMRA—are similar to the uses permitted under Regulation (EC) 1228/2003 (“Regulation 1228”).<sup>66</sup> This implies that Turkey also intends to use the congestion management methods laid out in the Congestion Management Guidelines appended to Regulation 1228, which require market-based methods, meaning either explicit (capacity) or implicit (capacity and energy) auctions.<sup>67</sup> The following questions should therefore be clarified with EMRA: (1) How capacity on the international interconnection is allocated in the event of congestion? (2) Whether existing users get a preference to retain the volume of capacity previously used or whether they can be “bumped” by newcomers who are willing to pay more for interconnection capacity? (3) Whether there is any preference for renewable energy in allocating interconnection capacity?

#### 4.1.3 CONSTRUCTION OF NEW INTERCONNECTION CAPACITY

No permit is required from EMRA for TEİAŞ to construct new transmission lines because it is licensed to operate the entire transmission grid. In addition, either TEİAŞ or distribution licensees “may make wholesale licensees to construct interconnection lines in order to increase trade and competition in the electricity market . . . or to increase existing NTC [Net Transfer Capacity].”<sup>68</sup> If congestion develops on the new line, the entity constructing the new international interconnection gets the use of fifty percent (50%) of the NTC value determined by TEİAŞ or the distribution licensee, until reimbursement of the cost of the line has been made.<sup>69</sup> However, ownership and operating rights of the interconnection line would remain with TEİAŞ or the distribution licensees, as appropriate. In the event that that more than one application to construct an interconnection at the same location is received, the least cost proposal is selected.<sup>70</sup>

The standard “to increase trade and competition in the electricity market” is relatively broad and does not require a showing that other interconnections are being fully utilized. This provision would therefore seem to allow the construction of a new international interconnection at a different voltage than the Akhaltsikhe-Borçka line, if a showing can be made that the line would increase trade and competition. This standard should be discussed with EMRA, as well as whether this obligation applies only to private wholesalers or also to TETAŞ.<sup>71</sup>

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<sup>66</sup> Regulation 1228 will be superceded by Regulation (EC) No. 714/2009, effective 3 March 2011 but the permissible uses for revenues received from congestion management are the same.

<sup>67</sup> Annex to Regulation 1228, Guidelines on the management and allocation of available transfer capacity of interconnections between national systems (“Congestion Management Guidelines”) at Article 2.1

<sup>68</sup> Import-Export Regulation, Article 21

<sup>69</sup> *Id.*

<sup>70</sup> *Id.*

<sup>71</sup> Even though Article 21 does not specify that the wholesaler has to be a “private wholesale company,” since only private wholesale companies may engage in the import of electricity, it should be assumed that this obligation to construct a new interconnection applies only to private wholesalers. However, this should be clarified with EMRA.

## 4.2 TRANSMISSION CAPACITY

### 4.2.1 ALLOCATION OF TRANSMISSION CAPACITY

There are no conditions in the Licensing Regulation, the Grid Code or the Communiqué Regarding Connection to and Use of Transmission and Distribution Systems in the Electricity Market specifically limiting the amount of transmission capacity that can be committed by TEİAŞ under a long-term transmission agreement or restricting the term of transmission agreements. Thus, legally there does not appear to be any barrier to obtaining long-term capacity downstream of the Borçka or Deriner substations. However, a number of the hydropower sites that have been auctioned by DSI are in the north east region bordering Georgia and a large dam of 1,800 MW is presently under construction further south. The impact of those additions on the transmission capacity of the lines from the border to the west and south-west regions needs further study to determine whether load flows from Georgia will be affected and whether there is sufficient capacity to serve all of the new plants coming on line.

In the event that there is congestion on a transmission line within Turkey, allocation of capacity is done in accordance with TEİAŞ' own rules, although EMRA's experts could not recall this ever occurring.<sup>72</sup> Third-party access is guaranteed under the Electricity Market Law.<sup>73</sup> Among the principles that TEİAŞ is required to observe are providing transmission service on a non-discriminatory basis "between equal parties," meeting the demands of third parties for connection to the transmission network "considering system access rights" and ensuring that the opinion requested by EMRA regarding the technical feasibility of an import or export request is provided within forty-five (45) days, "together with its justification."<sup>74</sup> It is unclear whether the term "equal parties" could be used to distinguish between power from domestic sources and foreign imports, to the disadvantage of Georgian hydropower, or whether power from different generating sources could be used to distinguish renewable energy from non-renewable energy, to the advantage of Georgian hydropower investors. While the Electricity Market Grid Regulation exempts renewable energy plants from some minimum frequency and voltage control requirements, and the Licensing Regulation provides preferential access for system connection,<sup>75</sup> it does not appear that there is any preference given to renewable power when allocating transmission capacity in the event of congestion due to new plants coming on line inside Turkey. Even if such a preference can be assumed due to the preference given to renewable power in system connections, whether such preference applies to imported power downstream of the Borçka interconnection is not clear. These issues should be further explored with EMRA and TEİAŞ.

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<sup>72</sup> Alici Meeting

<sup>73</sup> Article 3(b)(2)

<sup>74</sup> Licensing Regulation, Article 22(f)

<sup>75</sup> *Id.*, Article 38 (last para)

## 4.2.2 CONSTRUCTION OF TRANSMISSION CAPACITY

Under the Licensing Regulation, entities “requesting connection to the system” are able to finance system expansions “where system expansion investment or new investment is required due to insufficient capacity” and “the necessary financing is not available.”<sup>76</sup> In such case, the total cost of the actual investment is deducted from the transmission charge.<sup>77</sup> It is unclear whether this right would apply to offtakers, such as Turkish distribution licensees, who are already connected to the grid, or to Georgian generators, since there is no “connection” of their plants to the transmission grid inside Turkey. While the authors were told that TEİAŞ, in making its investment plans for capacity expansions, has taken into account the transmission requirements downstream of Borçka and will construct additional transmission lines to move power from the Borçka and Deriner substations to markets in the west and south-west,<sup>78</sup> in the event congestion occurs in the future, whether financing system expansion is available to potential offtakers of Georgian hydropower downstream of the Borçka line (assuming it would be economically feasible), should be explored with EMRA and TEİAŞ.

