

Mobilising finance for climate action in Georgia

Policy Highlights



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During the past 15 years, Georgia has undertaken a range of profound structural and market reforms to modernise and revitalise its economy. These included restructuring of the public sector, deregulation for businesses, a fight against corruption, and streamlining of tax- and trade-related rules and procedures.

Pollution and climate change have been recognised as major threats to Georgia's long-term socio-economic development. The Socio-Economic Development Strategy "Georgia 2020" called for rational use of natural resources, ensuring environmental safety and sustainability and preventing natural disasters, along with efforts to efficient and inclusive economic growth (GoG, 2014). Georgia has set climate targets through its nationally determined contribution (NDC) under the United Nations Framework Convention on Climate Change (UNFCCC) and adhered to the OECD Declaration on Green Growth. It has also completed the development of Low Emission Development Strategy (LEDS) and National Energy Efficiency Action Plan (NEEAP).

These Policy Highlights present key messages from the OECD report ***Mobilising Finance for Climate Action in Georgia***.¹ The report focuses on challenges and opportunities regarding mobilisation of finance from various sources – private and public, national and international – for climate action in Georgia, particularly for climate change mitigation.

Finance for climate action does not only benefit the environment, but also enhances business opportunities, technology transfer and job creation. This, in turn, contributes to stable and inclusive economic growth. Some Georgian companies have already started to see "green" investments as a business development opportunity. They have begun diversifying their portfolios and strengthening their competitive advantages in emerging new business contexts such as the Georgia-EU Deep and Comprehensive Free Trade Area (DCFTA) and the Association Agreement with the European Union (EU). For instance the JSC Partnership Fund, a sovereign equity fund, has invested in the facility that produces energy-efficient construction material (building blocks) in Ytong Caucasus for the Georgian market (Partnership Fund, 2016). Georgia's obligation under the Association Agreement to ensure energy-efficient construction has driven this investment decision.



1. The main report is available at <http://oe.cd/2d4>



Key policy messages

- **Finance for climate action in Georgia is already available but is unlikely to be sufficient to achieve the country's overall climate goals.** It is estimated that between 2017 and 2030, about USD 19 billion will be needed to achieve energy efficiency in industries, transport and buildings, non-energy related GHG emissions, activities related to land use, land-use change and forestry. The cost estimates for other sectors are less granular or more uncertain (e.g. for “nonhydro” renewable energy and adaptation projects).
- **Ambitious targets for greening economic growth, enforcing environmental regulations, and effective stakeholder engagement are crucial for creating demand for investment in climate action in Georgia.** Energy subsidy reforms, capital market development, “greening” public procurement, competitive energy markets, and integrating low-carbon and climate-resilience aspects, should be complemented and enhanced by a broader range of policies and included into the infrastructure planning process.
- **The government of Georgia, in co-operation with the National Bank of Georgia (NBG), can gradually integrate climate and environmental aspects into the ongoing capital market reform in the country.** Further engagement with the Ministry of Finance would help such integration and avoid a fragmented landscape of financing mechanisms for Georgia's climate action. The Georgian government and the NBG, together with local financial institutions and development finance institutions, should explore issuance and use of green bonds, and develop operational guidelines.
- **Risk mitigation instruments and public-sector finance are critical to developing a green capital market.** The functions and scale of an existing state equity fund could be enhanced to build greater support for “green” aspects within



their own mandates. The government's existing support schemes for small- and medium-sized enterprises (e.g. for interest and collateral) should also incorporate green growth aspects. The government could also consider establishing a Georgian green bank or fund to attract climate-related investment from the private sector.

- **Development finance institutions' credit lines can help finance Georgia's climate action. Yet, they should also be used wisely to mobilise investment by local banks and microfinance institutions.** Strategic blending of development finance is important, especially for mobilising risk capital for climate action in underserved sectors. Furthermore, Georgia's on-going effort under the Green Climate Fund Readiness programmes should be done in a way that reinforces its role in accessing and managing development finance to maximise the effectiveness of its climate action.

- **Development of a more competitive, open and unbundled Georgian electricity market driven by the Energy Community Treaty could create space for more renewable energy.** At the same time, state-owned enterprises in Georgia's energy sector could also promote the government's green growth agenda. However, promotion of green growth through state-owned entities must not be used to justify an uncompetitive energy market.
- **To bridge the information gap, the government should consider establishing a central depository of information on loan-level data, performance track records, technologies and hydro-meteorological data, among others, with regard to climate or green projects.**

Georgia has made great progress in developing strategic policies. Securing finance is the next step to implement such policies on climate action.

Through its Nationally Determined Contribution (NDC), Georgia committed 15% of greenhouse gas (GHG) reductions below business as usual (BAU) by 2030.

Committed to also reduce its emissions by 25% below BAU, and contingent on international support with finance and technology; the NDC explicitly refers to several key policy documents as its implementation strategy. Among them, the Low Emission Development Strategy (LEDS), the National Energy Efficiency Action Plan (NEEAP) and the Nationally Appropriate Mitigation Actions (NAMAs). Eleven Georgian self-governing cities and municipalities have submitted their own Sustainable Energy Action Plans (SEAPs) under the “Covenant of Mayors” initiative. Georgia also plans more policy documents to guide climate actions, including a Green Economy Strategy, a National Renewable Energy Action Plan, and a Climate Action Plan.

