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**HYDRO POWER AND ENERGY
PLANNING PROJECT (HPEP)**

ENERGY POLICY WHITE PAPER: ENERGY POLICY DIRECTIONS FOR GEORGIA

October, 2013

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DELOITTE CONSULTING LLP

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This document was prepared by:

Author	Organization	Contact Details
Gergana Stoitcheva, PhD	Deloitte Consulting LLP	gstoitcheva@deloitte.com
Ivane Pirveli	Deloitte Consulting	ipirveli@dcop-hpep.ge
Reviewer	Organization	Contact Details
Jake Delphia	Deloitte Consulting	idelphia@deloitte.com

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1.0 LIST OF TERMS AND ACRONYMS

AGRI	Azerbaijan–Georgia–Romania Interconnector
GEMM 2015	Georgian Electricity Market Model 2015
DSM	Demand Side Management
EC	Energy Community
EE	Energy Efficiency
ETM	Electricity Trading Mechanism
EU	European Union
GDP	Gross Domestic Product
HPP	Hydro Power Plant
LEDS	Lower Emission Development Strategies
MWh	Megawatt Hour
O&M	Operations and Maintenance
TENAP	Trans Anatolian Natural Gas Pipeline

2.0 EXECUTIVE SUMMARY

- This *Energy Policy White Paper for Georgia* sets out a strategic policy framework that addresses the priorities and challenges in the energy sector of Georgia.
- The policy framework is based on the Government of Georgia's intent to meet the country's long-term needs for secure, clean and affordable energy through competitive markets that are operating in the best long-term interests of consumers and the nation. The main directions in the Government's energy policy are designed to facilitate governmental and private investment decisions and to be flexible enough to address the impacts of technological, social, economic, environmental, and national energy security changes.
- The energy policy directions derived today are designed to meet tomorrow's challenges for Georgia.

3.0 ENERGY POLICY DIRECTIONS

The development and implementation of a national energy policy for Georgia is vital for the economic development of the country and a fundamental prerequisite for the attainment of energy strategy objectives.

In 2006, the Parliament of Georgia adopted the *Resolution on Main Directions of Georgia's State Energy Policy* that outlines the country's main strategic directions. Since then, Georgia has faced political and economic challenges that have somewhat constrained policy implementation. Despite many recent initiatives, the various energy sectors still lack transparency and a solid regulatory framework which prevents the country's integration into regional energy markets and impedes potential private investor interests.

Government of Georgia is committed to the provision of clean, secure and affordable energy that will underpin strong economic growth, consistent with the principles of environmental responsibility and sustainable development, and enhance a competitive power market.

A new comprehensive energy policy for Georgia is scheduled to meet the impending energy gap with an overarching long-term vision that will ensure security of supply, strengthen market designs, and at the same time, be deemed feasible for implementation. The new energy policy will reflect and reinforce the Government of Georgia's commitment to sustainable development to achieve economic, social and environmental objectives. Policy actions will be executed by priorities, measures and expected results, and will be pursued urgently but carefully as they have the potential to drastically impact upon the economic development of the country.

This Energy Policy White Paper was informed by rigorous analysis of the various energy sectors of Georgia and identified the following core policy priorities:

- **Strengthen the legislative and regulatory framework of Georgia through gradual approximation with the EU's energy acquis and regional power markets**

EU-Georgia Association agreement in July of 2010, declared a priority in the Georgian Government's foreign policy agenda: to achieve greater economic and regulatory harmonization with the EU via political association and economic relations. Throughout the consultations and recent international negotiations with the Energy Community (EC), Georgia has stressed its European choice and aspirations. The Government of Georgia acknowledges that the EU is ready to open up the perspective of possible future EC membership and has initiated an approach to carry out approximations of its legislation to the EU acts and international instruments. The main priorities in this direction shall include:

- Strengthen the competitive environment in all energy sectors including the electricity sector, natural gas and oil sector, coal and biomass through primary and secondary legislation;
- Strengthen the rule of law on gathering, publishing and reporting statistical data for the sector; and,
- Develop and adopt Georgia's Energy Efficiency (EE) framework.

Furthermore, approximation of the Georgian legislation with regional power markets is crucial for further regional energy cooperation. The Government of Georgia has already recognized this and initiated a pragmatic approach towards the Turkish electricity market.