## 5. REGULATED TARIFFS AND MARKET BASED PRICING

The regulated tariffs that are of primary relevance for HPP developers in Georgia hoping to sell their output in Turkey are the transmission tariffs and market-based generation tariffs.

### 5.1 TRANSMISSION TARIFFS

Under the Electricity Market Tariffs Regulation (“Tariffs Regulation”),<sup>79</sup> the transmission tariff prepared by TEİAŞ includes the:

- Use of transmission price calculated as per the provisions of the “Communiqué regarding the Regulation of Transmission System Revenue”;
- Transmission system operation price calculated as per the provisions of the “Communiqué regarding the Regulation of Transmission System Operation Revenue”;
- Market management price calculated as per the provisions of the “Communiqué regarding the Regulation of Market Management Price”; and
- The principles and procedures applicable to the implementation of the tariff.

Under Article 14, licensees must submit information and documents prepared in accordance with the provisions of the “Communiqué regarding Electricity Market

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<sup>76</sup> *Id.*, Article 38, para. 6

<sup>77</sup> *Id.*

<sup>78</sup> Onay Meeting. A map showing the planned investments in transmission lines around these two substations was provided to the authors by TEİAŞ and will be made available to potential investors.

<sup>79</sup> Electricity Markets Tariff Regulation, Article 8



Chart of Accounts, Regulated Items and Reporting.”<sup>80</sup> The formulae used in the communiqués to calculate the various components that make up the transmission tariff include caps for “controllable” costs, indices to reflect price changes, and incentive mechanisms to increase efficiency by taking local and international benchmarks into consideration.<sup>81</sup> A separate surcharge to cover a portion of EMR’s operating costs (called a “transmission surcharge ratio”) is “included as a separate item in the payment notices”<sup>82</sup> and is determined annually by EMRA. This surcharge cannot exceed one (1) percent and is of the transmission tariff.<sup>83</sup>

The “principles” of revenue control used to determine price caps include, among other factors, such criteria as:

- “Ensuring reliable, adequate, quality, uninterrupted, low-cost and environmentally friendly supply to consumers;”
- “Ensuring the financial viability of legal entities with due regard to their efficiency levels;”
- “Facilitation of efficient long-term investments;” and
- “Facilitation of effective competition.”<sup>84</sup>

Automatic tariff adjustments to reflect cost changes in the electricity Market Index based on inflation can be made monthly without requiring any approval by the regulator but must be reported to EMRA and publicly announced through publication in the press by the licensee.<sup>85</sup> No cross subsidies are allowed in designing regulated tariffs and to the extent that “consumers in certain regions and/or in line with certain objectives need to be supported, such subsidies shall be provided in the form of direct cash refunds to consumers without affecting the price structure and the prices.”<sup>86</sup> The amount of these refunds is determined by the Council of Ministers upon the proposal of MENR.

EMRA may modify tariffs that are subject to regulation at the request of licensees or if deemed necessary by EMRA, if: (a) the provisions of legislation are amended in manner that may explicitly affect the tariffs; (b) license modifications lead to changes that may explicitly affect the tariffs; or (c) “the force majeure conditions occur.”<sup>87</sup> There is no definition of “force majeure” in the Tariffs Regulation itself; instead that term is defined in Article 51 of the Licensing Regulation, which includes a provision that “special force majeure conditions specific to activities of licensees are incorporated into their licenses.” The license issued to TEİAŞ is not available on

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<sup>80</sup> This Communiqué is not available in English.

<sup>81</sup> See, e.g. Communiqué Regarding Regulation of Transmission System Operation Revenue, Article 3(a)

<sup>82</sup> *Id.*, Article 33.

<sup>83</sup> Electricity Market Law, Article 10(A)(e)

<sup>84</sup> Tariffs Regulation, Article 12

<sup>85</sup> *Id.*, Article 29

<sup>86</sup> *Id.*, Article 21

<sup>87</sup> *Id.*, Article 34



EMRA’s website in English. Under what conditions TEİAŞ can exercise the force majeure right is therefore not known and should be explored further with TEİAŞ.

TEİAŞ’ current transmission tariffs for each region, as reflected on EMRA’s website in English, is appended to this report as Appendix C. This table is difficult to interpret and requires an explanation from EMRA and TEİAŞ, in particular as to which transmission tariff would be applicable to imports through the Borçka line and how transmission tariffs would be calculated for transit through Turkey.

## **5.2 MARKET BASED GENERATION TARIFFS**

Investors in Georgia’s HPPs have several options to sell their power at market-based tariffs: (1) bilateral negotiated contracts; (2) the spot market; and (3) sale at preferential prices under the Law on Utilization of Renewable Energy Sources for the Purpose of Generating Electrical Energy (“Renewable Energy Law”). An in-depth forecast of unregulated power prices in Turkey is beyond the scope of this report and this section is limited to describing factors that could have a potential impact on negotiated pricing under bilateral and spot market contracts. Prices for renewable energy sold under the Renewable Energy Law are discussed separately.

### **5.2.1 BILATERAL NEGOTIATED PRICES**

As noted elsewhere in this report, the most likely offtakers for Georgian hydropower are private wholesalers and privatized distribution companies. Both may have an interest in medium-term and long-term negotiated contracts, particular those in the high growth areas where summer peaks are likely to occur, and the three month winter gap in supply will not be as much of an issue for off-takers. Changes in tariff methodology to introduce zonal pricing could be particularly beneficial to low cost generators in Georgia because prices in the south and south-west, where the air-conditioning load growth is anticipated, may be higher than other regions of Turkey when this occurs.<sup>88</sup> While zonal pricing is unlikely to be introduced before 2013, this timing could be opportune for Georgian generators.