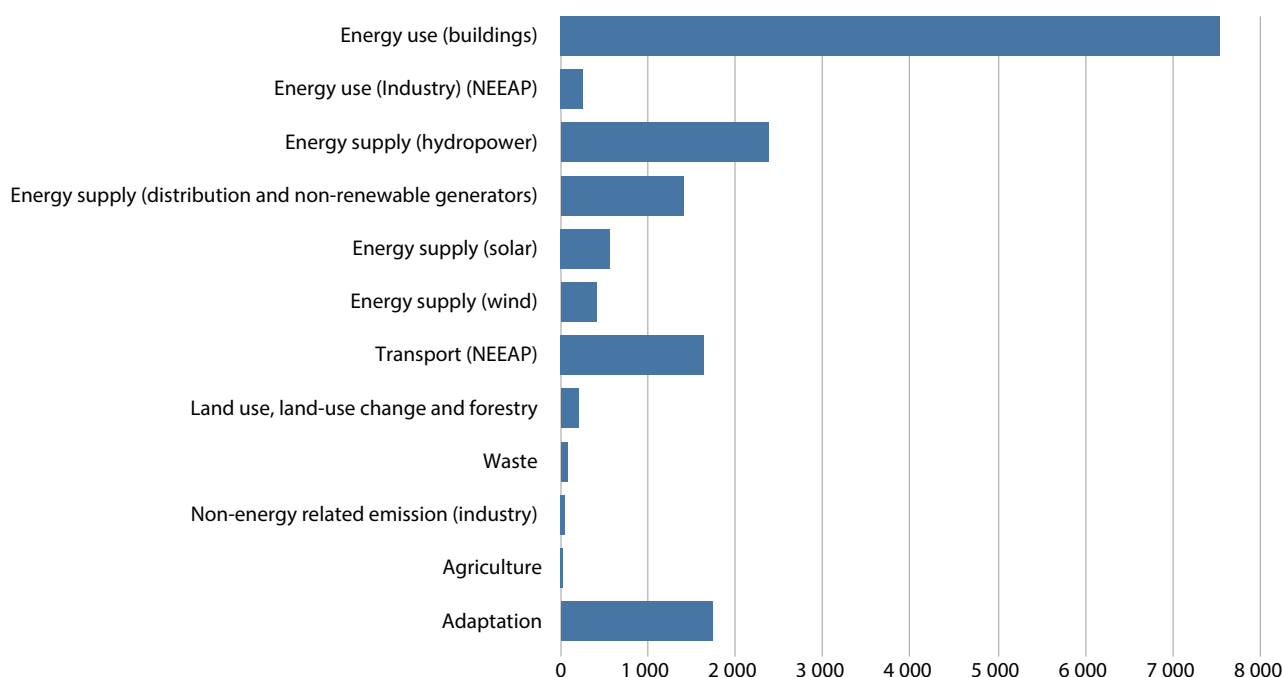
Georgia’s strategic policy documents for climate action and green growth make it clear that the country needs to further scale up finance from a variety of sources

(Figure 1). For example, gross investment needs for energy efficiency under NEEAP are estimated at USD 8.3 billion from 2017 to 2030. In order to achieve LEDS, an additional USD 10.6 billion is also needed for energy efficiency, non-energy related GHG emissions and LULUCF, among others. Georgia’s third National Communication shows that hydropower projects require about USD 2.4 billion over the same period (GoG, 2016; NEEAP Expert Team, 2017; Winrock and Remmisia, 2017). The cost estimates for other sectors are less granular or more uncertain (e.g. for “non-hydro” renewable energy and adaptation projects).

Better estimates of investment needs can further help the government of Georgia prioritise specific projects in light of its targets on climate change and green growth.

This is especially true for priority sectors such as energy efficiency, renewable energy, transport and adaptation. Better estimates of needs would also send a stronger signal on priority projects to potential investors.

Figure 1. **Stock-taking of long-term investment needs (USD million)**



Note 1: Cost estimation methodologies may differ among the information sources. Therefore, this figure does not aggregate the numbers at the national level.

Note 2: The estimates for the energy use in the industry and the transport sectors are derived from NEEAP, the estimate for adaptation cost is based on the figure included in the NDC, the estimate for hydropower plants is derived from the Third National Communication of Georgia, and the rest comes from LEDS

Source: Author’s calculation, based on GEDF (2017), GoG (2015a, 2015b), NEEAP Expert Team (2017) and Winrock and Remmisia (2017)

Finance for climate action in Georgia is available but varies among different sectors and it is unlikely to be sufficient to achieve the country's overall climate goals.

Various capital sources have already financed climate-related projects in Georgia through debt and equity (Table 1). Notably, public- and private-sector investors have already seen hydropower projects in Georgia as a bankable asset class. The national and municipal governments and state-owned enterprises play a crucial role in providing direct investments and risk mitigation instruments (e.g. revenue guarantees) for some of the climate-related projects. International multilateral and bilateral funding sources also provide finance for climate action and bring international experiences from other countries and help build in-country capacity.

Finance for climate action from commercial banks, institutional investors and businesses has been available but largely concentrated on hydropower. This was made possible by the power purchase agreements (PPAs) and other preferential policies for renewable energies backed by the government.

But PPAs have also led to a high degree of financial liabilities borne by the Georgian government (IMF, 2017). The government is revising the rules on renewable energy development so that terms and tariff levels for individual projects will be agreed with on a case-by-case basis, and no PPAs will be issued in future.

Nevertheless, the currently planned investment is still unlikely to be sufficient to meet the targets set under Georgia's NDC (GoG, 2016, 2015a; NEEAP Expert Team, 2017). The scale of financing is inadequate particularly for renewable energy other than hydropower, as well as for energy efficiency in the public- and private-sector buildings, clean transport systems and climate change adaptation. Small and medium-sized enterprises (SMEs) often face a greater level of challenges to accessing finance for resource efficiency and cleaner production than larger companies. (Chorgolashvili, 2017; Copenhagen Centre on Energy Efficiency, 2017; Singh, et al., 2016; Ministry of Energy, 2017).

Scaled up finance is needed particularly for energy efficiency, transport, "non-hydro" renewable energy, and climate change adaptation.



Table 1. Examples of financial channels already or potentially available for financing climate action in Georgia

■ 1. Financial channels available; ■ 2. Channels available, but not used yet; ■ n/a. Not Applicable

Domestic													International			
Public						Private				Public			Private			
Central government	Municipal government	Sovereign funds	Domestic commercial banks	Micro-finance institutions	Institutional investors	(Non-financial) corporations	Development banks	Bilateral donors	International climate funds	Financial institutions	Non-financial corporations					
1*	2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a					
n/a	n/a	n/a	2	2	2	2	1	n/a	n/a	2	2					
n/a	n/a	2	2	n/a	2	2	2	n/a	2	2	2					
n/a	n/a	1	1	2	2	n/a	1	1	2	1	n/a					
n/a	n/a	n/a	(Channel)	(Channel)	n/a	n/a	1	1	2	n/a	n/a					
n/a	n/a	1	1	n/a	1	n/a	1	2	1	2	n/a					
1	1	1	n/a	2	1	1	1	1	1	1	1					
n/a	n/a	n/a	n/a	n/a	n/a	n/a	2	1	2	1	n/a					
1	1	2	n/a	n/a	n/a	n/a	1	1	1	n/a	n/a					
1	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a					
1	1	n/a	n/a	n/a	n/a	n/a	1	1	1	n/a	n/a					
1	n/a	n/a	n/a	n/a	n/a	n/a	n/a	1	2	n/a	n/a					
2	n/a	1	n/a	n/a	n/a	n/a	1	1	2	2	n/a					
2	2	2	2	2	n/a	n/a	1	1	1	2	n/a					
n/a	n/a	n/a	n/a	n/a	n/a	n/a	2	2	2	1	n/a					
n/a	n/a	2	n/a	n/a	2	n/a	2	2	2	2	2					
n/a	n/a	2	n/a	n/a	2	n/a	2	2	2	2	2					

Note 1: PPAs = power purchase agreements.

Note 2: * Georgia's budget code does not allow for earmarked budget for any purposes, including expenditure on climate-related projects.

