CLEAN INFRASTRUCTURE DEVELOPMENT IN AZERBAIJAN

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INTRODUCTION

"Research by the University of California at Berkeley indicates that the United States could create 300,000 jobs if 20% of electricity needs were met by renewables. A leading Munich consulting firm predicts that more people will be employed in Germany's clean-technology industry than in the auto industry by the end of the next decade. The UN Environment Program estimates that global investment in zero-greenhouse energy will reach $1.9 trillion by 2020 – seed money for a wholesale reconfiguration of global industry."

Ban Ki-moon, Secretary General, United Nations

The need for sustainable development is a global one. With climate change becoming an increasing problem across the globe, clean infrastructure development is of a fundamental importance to every country. The clean infrastructure sector has shown that progress on climate change is possible. Clean infrastructure for the purposes of this report includes renewable energy (wind power, solar power, biomass, hydropower, geothermal, biofuels, waste to energy etc.) i.e. energy that allows for the creation of electricity and fuel, with a smaller environmental footprint. While there is no standard definition of "clean infrastructure," it has been described by Clean Edge, a clean technology research firm, as "a diverse range of products, services, and processes that harness renewable materials and energy sources, dramatically reduce the use of natural resources, and cut or eliminate emissions and wastes."[1]

The International Energy Association's contribution to the recent Clean Energy Ministerial stated that "*the renewable energy sector and emerging country efforts are lights in the dark as progress on clean energy remains far below a two-degree pathway.*"[2] In addition, clean infrastructure can no longer be dismissed as wishful thinking: it represents a globally strong market and has continued to grow in 2013 in all end-use sectors – power, heating and cooling, as well as transport – and supplied an estimated 19% of global final energy consumption in 2011. As in previous years, about half of new electricity capacity installed worldwide was renewable-based.[3] .

Today, at least 118 countries, more than half of which are developing countries, have clean energy targets in place, and 109 countries have policies to support renewables in the power sector.[4] In addition to mitigating climate change, one of the main drivers for propelling clean infrastructure policies is their potential to create jobs. Globally, an estimated 5 million people work directly or indirectly in clean infrastructure industries. As a result, more and more governments around the world acknowledge

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1 http://www.cleanedge.com/reports/clean-energy-trends-2013

2 Tracking Clean Energy Progress, IAE input to the Clean Energy Ministerial 2013. http://www.iea.org/publications/TCEP_web.pdf

3 REN21 Renewables 2013 Global Status Report. http://www.ren21.net/Portals/0/documents/Resources/GSR/2013/GSR2013_lowres.pdf

4 REN21 Renewables 2013 Global Status Report. http://www.ren21.net/Portals/0/documents/Resources/GSR/2013/GSR2013_lowres.pdf

the benefits of clean infrastructure as central to any national green economy strategy.[5] Some fossil fuels rich countries such as Norway are already major generators of renewable energy, with Norway's generating capacity being around 98% renewable. Qatar and the United Arab Emirates are also moving in the direction of developing a national green economy by considering clean infrastructure options, namely renewable energy generation for domestic use. As such, notwithstanding it being a fossil fuels rich country, Azerbaijan could easily follow in the same direction.

Clean infrastructure deployment is expected to impact on productivity and economic growth in various ways, depending on the specific projects it supports, including:

- Increased clean energy production can lead to improved competitiveness (via energy efficiencies) and greater export capacity for fossil fuel rich countries (thus greater revenue generation);

- Increased adoption and diffusion of new technologies may create opportunities to exploit sources of endogenous growth via innovation;

- Increased clean energy generation may assist national grids over-dependent on centralised distribution to develop greater robustness and tailor infrastructure power towards off-grid networks; and

- Productivity gains from using new technology.

The Azerbaijani government has achieved great progress over the last decade in integrating the country into the global economic marketplace and increasing foreign investment mainly due to its oil resources.[6] However at this time, the Azerbaijani government is focused on diversifying its economy outside of the oil sector, with the non-oil portion of the economy growing by almost 10% in 2011.[7]

Clean infrastructure development can contribute further towards the diversification of Azerbaijan's economy through the creation of a national green economy whilst at the same time mitigating climate change and addressing environmental and social concerns. By undertaking climate change mitigation policies Azerbaijan will be well prepared to adapt production and exports of hydrocarbons to the lower future global demand for fossil fuels. At the same time, in the short term, reducing hydrocarbon energy consumption domestically can result in an increase in quantities of hydrocarbons for export, resulting in a win-win scenario for the government. As noted by UNEP *"Using the fossil fuel revenues to fund a transition to a more sustainable and environment-friendly long-term economic framework is a unique opportunity that*

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[5] REN21, Renewables 2013 Global Status Report. http://www.ren21.net/Portals/0/documents/Resources/GSR/2013/GSR2013_lowres.pdf

[6] UNEP Green Economy Scoping Study Azerbaijan 2012. For more information see: http://www.unep.org/greeneconomy/Portals/88/documents/research_products/UNEP%20GESS%20Azerbaijan_English_12nov_low%20res.pdf

[7] Energy Charter Secretariat 2013. In depth review of the energy efficiency policy of Azerbaijan. For more information see: http://www.encharter.org/fileadmin/user_upload/Publications/Azerbaijan_EE_2013_ENG.pdf

must be seized."[8] By diversifying at this stage Azerbaijan will be perfectly placed to take part in the new energy-industrial revolution and to take advantage of the technological leapfrogging available for its domestic clean technology development.

At the same time, Azerbaijan is facing increasing demand for investment in infrastructure development generally, and the development of a green national economy (and the introduction of clean infrastructure technologies) can only increase that demand further. These pressures together have the potential to overstretch the government's budget, requiring as they do not only private sector investment, but private sector knowledge and expertise as well. The traditional approach of governments for infrastructure development of any kind is either to use the state's own budget or privatisation. The first is markedly insufficient to meet the country's needs, while the latter only works in a sound legal and financial framework and is not appropriate for all public service delivery projects.

In order to take advantage of the technological leapfrogging in the clean infrastructure space Azerbaijan should consider developing part of its clean infrastructure via the collaboration with the private sector through public-private partnerships ("**PPPs**"). The private sector is often considered to provide greater efficiency than the public sector when managing infrastructure projects and delivering infrastructure services. Most importantly involvement of the private sector has the potential to introduce the newest technologies, to increase operating efficiency by making investments in new technologies, to bring innovative solutions, and to encourage more transparent organizational structures.

UNECE, through its Team of Specialists on PPPs and the International PPP Centre of Excellence, held a series of meetings with key stakeholders involved in sustainable development, infrastructure development and climate change in Azerbaijan in order to prepare this report on the potential for clean infrastructure development in Azerbaijan via the PPP route.

The report will focus on PPP possibilities and necessary enabling environment for PPPs in Azerbaijan with a particular focus on clean infrastructure projects. The assessment will aim to provide information on options to facilitate the development and financing of clean infrastructure projects through the use of PPPs.

This report will be divided into the following sections:

Section 1 PPPs in Azerbaijan

This section provides an explanation of what PPPs are, and what their role in the development of clean infrastructure projects might entail. It also provides a comparison between the traditional approaches to infrastructure financing, and puts forwards PPPs as an alternative to "traditional" public procurement. The section also provides a list of main principles of PPPs and concludes with a list of recommendations for the development of clean infrastructure projects through PPPs.

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[8] UNEP Green Economy Scoping Study Azerbaijan 2012. For more information see: http://www.unep.org/greeneconomy/Portals/88/documents/research_products/UNEP%20GESS%20Azerbaijan_English_12nov_low%20res.pdf

Section 2 Climate Change and Clean Infrastructure Development in Azerbaijan

This section will provide an analysis of climate change effects in Azerbaijan. The section will show that climate change should be seen as one of the main triggers for clean infrastructure development in the country. This section will also try to explain why clean infrastructure development is important to Azerbaijan. The section concludes with a list of recommendations for clean infrastructure development in Azerbaijan.

Section 3 Legal and Regulatory Framework for PPPs in Azerbaijan– Current Position and Proposed Recommendations

This section will identify gaps in the current legal and regulatory framework in Azerbaijan and will highlight the main components of a workable PPP legal and regulatory framework, including the necessary steps for an effective implementation. The steps that Azerbaijan needs to take in order to develop and implement clean infrastructure projects via a PPP model will be spelled out together with recommendations on possible actions to fill the gaps.

Section 4 Innovative Financing Options

This section provides a list of potential financing options for clean infrastructure development in Azerbaijan and will explore alternative sources of finance, innovative financing schemes and effective channelling of resources for investment.

Section 5 Conclusion

This section will conclude our report.

PUBLIC-PRIVATE PARTNERSHIPS IN AZERBAIJAN

SECTION 2 PPPS IN AZERBAIJAN

2.1 General Overview

The government of Azerbaijan is at a very early stage of clean infrastructure development and there is currently no PPP regulatory or legislative environment to support any proposed development via a PPP model. Notwithstanding this the government should take into account the potential benefits that a PPP model could bring to its infrastructure development in the near future and should follow in the footsteps of such countries like Mongolia which did not have a PPP legislative or regulatory framework in place until 2010 but today has one of the most highly regarded legislative frameworks in the world and has recently successfully constructed a 50MW wind farm project in partnership with the private sector via the PPP model.[9]

There is no clear-cut definition of a PPP although a standard definition is that a PPP is a business venture which is financed and operated by a partnership between the government and a private sector company. This arrangement contrasts with traditional public investment where the government contracts with the private sector to build an asset that is designed and financed by the government. There are various types of PPP projects and there is sometimes too much temptation to provide for a specific set of PPP structures/forms in a concession PPP/legislation ("**BOT**"; "**BOO**"; "**DBFO**," etc.). This is usually undesirable. The PPP "universe" now comprises a wide spectrum of commercial and financial structures. None of them are, in fact, capable of being defined in a precise and clear-cut manner, and attempts to define and provide for them in a concessions law are generally unhelpful, easily giving rise to confusion and inflexibility in practice. *What is needed instead is maximum flexibility, allowing the law to cater for the full range of existing structures the market currently deploys, and the inevitable evolution of new ones in the future.* This can often be achieved at a definitional level in the elucidation of the expressions "public-private partnership" or "privately-financed infrastructure."