Certain factors will have a moderating impact on imported prices. Historical contracts still dominate the Turkish market and at the current time, 80 percent of all power sales are regulated.<sup>89</sup> About 24,000 MW of the 44,500 MW of installed capacity in Turkey (or approximately 54 percent) is owned by EÜAŞ, the state-owned generating company. The remaining 20,500 MW has already been privatized and more will continue to be sold to private operators, leaving EÜAŞ with 7,800 MW of large hydro dams upon completion of the privatization program. TETAŞ, the state-owned wholesaler, buys all the power produced by EÜAŞ under “vesting” or “transitional” contracts and from private IPPs that still had long-term contracts with TEDAŞ under Build-Own-Transfer (“BOT”) contracts. These PPAs have take or pay provisions in them. The prices from the BOT purchases and the cost of EÜAŞ’ own generation are blended to come up with a regulated price. There are some 5,000 MW contracted bilaterally under the BOT contracts until 2023 and 2,000 MW until

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<sup>88</sup> Yörük Meeting

<sup>89</sup> Id.

2020. The vesting contracts are scheduled to end by 1 January 2011; however, it is generally believed the vesting contracts will be extended to keep prices low and that these transitional contracts will be assigned to the private investors who buy the generating units.<sup>90</sup>

Even after these vesting contracts end, competition from new capacity additions in Turkey and other imports from neighboring countries could have an impact on the price of long-term contracts. As noted below, Turkey anticipates a number of capacity additions to its generation portfolio, but the largest additions will likely be primarily from capital intensive power plants, such as large dams and nuclear power plants, which will have TETAŞ as an off-taker or EUAŞ as an owner.

Another factor that could potentially impact prices under long term bilateral contracts is Turkey's scheme for assuring security of supply. MENR is responsible for security of supply under 2008 amendments to the Electricity Market Law. Regulations are in the process of being developed regarding the implementation of the two mechanisms foreseen for addressing security of supply problems: capacity certificates and capacity procurement. The arrangements described below are tentative<sup>91</sup>:

- Under the capacity certificate method, load serving entities have to buy capacity certificates from generators entitling them to sufficient capacity to meet their maximum demand and if they can not meet their obligations, they will be subject to penalties by EMRA
- Under the capacity procurement method, TEİAŞ holds an auction for new capacity to be supplied by private generators; a ceiling price will be set in these auctions but the secondary legislation on how to develop this ceiling price has not yet been finalized. The current draft says it will be set by an auction committee but the methodology has not yet been developed.

However, according to EUAŞ,<sup>92</sup> TEİAŞ is responsible for making the supply and demand balance projections for MENR and it includes imports from neighboring countries like Georgia in its assumption about available capacity. Thus, the supply and demand balance assumes imports of 650 MW from Georgia through the Borçka interconnection. Turkey is therefore relying on imports from Georgia to meet its demand projections, which should reduce the likelihood that the capacity procurement scheme will be used to “squeeze out” Georgian imports.

## 5.2.2 SPOT MARKET PRICES

Until 2008, prices in the spot market were above those offered under bilateral contracts and above those offered under feed-in tariffs for renewable power. However, as noted in the Introduction to this report, prices in the spot market declined in 2009 due to the global recession and falling demand, but have very

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<sup>90</sup> Id.

<sup>91</sup> See Strategy Paper

<sup>92</sup> Yüksel Meeting

recently been increasing again. Bids and offers in the spot market are settled at the marginal price (the price of the last bid/offer accepted to meet demand. Spot market prices will necessarily be affected by the type and amount of generation available in the market. Therefore, new capacity additions will have an effect on those prices, although capacity additions are by their nature “lumpy,” in that large amounts come on line all at once. Therefore, any downward pressure on prices from new capacity that is already planned and under construction is likely to be temporary, until the new capacity is absorbed by increased demand. A brief overview of planned capacity additions follows.

The 2010-2014 Strategic Plan of MENR includes several tables showing new capacity additions expected to come on line through 2014. By 2013, 3,500 MW of new coal-fired plants<sup>93</sup> and 5,000 MW of new HPPs<sup>94</sup> are expected to be completed, and 10,000 MW of wind power<sup>95</sup> and 300 MW of geothermal power<sup>96</sup> are targeted for completion by 2014. Construction of the first nuclear plant is expected to begin in 2014.<sup>97</sup> All of this capacity is anticipated to be built by the private sector, and without state-support (with the exception of the offtake agreement for nuclear power).

Even more robust projections are found in a report by the Turkish Chamber of Mechanical Engineers shown to one of the authors by Kivanc Eryavuz, a Board Consultant to Yuksel Insaat A.S. (“Yuksel”).<sup>98</sup> According to that report, a total of 33,000 MW of capacity is presently in the planning or construction stages, out of which 12,000 MW is past the ten (10) percent completion stage. In addition to the agreement executed with Russia for the nuclear plant in or around Mersin in the south, the Government of Turkey also executed an MOU with a consortium from the Republic of South Korea in January 2010 to build another nuclear plant of 5000 MW at Sinop, in the north of Turkey.<sup>99</sup> However, that proposal is only in the pre-feasibility stage.

Price competition could also come from auto producers. Pierce Atwood learnt from a meeting with an energy attorney advising electricity market investors in Turkey<sup>100</sup> that EMRA has proposed amendments to the Electricity Market Law that would abolish the category of generators known as auto producers (self-generators) thus allowing such generators to sell electricity into the market.

Turkey is also building or upgrading international interconnections with other countries which will allow for further exports and imports from other adjoining countries besides Georgia. While the volume of electricity that could or would be

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<sup>93</sup> The Republic of Turkey Ministry of Energy and Natural Resources Strategic Plan (2010-2014) (“Strategic Plan”) at 15

<sup>94</sup> *Id.* at 18

<sup>95</sup> *Id.* at 19

<sup>96</sup> *Id.*

<sup>97</sup> *Id.* at 16

<sup>98</sup> Yuksel is the biggest hydropower construction company and the fifth largest construction contractor in the region.

<sup>99</sup> According to the Strategy Paper, Turkey’s goal is to generate five (5) percent of its power from nuclear generation by 2020.