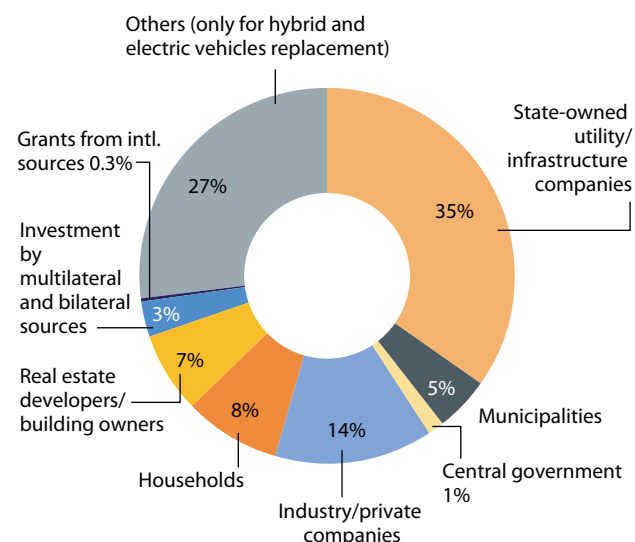
Source: Author's analysis.

Limited availability of low-cost, long-term capital in Georgia, especially from the private sector, hampers investments in climate-related projects, similarly to investment in other types of fixed assets. Some low-interest rate loan products from commercial banks exist, but with the minimum requested amount of GEL 100 000 (about USD 38 600). Typically SMEs need USD 9 000 to 40 000 for green projects, which does not match with the minimum amount mentioned above (Chorgolashvili, 2017). The high collateral requirement from banks – about 220% of the value of the loan – also makes it difficult for Georgian companies, especially SMEs, to take loans (EU4Business, 2017). One study shows that commercial banks normally do not reach the threshold of uncollateralised loan stipulated by law (25% of total portfolio). This implies that commercial banks may perceive a greater level of risk than those required by the regulations (EIB, 2016). Moreover, attractive short-term lending opportunities in Georgia, such as retail banking (rather than corporate banking), often exacerbate a shortage of long-term capital that could be mobilised to finance climate action.

The national and municipal governments, state-owned enterprises and development financial institutions are, and likely to remain, the major financial source for climate action. NEEAP, for instance, also assumes that more than 40% of finance for energy efficiency will come from domestic public sources including state-owned

entities (Figure 2). However, those public finance sources are scarce and should be used wisely so that they can mobilise further private-sector investment and avoid any crowding-out.

Figure 2. Expected financial sources for energy-efficiency measures in NEEAP for 2017-30



Note 1: The original estimates were made in Euros. The exchange rate applied is USD 1 = EUR 0.904 according to OECD (2017), Exchange rates (indicator), <http://dx.doi.org/10.1787/037ed317-en> (accessed 14 August 2017).

Note 2: "State-owned utility/infrastructure companies" include JSC Georgian State Electrosystem, JSC Georgian Railway and JSC Georgian Oil & Gas Corporation.

Source: Author's calculation based on NEEAP Expert Team (2017).

Box 1. Financing climate action is needed at both national and municipal levels

Municipalities (including large cities such as Tbilisi and Batumi) face severe financial constraints to improving environmental quality and efficiency of their public infrastructure such as transport and public buildings. Proper implementation and enforcement of policies at the sub-national level and mobilisation of necessary finance are critically important to achieving the national targets on climate change and green growth. National-level strategies should also function as an umbrella for sub-national level strategies. Some Georgian municipalities and development co-operation partners facilitate investment projects. These include the Municipal Project Support Facility (MPSF), the European Bank for Reconstruction and Development's Green City Framework and the Asian Development Bank's Tbilisi Sustainable Urban Transport Programme. Currently, no governmental body co-ordinates the different sub-national level climate policy frameworks across the country.



It is essential to create a demand for investment in climate action through policy reform *and* the financial system conducive to meeting the demand.

Mobilisation of private-sector investment in climate action in Georgia requires enhancing the interaction between different actors. (Figure 3) These include: direct public investment in projects, public finance intermediated by banks and funds (such as credit lines extended by development banks), regulatory and financial incentives, better investment climates, and capacity and knowledge enhancement. Such enhanced interactions should also avoid the fragmentation of the financial mechanisms and crowding-out of private-sector finance.

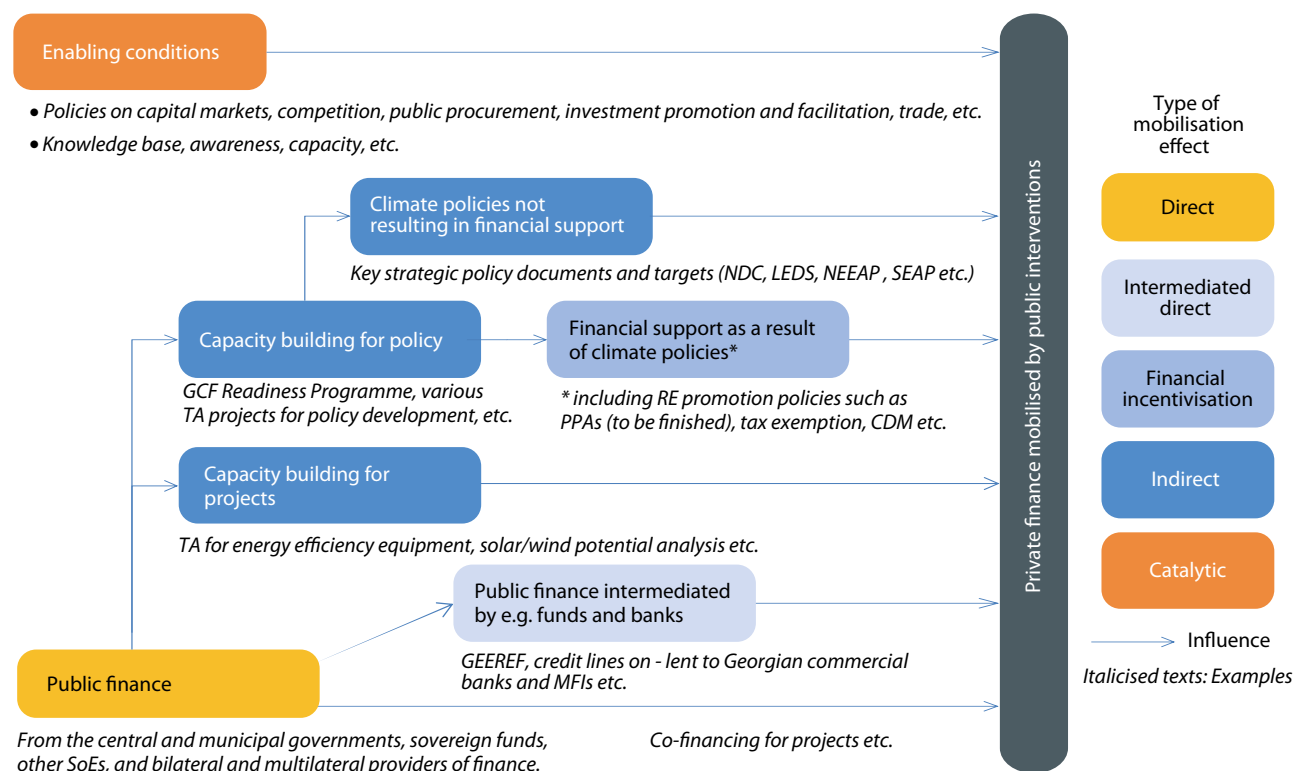
Policy coherence can help the government avoid inefficiencies and build confidence among Georgian stakeholders, both public and private, in directing their financial resources to climate action. Use of the MARKAL Georgia Model for LEDS and NEEAP has already achieved some built-in coherence but overlaps exist in sectoral