A typical example of a clean infrastructure PPP project are renewable energy projects or the so-called "independent power producer" (the "**IPP**") projects. This usually involves the development of a new (greenfield) power generating facility by a private company that sells the power on a wholesale basis to a government utility that distributes the power to individual customers. In the case of IPPs, the assets will belong to the private company, but the power will be sold to the government (or a government power utility) for retail distribution as a public service to customers.

[9] For more information about this project please see: http://www.ebrd.com/pages/news/features/mongolia-windfarm.shtml

2.2. Traditional Approach to Infrastructure Financing

Although, there has been a significant increase in private sector participation in infrastructure initiatives across the CIS region, the traditional approach to infrastructure finance continues to dominate the playing field.

Traditionally, governments have financed infrastructure projects through state resources. There are several drawbacks associated with financing projects entirely from the government budget:

- Large infrastructure projects often take several years to develop and public funding may only be available for the initial stages of the project. As a result, government departments are cautious about investing time in the planning stage of a project if there is a degree of uncertainty regarding the future availability of funds to complete the project;

- There tends to be disproportionate focus on the capital aspect of the relevant government ministry's budget;

- There is lack of equilibrium between the costs of the project vis-à-vis the capital returns. It is crucial that the project costs are weighed against the capital returns to ensure that the investment will add value and contribute to overall economic growth of a country.

2.3. PPPs as an alternative to 'traditional' public procurement

There are different ways in which the private sector can invest in public infrastructure projects. On one end of the spectrum we find the 'traditional' public procurement, while on the other end, we find outright privatization. PPPs are essentially what comes in between, and are different from both 'traditional' public procurement and outright privatization of public assets.

The key differences are:

- Specifications in PPPs are measured in terms of 'outputs' rather than 'inputs' as in 'traditional' public procurement;

- The private sector is responsible to finance, build and operate the asset;

- The public sector 'purchases' the services through regular payments (service payments) or income generated (user fees) over the life of the contract;

- In a PPP, any costs overruns remain at the private sector's risk; risks associated with costs of design, construction, operation and maintenance, and demand for the use and service provided by the asset, are transferred from the public to the private sector in a PPP project;

- In a PPP, construction costs are funded by the private sector, thus relieving the pressure on government funding for infrastructure projects requiring significant capital investment; and

- The whole life-cycle approach in the PPP model vis-à-vis traditional procurement ensures that the private sector selects the most efficient and sustainable solution for the long term rather than the cheapest solution in the short term.

2.4. Viability

Following are various scenarios under which a PPP can be a viable option:

- Where the service requires external expertise and government will not be able to provide it independently;

- Where a private partnership would significantly enhance the quality of service compared to what the government could extend independently;

- Where a private partnership would expedite the project implementation significantly;

- Where there would be a considerable reduction in the project cost and also the service cost with the involvement of a private player;

- Where PPP offers greater scope for innovation which would simplify the existing systems and processes; and

- Where PPP provides larger scope for socio economic welfare.

2.5. Main principles of PPPs

2.5.1. Value for Money in a Project

Ensuring value for money ("**VfM**") in an infrastructure project should be at the core of the public sector's decision to engage in a PPP infrastructure project. Essentially, a PPP is a considered a VfM transaction if it generates a net profit for a public institution in terms of quantity, quality of the service or facility, cost and risk transfer during various stages of the project life cycle. Hence, the VfM prognosis of a PPP plays a fundamental role in the decision whether a public institution would be willing to enter into a PPP agreement.

2.5.2. Selection of Appropriate Infrastructure Projects

One of the challenges faced by institutions is the ability to discern the suitability of an infrastructure project for the PPP model. This suggests that the notion of 'one size fits all' is not applicable to infrastructure projects. The governments should heed the fact that PPPs are not a panacea for all infrastructure development initiatives. It is therefore crucial in the planning phase to select infrastructure projects that would

be well suited to the PPP model as it would be more likely to ensure the success of a project.

2.5.3. Legal and Regulatory Framework

It is vital that a strong legal and regulatory framework is established to govern PPP transactions as without this it will be almost impossible to attract private sector investment. In view of the nature and the lengthy time frame of such projects it is imperative that the interests of both the public and private sector are protected by law. It is evident that an established legal framework governing PPP transactions creates an incentive and an enabling environment for prospective investors. As Azerbaijan does not have a legal and regulatory framework governing PPP arrangements, it is recommended that it embarks upon such reform as soon as possible as this would create an incentive for prospective investors. For more information on our detailed review of the legal and regulatory framework in Azerbaijan please see section 4 below.

2.6. Sustainability and PPPs

2.6.1. PPPs and Sustainability - A focus on longer term timescales

At its core, sustainability is about ensuring society lasts through time. By focusing on longer timescales, it demands that the impacts of a project are taken into account over its entire life-time, rather than in terms of just the initial capital/building costs. This approach to the total costs of a project is sometimes known as 'cradle-to-grave' or life-cycle analysis. PPPs are similar because they require companies to build and operate projects over a relatively long time period. The PPP approach thus allows governments to ensure that projects are efficient over their entire life-time, rather than being cheap to build and expensive to run or decommission. For example, in construction projects, architects focus on minimising capital costs rather than operational costs, despite the fact that operating and maintenance costs far outweigh capital costs over the entire life-time of a project. Rather than focusing solely on the initial cost of a project, the PPP process encourages bids that are more efficient over the long term. Evidence shows that contractual parties are more willing to cooperate and to build good relationships on longer-term contracts, and this is good for sustainability.

2.6.2. Working in partnership

Sustainability requires all parts of society, including the public, business and non-governmental organisations ("**NGO**") to work together in partnership with the government. The entire PPP approach is based upon a similar recognition that governments can deliver major projects like infrastructure more efficiently by working closely with business and the public. Public participation is a critical part of working in partnerships. For PPPs to be successful, people must want

them and be willing to pay for the services that they provide. Stakeholder consultation is essential to identify PPP needs, gauge demand and develop exact specifications for new projects that will ensure that they are supported.

2.6.3. Creating 'win-win-win' scenarios

Applying the principles of sustainability to PPPs creates win-win-win scenarios for the government, private industry and the public. Taking into account the goals and principles of sustainability enhances the long-term acceptability/sustainability of PPP projects and, at the same time, PPP projects, if properly designed, can effectively promote sustainability.

- Private industry benefits because sustainable PPPs are more profitable, using cutting edge technology and management to reduce costs over the entire life-time of the project. This means that risks are lower and the potential operating profits are higher, making them more attractive to private industry.

- The public benefit because sustainable PPPs provide more effective public services. Consulting the public ensures that the PPP will provide a service that is actually needed in a way that people will be willing to pay for. By consulting NGOs and Trade/Labour Unions to take account of labour concerns the likelihood of public opposition is also reduced.

- The government benefits in three ways. First, PPPs enhance local support for the project. For example, including transport costs for construction materials in a tender might make it more efficient to use local resources of labour and materials. This reduces carbon emissions from transporting the materials used, promotes sustainable consumption/production patterns and stimulates the local economy. Second, effective partnership working with private industry attracts investment into an area. For example, setting out a clear and transparent legislative framework for the PPP process will attract investment from leading companies. Third, sustainable projects are more self-sufficient making them resilient to future threats from climate change.

The tables below describe some typical sustainability criteria for environmental, social and economic considerations respectively that might be applied to the majority of PPPs. The sustainability specification is listed in the first column, while the possible techniques to achieve it and the measurable performance criteria are listed in the second and third columns. The list is not exhaustive, and is a mixture of project specific indicators, like green procurement, and outcomes flowing from the practise of sustainability, like greenhouse gas emissions, or improved employment. While the menus have been separated into environmental, social and economic for clarity, it should

be clear that many of the specifications address overlapping sustainability issues.

2.6.4. Menu of environmental criteria for sustainability[10]

Output specification	***Possible techniques***	***Performance criteria***
General sustainability	Adherence to recognised environmental management systems such as EMAS or ISO 14002 Appropriate use of Environmental Impact Assessments Feedback on environmental performance from local people and / or NGOs Life-cycle analysis	Audit of procedure Cost of bid over entire life-time
Efficient use of energy and security of supply	Use renewable sources Establishment of ESCo (Energy Service Company) to supply the project's energy and provide ongoing advice on improving efficiency and flexible means of financing renewable energy sources for the project Adherence to recognised building quality standards that require incorporation of sustainability principles in building design: e.g. making use of natural heating and ventilation, natural light Innovative technologies Carbon offsetting by creation of new habitat	Running costs Carbon footprint Proportion of energy from renewable sources
Minimise waste	Re-use of materials during construction and operation	Amount of non-recyclable waste produced (during construction and operation) Proportion of waste materials reused, recycled, composted, energy from waste, sent to landfill
Conserve water resources	Treatment of waste water Grey water recycling Rainwater harvesting	Running costs Proportion of clean / brown water usage
Minimise vulnerability to flood risk	Porous surfaces to allow infiltration Creation of reed beds and green areas to absorb and store water	Number / severity of flood incidents at site and downstream
Maximise use of materials from local and sustainable sources	Sustainable procurement procedure for sub-contractors Goods and services sourced locally Substitution of non-renewable resources for renewable, sustainable resources	Audit of construction and operating materials Proportions of natural resources sourced from sustainable sources
Minimise pollution	Clean technologies that reduce emissions Avoidance of toxic substances Treatment of emissions to water, air and soil Minimise noise and light pollution Maximise vegetation	Local air/water quality indicators User / resident satisfaction
Protect biodiversity	Preservation of existing habitat Creation of new habitat Incorporation into building design	Number of critical species Area / quality of habitat

[10] Source: UNECE Training Module - An overview of issues related to PPPs and sustainable development