<sup>100</sup> Ozlem Odabas Tavares, Attorney Odabas Tavares Law Office, Ankara June 4, 2010

imported through the interconnections with these countries is somewhat speculative, they are worth noting:

- **Iran:** There are currently two 400 kV interconnection lines but they are only operated at 150 kV level because the line connecting the substation is only 150 kV; Turkey imports 70 MW from Turkmenistan through Iran into the isolated Başkale area; TEİAŞ plans to invest in a 400 kV substation in Başkale to upgrade the 1000 MW line to 400 kV and plans to install a back-to-back converter at the Iran border to enable transit of Turkmenistan power through Turkey to Europe; the other 150 MW line is at Doubuwazit but currently not operating due to disagreements
- **Iraq:** There is one 400 kV line with a capacity of 150 MW to Zakho and a planned 400 kV line with a capacity of 1000 MW from the Cisre substation to Mosul (which will be operational in two years). The line to Zakho is 400 kV but can only operate at 150 kV because the line connecting the substation is only 150 kV; a private investor who owns an oil fired thermal power plant (“TPP”) at Karadinez near the border is upgrading the 150 kV line that runs to the substation to 400 kV so he can use the existing line to Zakho at 400 kV. The investor buys fuel oil in Iraq to operate the TPP in Turkey and sells electricity back to Iraq. Two back-to-back converters will be installed once the new line is completed, one to be paid for by Iraq and one paid for by Turkey
- **Nakhchivan** (an enclave between Armenia and Azerbaijan): Two 150 kV lines of 300 MW exist but are underutilized because consumption in Nakhchivan is only 100 MW and Azerbaijan has built a new gas-fired plant in Nakhchivan. The excess capacity can be used for transit between Turkey and Armenia once relations between the two countries are normalized
- **Armenia:** A 220 kV line of 250 MW exists and could potentially be used to import cheap power from Armenia’s Soviet-built nuclear plant at some point in the future but is currently not utilized because relations between Turkey and Armenia have not yet been normalized and approvals for the imports must be obtained from the Ministry of Foreign Affairs

Based on a projected growth of 8.5 percent per year, however, Turkey will need to add close to 4000 MW per year and should be able to absorb all these capacity additions and imports. The downward pressure on prices for bilateral contracts may therefore be temporary but should be investigated in more depth.

### 5.2.3 RENEWABLE ENERGY LAW

Under the Renewable Energy Law, retail license holders have to buy electrical energy from power plants generating such electrical energy from renewable resources<sup>101</sup> and who have been in operation for less than ten (10) years. Retail licensees are required to pay a feed-in tariff equal to the average wholesale price for the previous year, as determined by EMRA.<sup>102</sup> However, the feed-in tariff can not be

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<sup>101</sup> Renewable Energy Law, Article 6(a)

<sup>102</sup> *Id.*, Article 6(c)

less than the Turkish Lira equivalent of 5 Euro cents per kWh and may not exceed the Turkish Lira equivalent of 5.5 Euro cents per kWh.<sup>103</sup> Retail licensees have no quota obligation so if renewable energy producers do not want to sell at feed-in tariff price, there is no penalty for not buying renewable energy. Because prices on the spot market have been higher than the feed-in tariff, renewable generators have not been selling power under feed-in tariff prices. The authors were informed that MENR is seeking to raise the feed-in tariff, possibly as high as 13.5 Euro cents per kWh,<sup>104</sup> but were also told there is little political support for such a move.<sup>105</sup> The Renewable Energy Law assumes the sale of Turkish renewable power into international markets,<sup>106</sup> and may therefore also contemplate the sale of imported renewable power into Turkey's internal market. However, the law does not specifically state that feed-in tariffs are available for imported power and this issue should be clarified with MENR.

## 6. POTENTIAL OFFTAKERS AND TRANSACTION STRUCTURES

### 6.1 TETAŞ

For a number of reasons, TETAŞ is unlikely to be a direct importer of Georgian electricity and counterparty for Georgian HPPs. First, as noted above, several sector participants that the authors met with believe that the law forbids TETAŞ from being involved in any import or export activity without an international agreement approved by Parliament. Although we were not advised of any specific provision preventing TETAŞ from importing power, Article 22(n) of the Licensing Regulation makes it a specific license obligation of TEİAŞ that it carries out any international interconnection activities in line with decisions of MENR. All imports and exports by Turkey thus far have been pursuant to bilateral country agreements or special government decree, so the existing MOU between Turkey and Georgia would need to be amended to specifically provide for such a role or a new agreement signed, which is unlikely.<sup>107</sup>

Second, TETAŞ' role is not so much to act as a commercial wholesaler, but to purchase electricity for the purpose of balancing the system and to handle the output of generators which remain in government hands. As a government company related to MENR, TETAŞ takes a conservative view of its role as one that is limited to operating within the Turkish electricity sector, rather than internationally without specific government authorization. An expansion of TETAŞ' role would not sit comfortably with the government's policy of privatizing generation assets. Third, as previously mentioned, TETAŞ may not enter into purchase contracts that exceed one year. Finally, TETAŞ was intended to be a temporary entity (although, in fact its role has grown). For these reasons, TETAŞ is generally considered to have limited ability as a state company to purchase electricity imports.

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<sup>103</sup> *Id.*

<sup>104</sup> Unofficial meeting between one of the authors and Yuksel Oktay, Country Representative of Covanta Energy,

<sup>105</sup> Yörük Meeting

<sup>106</sup> *Id.*, Article 5

<sup>107</sup> A lawyer at the MoE indicated that the negotiations over the existing MOU were difficult and that Turkey would be unlikely to want to enter into further negotiations.

It was, however, suggested that TETAŞ could purchase power from a Turkish licensed wholesaler that has itself imported the power, noting that TETAŞ is now starting to run auctions for new capacity.<sup>108</sup> These auctions would likely be restricted to buying power from Turkish wholesalers (rather than sellers from Georgia), so in this regard TETAŞ would be a buyer from a Turkish wholesaler. There have been several companies, including from Russia, looking at the issue of imports, as well as the possibility of constructing a new transmission line.