coverages among the national-level strategic policy documents. This is likely to lead to a potential risk of lack, or insufficient level, of co-ordination of actions under key strategy documents.

Financing the implementation of LEDS and NEEAP should be complemented and enhanced by an adjustment of a broader policy framework, such as on capital market development, investment promotion and facilitation, competition and information base.

The government of Georgia plans to significantly raise public investment, starting in 2017 with a focus on road, energy and seaport infrastructure. Failure to mainstream climate and green growth consideration into such public investment will risk locking in the high GHG emissions from, or low climate resilience of, infrastructure over the coming decades.

Figure 3. **Factors that influence mobilisation of private finance for climate action in Georgia**



Note: Acronyms: CDM (Clean Development Mechanism), GCF (the Green Climate Fund), GEEREF (Global Energy Efficiency and Renewable Energy Fund), LEDS (Low Emission Development Strategy), MFI (Microfinance institutions) NDC (nationally determined contribution), NEEAP (National Energy Efficiency Action Plan), PPAs (Power Purchase Agreements), SEAP (Sustainable Energy Action Plan), SoE (State-owned Enterprises), and TA (Technical Assistance)

Source: Author based on McNicoll & Jachnik (2017).

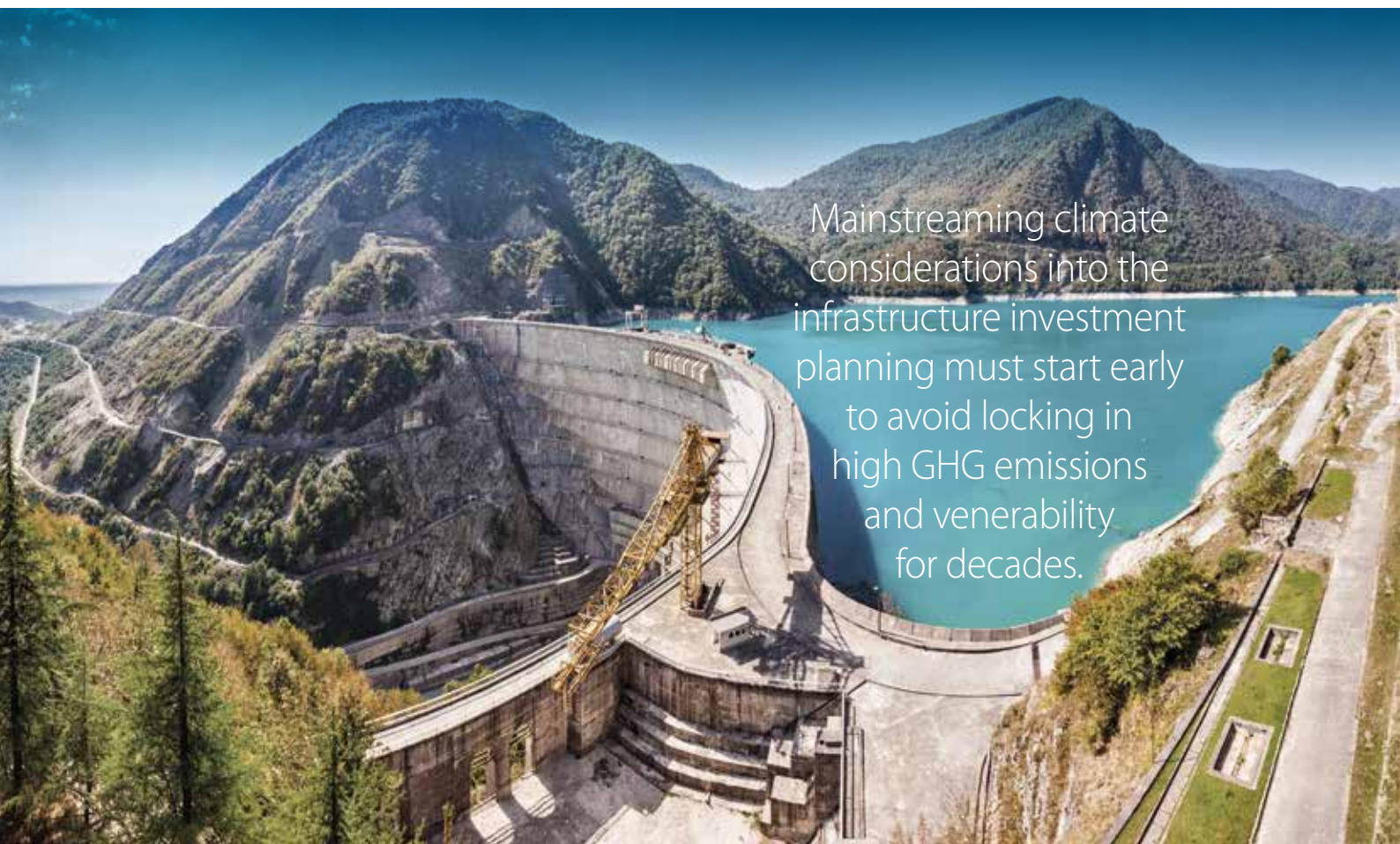
Strong and stable policy signals, effective enforcement of regulations, and stakeholder engagement are crucial for creating demand for investment.

Creating demand for investment in climate action relies on a strong and stable policy signals, including reasonably stringent environmental regulations and their enforcement, as well as effective communication to, and engagement with, stakeholders. Georgian enterprises, from small- to large-sized, consider stricter environmental policies to be the most important lever that would influence their investment decisions, including resource efficiency and cleaner production measures (Chorgolashvili, 2017).