2.6.5. Menu of social criteria for sustainability[11]

Output specification	*Possible techniques*	*Performance criteria*
Community engagement	Stakeholder consultation Identification and empowerment of a 'sustainability champion' for the project	Public support for the project Levels of public participation in project governance arrangements: openness & accountability; extent to which users believe their views are considered Quality of feedback from public consultation; Degree to which public preferences are reflected in project outcomes Number of NGOs involved in project
Community facilities	'Bundling' profitable PPPs with less profitable ones that provide facilities (for example, a worker crèche, a school, recreation spaces)	Levels of resident / employee satisfaction Percentage of catchment population able to access service Equality of access across race, religion, gender, age, disability, sexual orientation
Social cohesion	Availability of affordable housing Equal opportunities Accessible to minorities Preservation and / or enhancement of cultural heritage and integrity	Levels of resident / employee satisfaction Levels of community voluntary work, membership of community organisations Community diversity
Low carbon lifestyle	Link development to public transport Provide high quality pedestrian and cycle routes	Level of car use / proportion of employees using sustainable methods of transport to travel Resident / user satisfaction Health e.g. if policy is to improve air quality through public transport, then reductions in respiratory illnesses appropriate

2.6.6. Menu of economic criteria for sustainability[12]

Output specification	*Possible techniques*	*Performance criteria*
Maximise local benefits	Use local businesses, local labour and training in construction, operation, and maintenance. Local procurement	Percentage of procurement / employment sourced within a specific area Employment statistics (broken down into youth, old age, female, disabled, ethnic groups etc if specific groups are being targeted) Income statistics and distribution (again possibly broken down as above) National / regional / local GDP PPP completed and operated to budget and time Private sector profits against expected profits Number of new businesses starting up over PPP lifespan
Worker	Compliance with	Worker satisfaction

[11] Source: UNECE Training Module - An overview of issues related to PPPs and sustainable development

[12] Source: UNECE Training Module - An overview of issues related to PPPs and sustainable development

health and safety	relevant labour legislation Health and safety standards /regulations	Number of accidents Staff turnover Other products: e.g. training provided to workers, creation of a skilled workforce, thriving 3rd sector

2.7. Delivery of Projects and Pathfinders

In line with the theme of "success breeds success" we believe that the government needs to be the main driving force for the implementation of a PPP programme, at least for the early stages of the programme. We also believe that the government should focus on a few high profile projects early in the programme. At the outset of the programme, the private sector is probably going to be unwilling to spend its resources on a project that is sponsored by a local or municipal entity. This is because there will be a perception that entities outside of central government do not have the capacity to deliver PPP projects. There will also be concerns about the legal powers of such entities to enter into PPP transactions, their creditworthiness and the interface with central government in the process.

We therefore strongly suggest that the early implementation of the programme be taken forward by central government. In addition, we suggest that a "pathfinder" scheme be identified and used as a demonstration case to prove the structures for the delivery of PPP projects. *Focussing on a single project and delivering it on a basis that permits financing by local and international financiers on a limited recourse basis will showcase the country's PPP processes and capabilities to international developers and lenders alike.*

2.8. Relevant Areas of Law

There are potentially many areas of law that have to be considered before making any attempt to design an optimal legislative and regulatory framework for successful clean infrastructure PPPs. PPPs will touch on many of these areas, quite apart from the contents of any general legislation that may be introduced to facilitate their use. These will typically include, for example, commercial contract law, company law, taxation law, employment law, competition law, the law of finance and security, insolvency law, infrastructure sector specific laws, property law, environmental law, foreign investment protection law, intellectual property law, public procurement law or rules, laws relating to expropriation and compulsory property purchase, and many others. The existence of adequate legal provision in these and many other laws is paramount as serious deficiencies in any of them could potentially represent insuperable obstacles in the way of the effective implementation of PPPs.

In order to create a stable legal environment that will attract private investors to PPPs, the government needs to review its existing legislation and may have to amend, repeal or adopt certain laws and regulations.

It would go well beyond the scope of this report to discuss all the aspects in which these diverse areas of law might prove deficient or what might have to be done to reform or modify them in order to make them more conducive to

the successful implementation of PPPs. However, section 4 below analyses in greater detail the current legal and regulatory framework in Azerbaijan and contains specific recommendations on each of the issues raised.

2.9. PPPs in Azerbaijan Recommendations

PPP is a relatively new concept in Azerbaijan and, as such, understanding and knowledge of its basic principles is justifiably patchy across the public and private sectors.

- Greater coordination within the public sector and also the inclusion of private sector parties became the norm in other countries with a more mature PPP process, and this coordination and level of engagement should be further encouraged in Azerbaijan to help raise the understanding more speedily and consistently across the board. Political will is the single most important aspect of successful PPP development followed by the availability of capital, that is, affordability.

- The PPP process should have sufficient political support across all ministries.

- Private participation in PPP projects should have a clear basis in policy, with broad government support and should be linked to broader sustainable development objectives of the country.

- Transparent procedures should be specified for all stages of the PPP process.

The government might want to consider:

1: Engaging key stakeholders early – list includes local communities, ministries, local authorities and national energy transmission and distribution companies.

2: Building capacity for the development of clean infrastructure projects.

3: Preparing a national clean infrastructure development plan. This plan must include rigorous and transparent funding and realistic but detailed affordability analysis; this will result in a more efficient identification and ranking of potential PPP projects. A number of pilot projects should be identified within the plan. Running such projects would be a great demonstration of the government's political willingness to support PPP implementation and a significant example of cooperation/coordination.

CLIMATE CHANGE AND CLEAN INFRASTRUCTURE DEVELOPMENT IN AZERBAIJAN

3. CLIMATE CHANGE AND CLEAN INFRASTRUCTURE DEVELOPMENT IN AZERBAIJAN

3.1. General Overview

The link between clean infrastructure and mitigation of climate change is clear. According to the International Energy Agency clean energy could become the world's second largest source of power generation by 2015, second only to coal. However, without policy support, up to two thirds of the economically viable potential to improve energy efficiency and to incentivise clean infrastructure development will remain unrealized through 2035.[13]

Historically, economic development has been strongly correlated with increasing energy use and growth of greenhouse gas emissions. Clean infrastructure can help decouple that correlation, contributing to sustainable development.[14] Cleaner infrastructure deployment is expected to play a key role in helping to mitigate Azerbaijan's climate change impact by abating significant amounts of greenhouse gas emissions and paving the way for greater domestic low-carbon energy development. This abatement can be realized directly by developing clean infrastructure projects and indirectly through enhancement of the wider political, legal and investment environment in order to attract the relevant private sector investment necessary for the development of such projects on a larger scale.

3.2. Climate Change in Azerbaijan

Climate change scenarios for Azerbaijan suggest an increase in the average temperature and rainfall. The average annual temperature increase between 2021 and 2050 is expected to amount to 1.5°C–1.6°C[15] and deforestation and desertification already pose significant challenges with the country suffering from land degradation (overgrazing, soil pollution, and erosion) and from water shortages.

Azerbaijan joined the United Nations Framework Convention on Climate Change (UNFCCC) in the category of a non-Annex I country in 1995, and is also a signatory to other international agreements on climate change, such as the Kyoto Protocol. Since ratifying the Kyoto Protocol in 2000 Azerbaijan has participated in the Clean Development Mechanism ("**CDM**") with a number of projects mainly for the rehabilitation of fuel, gas and heavy fuel oil units and one if its projects, namely the energy efficiency improvement of the

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[13] International Energy Agency, 2012 World Energy Outlook. http://www.worldenergyoutlook.org/publications/weo-2012/

[14] IPCC: Special Report on Renewable Energy Sources and Climate Change Mitigation. http://orbit.dtu.dk/fedora/objects/orbit:63951/datastreams/file_5672879/content

[15] Energy Charter Secretariat 2013. In depth review of the energy efficiency policy of Azerbaijan. For more information see: http://www.encharter.org/fileadmin/user_upload/Publications/Azerbaijan_EE_2013_ENG.pdf

AzSRES thermal power plant is the largest CDM-registered project in the Caucasus.

In addition to the Kyoto Protocol, Azerbaijan ratified the following:

- UN Framework Convention on Climate Change, 1992 Rio-de-Janeiro (ratified in 1995);
- Convention on Environmental Impact Assessment in a Transboundary Context (ESPO Convention), 1991 (ratified in 1999);
- Convention on the protection of ozone layer (Vienna, 1985) and Protocol on Substances that Deplete the Ozone Layer. 1987, Montreal Protocol (ratified in 2000);
- Convention on the Control Transboundary Movements of Hazardous Wastes and their Disposal. 1989, Basel Convention (ratified in 2001);
- Convention on Organic Pollutants. 2001, Stockholm Convention (ratified in 2003).

Azerbaijan has also developed the State Program of Poverty Reduction and Sustainable Development in the Republic of Azerbaijan for 2008-2015 (the "**State Program**") which stipulated measures to establish a Carbon Fund to provide financial support to enterprises in reducing the amount of CO2 and other atmosphere emissions.[16] In addition, the State Program for Environmentally Sustainable Economic Development clearly states the government's aim for an environmentally sustainable energy development. These state programs make it clear that political leadership has already taken a lead in ensuring greater public awareness of the link between climate change, sustainable development and the need for incorporation of clean infrastructure into the country's national policies. *What remains is, however, the implementation of this vision on a scalable scale.*

3.3. Why Clean Infrastructure in Azerbaijan

- The interest in clean infrastructure sources is derived from their sustainability;
- To use the resources with minimal negative impact on the environment and to mitigate climate change;
- To develop resources in an appropriate and cost-effective manner that is able to carry on for the long term;
- Clean infrastructure can help trigger sustainable economic growth and help economies that are dependent on fossil fuels to diversify by creating new industries, expertise and jobs;

[16] http://www.unece.org/fileadmin/DAM/energy/se/pdfs/ee21/EE21_Subregional_projects/AzerbaijanAliyev-05.pdf

- Clean infrastructure development offers opportunities for new business formation and new technologies, particularly for SME's;

- Emerging evidence shows that clean energy projects create new opportunities for job creation on the grounds that low carbon sources of power employ more people per MW of installed capacity than conventional sources. In addition, a crucial contribution expected from further deployment and support to clean energy power generation, will be in terms of its contribution to economic growth, within Azerbaijan and potentially, within the region;

- Increased adoption and diffusion of new technologies may create opportunities to exploit sources of endogenous growth via innovation;

- Increased clean energy generation may assist national grids over-dependent on centralised distribution to develop greater robustness and tailor infrastructure power towards off-grid networks; and

- The development of clean energy can also help in the transmission and distribution of electricity of the country. For example, currently 80% of Azerbaijan's power generation is located in the west. However 70% of power consumption is located in the east, north-east and south-east. Therefore fuel is transported hundreds of kilometres from Absheron peninsula to thermal power plants, Azerbaijan HPP and Ali Bayramli HPP. Generated electricity is then transmitted back to Absheron peninsula and from there distributed to northern and southern regions. This can lead to transmission losses and inefficiencies in distribution and clean energy sources could be used instead to distribute electricity directly from the Absheron peninsula to the northern and southern regions. According to the United Nations Environmental Statistics on Azerbaijan (2009): around 60% of electricity is consumed in the Absheron peninsula meaning that electricity generation and consumption could be delivered locally in particular via the implementation of wind energy projects in that region. According to SAARES Azerbaijan has the potential of about 800MW of wind power and the windiest areas of Azerbaijan is the Absheron peninsula where the average annual wind speed is 5-8 m/s.