Even if TETAŞ does become authorized to purchase imported power, as a state-owned entity there may be concerns in seeking to contract with it long term, as it is perceived to be less flexible than a private wholesaler in dealing with contractual disagreements over commercial terms and perhaps more likely to resort to the courts rather than to seek mutually acceptable solutions (as a private wholesaler might).<sup>109</sup>

It would be helpful to review TETAŞ' license; however this does not appear to be a public document. Any further analysis should also encompass a review of TETAŞ' articles of incorporation.

## **6.2 PRIVATE DISTRIBUTION COMPANIES**

According to Peter Graham, Business Development Manager for Turkey with International Power plc, the privatized distribution companies would be the most creditworthy importers and offtakers for Georgian hydropower because of the value of their network assets. Not only can they sell at retail in their own service territory, they can also use their retail license to sell to eligible customers in another distribution company's region if their retail license specifically permits it.<sup>110</sup> Regional distribution licensees are also obliged to supply electricity and capacity to eligible consumers whose retail supplier is temporarily suspended or ceases activity, until such consumers enter into bilateral contracts with new suppliers. The distribution company must enter into supplier of last resort contracts with wholesalers to fulfill this obligation.

However, as mentioned in Section 3.2, Article 5(b) of the Import-Export Regulation imposes the requirement that imports of electricity must be at 36 kV and lower voltage levels. In addition, Pierce Atwood was also told by Bekir Bora, Senior VP Project Finance, Alarko Contracting Group, that the government is considering entering into long term PPAs with distribution companies which it privatizes, which could have the effect of foreclosing contracts with privatized local distribution companies as potential offtakers. This issue should therefore be monitored.

The distribution companies that already own generation in Turkey would likely be buyers only to the extent of any shortfall in quantities of power need to supply their retail consumers. The number of distribution companies owning generation should therefore also be assessed and monitored.

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<sup>108</sup> Meeting with Mesut Cakmak, White & Case LLP, in Istanbul, 2 June 2010 ("White & Case Cakmak Meeting")

<sup>109</sup> Meeting with Yurdakal Yigitguden, Board Member, Borusan EnBW Enerji (former Under-Secretary, MENR), in Ankara, 20 May 2010

<sup>110</sup> Electricity Market Law, Article 3(c)(5)

## 6.3 PRIVATE WHOLESALE COMPANIES

Licensed private wholesale companies appear to offer the best prospects for sales of power exported from Georgia. A significant number of companies have sought and obtained wholesale licenses from EMRA, some of which have substantial portfolios. A project developer in Georgia could form, and then sell, to its own Turkish licensed wholesaler, which would then arrange sales in Turkey (that is, act as a middle man). Or, the developer could sell to an unaffiliated wholesaler licensed in Turkey, which would then assume responsibility for (and the risk of) selling the power. It could also simply hire a wholesaler to sell power for a fee (rather than sell electricity to the wholesaler).

Wholesale licensees are also responsible for arranging transmission. Sales of electricity by the wholesaler (whether or not affiliated with a generator in Georgia) can be through bilateral contracts or spot market sales (or a mix of these).

## 6.4 ORGANIZED INDUSTRIAL ZONES

Organized Industrial Zones (“OIZ”) are entities established under the Organized Industrial Zones Law no. 4562, entitling them to generate and distribute electricity to meet the demands of participants within their boundaries, without having to qualify as eligible consumers<sup>111</sup>. An eligible consumer within an OIZ may also choose a supplier to purchase from (and would pay distribution fees to the OIZ). There are presently a large number of OIZ, many of them of significant size. OIZ are licensed by EMRA, but their licenses do not allow them to import nor to act as a wholesaler of electricity. However, an OIZ can be an offtaker, purchasing electricity from a wholesaler and distributing it to the participants in the OIZ.

We understand that regulations in respect of “the principles and procedures regarding the activities of the OIZ” have been issued as required by the Electricity Market Law<sup>112</sup>; however these are not readily available (either in Turkish or English). Whether OIZs could potentially be off-takers of Georgian hydropower should be further explored.

## 6.5 RETAIL COMPANIES

As mentioned in Section 3.2, licensed retail companies may also obtain authorization to import power. Retail licensees (as well as distribution licensees who have retail licenses) are entitled to provide retail services to consumers without regional limitation, and can sell to eligible consumers in another authorized distribution region if their license includes the relevant provisions.<sup>113</sup> However, they are likely to be less creditworthy than wholesalers affiliated with large construction companies or distribution companies with retail licenses.

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<sup>111</sup> *Id.*, Article 2(g)

<sup>112</sup> *Id.*

<sup>113</sup> Articles 25(t) and 30, Licensing Regulation



## 6.6 ELIGIBLE CONSUMERS

Eligible consumers are entities whose electricity use exceeds 100 MWh during a one year period. Eligible consumers are potential buyers from retail licensees who have the right to import. However, industrial customers are heavily subsidized under regulated tariffs so they have little incentive to switch suppliers;<sup>114</sup> the highest retail tariffs are for commercial customers who, once they become eligible consumers, would be more likely to enter switch suppliers and enter into an agreement with a retail supplier that is importing power from Georgia. An eligible consumer is not a licensed entity and so cannot import electricity unless it also has a retail license allowing it to on-sell to other consumers. The import authorization can be added to a retail license. Therefore potential sales to eligible consumers who are retailers are covered under the section above.

## 7. DISPUTE RESOLUTION

### 7.1 HISTORICAL CONTEXT

The Turkish government has had experience of disputes involving investments in the electricity sector. When it decided to allow the development of independent power projects in the mid to late 1990s, the government entered into concession agreements and long term PPAs with foreign developers, following the accepted method of opening up electricity generation markets in countries that do not possess legal frameworks supportive of large scale infrastructure investment by foreign companies. Such contracts with the government in Turkey were governed by administrative law rather than private law (and accepted methods of dispute resolution); under a separate Turkish court system. The granting of a concession agreement is considered an act of the government (or governmental entity) and so both the grant and the terms of the concession agreements were subject to challenge on the basis that the government did not follow all procedural requirements, until changes to the Turkish Constitution in 1999 subjected concession agreements to private law (disputes over which could be resolved through international arbitration).