Despite progress made in recent years, policies on energy use and environmental quality in Georgia remain relatively lenient. Georgia is the only country in the Eastern Europe, the Caucasus and Central Asia (EECCA) region, except Turkmenistan, that does not have a quantitative target on renewable energy or energy-

efficiency measures as of July 2017. NEEAP is expected to fill this gap by introducing, for instance, energy-efficiency targets and specific measures to achieve them (e.g. energy audit and labelling). The government is developing a national-level renewable energy action plan in light of Georgia's compliance with the Energy Community acquis.

Preferential policy measures for hydropower (e.g. revenue guarantees and value-added tax exemptions) and its untapped potential have successfully enhanced hydropower project development in Georgia. Yet these positive policies may have made it more challenging to draw private-sector investors' attention to "non-hydro" renewable energy projects. Differentiated tariff policies between hydropower and other types of renewable energy (e.g. higher tariffs for wind, solar and geothermal than



Mainstreaming climate considerations into the infrastructure investment planning must start early to avoid locking in high GHG emissions and vulnerability for decades.

for hydropower) could be explored to ensure a “level-playing field” between different energy sources.

Further rationalising energy prices in Georgia will greatly help mobilise finance for energy-efficiency measures and smaller-scale renewable projects,

(GoG, 2016; Singh, et al., 2016; OECD forthcoming). The Georgian government has taken steps to increase tax rates on certain fossil fuels (e.g. amendments to the Tax Code in 2017), and the subsidy level has been relatively low (1.4% of GDP in 2014) compared to other Eastern Europe and Caucasus countries (OECD, forthcoming). Nevertheless, energy prices remain too low to stimulate investments in energy efficiency activities, for example. This is mainly due to both the low cost of domestic electricity generation, especially from large-scale hydropower, and subsidy for natural gas used for supplying electricity and heat (IEA, 2015; OECD, forthcoming; Pavlenishvili and Biermann, 2016; Singh, et al., 2016).

Energy subsidy reforms have been a socially and politically sensitive matter in Georgia, as in many countries. However, an increasing number of countries

have overcome the political obstacles to subsidy reforms, including middle income countries such as India, Indonesia and Peru (OECD, 2017a). Successful reforms generally have several common features. These include: availability of data on the monetary value of the subsidies; their distribution across beneficiaries; and analysis of how energy-related services, air quality and/or GHG emissions could be improved when prices better reflect costs (OECD, 2017a). An energy subsidy inventory in Georgia, developed by the OECD (forthcoming), can help the country pursue further reforms to energy subsidies.

“Greening” Georgia’s public procurement system can help create demand for investment in low-emission goods and services, and trigger industrial and business model innovation

(OECD, 2017a). Georgia’s procurement system works well to ensure competitive public tendering, but does not adequately consider lifetime environmental or energy performance of goods and services (OECD, 2016b; Singh, et al., 2016). Georgia’s State Procurement Agency should consider integrating environmental and energy performance criteria into the Law on Public Procurement.



“Greening” Georgia’s public procurement system can help create demand for investment in low-emission goods and services.

Georgia's financial system must be made conducive to mobilising finance for climate action.

Developing a well-functioning capital market in Georgia has a great potential to diversify financial channels, lower investment costs and complement bank lending, which can enhance the flow of capital, including for climate action. The role of the capital market is currently modest in Georgia. Commercial banks held 91.9% of financial sector assets in 2015, followed by microfinance institutions and credit unions (5.9%) (MoESD, 2016). Public and private sectors have provided equity investments, particularly to large-scale renewable energy projects mainly on hydropower. They have invested much less in smaller-scale, non-hydro renewables and energy-efficiency projects.

Georgia is making progress in developing its capital markets (e.g. securities market, money market and payment system). These can offer an opportunity to develop a comprehensive financial sector that is also conducive to green finance mobilisation over time. Development of markets related to climate, or green growth, have yet to become part of this work. (Table 2) However, actors working on financial market development have shown growing interest in financing green and climate activities (e.g. OECD, 2017d; Van Bilsen, 2017). The government and the National Bank of Georgia (the central bank) have recently reviewed legal frameworks relating to financial sector regulations. This could provide a basis for examining where climate risks could be “mainstreamed” into the individual menus of the financial market reform in the short- and long-run.



Table 2. Key factors for developing Georgia's capital market and its status

Key factors for developing “green” capital markets	Status in Georgia
Well-functioning local capital market	Under development: Government bonds and other major corporate bonds have been issued, but are still a small fraction of the total financial asset and issued mainly outside Georgia.
Credit rating services	NBG and Fitch Ratings started a pilot credit rating service for major Georgian companies, including the largest commercial banks.
Good payment service	NBG's clearing and settlement system development is being finalised as of 2017.
Government yield curve	Government GEL bond yield curve was introduced in 2015.
Financial education	The National Strategy for Financial Education was adopted in 2016.
Measures to promote ESG* performance of assets	Not yet considered.
Green bond guideline and standards	Not yet considered.

Note: ESG = Environment, Social and Governance; GEL = Georgian Lari; and NBG = National Bank of Georgia.

Source: Author's analysis.

New financial instruments and channels should be explored for climate action in Georgia.

In addition to scaling up the currently available sources of green finance, multilateral development banks and local financial institutions have already started to explore new financial instruments and channels to finance climate action in Georgia. The government of Georgia also considers establishing a new channel to catalyse further finance for climate action. Examples of these emerging or potential financing channels include the following:

- **Interest in green bonds is increasing in Georgia, although none have been issued to date (Van Bilsen, 2017).** An OECD analysis shows that, globally, bond financing for renewables, energy efficiency and low-carbon vehicles could reach USD 620-720 billion per year by 2035 from USD 95 billion in 2016 (OECD, 2017b). Some major challenges still exist, such as scalability of projects and Georgia's nascent bond market. The government of Georgia, in collaboration with the National Bank of Georgia, should consider developing its green bond standard or adopt ones developed by other institutions or countries.
- **Microfinance institutions, institutional investors and non-financial sector corporations could play a greater role in financial flows to climate action.** Some microfinance institutions (e.g. MFO Crystal) and commercial banks that primarily target SMEs (e.g. JSC ProCredit Bank) have made progress in designing and providing loans to energy-efficient activities and smaller-scale, often decentralised, renewable energy facilities. The Dutch Development Bank, FMO, started to work with MFO Crystal on a green microfinance programme in 2017.
- **Non-bank financing channels have a great potential but are currently little used for climate action such as energy efficiency.** They include lease, vendor credits and private-sector energy service companies. These channels and instruments have great potential to improve risk-return profiles of energy-efficiency activities (Chernyavskay and van Waveren Horgervorst, 2017).
- **Establishing a new green bank (or fund) could help to provide direct investment or risk mitigation instruments, or both, to climate-related projects.**

LEDs and NEEAP have separately proposed options to set up a public entity with a specific mandate on green finance. Investors, commercial banks and corporations active in Georgia could benefit from such a national funding entity to de-risk their investments in climate action.