- **Improve the national energy security of Georgia through diversification of resources**

National energy security remains as one of the priority issues on the agenda of the Government of Georgia. National energy security entails the diversification of supply sources and routes for oil, natural gas and electricity grids on one hand, and the development of clean energy on the other. Despite the scarce natural gas and oil resource potential of Georgia, different quantities of several types of primary resources can be found in its territory and remain to be utilized. The key energy security policy actions shall include:

- Construction of strategic natural gas and oil reserves;
- Facilitate diversity of supply, infrastructure reliability and supply chain resilience;
- Re-evaluation and diversification of Georgia's electricity generation expansion options;
- Enhance research and development of local reserves of shale gas, oil and coal beds;
- Decrease natural gas supply dependence;
- Maintain and support well-functioning and efficient energy markets with responsive and effective energy emergency response arrangements; and,
- Secure the long-term availability of Enguri and Vardnili HPPs for serving all regions of Georgia.

- **Utilization of Georgia's renewable energy resources**

Renewable resources are keys to tackle climate change and deploy cleaner source of energy. Georgia remains remarkably rich in hydro-power followed by wood resources which create a clear opportunity to utilize its natural advantage and translate it into major economic benefit for the country and the region. Georgia's

potential hydro-power production is roughly 7.27 MWh per capita, which is considerably high when compared to after some the world's biggest hydro-power producers, such as Norway and Canada. Being one of the world's top five countries in per-capita water resources, currently Georgia utilizes only 18% of its hydro-power potential. The country has the potential of utilizing solar and wind power as well. Renewable resource development lacks incentivization, specifically biomass, solar and wind, and a developed regulatory framework. Research and development in the area including institutional capabilities has to be facilitated.

Consequently, the key strategic objective of the economy, and more specifically of the energy sector, should be the rational use of renewables, mainly hydro-power and biomass, by strengthening legislative and regulatory frameworks and facilitating private investments.

Coordination between ministries that are directly or indirectly impacted by energy strategy is vital for a robust renewable energy development plan including but not limited to the Ministry of Energy, Ministry of Environment and Natural Resources Protection, Ministry of Economy and Sustainable Development, Ministry of Agriculture, Ministry of Finance and Ministry of Regional Development and Infrastructure.

- **Facilitate Georgia's importance as a transit route with existing projects and new endeavors in the region**

Georgia's geographical location positions the country as a future transit corridor for oil, natural gas and electric power, and as a dispatching and market center in the region. Georgia attaches particular importance to energy transit from the Caspian region through the Black Sea to Europe, as an important part of the Southern Energy Corridor, and the EU energy security. The country hosts oil and gas projects of international and regional relevance (*like Baku-Tbilisi-Ceyhan oil pipeline, Baku-Tbilisi-Erzurum gas pipeline and Baku-Supsa oil pipeline*), which are also an integral part of forthcoming region-wide projects like TANAP, Nabucco, AGRI, White Stream and other upcoming projects. The recently completed Black Sea Transmission line will link Azerbaijan and Turkey via Georgia and is setting the pace for the development of new HPPs in Georgia, to partly satisfy Turkey's energy requirements. The key targets in this direction shall include:

- Regional market regulatory synchronization;
- Enhance Georgian's market design toward competitiveness;
- Enhance economic growth of the country; and,
- Facilitate private investment.

- **Establish Georgia as a regional green electricity platform**

The country's geographical location and generally favorable investment climate shall enhance the transition from a strategic transit corridor to a regional platform for the generation and trading of clean electricity. Success will be predicated upon supporting policies and well-developed markets, especially within the context of the on-going EC negotiations.

With the purpose of enhancing electricity trade and export potential, efforts should continue to promote Georgia's clean energy potential and establish Georgia as a platform for the regional trading of clean electricity.

- Diverse, resilient and integrated energy portfolio with a growing penetration of hydro-power generation (including better demand management and distributed generation and a widening range of cost-competitive products and services);
 - Improve sharing of knowledge about the successes (and failures) of clean energy technologies and systems;
 - Foster private investments; and,
 - Foster regional cooperation in building a sustainable future and green economy including new energy interconnections.
- **Strengthen energy markets design and further electricity trading mechanism implementation**

Energy demand and energy supply can only be streamlined under a competitive economy and a competitive electricity market. Competitive market-based approaches are the best means to efficiently deliver policy outcomes and to provide the flexibility needed to respond to future developments.

Endorsing this vision, the Government of Georgia has declared its commitment to facilitating private sector led development of Georgian hydro-power resources and the establishment of a competitive electricity power market under the principles of the Georgia Electricity Market Model 2015 (GEMM2015). Electricity Trading Mechanism (ETM) will provide transmission paths, trading tools and risk mitigation options so investors in new electricity generating plants can sell their electricity into the Turkish and other regional electricity markets.

The ETM will enable Georgia to leverage its natural resource base to turn the electricity industry into Georgia's leading export sector. Along with the electricity sector, the natural gas and oil sectors define large energy shares in the country. And also likewise, the oil and natural gas sectors lack well developed and transparent institutional and legal structure.