The restructuring of Turkey's electricity sector in 2001, principally through the Electricity Market Law, following a change in government and the financial crisis in 2001, resulted in a more market-driven approach, and the government sought to void several concession agreements it had signed (and which had been converted to private law contracts). We are aware of five (5) arbitrations, of which the government was successful in one. The other four (4) resulted in the investors recovering losses (in most cases, the amount of developmental costs expended).<sup>115</sup>

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<sup>114</sup> Yörük Meeting

<sup>115</sup> Turkey and Georgia have entered into a Bilateral Investment Treaty which went into effect Jun 06, 1995; however that treaty is not available in English on the website of the International Centre for Settlement of Investment Disputes. It should be examined with regard to the dispute resolution provisions, if it is made available in English



## 7.2 JUDICIAL PROCESS AND ARBITRATION

The creation of EMRA and adoption of the use of licenses to authorize electricity sector activities has resulted in the administrative courts playing a reduced role. License issues are decided by EMRA and appealable to the Council of State, but contracts with the Turkish government-owned companies are subject to private (contract) law. Whether it is typical for these to include provisions requiring disputes to be decided by international arbitration, or whether it is possible to negotiate such provisions, we do not know. Any decisions as to whether international interconnection conditions have been met (which requires EMRA to obtain the opinion of TEİAŞ on technical matters) would, presumably be appealable to the Council of State.

Turkey is a signatory to the 1958 Convention on the Recognition and Enforcement of Foreign Arbitral Awards (the “New York Convention”). The New York Convention requires the Turkish courts, subject only to specific limited exceptions, to give effect to arbitration agreements and to recognize and enforce awards made in other states. We are not aware of any non-Turkish contracting parties having experienced difficulties in enforcing foreign arbitral awards in Turkey.

Article 12 of the Electricity Market Law requires the Council of State to consider any appeal against an EMRA decision as “an urgent matter.” However, we confirmed that there is no requirement that EMRA delay the imposition of any sanction decided by EMRA until appeals have been exhausted, although Turkish law has available the remedy of injunction to order a party to refrain from taking some action. The remedy of specific performance (court order requiring a party to perform some action) is not available except where there is a special reason such as protection of property.<sup>116</sup>

Article 44 of the Electricity Market Licensing Regulation provides that licensees can appeal TEİAŞ intervention in emergency conditions as being excessive or for too long a period.

Decisions of EMRA constitute both secondary law, in the sense of amplifying or explaining sector laws, and primary law, where a decision breaks new ground. In relation to both, decisions of the administrative courts have primacy and EMRA is bound by them.

## 8. CONTRACTS

### 8.1 BILATERAL CONTRACTS

As at the date this report was prepared, we understand that bilateral contracts (defined in the Market Law<sup>117</sup> as “the commercial agreements between real persons and legal entities for the purchase and/or sale of electricity under the provisions of civil law without requiring Board approval”) do not constitute a significant part of

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<sup>116</sup> Conversation with Mesut Cakmak, White & Case, June 2, 2010

<sup>117</sup> Article 1(41)

electricity sales in Turkey. Most bilateral contracts are those entered into by the original IPPs (2,000 MW is contracted bilaterally until 2020 and another 5,000 MW until 2023). However it is believed that the use of bilateral contracts will increase as the Turkish distribution networks (and associated retail businesses) become privately owned, and new hydro power plants are constructed.

## 8.2 MODEL CONTRACTS

Standard “model” contracts are prescribed by law for connection to and for use of the transmission system.<sup>118</sup> We are also aware of a third form of agreement, the market participation agreement, which repeats the provisions of various regulations, particularly the Balancing & Settlement Regulation, and also amplifies some provisions, the objective being to make regulatory provisions contractually binding on market participants (to avoid challenges to the Turkish courts against regulations themselves).<sup>119</sup>

The Communiqué Regarding Connection to and Use of Transmission and Distribution Systems in the Electricity Market, issued under the Electricity Market Law, covers the principles and procedures of connection and use of system agreements to be signed with TEİAŞ for connection to and use of the transmission system. Article 8 of the Electricity Market Grid Regulation provides that if TEİAŞ and a licensee cannot agree on the terms and conditions of the (connection and) use of system agreement, EMRA has jurisdiction to settle disputes.

Standard agreements prepared by TEİAŞ in accordance with the Communiqué and approved by EMRA are in use, however those we obtained are in Turkish.<sup>120</sup> The “general provisions” of these agreements cannot be changed without an EMRA decision. The general provisions cover force majeure<sup>121</sup>: where obligations cannot be fulfilled due to force majeure conditions, “affected obligations are suspended as long as the force majeure conditions and their effects persist and avoid fulfillment of obligations.” The definition of force majeure that applies is set forth in Article 51 of the Licensing Regulation. An event that prevents an affected party from fulfilling its obligations must be unpreventable, unavoidable or irremovable although the party affected has used the required care and attention and has taken all necessary measures to overcome it. General force majeure conditions are: natural disasters and epidemics; war, nuclear and chemical leaks, national mobilization, civil unrest, rebellions, military attacks, sabotage, terrorism; strikes, lockouts or other worker movements; failure to complete, on time or at all, the administrative procedures such as approval, permission, or failure to establish real rights other than real estate possession rights without any due negligence of the related legal entity.

Special force majeure conditions specific to activities of licensees are incorporated into their licenses. In the event of force majeure conditions, the liabilities of the

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<sup>118</sup> Article 4, Communiqué Regarding Connection to and Use of Transmission and Distribution Systems in the Electricity Market

<sup>119</sup> Telephone conversation with Uygur Yoruk, June 1, 2010

<sup>120</sup> These agreements should be translated and reviewed.

<sup>121</sup> Article 22 of the Communiqué

licensee arising from the applicable legislation may be postponed “in a proportional way” by an EMRA decision until the effects of force majeure conditions are eliminated. Where it is impossible to fulfill such obligations, EMRA may also decide that the obligations be eliminated, however it is not possible to request the elimination of obligations regarding transmission and distribution activities.