3.4. Clean Infrastructure in Azerbaijan

The political will to develop clean infrastructure in Azerbaijan is considered very strong with numerous statements by the government encouraging the development of this sector. In addition to the climate change international treaties that Azerbaijan has become signatory to, since 2009 Azerbaijan has been signatory to the International Renewable Energy Agency ("**IRENA**") and has created the State Agency on Alternative and Renewable Energy Sources ("**SAARES**").[17]

[17] A national strategy on the use of alternative sources of energy for the period 2012–2020 is being prepared by SAARES and by the Ministry of Industry and Energy including the preparation of

3.4.1. The tasks of SAARES are to prepare:

- Renewable energy policy and legislation;
- Renewable energy programming;
- Renewable energy potential analysis;
- Renewable energy Promotion/Information/awareness raising;
- Renewable energy project development.

3.4.2. The ambitions of SAARES are as follows:

- 20% share of renewable energy in electricity generation;
- 9.7% share of renewable energy in all energy consumption;
- 2,000 MW of installed renewable energy capacity by 2020.[18]

In 2011, the share of renewable energy in electricity production in Azerbaijan was 10%, 9.8% of which was from hydropower, and the share of renewable energy in all energy consumption was only 2.3%.[19] *The realisation of the 2020 targets therefore requires the regulatory framework to be strengthened by enacting and enforcing laws that promote renewable energy projects and by preparing the legal and regulatory framework and relevant financing incentives for PPPs – a method through which Azerbaijan could achieve large scale renewable energy development potential.*

This is particularly important in a country like Azerbaijan where various studies conducted by the German Kreditanstalt für Wiederaufbau ("**KfW Bankengruppe**"), the Energy Charter Secretariat and the European Bank for Reconstruction and Development ("**EBRD**") have shown that the country has a significant potential for the development of alternative energy sources. For a detailed overview of Azerbaijan's clean energy potential in solar, wind, biomass, hydro, geothermal and other clean energy please see the recent Energy Charter Secretariat 2013 in depth review of clean energy potential in Azerbaijan.[20]

Renewable Energy Law, which was expected to be published by the end of 2012 but it has not been published to date.

[18] Energy Charter Secretariat 2013. In depth review of the energy efficiency policy of Azerbaijan. For more information see: http://www.encharter.org/fileadmin/user_upload/Publications/Azerbaijan_EE_2013_ENG.pdf

[19] Energy Charter Secretariat 2013. In depth review of the energy efficiency policy of Azerbaijan. For more information see: http://www.encharter.org/fileadmin/user_upload/Publications/Azerbaijan_EE_2013_ENG.pdf

[20] Energy Charter Secretariat 2013. In depth review of the energy efficiency policy of Azerbaijan. For more information see: http://www.encharter.org/fileadmin/user_upload/Publications/Azerbaijan_EE_2013_ENG.pdf

3.5 Potential Renewable Energy Pilot Projects in Azerbaijan

According to SAARES the achievable potential of renewable energy generating capacity in Azerbaijan is:

Source	**Achievable Potential in MW**
Small hydropower stations	Over 400
Wind energy	Over 800
Solar energy	Over 5000
Bioenergy	Over 1500
Geothermal energy (thermal only)	Over 800

In renewable energy SAARES is currently implementing or planning to implement the following projects:

- Wind Energy Park – 10-25% participation of the state of Azerbaijan plus KfW Bank of Germany;
- Aeration-gas station – 10-25% participation of the state of Azerbaijan the rest POSCO;
- Absheron Sun Park - 10-25% participation of the state of Azerbaijan the rest JICA;
- Sea Wind Park – 10-25% participation of the state of Azerbaijan the rest private investors.

Azerbaijan is also partner of EU INOGATE energy programme and is cooperating with UNDP for promotion of the clean energy production. Together with UNDP SAARES applied several projects on sustainable energy ("Promoting Development of Sustainable Energy in AZB"(2011-2013) and on the "Solid Waste Management Improvement Project" (2008-2012)). The government also opened a polygon of renewable and alternative energy as a pilot project in September 2011. The polygon consists of sites for biogas plant, wind turbines, solar panels and eco-cottages.

However, the state program on clean energy is from 2004 and does not contain measures encouraging PPPs in this field making difficult to achieve the required scale of development. Recent tax incentives (7 years tax exemptions for industrial parks) (Law on making amendments and additions to the Tax Code from 21.12.2012 effective from 1.1.2013) do provide an encouragement but they are not tailored towards the encouragement of PPPs in this field.

With its order from 29/11/2011 the President of the Republic of Azerbaijan tasked SAARES to prepare a strategy on the generating prospects for clean energy development in the country covering 2012-2020 ("**the Strategy**"). The Strategy should have been prepared within 6 months however it has not been

published to date. The order of the President also tasked SAARES inter alia to cover in the Strategy the following:

- creation of the legislative basis for the clean energy industry;
- stimulating measures in the field of the clean energy; and
- providing the use of the clean energy in all fields of the economy.

It is to be hoped that this Strategy will consider the role of PPPs in clean energy development and that the proposed legal and regulatory changes will also take into account this important model of infrastructure delivery.

In addition, it is to be hoped that the EU ERSP project led by the International Ecoenergy Academy on *"Improvement of Azerbaijan's legislation relating to Renewable Energy Sources and Energy Efficiency and its bringing in conformity to the EU legislation"* also considered in some detail a number of issues we mentioned in this report. According to the media, as part of the EU ERSP project draft laws and standards regulating development of non-traditional renewable energy sources and energy saving were developed. Among them there are draft laws *"On Energy Saving and Increasing Energy Efficiency"* and *"On utilization of Renewable Energy Sources"* and 21 secondary legislation documents needed to ensure the implementation of these laws. We did not manage to obtain access to these draft laws nor have they been implemented as of yet but their implementation could be key for a successful clean infrastructure development in the country.

(a) The Solid Waste Management Improvement Project

Azerbaijan already achieved great progress in the waste to energy sector and this sector can be used as an example of the readiness and potential in the country for other sustainable development projects.

Source: http://www.durangobrowne.ie/en/projects/baku-waste-to-energy-azerbaijan.htm

The construction of Waste-to-Energy Plant was decided within the framework of "The Comprehensive Action Plan about the improvement of ecological situation in the Republic of Azerbaijan for 2006-2010 years" approved by the Decree of the President of the Republic of Azerbaijan dated 28.08.2006. The open tender was held for selecting the Contractor Company by the Ministry of Economic Development and the agreement on designing, building, operating and provision of technical services for "Waste-to-Energy Plant in the city of Baku" was signed with the winner company French "Constructions Industrielles de la Mediterranee S.A." ("CNIM" S.A.) on 15th December 2008. The contract is type of "turn-key" and it is being carried out with the principle of "Design Build Operate". So the designing, building and operating are entirely being held by "CNIM" S.A. We have not been able to obtain clear information on the financing structure for this project and it is anticipated that the financing was procured by the government.

The waste to energy plant will have an annual capacity of 500,000 tons of waste per year which makes it one of the largest in Europe and the first of its kind in the CIS. There are two treatment lines at the plant that are capable of treating 33 tons/hour of waste each. The plant design allows adding a third treatment line which would increase the annual plant capacity up to 750,000 tons each year, if necessary. The plant will consume about 15% of the electricity produced. The remaining 85 %, or approximately 231,500 MWh/year, will be sent to the electrical grid and distributed to consumers. Furthermore, anything produced at the plant will belong to the Azerbaijani State which is going to benefit from energy sales. The total cost of the design-build works of the plant is 346 million EURO.[21]

(b) Benefits:

(i) Replacement of fossil fuels results in fuel savings. This subsequently leads to the reduction of greenhouse gas emissions as CO2 is not emitted by replaced fossil fuels; half of the energy of municipal waste is recognized as being from a biogenic origin and therefore neutral in terms of CO2 emissions.

(ii) Waste incineration also leads to a significant reduction of dependence on landfills. As a result, toxic substances are eliminated from the eco-cycle and pathogen agents are destroyed.

(iii) Replacing landfills by incineration is also beneficial in respect of climate change since greenhouse effects are significantly reduced by offsetting methane emissions from landfills.

[21] American Chamber of Commerce, 2010: Impact Azerbaijan, the Year of Ecology. For more information see: http://www.amchamaz.org/domains/amcham/assets/file/newsletter/impact10.pdf

(iv) Incineration reduces domestic waste volumes by 90%. If bottom ash is utilized for road construction, the reduction effect increases up to 99%. In respect of weight, the effect of the incineration process is reduced by 4 times.