- **Alternatively functions and/or scale of an existing state fund or entity could be strengthened to build greater support for “green” aspects within their own mandates** (Giorgobiani and Brandt, 2017; Park, 2017; Winrock and Remissia, 2017). Such entities could include JSC Partnership Fund, JSC Georgian Energy Development Fund (GEDF), Enterprise Georgia and the Municipal Development Fund. This process could be supported by a review of functions, capability, portfolio and current expenditures of such institutions, for example.
- **Georgia's pension system, which is undergoing reform, could be a future source of funding for climate-related projects through direct investment or purchase of green bonds.** The accumulation of pension fund assets is expected to increase from GEL 313 million (USD 128.8 million) in 2018 to GEL 29.7 billion (USD 12.2 billion) in 2035 (Paresishvili, 2017). However, further clarity is needed as to whether such climate-related projects or green bonds can be an eligible asset class for Georgian pension funds.



Georgia should make best use of risk mitigation instruments.

Developing a capital market, let alone “greening” it, inherently takes a long time, hence the provision of risk mitigation instruments and public-sector finance will remain critically important. A range of domestic and international providers of public finance has deployed various risk mitigation instruments for

climate action in Georgia, such as credit enhancement mechanisms, grants and direct public investment. Such instruments will therefore continue to be powerful tools to create market-based incentives for commercial banks, equity investors and other types of financial institutions (Table 3).

Table 3. Examples of risk mitigation instruments

Category	Instrument	Description	Examples from Georgia
Credit enhancement	Revenue guarantee	Guaranteeing certain cash flows for a project, such as through regulated tariffs	Each project agrees on a power purchase agreement backed by the government (currently with a capped tariff: 6 US cents/kWh for less than eight months a year).
	Layered fund subordination	Taking a subordinated position in a fund to give priority to private investors for claims on assets	The Green for Growth Fund created a USD 15 million subordinated loan facility with TBC Bank to expand funding for energy efficiency and renewable energy projects.
	(Partial) credit guarantee	Guaranteeing payments for the principal and interest on debt issuance (up to a certain percentage) under new or existing loan portfolios in the event of non-payment by the borrowers	The US Development Credit Authority provides loan portfolio guarantees for energy efficiency projects in Georgia (50% ceiling and eight-year guarantee). EIB and European Investment Fund (EIF), through its InnovFin products, also provide SMEs with a guarantee of up to 50% of a portfolio of new or existing loans.
Public investment	Grant	Concessional funds allocation	Development finance institutions and bilateral donor institutions often provide grants for interest or technical assistance for (e.g. green credit line products). The government (e.g. Enterprise Georgia) provides financial assistance to interests on loans and collateral requirement to SMEs.
	Blending	Strategic use of public (generally concessional) and for-profit funding to catalyse private sector investment	For Shuakhevi hydropower project, IFC together with private-sector companies (Tata Power and Norway's Clean Energy Group) are equity sponsors, while EBRD and ADB provide senior loans. MIGA provides investment guarantee. Georgian government bears financial liabilities associated with the PPA.
	Cornerstone stake	Investment in an offering that occurs early in the investment process to increase chances of success and to play a demonstration role to attract other investors	The Global Energy Efficiency and Renewable Energy Fund (GEEREF) takes cornerstone stake in the Caucasus Clean Energy Fund to catalyse private-sector finance in small-to medium hydropower projects.
	Fund seeding	Public investment to help establish private equity funds that specialise in green projects.	Georgian government established a state-owned JSC Georgian Energy Development Fund (GEDF) to provide equity investment in renewable energy projects. GEDF is in principle meant to have only a minority stake in a project.

Note 1: The range of risk mitigation instruments (or risk mitigants) and transaction enablers (e.g. securitisation and warehousing) that can help mobilise green finance is broader than those listed above. For more information, see (e.g.) OECD (2015)

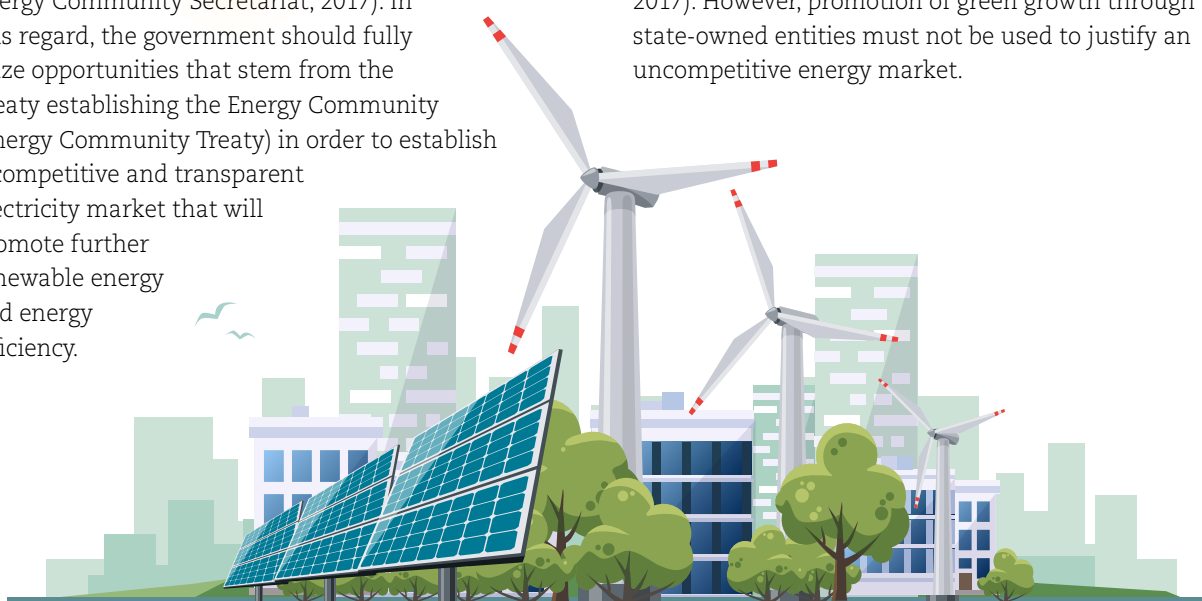
Note 2: ADB = Asian Development Bank; EBRD = European Bank for Reconstruction and Development; EIB = European Investment Bank; MIGA = Multilateral Investment Guarantee Agency.

Source: Author's analysis, based on GNIA (2015), GEEREF (2016), Adler (2017), EIF (2017), EU4Business (2017) and GEDF (2017).

Open, competitive and unbundled electricity markets, if designed properly, can create more space for renewable energy in Georgia.