## **9. CONCLUSION AND RECOMMENDATIONS**

The business case for exports from Georgia to Turkey is compelling. Turkey’s demand for power is growing and capacity additions in Turkey will not alone be sufficient to meet this demand by around 2014. Prices on Turkey’s spot market have been rising to pre-recession levels and are likely to remain higher than the cost of imported hydropower from Georgia because of the structure of Turkey’s electricity market. However, this report identifies a number of potential barriers to the export of power to Turkey from Georgia. Some of these barriers may need nothing more than clarification from EMRA, TEİAŞ or MENR. Others may require mitigation measures.

In order to determine the full impact these potential barriers may have on investors in Georgia’s small and medium-sized HPPs, Pierce Atwood recommends that the following issues be clarified:

- Whether import operations other than DC interconnections (in particular, “clustering” of small Georgian HPPs and operating them in island mode or redirecting them to Turkey) will be permitted after TEİAŞ becomes a member of ENTSO-E, provided such operations do not jeopardize the safety and security of grid operations in Turkey?
- Under what circumstances would EMRA refuse to “roll over” or reauthorize the annual allocation of interconnection capacity to an importer that met all of the requirements specified in the Import-Export Regulation?
- How is capacity on international interconnections allocated by TEİAŞ in the event of congestion?
- Is there any preference given to existing shippers or to energy from renewable resources in allocating interconnection capacity in the event of congestion?
- What are the maximum import terms and quantities allowed for private wholesalers under the Import-Export Regulation and are these limits applicable to distribution companies holding retail licenses?
- Does the existence of an MOU between Georgia and Turkey related to imports from Georgia provide sufficient authorization for TETAŞ to become an off-taker for Georgian hydropower imports?
- Does the existence of an MOU between Georgia and Turkey related to imports from Georgia provide sufficient basis for receiving long-term and large quantity import authorizations from EMRA?
- What does the restriction in the Import-Export Regulation limiting distribution companies with retail licenses and retail licensees to importing power only across 36 kV lines or at lower voltage levels mean in practice? Does it mean

that the distribution company wanting to import power would be required to construct an international interconnection at 36 kV, or does it mean that the import takes place at the point of interconnection between the distribution system and TEİAŞ' transmission system?

- Is only TEİAŞ permitted to construct interconnection capacity at the international border or can distribution licensees and retail licensees also construct international interconnection capacity?
- Can importers obtain long-term capacity rights on the 380 kV transmission line downstream of the Borçka and Deriner substations to the south and west of Turkey?
- What impact will the construction of new HPPs in the region bordering Georgia have on load flows on the transmission line from Georgia?
- How is transmission capacity on the 380 kV line from the Borçka substation to the south and west of Turkey in Turkey allocated in the event of congestion arising as a result of new generators coming on line?
- Can private distribution companies construct generating facilities, or purchase from affiliated generation units, in another country?
- How has the standard in Article 21 of the Import-Export Regulation, under which wholesale licensees can be required to construction international interconnection capacity in order “to increase trade and competition in the electricity market,” been interpreted by EMRA? Would this permit a distribution company to compel a wholesaler to construct such capacity to import Georgian hydropower, if capacity on the new transmission line becomes congested? Does this apply only to “private” wholesale licensees or also to TETAŞ?
- In the event congestion occurs in the future, can potential offtakers of Georgian hydropower finance system expansions on TEİAŞ downstream of the Borçka line (assuming it would be economically feasible), under the provisions of Article 38 of the Licensing Regulation?
- Do the feed-in tariffs apply to imported power from renewable energy sources and if so, will those tariffs be raised in the near future?
- What are the current transmission tariffs for carrying power from the Georgian-Turkish border to the Borçka substation and further south and west? Where the boundaries for each region?
- Under what conditions can TEİAŞ exercise the force majeure right to request a change in the level of its transmission tariff or a change to the terms and conditions in a transmission service agreement?
- Whether the plans to separate the functions of distribution, production and retail sales by January 1, 2013 would have an impact on Turkish distribution companies wanting to own generation capacity in Georgia?
- Whether the restriction on private distribution companies limiting them to purchasing from an affiliated generation company no more than 20% of the total volume of electricity distributed by them in their authorized region in the

previous year applies to Turkish distributors buying from affiliated generators in Georgia?

- Whether the regulations governing OIZs could allow for OIZs indirectly to be off-takers of Georgian hydropower (even though they themselves could not import power)?

## 10. NEXT STEPS

The following steps should be taken as a follow-up to this report:

- The restructuring of the market in Turkey should be closely monitored by Deloitte Turkey and an update of this report should be prepared closer to the date that the Deal Book is finalized.
- Certain issues that were outside the scope of this report but that have the potential to affect the attractiveness of Turkey as a market for Georgian hydropower should be further investigated and consideration should be given to engaging the specialized expertise of Deloitte Turkey. The issues that need further investigation include the transmission tariffs that will be applicable to the interconnection and the Borçka line, and the impacts that new capacity additions and continued market restructuring are likely to have on spot prices and bilateral contract prices in the near term and mid-term.
- Not all of the documents that the authors felt should be reviewed for this report were either available or available in English. The following documents, at a minimum, should either be reviewed by Deloitte Turkey or translated and be reviewed by Pierce Atwood, and as new regulations affecting imports become available, these should also be reviewed and/or translated:
  - The Bilateral Investment Treaty between Georgia and Turkey;
  - The Licenses issued to TEIAŞ and TETAŞ;
  - TETAŞ' Articles of Incorporation;
  - The model contracts for transmission connection, use of system and market participation;
  - The regulation issued by EMRA regarding the OIZ.
- Prior to finalizing the Deal Book, efforts should be made to hold meetings with other potential Turkish off-takers and investors who were identified during the course of investigations for this report, but with whom the authors were unable to meet. They include Taskin Kizilok, of Soyak Energy, and Nermin Guliyeva and General Manager Ilia Kutidze of TGR Enerji.