As concluded by the American Chamber of Commerce in Azerbaijan: "In general, Waste-to-Energy plants contribute to the economy of natural resources, development of alternative energy sources and climate and health protection."[22]

3.6. Additional Pilot Projects

(a) Biomass:

With 55% of Azeri territory suitable for agricultural production there is real potential for harnessing residues for biomass combustion or gasification. In this regard, the Asian Development Bank is currently helping to promote renewable energy development in Azerbaijan through developing two pilot renewable energy projects (biomass cogeneration) with a total installed capacity of 16 megawatt (MW) for efficient electricity and heating supply in Oghuz and Agjabedi regions. The project impact will be efficient and sustainable renewable energy development in Azerbaijan. The expected project outcome will be increased renewable energy share in power generation by demonstrating the viability of biomass cogeneration plants and heating supply systems in Oghuz and Agjabedi regions. The project outputs will consist: (i) construction of two biomass cogeneration plants in Oghuz and Agjabedi regions; (ii) construction of heating supply systems in Oghuz and Agjabedi regions; and (iii) project management and supervision, including consultancy services for project supervision, safeguards compliance, reporting, and capacity building for the executing agency.[23]

(b) Wind Pilot Projects:

According to the Energy Charter Secretariat, wind power has great prospects in some regions of Azerbaijan and calculations from governmental institutions suggest that the Republic of Azerbaijan has the economically feasible potential of about 800 MW of wind power with the windiest areas of Azerbaijan being the Absheron peninsula where the average annual wind speed is 5-8m/s.[24]

As noted in the table above SAARES is currently undertaking or intending to undertake a number of wind projects and two private companies have already undertaken pilot projects including:

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[22] American Chamber of Commerce, 2010: Impact Azerbaijan, the Year of Ecology. For more information see: http://www.amchamaz.org/domains/amcham/assets/file/newsletter/impact10.pdf

[23] http://export.gov/adb/build/groups/public/@eg_adb/documents/webcontent/eg_adb_067642.pdf

[24] Energy Charter Secretariat 2013. In depth review of the energy efficiency policy of Azerbaijan. For more information see: http://www.encharter.org/fileadmin/user_upload/Publications/Azerbaijan_EE_2013_ENG.pdf

(i) 2x850 kW Vestas v52/850 turbines installed in 2010 and owned by Caspian Technologies + 500 kW Training Center;

(ii) Alten Group Project – 4x2 MW Gamesa turbines installed in 2011 and owned by Alten Group Hotel Coordina.

The development of wind energy should be strongly encouraged in a country with so much wind power potential. Most importantly wind energy can also help in the transmission and distribution of electricity within the country. Currently 80% of Azerbaijan's power generation is located in the west. However 70% of power consumption is located in the east, north-east and south-east. Therefore fuel is transported hundreds of kilometres from Absheron peninsula to thermal power plants, Azerbaijan HPP and Ali Bayramli HPP. Generated electricity is then transmitted back to Absheron peninsula and from there distributed to northern and southern regions. This can lead to transmission losses and inefficiencies in distribution and wind energy could be used instead to distribute electricity directly from the Absheron peninsula to the northern and southern regions. According to the United Nations Environmental Statistics on Azerbaijan (2009): around 60% of electricity is consumed in the Absheron peninsula meaning that electricity generation and consumption could be delivered locally in particular via the implementation of wind energy projects in that region.

(c) Solar Pilot Projects:

According to the Energy Charter Secretariat the climatic conditions of Azerbaijan provide numerous opportunities for increasing the production of electricity and heat using solar energy. For example, the amount of sunlight energy available per year is estimated to be 1300 kWh/m2 in Azerbaijan.[25] Solar energy plants may be particularly beneficial in places remote from electric transmission lines. It is economically inefficient to connect remote areas with the electricity grid and gas pipelines and/or the cost of maintenance of such grid can be extensive. Solar energy could become a source of power generation, which could be used for household and agricultural needs, as well as pumping of underground drinking water. The government and/or SAARES should consider promoting alternative sources of energy, in particular solar energy to ensure sustainable development of remote rural communities, as well as full-scale large solar and wind power projects, which could be cost effective when export prices for natural gas are taken into account.

3.7. PPPs for Renewable Energy Pilot Projects

Most of the renewable energy pilot projects currently being contemplated in Azerbaijan are not structured as potential PPP projects. In addition, the state program on clean energy is from 2004 and does not contain measures encouraging PPPs in this field making it difficult to achieve the required scale of development. Recent tax incentives (7 years tax exemptions for industrial

[25] Energy Charter Secretariat 2013. In depth review of the energy efficiency policy of Azerbaijan. For more information see: http://www.encharter.org/fileadmin/user_upload/Publications/Azerbaijan_EE_2013_ENG.pdf

parks) (Law on making amendments and additions to the Tax Code from 21.12.2012 effective from 1.1.2013) do provide an encouragement but they are not tailored towards the encouragement of PPPs in this field.

With its order from 29/11/2011 the President of the Republic of Azerbaijan tasked SAARES to prepare a strategy on the generating prospects for clean energy development in the country covering 2012-2020 ("**the Strategy**"). The Strategy should have been prepared within 6 months however it has not been published to date. The order of the President also tasked SAARES inter alia to cover in the Strategy the following:

- creation of the legislative basis for the clean energy industry;
- stimulating measures in the field of the clean energy; and
- providing the use of the clean energy in all fields of the economy.

It is to be hoped that this Strategy will consider the role of PPPs in clean energy development and that the proposed legal and regulatory changes will also take into account this important model of infrastructure delivery.

In addition, it is to be hoped that the EU ERSP project led by the International Ecoenergy Academy on *"Improvement of Azerbaijan's legislation relating to Renewable Energy Sources and Energy Efficiency and its bringing in conformity to the EU legislation"* also considered in some detail a number of issues we mentioned in this report. According to the media, as part of the EU ERSP project draft laws and standards regulating development of non-traditional renewable energy sources and energy saving were developed. Among them there are draft laws *"On Energy Saving and Increasing Energy Efficiency"* and *"On utilization of Renewable Energy Sources"* and 21 secondary legislation documents needed to ensure the implementation of these laws. We did not manage to obtain access to these draft laws nor have they been implemented as of yet but their implementation could be key for a successful clean infrastructure development in the country.

3.8. Delivery of Projects and Pathfinders

In line with the theme of "success breeds success" we believe that the government needs to be the main driving force for the implementation of a PPP programme, at least for the early stages of the programme. We also believe that the government should focus on a few high profile projects early in the programme. At the outset of the programme, the private sector is probably going to be unwilling to spend its resources on a project that is sponsored by a local or municipal entity. This is because there will be a perception that entities outside of central government do not have the capacity to deliver PPP projects. There will also be concerns about the legal powers of such entities to enter into PPP transactions, their creditworthiness and the interface with central government in the process.

We therefore strongly suggest that the early implementation of the programme be taken forward by central government. In addition, we suggest that a

"pathfinder" scheme be identified and used as a demonstration case to prove the structures for the delivery of PPP projects. *Focussing on a single project and delivering it on a basis that permits financing by local and international financiers on a limited recourse basis will showcase the country's PPP processes and capabilities to international developers and lenders alike.*

3.9. Barriers and Challenges to Clean Infrastructure Development in Azerbaijan

- The lack of a clear legal and regulatory framework for clean energy development and the low tariffs currently available for such projects;
- The lack of a comprehensive tariff methodology reflecting a clearly stated strategy on the nature of energy production;
- The lack of a legal basis for connection rules to the grid of clean energy projects;
- Like other former soviet countries, Azerbaijan has serious institutional, legislative, financial, economic, scientific-technical, informational, and market barriers to clean energy development;
- The lack of local and foreign investment: the local companies interested in clean energy have limited financial resources and insufficient access to funds intended for such technologies;
- The lack of long-term credits: commercial banks issue credits unwillingly, because repayment of long-term credits has risk aspects. In addition, financial entities have not enough experience for analysing financial aspects of investments in this field; and
- The lack of governmental financing mechanisms that is necessary taking into account technical complexity, high risk level and long-term realization of projects aimed at clean energy development. The situation is also complicated due to the fact that generation of energy from traditional fossil fuels is considerably subsidized.

3.10. Recommendations for Clean Infrastructure Development in Azerbaijan:

Green investment will require the development of a sound framework of fiscal, financial and legislative instruments. This is particularly the case in the energy market, which requires significant government support for clean energy to establish an initial market share, to gain access to the national electricity grid and other energy infrastructure, and to attract investment.

These framework policies include:

- Key investment principles: These should be applied to entry, establishment, mergers and acquisitions, and investment incentives in the clean energy sector. Domestic investment policy also needs to be attractive to foreign investors, given that developing countries depend to a large extent on foreign investment;

- The field of clean energy has to be opened as a market for participation of the private sector. By doing so the government needs to take into account that this field needs high investments and the country itself has limited number of companies able to realize such investments. Moreover, the government is lacking the needed technologies and experience of improving green energy and needs know-how of foreign private actors; and

- The market should be opened for private sector generation of energy and their connection to the distribution and transmission links.

The government might want to consider:

1. Preparing for the integration of clean energy sources into the existing energy system which requires adapting the existing system and creating a supporting framework to minimize voltage fluctuations while accommodating intermittent clean energy production. A policy that looks to reduce barriers to clean energy grid connection should address the following:

- System reliability;

- Uniform technical standards for interconnecting distributed generation to the grid;

- Testing and certification procedures for equipment that interconnects with the grid;

- Rules eliminating or reducing barriers for entities to install and interconnect systems;

- Monitoring equipment for utilities to assess the value or impact of power anywhere on the grid at any given moment;

- Regulatory tariffs;

- Utility support schemes that eliminate the incentive to allow distributed generation;

- Interconnection rules;

- A priority for certain types of technologies.

2. Dedicating part of the oil and gas revenues to clean infrastructure development and a clean infrastructure fund could be created;

3: Strengthening the role of SAARES to it to have a leading role in developing clean energy projects in Azerbaijan;

4: Adopting the Strategy and clearly state its support for PPPs in this field in order to achieve the required scale of development;

5: Changing the energy tariffs and tariffs methodology with different tariffs for clean energy generation;

6: Improving the legislation to include in a more structured and clear way a legal framework for PPPs. Currently there is no such legal framework. Unless there is a clear legal and regulatory framework (with necessary guarantees) the foreign and local private actors will be reluctant in engaging in this sector;

7: Having a new green energy policy. Current policies are based on the state program from 2004;

8: Incentivising Azerenergy towards developing clean energy in the country since the company has the monopoly over the energy generation in Azerbaijan and might be more interested in keeping the status quo and continue being in the central position of the energy industry;

Wind Energy Case Study Mongolia

Mongolia's first wind farm was recently constructed – the 50 MW Salkhit wind farm. As of 20 June, 2013, Salkhit is connected to the grid and has started producing electricity

Mongolia has adopted a progressive Renewable Energy Law which will give producers preferential rights to sell their output. However, while the National Renewable Energy programme mandates a quarter of energy coming from renewable sources by 2020, the Salkhit wind farm is the first significant renewable energy generator in the country, producing about 5 per cent of its electricity needs.