The Energy Community Treaty offers an opportunity to promote further renewable energy and energy efficiency in Georgia. Georgia has a well-functioning power sector in general. However, assessments by several organisations have concluded that creating a more competitive and transparent electricity market is urgently needed (ADB, 2015; Kochladz et al., 2015; Energy Community Secretariat, 2017). In this regard, the government should fully seize opportunities that stem from the Treaty establishing the Energy Community (Energy Community Treaty) in order to establish a competitive and transparent electricity market that will promote further renewable energy and energy efficiency.

State-owned enterprises (SoEs) in the energy sector should help promote the government's green growth agenda. Such SoEs include the Electricity System Commercial Operator (ESCO), the Georgian State Electrosystem (GSE), and the Energotrans LLC. The steps could include preferential financing and influencing policies via the boards of the SoEs (Prag and Röttgers, 2017). However, promotion of green growth through state-owned entities must not be used to justify an uncompetitive energy market.



Bridging the information and capacity gap is a key ingredient for scaling-up investment in climate action.

To bridge the information gap that still impedes mobilisation of finance for climate action in Georgia, the government should establish, or help establish, a central depository of data. Such a system would allow collecting in a unified way loan-level data, performance track records of investment projects, related technologies and hydro-meteorological information. Georgia's first Biennial Update Report, submitted to

UNFCCC in 2016, describes the lack of data on climate change-related information as chaotic, dispersed, inaccurate, outdated and unreliable (GoG, 2016). A range of countries are setting up learning networks and platforms to improve information flows, raise awareness of benefits from green investment and good national and international practices, as well as enhancing analytical capabilities.

References

- ADB (2015), *Assessment of Power Sector Reforms in Asia: Experience of Georgia, Sri Lanka and Vietnam – Synthesis Report*, Asian Development Bank (ADB), Mandaluyong City, Philippines, www.adb.org/documents/assessment-power-sector-reforms-asia-synthesis.
- Adler, B. (2017), *Development Credit Authority Putting Local Wealth to Work in Asia*, presentation at Asia Clean Energy Forum, Manila, 8 June 2017, https://d2oc0ihd6a5bt.cloudfront.net/wp-content/uploads/sites/837/2017/06/04-Beth-Adler_Asia-DCA-Pitch-Deck.pdf
- Baron, R. (2016), *The Role of Public Procurement in Low-carbon Innovation*, Background paper for the 33rd Round Table on Sustainable Development, 12-13 April 2016, OECD, Paris, www.oecd.org/sd-roundtable/papersandpublications/The%20Role%20of%20Public%20Procurement%20in%20Low-carbon%20Innovation.pdf.
- Chernyavskay, T. and M. van Waveren Horgervorst (2017), "Financing RECP measures at SMEs: An overlooked opportunity", presentation at EAP Green, Partnership for Environment and Growth, www.slideshare.net/OECD_ENV/session-4-presentation-by-tatiana-chernyavskaya-and-marko-van-waveren-unido.
- Chorgolashvili, A. (2017), "Research about opportunities and barriers to promote RECP financing in Georgia", presentation to OECD workshop on green finance mobilisation in Georgia, Tbilisi, June 2017.
- Copenhagen Centre on Energy Efficiency (2017), *Energy Efficiency Brief: Tbilisi, Georgia*, Copenhagen Centre on Energy Efficiency, <http://kms.energyefficiencycentre.org/publication-report/energy-efficiency-brief-tbilisi-georgia>.
- Covenant of Mayors (2017), "Covenant of Mayors – Signatories", webpage, www.covenantofmayors.eu/about/about/signatories_en.html?commitments2=1&commitments3=1&commitments1=1 (accessed 9 June 2017).
- EIB (2016), *Georgia: Neighbourhood SME Financing*, European Investment Bank, Luxembourg, www.eib.org/attachments/efs/economic_report_neighbourhood_sme_financing_georgia_en.pdf.
- EIF (2017), "EUR 50 million to benefit SMEs in Georgia as EIF and ProCredit Bank Georgia sign first InnovFin transaction", News Release, 2 March 2017, European Investment Fund, Luxembourg, www.eif.org/what_we_do/guarantees/news/2017/innovfin_procredit_georgia.htm.
- Energy Community Secretariat (2017), *Energy Governance in Georgia, Report on Compliance with the Energy Community Acquis*, Energy Community Secretariat, Vienna, www.euneighbours.eu/sites/default/files/publications/2017-08/ECS_Georgia_Report_082017.pdf.
- EU4Business (2017), *Investing in SMEs in the Eastern Partnership Countries: Georgia Country Report*, EU4Business, Diegem, Belgium, http://eu4business.com/files/medias/country_report_georgia.pdf.
- GEDF (2017), "Georgian Energy Development Fund announces Selection of Investor for development of Zestaponi WPP Project", webpage, <http://gedf.com.ge/en/georgian-energy-development-fund-announces-selection-of-investor-for-developolment-of-zestaponi-wpp-project/> (accessed 18 August 2017).
- GEEREF (2016), *GEEREF Impact Report 2015: Catalysing EUR10 Billion of Clean Power*, Global Energy Efficiency and Renewable Energy Fund, Luxembourg, http://geeref.com/assets/documents/GEEREF%20IMPACT%20REPORT%202015_FINAL%20final_public.pdf
- Giorgobiani, G. and Y. Brandt (2017), "EC-LEDS Clean Energy Program Georgia Climate Finance Strategy Roadmap", presentation at Green Climate Fund workshop, Tbilisi, 22 June 2017, www.slideshare.net/OECD_ENV/session-2-presentation-by-winrock.
- GNIA (2015), "Tata Power: Adjaristsqali Georgia", webpage, Georgian National Investment Agency, Tbilisi, www.investingeorgia.org/en/keysectors/success-stories/tata-power-adjaristsqali-georgia.page (accessed 13 October 2017).
- GoG (2016), *First Biennial Update Report on Climate Change*, Government of Georgia, http://unfccc.int/files/national_reports/non-annex_i_parties/ica/application/pdf/first_bur_-_georgia.pdf.
- GoG (2015a), *Georgia's Intended Nationally Determined Contribution*, Government of Georgia, Tbilisi, www4.unfccc.int/submissions/INDC/Published%20Documents/Georgia/1/INDC_of_Georgia.pdf.
- GoG (2015b), *Third National Communication of Georgia to the UN Framework Convention on Climate Change (UNFCCC)*, Government of Georgia, Tbilisi, www.ge.undp.org/content/georgia/en/home/library/environment_energy/third-national-communication-of-georgia-to-the-un-framework-conv0/.