# APPENDIX A

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# APPENDIX B

## REPORTS, LAWS AND REGULATIONS REVIEWED

### Websites

Ministry of Energy and Natural Resources – [www.enerji.gov.tr](http://www.enerji.gov.tr)

Energy Market Regulatory Authority – [www.epdk.gov.tr/english/](http://www.epdk.gov.tr/english/)

International Center for the Settlement of Investment Disputes --  
[www.worldbank.org/icsid](http://www.worldbank.org/icsid)

### Reports and Papers

Econ Pöyry AS, Electricity Export Opportunities from Georgia and Azerbaijan to Turkey, commissioned by Ministry of Energy Georgia (undated)

Electricity Energy Market and Supply Security Strategy Paper approved by Resolution no. 2009/11 of the Secretariat of the Higher Board of Planning, Undersecretariat of State Planning Organization, Prime Ministry, dated 18/5/2009

Turkish Electricity Market Structure, January 3, 2009, Navitas Enerji (<http://www.ne.com.tr/images/Turkish%20Electricity%20Market%20Structure.pdf>)

Turkey's Energy Policies in a Tight Global Energy Market, Brenda Shaffer, Research Director of the Caspian Studies Project, Harvard's Kennedy School of Government, "Insight Turkey" (April-June 2006, volume 8 number 2)

Prospects of a Triangular Relationship? Energy Relationships between the EU, Russia and Turkey, Kristin Linke and Marcel Vietor (eds), Friedrich-Ebert-Stiftung, April 2010

Final Follow On Report to Investment Symposium: Hydro Power Development in Georgia, USAID (Pierce Atwood LLP and Nixon Peabody) May, 2009

PSEG Global Inc. and Konya Ilgin Elektrik Uretim ve Ticaret Limited Sirketi v. Republic of Turkey (arbitration award January 19, 2007 under ICSID)

### Turkish Legislation

Electricity Market Law

Electricity Market Import and Export Regulation



Electricity Market Licensing Regulation

Electricity Transmission System Supply Reliability and Quality Regulation

Electricity Market Grid Regulation

Electricity Market Balancing and Settlement Regulation

Law on Utilization of Renewable Energy Sources for the Purpose of Generating Electrical Energy

Communiqué Regarding Connection to and Use of Transmission and Distribution Systems in the Electricity Market

Communiqué Regarding the Principles and Procedures of Financial Settlement in the Electricity Market

Communiqué Regarding Determination of Transmission and Distribution Connection Charges

Electricity Market Eligible Consumer Regulation

Electricity Market Tariffs Regulation

Regulation on Principles and Procedures for Granting Guarantee of Origin

Regulation Concerning Electricity Demand Forecast

Communiqué Regarding Regulation of Transmission System Operation Revenue

Communiqué Regarding Regulation of Transmission System Revenue

Communiqué Concerning Principles and Procedures for Selection in the Existence of more than one Application for Generation of Electricity from the Same Source and in the Same Region

Electricity Market License Fees (2002-2003)

Legislation Either Not Available or Not Reviewed

Energy Ministry Establishment Law

Communiqué Regarding Electricity Market Chart of Accounts, Regulated Items and Reporting

Communiqué Regarding Regulation of Distribution System Revenue

Communiqué Regarding Regulation of Retail Service Revenue and Retail Prices

Regulation on the Organization of the Energy Market Regulatory Authority and Working Procedures and Provisions applicable to its Employees

Communiqué Regarding Preparation of Retail Contract in the Electricity Market

Communiqué Regarding Regulation of Market Management Revenue

Communiqué Regarding Regulatory Accounting Guidelines

Electricity Market Distribution Regulation

Communiqué Regarding the Meters to be used in the Electricity Market

Communiqué Regarding Wind and Solar Measurements

Electricity Market Customer Services Regulation

Organized Industrial Zones Law

# APPENDIX C

## TRANSMISSION TARIFFS

### TRANSMISSION TARIFFS ACCORDING TO REGIONS

Region	GENERATION (*)		CONSUMPTION (*)	
	USE OF SYSTEM TARIFF TL/MW-Year	SYSTEM OPERATION TARIFF TL/MW- Year	USE OF SYSTEM TARIFF TL/MW-Year	SYSTEM OPERATION TARIFF TL/MW-Year
1	15.145.818.267	230.567.900	5.349.297.167	230.567.900
2	9.610.855.026	230.567.900	12.237.949.322	230.567.900
3	6.762.686.154	230.567.900	13.942.288.280	230.567.900
4	1.459.011.944	230.567.900	18.249.256.914	230.567.900
5	10.487.203.955	230.567.900	8.022.834.268	230.567.900
6	17.816.365.815	230.567.900	1.695.281.697	230.567.900
7	0	230.567.900	24.294.356.371	230.567.900
8	1.726.548.093	230.567.900	16.110.951.008	230.567.900
9	4.817.573.338	230.567.900	13.998.706.648	230.567.900
10	0	230.567.900	16.864.112.982	230.567.900
11	4.568.519.078	230.567.900	11.490.611.544	230.567.900
12	6.323.832.217	230.567.900	17.757.257.995	230.567.900
13	9.771.939.966	230.567.900	12.963.446.065	230.567.900
14	0	230.567.900	35.509.608.831	230.567.900
15	0	230.567.900	25.096.590.941	230.567.900
16	9.724.649.805	230.567.900	13.143.611.515	230.567.900
17	8.680.955.955	230.567.900	12.431.123.664	230.567.900
18	0	230.567.900	24.548.070.511	230.567.900
19	0	230.567.900	15.536.468.861	230.567.900
20	0	230.567.900	21.108.937.019	230.567.900
21	5.952.711.127	230.567.900	14.788.216.906	230.567.900
22	6.117.574.857	230.567.900	9.729.738.816	230.567.900

(\*) Tariffs include transmission surcharge



USAID Hydropower Investment Promotion Project (USAID-HIPP)

Deloitte Consulting Overseas Projects - HIPP

36 a Lado Asatiani Street

Tbilisi, 0105, Georgia