Salkhit wind farm was built with debt and equity financing of US $47.5 million from the EBRD and the same amount from FMO, the Dutch development bank. The funds were provided to Clean Energy LLC, a company now 51 per cent owned by Newcom, 14 per cent owned by each the EBRD and FMO, and 21 per cent by General Electric. Newcom is a Mongolian technology holding company, which founded the first mobile operator in the country and owns the largest domestic airline.

According to the EBRD: "Salkhit wind farm has awakened interest in wind power in Mongolia from other investors, both local and international. We are now assessing several follow-on wind farm projects. The demonstration effect from the Salkhit, both in terms of project implementation and financing, has been significant."

The 50 MW Salkhit wind farm was built about 70 km away from the capital Ulaanbaatar, one of the most polluted cities on Earth. The wind farm is expected to reduce CO2 emissions in the country by approximately 164,000 tonnes annually, enabling the company to sell carbon credits.

Shams 1 UAE Solar Case Study

Three companies, France's Total S.A., Spain's Abengoa S.A., and Abu Dhabi-based Masdar gained a US$600 ban loan to build the plant, named Shams 1, which will have a 100-megawatt capacity and would qualify for carbon credits under the United Nation's Clean Development Mechanism (CDM).

The Shams 1 solar plant is the GCC's biggest renewable energy project to date. Shams 1 has attracted a 22-year, US$600 million bank loan from eight foreign and two local banks led by French bank BNP Paribas. The Shams consortium also received a US$153 million equity subscription from its sponsors: UAE-based Masdar holding a 60% stake, alongside France's Total and Spain's Abengoa each holding 20%.

Two different processes generate solar power: solar photovoltaic (PV) cells that absorb light and concentrating solar thermal (CST) technologies that harness heat. The Shams 1 project uses parabolic trough technology, which is a form of CST technology to generate electricity.

Under the model, we understand the project company will sell power to state utility Abu Dhabi Water and Electricity Co. (ADWEC) under a power purchase agreement. An important feature of the Shams 1 solar project is the introduction of a "green payment" under which the Abu Dhabi Ministry of Finance will compensate ADWEC for the difference between average domestic power generation cost and the generation cost for Shams 1. The green payment provides a critical political support in the form of this payment, which enhances the long-term viability of renewable transactions in UAE.

THE LEGAL AND REGULATORY FRAMEWORK FOR PPPS IN AZERBAIJAN

4. THE LEGAL AND REGULATORY FRAMEWORK FOR PPPS IN TURKEMNISTAN – CURRENT POSITION AND PROPOSED RECOMMENDATIONS

4.1. Review of the Current Legal and Regulatory Framework in Azerbaijan

1 General Legislative and Institutional Framework

1.1 Issue: Does the constitutional, legislative and institutional framework for the implementation of privately-financed clean infrastructure projects ensure transparency, fairness, and the long-term sustainability of projects?

A general policy, legal and institutional framework for public-private partnerships was not identified in Azerbaijan.[26] However, there are different structures that the government is using to shape private participation in different projects initiated by the government itself to boost the non-oil economy, but also in the conventional energy sector. Article 40 of the Law on Protection of Foreign Investments of the Republic of Azerbaijan recognizes the possibility of concluding concession agreements for the search, exploration and development of the raw materials and other natural resources. This article was widely implemented for the oil contracts the country entered into with western energy companies and so far is primarily used within the oil and gas industry. However, the articles of the Civil Code of the Republic of Azerbaijan on "concession agreements" (Articles 800-808) can be applied to the clean energy infrastructure projects.

According to the EBRD "while the laws of Azerbaijan govern either privatisation as the outright sale of assets to private sector or public procurement, they are largely silent on public works and services concessions as a way of structuring public-private partnership relations that lie in between these two extreme ends of possible relations of public and private sectors."[27]

1.2 Issue: Are there undesirable restrictions within that framework on private-sector participation in clean infrastructure development and operation?

Any kind of participation is at complete discretion of the government. To regulate the clean energy sector, the government created an independent Agency on Alternative and Renewable Energy ("**Agency**") in 2013. Private participation in clean infrastructure is subject to licensing by the Agency. The licensing procedures are regulated under Rules adopted by the Cabinet of Ministers. License is issued for development, construction and operation of the clean infrastructure.

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[26] See with regard also EBRD Assessment on Commercial Laws of Azerbaijan, 2011

[27] EBRD Assessment on Commercial Laws of Azerbaijan, 2011

1.3 Issue: If so, how can they best be eliminated?

N/A- See the recommendation in Issue 2.

2 Scope of Authority to award projects

2.1 Issue: Does the law clearly identify the public authorities of the host country (including, as appropriate, national, provincial and local authorities) that are empowered to award privately-financed clean infrastructure projects ("PPPs") and contracts for their implementation.

Private-actors are able to identify authorities responsible for award of clean infrastructure projects. Licenses for development, construction and operation of the clean infrastructure are issued by the Agency. The Agency is also entitled to control that the conditions of the license are obeyed.

However, the Agency is not the only authority *controlling* the implementation of the infrastructure project and different public authorities may claim a right of control over the project with their methods of control being often considered as controversial.

2.2 Issue: Is there a clear allocation of such powers as between national and local authorities?

All local authorities in Azerbaijan are considered as national. If the intention is to understand whether there is a clear allocation of powers between central and local authorities, no clarity in allocation of such powers was identified. The powers of the relevant state authorities are clearly allocated, whereas the identification of who is responsible for what might require involvement of a specialist with detailed knowledge of the local legal and policy structures.

2.3 Issue: Is it clear that these powers extend both to the construction and operation of new facilities and the maintenance, modernisation, expansion and operation of existing facilities?

Legislative acts empowering relevant authorities to license activities also extend to construction and operation. It does not clearly cover maintenance, modernization and expansion.

2.4 Issue: Does the law identify with sufficient clarity the sectors or types of clean infrastructure in respect of which PPPs may be granted?

Rules on Licensing list the following types of clean energy:

(a) Water energy;

(b) Wind energy;

(c) Solar energy;

(d) Bio-energy;

(e) Geothermal energy;

(f) Micro water electricity stations (50>10000 kv); and

(g) Wind electricity stations.

The Law on Protection of Foreign investors seems to limit the sectors eligible for concession to natural resources. But there is no restriction in the law for concession in other areas. The eligibility of the private legal and physical persons to apply for a licence to develop, construct and operate a clean energy infrastructure, as provided above, is an example for non-existence of such restriction.

2.5 Issue: Does the law address questions of geographical extent and exclusivity relating to the jurisdiction of the relevant authorities with sufficient clarity, and the resolution of overlapping jurisdictions?

Powers of all central authorities (including the Agency (licensing the clean infrastructure projects) and the Cabinet of Ministers (entering into contracts under Art 40 of the Law on Protection of the Foreign Investors)) apply in the whole territory of the country. There are no overlapping jurisdictions.

3 Administrative Co-ordination

3.1 Issue: Have adequate institutional mechanisms been established to co-ordinate the activities of the public authorities responsible for issuing approvals, permits, licences and consents needed for the implementation of the clean energy project?

Although there is a single body issuing licences needed for the implementation of clean energy projects, according to the current legislation of Azerbaijan there are no clear institutional mechanisms to coordinate the activities of the public authorities for issuing approvals, permits, consents, etc. needed for complete implementation of such projects.

4 Regulatory Authority

4.1 Issue: Is there a clear separation of authority between the regulator and the entity providing the services?

No clear separation of authority between the regulator and the entity providing the services in clean infrastructure was specified in the laws. But the contract with the relevant authority usually has the clauses on scope of the entity providing services. Under the existing laws the Agency is acting as an oversight body of the state.

4.2 Issue: Are the rules governing regulatory procedures publicly available?

Generally rules governing regulatory procedures, including with regard to clean infrastructure, are publicly available at the registry of the laws operated by the Ministry of Justice. However, the existence of the rules does not imply that the procedures applied are understandable or clear.

4.3 Issue: Is there an obligation to provide reasons for regulatory decisions, with sufficient access for interested parties?

According to the existing legislation decisions with regard to requests of the interested parties shall be justified and reasons must be given.

4.4 Issue: Are there transparent procedures whereby regulatory decisions can be appealed to – and reviewed by – an independent and impartial body, and clear criteria applicable thereto?

Under the current legislation all decisions of the government bodies can be contested in court proceedings. Courts are considered according to the existing laws (e.g. Constitution of the Republic of Azerbaijan), as impartial branch of the state. In the contractual relations with foreign participation parties usually choose to resolve disputes through arbitration in a jurisdiction outside Azerbaijan.

5 Risk Allocation

5.1 Issue: Are there any unnecessary statutory or regulatory limitations on the ability of the contracting authority and the concessionaire to agree on an allocation of risks in the project agreement that is best suited to the project?

According to the Civil Code civil or legal persons are free to conclude contract and agree on the content of such contracts. Under another norm of the Civil Code in contractual relations the state is represented by its organs which usually are entrusted to agree on an allocation of risks in project agreements, including allocation of risks that is best suited to the particular project.

Notably, scope of activities of every single state organ is defined in its regulations usually approved by the President of the country. For project agreements the negotiating state authority is usually receiving instruction (verbal and/or written) on possible allocation of risks. Under existing norms of the national and international law if any state organ acts in violation of its powers the respective agreements might be considered void.

Under public procurement procedures as described below there is a predetermined model contract to be signed between the procuring agency and contractor, which leaves little room for flexibility.