The key principles in this direction are:

- Anticipate and respond to changing energy demand and supply needs;
 - Improve competition in the electricity, natural gas and oil sectors;
 - Implementation of the ETM and energy export growth; and,
 - Institutional development.
- **Develop and implement an integrated Georgian approach to energy efficiency**

Well-functioning energy and lower emission markets are the resource for sustainable growth. Energy efficiency is not an end in itself in the policy priorities for Georgia, but a means to reduce costs, improve competitiveness, security of energy supply and environmental protection. Demand-side management (DSM) and energy efficiency programs are fundamental to curbing peak demand and the country's energy

consumption dynamics. They require an integrated approach to market reform that provides efficient signals to guide behavior, along with the right incentives for energy services.

Georgia has no primary energy efficiency legislative framework. As of today, no actions towards this objective have been taken or initiated. The following defines the main targets in this direction:

- Develop and adopt primary energy efficiency legislation, EE measures and institutional settings;
 - Support, including through government guarantees and DSM projects development with a significant social effect;
 - Reduce emissions through adoption of lower emission development strategies (LEDS); and,
 - Invest in research and development and promotion of DSM/EE/LEDS programs in governmental level.
- **Strengthen and maintain the financial viability of the government-owned energy sector entities**

The Government of Georgia owns equity in several energy sector entities, sometimes controlling 100% of the shares. The sustainability of the energy sector requires financially strong entities. The attraction of private investment into the energy sector is dependent on investor confidence that the government-owned energy structures will be able to provide high quality services while also being able to cover all of their current and potential future liabilities. All national energy assets owned by the country should be operated and maintained under a sound O&M plan that will ensure efficient and effective operation of the assets for their intended lives.

- **Improve Georgia's energy intensity per GDP unit towards further economic growth and development**

Energy intensity is a key measure of energy efficiency and an important component of a nation's competitiveness. For Georgia, this indicator remains high¹ by EU standards which indicates the lack of an energy efficiency approach and demand-side incentive mechanisms, wrong price signals to consumers and insufficient energy policy implementation. Therefore, the main directions in this priority area are:

- Promotion of demand side management and energy efficiency programs by regulated energy utility entities;
- implementation of EE programs for State and local government bodies, agencies and entities;
- Promotion of investments in energy efficiency programs; and,
- Develop and implement mechanisms for the right price signals that create incentives for end-users.

¹ In 2010, the energy intensity indicator for Georgia was 23 MBTU per dollar of GDP. (US dollars are in 2005 market exchange rates). Source: www.eia.gov

Decreasing the energy intensity indicators will be a clear indicator of the further strengthening of economic growth and development in Georgia.

- **Deliver better energy outcomes for consumers**

The energy policy for sustainable and reliable essential goods and services is designed to benefit all the consumers of Georgia. A key prerequisite for the development of competitive markets is cost-reflective pricing. As we move to greater cost-reflectivity, it will be important to develop policies and programs to assist consumers likely to have difficulty in meeting their energy bills. Priority for the government will be to develop social programs and measures to support low income consumers and in particular, the most vulnerable customers. The two matters of greatest importance in this direction will be:

- Develop and adopt various social programs through legislative and regulatory frameworks for appropriate transparency and protection of energy consumers; and,
- Develop efficient social protection through targeted subsidies for the most vulnerable customers, through energy efficiency measures and introduction of socially-oriented tariffs.

4.0 CONCLUSIONS

This Energy Policy White Paper is intended to propose recommendations that will strengthen the sector and drive major directions towards wider energy strategy development and implementation. A well-founded and robustly reviewed national energy strategy is needed in accordance with the national energy policy. This Energy Policy White Paper therefore covers energy security, improvements in the legislative framework, diversification of resources, clean energy development, the operation of Georgia's energy markets, and demand-side and consumer participation mechanisms. The energy policy framework therefore also includes aspects such as the need for international engagement, sustainable development, improving Georgia's energy data base information and promoting social and employment opportunities.

There are many other aspects, but the above are considered the most important for the energy policy of the country. Failure to undertake timely actions in this sector increases the possibility of placing a heavy financial burden on the economy as a whole. Policy success will be measured by improvement in Georgia's energy market designs, securing private investments and facilitating regional and global economic integration.

This Energy Policy White Paper recognizes the complexities imposed by various shared and separate responsibilities for energy-related functions across the different levels of government in Georgia. Georgia's energy governance arrangements are defined through a mix of constitutionally defined responsibilities, intergovernmental agreements and market governance agreements. They all will be contributing to the implementation and success of the energy policy of Georgia.

USAID Hydro Power and Energy Planning Project (USAID-HPEP)

Deloitte Consulting Overseas Projects - HPEP

Tiflis Business Centre, 13th Floor

11 Apakidze Street

Tbilisi, 0171, Georgia