- GoG (2014), *Social-economic Development Strategy of Georgia: GEORGIA 2020*, Government of Georgia, Tbilisi, https://policy.asiapacificenergy.org/sites/default/files/Georgia%202020_ENG.pdf.
- IEA (2017), *World Energy Balances of non-OECD Countries 2015*, OECD Publishing, Paris, www.iea.org/statistics/statisticssearch/report/?country=Georgia&product=balances.
- IEA (2015), *Energy Policies Beyond IEA Countries: Caspian and Black Sea Regions 2015*, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264228719-en>.
- IFC (2017), "IFC, Amundi to create world's largest green-bond fund dedicated to emerging markets", *Press Release*, 21 April 2017, International Finance Corporation, Washington, DC, <https://ifcextapps.ifc.org/IFCExt/pressroom/IFCPressRoom.nsf/0/2CC3EDA1AE8B9B558525810900546887>.
- IMF (2017) "Georgia : Request for extended arrangement under the Extended Fund Facility and cancellation of stand-by arrangement-press release; staff report; and statement by the Executive Director for Georgia", *Country Report*, No. 17/97, International Monetary Fund, Washington, DC, www.imf.org/en/Publications/CR/Issues/2017/04/13/Georgia-Request-for-Extended-Arrangement-Under-the-Extended-Fund-Facility-and-Cancellation-44834.
- Kochladz, M. et al. (2015), *Georgia and European Energy Community – The Challenges of EU Integration*, Green Alternative, Tbilisi, https://greenalt.org/wp-content/uploads/2015/06/Georgia_and_European_Energy_Community.pdf.
- McNicol, L. and R. Jachnik (2017), *The "Investor Perspective" for Estimating Publicly-mobilised Private Finance for Climate Action: Methodological Proposal and Case Studies*, Researchers Collaborative, OECD Publishing, Paris, www.oecd.org/env/researchcollaborative.
- Ministry of Energy (2017), *More Renewables and Improved Energy Efficiency: Energy Policy in Georgia*, Ministry of Energy of Georgia, Tbilisi, www.unece.org/fileadmin/DAM/env/documents/2017/WAT/04Apr_11_5SC/GE_5SC_Arabidze_EN.pdf.
- MoESD (2017), *Green Economy Strategy Development*, Ministry of Economy and Sustainable Development, Tbilisi.
- MoESD (2016), *Capital Market Development Strategy*, Ministry of Economy and Sustainable Development with the Ministry of Finance and the National Bank of Georgia, Tbilisi.
- NEEAP Expert Team (2017), "Draft National Energy Efficiency Action Plan", report commissioned by European Bank for Reconstruction and Development, NEEAP Expert Team.
- OECD (forthcoming), *Inventory of Energy Subsidies in the EU's Eastern Partnership Countries*, OECD Publishing, Paris.
- OECD (2017a), *Investing in Climate, Investing in Growth*, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264273528-en>.
- OECD (2017b), *Mobilising Bond Markets for a Low-Carbon Transition*, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264272323-en>.
- OECD (2017d), *Summary Record of Workshop on Green Finance Mobilisation in Georgia*, [www.oecd.org/environment/outreach/Summary%20record_OECD-MoENRP%20Green%20Finance%20Mobilisation%20Workshop%20\(Tbilisi\)%2022-23.07.2017.pdf](http://www.oecd.org/environment/outreach/Summary%20record_OECD-MoENRP%20Green%20Finance%20Mobilisation%20Workshop%20(Tbilisi)%2022-23.07.2017.pdf).
- OECD (2016a), *Responsible Business Conduct in Georgia*, OECD Publishing, Paris, www.oecd.org/countries/georgia/RBC-in-Georgia-2016.pdf.



- OECD (2016b), *Promoting Better Environmental Performance of SMEs: Georgia*, www.oecd.org/env/outreach/Georgia%20pilot%20project%20report%20final%20EN.pdf.
- OECD (2015), *Mapping Channels to Mobilise Institutional Investment in Sustainable Energy*, OECD Publishing, Paris. <http://dx.doi.org/10.1787/9789264224582-en>
- Paresishvili, G. (2017), *Georgian Stock Exchange: Georgian Capital Market Development*, www.saras.gov.ge/Content/files/GSE-Capital-Market-Development-FINAL-ENG-19.06.17.pdf.
- Park, L. (2017), "Creation of Green Banks", presentation at Green Climate Fund workshop, Tbilisi, 22 June 2017, www.slideshare.net/OECD_ENV/session-5-presentation-by-green-climate-fund.
- Partnership Fund (14 June 2016), "Partnership Fund launches Ytong energy efficient block factory project", JSC Partnership Fund News and Media blog, www.fund.ge/eng/view_news/736.
- Pavlenishvili, L. and F. Biermann (10 May 2016), "No price caps in the electricity wholesale market!", The Financial Opinion and Blogs, www.finchannel.com/opinion/57148-no-price-caps-in-the-electricity-wholesale-market.
- Prag, A. and D. Röttgers (2017), *State-Owned Enterprises and the Low-Carbon Transition*, OECD Publishing, Paris.
- Singh, J. et al. (2016), *Energy Efficiency Financing Option Papers for Georgia*, World Bank, Washington, DC, <http://documents.worldbank.org/curated/en/825761475845097689/Energy-efficiency-financing-option-papers-for-Georgia>.
- UNDP Georgia (2017), "Georgia to develop national strategy of sustainable urban transport | UNDP in Georgia", *Press Release*, 28 February 2017, United Nations Development Programme, Tbilisi, Georgia, www.ge.undp.org/content/georgia/en/home/presscenter/pressreleases/2017/02/28/georgia-will-develop-national-strategy-of-sustainable-urban-transport-.html.
- UNECE (2016), *Third Environmental Performance Reviews of Georgia*, United Nations Economic Commission for Europe (UNECE), Geneva, www.unece.org/fileadmin/DAM/env/epr/epr_studies/ECE_CEP_177.pdf.
- Van Bilsen, J. (16 January 2017), "Green Bond Market in Georgia – a Growing Opportunity" Georgia Today on the Web News blog, <http://georgiatoday.ge/news/5609/Green-Bond-Market-in-Georgia-%E2%80%93-a-Growing-Opportunity>.
- Winrock and Remmisia (2017), "Georgia Low Emission Development Strategy Draft Report", commissioned by USAID-funded EC-LEDS Clean Energy Program, Winrock International and Sustainable Development Center, Remissia.
- Schwarz, A. et al. (2016) "Pension reform in Georgia", presentation at Name of workshop, City, 5 April 2016, www.economy.ge/uploads/meniu_publicaciebi/ouer/msoplio_bankis_prezentacia.pdf.
- World Bank (2017), *World Development Indicators*, World Bank Group, <http://wdi.worldbank.org/table/5.4>

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This Policy Highlights is based on the OECD report *Mobilising Finance for Climate Action in Georgia* that aims to discuss key issues for achieving Georgia's targets on its climate change and green growth agendas. It reviews financial sources and instruments currently or potentially available for Georgia's climate action, as well as the estimated costs of implementing such action. The report also examines key policies on climate change, while also looking into the country's effort for developing its capital market and better investment climates.

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