6 Government Support

6.1 Issue: What feed in tariffs (if any) are available for the project?

There are no feed in tariffs or other incentives for clean energy development projects.

6.2 Issue: Is there any direct promotion through governmental support programmes for the project?

No such support program for clean energy projects has been identified in the existing normative and government acts.

6.3 Issue: Are there any other subsidies, quotas applicable or soft loans available by the government for the project?

No such subsidies, applicable quotas or available soft loans could be identified for clean infrastructure development (unless such infrastructure is located in the territory of techno-parks (see the answer to issue 6.4 below)).However, the government can enact normative acts (Cabinet of Ministers' resolutions) exempting certain equipment from the customs duties or VAT charges in projects of state importance.

6.4 Issue: Are there any fiscal incentives and/or grants and rebates for the project?

Generally, on an *ad hoc* basis the government might apply such fiscal incentives or rebates; with amendments to the Tax Code effective from 1/01/2013 activities in techno-parks for example are exempt from taxes for 7 initial years. There is no practice of providing grants for any kind of projects.

6.5 Issue: Were any clean energy targets adopted by the government?

With its order from 29/11/20011 the President of the Republic of Azerbaijan tasked the Agency to prepare a strategy on prospects of the use of clean energy in the country covering. The strategy should have been prepared within 6 months but it has not been published or implemented as of yet.

The order of the President tasked the Agency *inter alia* to cover:

(a) creation of the legislative basis for the clean energy industry;

(b) stimulating measures in the field of the clean energy;

(c) providing the use of the clean energy in all fields of the economy.

6.6 Issue: Does the law make it clear which public authorities may provide financial or economic support to the implementation of the project (where needed) and what types of support are they authorised to provide?

All financial or economic support shall be approved either by Parliament or the Cabinet of Ministers. In certain cases such support can be sanctioned with a Presidential decree.

7 Selection of the IPP (independent power project) developer

7.1 Issue: General: Are the law's selection procedures sufficiently transparent and efficient, and well-adapted to the particular needs of privately-financed clean infrastructure projects?

The laws on selection procedures of Azerbaijan are general and applicable to all participants of the local market and foreign participants (entering the market) including IPP developers. There is no procedure specifically designed for clean energy infrastructure or IPP developers.

The laws on the selection procedures (Public Procurement Law) provides a division between the stages of the selection, which does not imply that selection process is sufficiently clear, efficient and well-adopted to the needs of privately-financed projects, including clean infrastructure projects.

Public Procurement Law provides for a detailed description of public procurement tender procedures under the Chapters III-VII. Under the Article 22 the Public Procurement Law recognizes three stages of the public procurement:

(i) forming a tender commission;

(ii) preparing the major conditions of the tender (to be approved by tender commission);

(iii) publishing a tender call (a call shall be approved by the tender commission), alternatively, tender commission can send individual invitations for participation in tender.

7.2 Issue: Are there clear and well-structured procedures relating to:

(a) pre-selection

Public Procurement Law does not provide for a specific procedure enabling a pre-selection for procurement of goods/works. However, pre-selection is practiced by government institutions, especially in cases when tender commissions are sending individual invitations. There are no pre-established criteria for such selection while sending individual invitations.

Also, for procurement of the services government institutions may attract direct offers from service providers if:

(i) such services are provided only by a few number of private actors (with the condition that all private actors are requested/invited to submit a direct offer);

(ii) costs and time for considering large number of offers/bids are disproportionate to the price of the services (with a condition that at least three companies are allowed to the tender).

The general criteria for the companies to offer in the bidding procedures are the relevance of the activity to the subject of the bid/tender.

(b) single and two-stage procedures (as appropriate) for requesting proposals from pre-selected bidders?

Under Article 46 of the Public Procurement Law the tender procedure can be two-staged. At first stage all providers of requested works/goods are informed about the tender documents except the approximate price of the intended work/good. At the second stage the

participants are also informed with the final tender documents including the price.

(c) the content of final proposals?

Content of the final proposal shall correspond to the content of the request for service offers defined under Art 42 of the Law on Public Procurement.

(d) requests for clarification and modification?

Private actors can request clarification from the tender commission 7 bank days in advance of the deadline for bids (Art 30.1, Public Procurement Law)

Assignors can make modifications or amendments to the main conditions of the tender upon request of the private actors (Art 30.2, Public Procurement Law).

(e) appropriate evaluation criteria?

Law on Public Procurement provides a list of criterion entitling the government institution to reject the bid (Art 36.5).

Law also provides a list of the tender proposals to be considered as winning (Art 36. 7, 44.4)

Law also stipulates that procuring agency shall define the evaluation criteria and list items that such criteria can apply to (Art 43, LLP)

(f) accepting and evaluating proposals?

Law provides for procedures with regard to accepting and evaluating the proposals in Chapter V and VI.

(g) final negotiation and project award?

Negotiations between the procurement agency and bidder regarding the tender proposal during the tender procedures are prohibited (Art 39, LPP).

Project is considered as awarded when the contract is signed and the contract guarantee is provided (Art 40, LPP)

(h) award of the project without using competitive procedures (and the circumstances in which this can be done)?

Projects can be awarded without a competitive procedure from one source (Art 21, LPP) if:

(i) procured goods (works and/or services) are only available from one company and there are no alternatives to it;

(ii) goods (works and/or services) are urgently demanded and conducting a tender or use of any other procurement method is inexpedient; except the cases when the urgency is the failure of the procuring agency and urgency was foreseeable;

(iii) goods (works and/or services) are urgently demanded because of emergency situations and use of other procurement methods will lead to delays;

(iv) procurement agency for standardization or compatibility purposes decides to procure the goods (works and/or services) again after previous procurement of such goods (works and/or services).

(i) the treatment of unsolicited proposals?

LPP does not regulate the treatment of unsolicited proposals.

(j) confidentiality of submissions and negotiation?

LPP provides for confidentiality during the submission and negotiations.

(k) publication of final award?

According to the law the information on the agreement resulted from the public procurement tender shall be published within 5 bank days (Art 5.3, LPP)

(l) maintenance of records of selection and award proceedings and scope of public access thereto?

The contracting authority shall prepare a report on procurement procedures containing the information on tender procedures and their outcome. Upon request of interested such reports shall be provided to requesting person/body. (Art 10, LPP)

(m) the right to appeal against or seek review of the contracting authority's acts?

LPP provides under Chapter VIII for the review of the acts by contracting authority itself as well as by a higher administrative organ and judicial review.

8 Project Agreement

8.1 Issue: Does the law allow sufficient scope and flexibility for the parties to agree on the contents of the project agreement as best suited to the needs of the project?

The model agreement in form established by the Cabinet of Ministers shall be used as a template for project agreements (Art 40.11, LPP). The model agreement is mandatory.

However, in certain cases, the government also accepts models agreements prepared by internationally recognized institutions (e.g. FIDIC Contracts). Parties are usually able to agree on the content best suited to the needs of the project, including sufficient scope and flexibility for parties.

In certain cases, the government might be very reluctant to negotiate and change the principle terms of the model agreement provided by the Cabinet of Ministers.

8.2 Issue: Does it contain any unnecessary constraints in this context?

The mandatory nature of the pre-established model is itself an unnecessary constraint.

9 Project site, assets and easements

9.1 Issue: Is the law sufficiently flexible in terms of the controls it permits to be vested in the developer over the use and ownership of the site and the assets comprised in the project? (For example, can clear distinctions be made (if necessary) between public assets and private property? Can the developer be obliged to transfer some assets and retain others at the end of the project?

The civil legislation of Azerbaijan enables delegation of control competences to the service providers.

In case the activities require receipt of a license (e.g. activities in the field of clean energy, including IPP development) from the state, the state agency issuing a licence is entitled to control the state of the implementation of the project, including operations.

The possibility of transferring some assets and keeping other depends on the goals set by government for implementation of the project *or* mutual agreement with the private participant.

9.2 Issue: Does the law make it possible for the developer to obtain/enjoy ancillary property rights (easements etc.) related to the project as necessary for the performance of its obligations – e.g. to enter upon/transit through property of third parties?

Civil legislation of Azerbaijan recognizes the ancillary property rights under its relevant Chapters.

The developer can obtain such rights, in certain cases subject to compensation to be paid to the owner of the neighbouring territory.

9.3 Issue: How satisfactorily will any compulsory purchase powers work?

(a) are they available to the conceding (or other) authority?

Conceding authority or other state authorities can, after the decision of the Cabinet of Ministers, purchase plots for the state purposes. In cases of a movable property the decision to purchase can be taken by conceding authority, whereas in most of the cases such purchases shall be sanctioned also by the Cabinet of Ministers.

Foreign investors are not entitled to purchase an immovable property in the territory of Azerbaijan, but lease such property.

(b) are the relevant powers sufficiently clear and reliable?

All such purchases shall be sanctioned by the Cabinet of Ministers.

(c) will they operate efficiently enough?

If the political will exists they will operate with a high efficiency.

(d) will the project be adequately insulated from third party claims?

The projects can be insulated from third party claims if respective articles on indemnity are included into the contract between the parties. Laws do not contain specific indemnity clauses.

(e) can acquisition costs be allocated appropriately (including recovery from the concessionaire where necessary)?

If acquisition costs for the project are meant, they are usually included into the price of the contract. If the costs for acquisition of the property are meant it can be included into the contract price or depending on the agreement with the contracting authority be recovered.

10 Tariffs

10.1 Issue: Does the law enable/allow the contracting authority (or other government body) to pay the developer for its services where appropriate?

Where appropriate and if agreed in advance the contracting authority can pay the developer for its services. Laws have no restriction for payment of services, unless the services are provided upon prior awareness of the contracting authority.

10.2 Issue: Where needed, does the law contain adequate regulatory controls over the developer's charges and tariffs?

In Azerbaijan certain tariffs and charges are regulated by state, including price for fuel, electricity gas, etc. There is a State Tariff Commission under the Ministry of Economic Development defining tariffs in certain fields of the country's life.

11 Finance and Security

11.1 Issue: Does the law allow the developer to raise and structure the finance it needs for the project (with sufficient flexibility in terms of sources, mixture, use and application etc.)?

Once the developer receives necessary license for development of the project from the relevant government Agency, there is no statutory restrictions on the developer's ability to raise and structure the finance needed for the project.

However, the government might have political and/or economic reasons for not allowing financing from certain sources.

11.2 Issue: Does the law enable the developer to grant adequate security over the project assets for the purposes of raising such finance, including:

The laws do not specify any kind of possibility for a developer to grant security over the project assets for the purposes of raising finance, if such property belongs to the state. Any security granted through a public property must be sanctioned by the Cabinet of Ministers.

Private property can be used as security for financing, if the owner of the property provided his consent in accordance with the legislation.

(a) mortgage/charge over its property (immoveable and moveable);

Mortgage/charge is possible as described above in Answer to Issue N 11.2.

(b) pledges of shares in the project company;

No restrictions could be identified in the legislation

(c) a charge over proceeds and receivables from the concession;

In practices in private transactions, whereas in large projects (with public participation) the practice is unknown. No restrictions to use of this vehicle could be identified.

(d) an assignment of the concessionaire's contractual rights and claims;

No restriction to the use of this vehicle could be identified in the laws.

(e) any other suitable security?

Under the existing legislation intellectual property rights can also be used as a security.

11.3 Issue: Are there restrictions in the law relating to the grant of security over any public assets comprised in the project? Are these prejudicial to the developer's ability to finance the project?

In Azerbaijan the government is extremely reluctant to allow security over public assets.

There is no specific restriction in the legislation towards this end. But as an owner of the public assets only the state (through Cabinet of Ministers) can sanction the use of public assets as a security.

11.4 Issue: Does the law allow for the creation of appropriate "step-in rights" in favour of lenders where required?

The laws contain no provisions on "step-in-rights" in favour of lenders, but also do not restrict or prohibit such measures.

11.5 Issue: Does the law make it possible for a controlling interest in the project company to be transferred to a third party where appropriate?

In Azerbaijan the rules on transfer of controlling interests in companies depend on the legal form of the company (ltd., open joint stock company, closed joint stock company, etc.). Depending on a form restrictions over transfer of the controlling interests are applied.

12 Construction Works

12.1 Issue: Does the law contain any unnecessary restrictions relating to the parties' ability to agree on suitable provisions for the design and construction of the project works (including (a) the drawing up, review and approval of construction plans and specifications; (b) the preparation of the design; (c) the contracting authority's right to monitor construction; (d) the contracting authority's power to order variations where appropriate; (e) procedures for testing, inspection, approval and acceptance of the facility; (f) latent defects and liability)?

In Azerbaijan construction phase of any project require interaction with several state agencies, including contracting authority. Every construction, except construction of private houses, must be licensed by the state (including drawings and design) and shall undergo state acceptance (called in legislation "operation permits"). Both contracting authority and other state agencies will require tests and launch inspections.

Contracting party has the preferential right to monitor the construction and/or assign its representative to undertake such monitoring, including its right to order changes where appropriate.

13 Operation of the Facility

13.1 Issue: Does the law contain any (unnecessary) restrictions relating to operation of the completed facility and the parties' ability to agree on suitable provisions relating thereto (including, for example:

(a) continuity of service provision;

(b) non-discriminatory access and availability;

(c) provision of information and progress reports;

(d) the contracting authority's right to monitor performance;

(e) the contracting authority's right to exercise appropriate emergency step-in and operation powers;

(f) the making (and publication) of rules governing use and operation?)

The existing legislation of Azerbaijan enable the contracting authority and other state agencies to apply reasonable control over the operation of the facility, including, but not limited to the listed items.

14 Ancillary Contractual Arrangements

14.1 Issue: Does the law contain any (unnecessary) restrictions on the developer's freedom to agree the terms of the various project and other contracts with third parties necessary to give effect to the project (e.g. construction/O&M/shareholders agreements)? For example, are there (unnecessary) requirements to obtain government approvals, apply local law, restrictions on "delegation" etc.?

According to the existing legislation of Azerbaijan assignment of rights and obligations to third parties shall be agreed in advance with the contracting authority.

Depending on the character of the contractual relations in certain cases complete assignment of the rights and obligations to third parties are not allowed. Such assignment is subject to approval from the contracting authority.

In clean energy projects the operation of facilities are sanctioned with a licence. Rights licensed to one operator cannot be transferred to other third parties without prior agreement with the licensing authority.

Sub-contracts for certain part of the services with in advance agreement of the contracting authority are allowed.

14.2 Issue: Does the law contain other (unnecessary) restrictions relating to the parties' freedom to agree on other fundamental provisions of the project agreement such as:

(a) suitable performance guarantees;

(b) suitable insurance arrangements;

(c) modifications for events of force majeure/changes in law/stabilisation provisions, and the payment of compensation where appropriate?

(d) extensions of time for completion/extension of the term of the concession?

(e) remedies for default.

No restrictions relating to the parties' freedom to agree on above mentioned and other fundamental provisions of the project agreement could be identified.

15 Duration, extension and termination of Project Agreement

15.1 Issue: Does the law prescribe a (maximum) duration for the project and the PPA?

In Azerbaijan laws do no prescribe such a maximum duration for the project and/or PPA

15.2 Issue: Does it allow the conceding authority sufficient flexibility to agree an appropriate term?

In large projects, to conclude a contract usually state organs get instructions (verbal and/or written) from Cabinet of Ministers.

Contracting authorities can be limited to the model tender agreement prepared by the Cabinet of Ministers, as described above.

Contracting authorities can negotiate and agree upon appropriate terms within their competences (approved in their Regulations). Within their competences contracting authorities have sufficient flexibility.

15.3 Issue: Does it permit the term to be extended in appropriate circumstances (e.g. completion delay due to force majeure/government suspension of the project/compensation for change in law)?

Laws do permit the term to be extended. Subject to the agreement between the project parties compensations are also applicable.

16 Termination of PPA

16.1 Issue: Does the law contain any (unnecessary) restrictions on the parties' freedom to agree on termination rights and procedures that are best suited to the project. The law will often provide for termination rights, of course. But are these:

(a) sufficiently flexible to be developed/modified in the agreement as appropriate?

(b) sufficiently clear and balanced (and fair to the developer)?

(c) subject to a "public interest" termination right? If so, will these be acceptable to the developer and its lenders (this will often come down to the payment of adequate compensation)?

(d) sufficiently broad to allow for force majeure/suspension/frustration terminations?

The list of the termination grounds are specified in the model public procurement agreement (Art 24) and Civil Code of Azerbaijan (Chapter 20,

paragraph 4). According to the Civil Code the contract can be terminated with the mutual agreement of the parties, including the change of circumstances.

Termination rights of parties correspond to the items described from a-d.

16.2 Issue: Does the law allow adequate "step-in rights" to be granted to lenders (see above)?

No such rights could be identified in laws.

(a) Issue: Does the law deal adequately with the subject of compensation payments on termination? In particular:

(b) will the parties have sufficient flexibility to provide for this in detail in the project agreement?

(c) is it possible to deal appropriately with the full range of termination events and categories of loss (including the fair value of works performed/lost return to shareholders/payment out of debt)?

(d) are any restrictions consistent with "international norms" and the expectations of lenders?

Existing laws of Azerbaijan are adequate and are providing sufficient flexibility in agreeing upon compensation payments in cases of termination, including cases described from a-c, within the contract. International contractors are practicing (by inclusion of the relevant provisions into their contracts with authorities).

Current legislation prescribes compensation of the full amount of damage in case of nationalization or requisition. Foreign investors are entitled to a compensation in cases of damages caused by acts of public authorities or civil servants contrary to the legislation of the Republic of Azerbaijan.

16.3 Issue: Does the law contain any (unnecessary) restrictions relating to:

(a) the transfer of technology required for operation of the facility?

(b) the training of the contracting authority's personnel?

(c) the provision of O&M services and spare parts by the concessionaire, if required, for a limited period after termination?

Laws of Azerbaijan do not contain any unnecessary restrictions relating to (a) - (b).

17 Settlement of Disputes

17.1 Issue: Does the law allow the parties to the project agreement sufficient freedom/flexibility to agree on dispute-resolution mechanisms which are best suited to the needs of the project (including choice of law/international arbitration/mediation and "panel" mechanisms etc.)?

Laws of Azerbaijan contain no restriction and provides sufficient flexibility to parties to make choice of law and use dispute resolution mechanisms other than local judicial system.

17.2 Issue: If not, how prejudicial could any restrictions be?

Non applicable

17.3 Issue: Does the law contain any unnecessary restrictions on the concessionaire's freedom to agree on the most appropriate dispute-resolution mechanisms with its third party contractors (including shareholders/lenders/contractors/operators and suppliers)?

Laws contain no express permission and at the same time no express restriction for such arrangements with third parties.

4.2. General PPP Recommendations for Azerbaijan:

Azerbaijan has no single legislative act regulating concessions or structured PPPs. The country also lacks a single PPP policy and respectively any measures encouraging private participants to engage in projects.

- With the increasing scarcity of natural resources and the need for optimisation of the costs for the local investment projects, the government of Azerbaijan might want to consider adopting measures to introduce a PPP policy and to prepare the legal and regulatory framework for PPPs.

- Private participation in PPP projects should have a clear basis in policy and legislation, with bound government support. The government might want to consider either amending or making additions to the existing legislative acts (including the Civil Code of the country) and/or enact a new special law on PPPs;

- The Government might want to consider reforms in the licensing and inspection practices of the public authorities and/or civil servants. While it is understood that complete abolishment of the licensing might not be possible, simplifying the procedure (by reducing the number of documents required; enabling online application; etc.) is considered vital for private-sector participants to do business in all fields of the economy, including for clean energy infrastructure development;

- The information on allocation of powers (who is responsible for what in government) with regard to all projects including clean infrastructure projects should be easily accessible via public internet sources, such as e-gov.az portal;

- The government might want to consider taking measures to strengthen the rule of law system and to contribute to the confidence of the private participants in a correct and non-restrictive interpretation of laws and/or prevention of the misinterpretation of the existing and future legal acts relevant for PPPs.

4.3. Specific PPP Recommendations for Azerbaijan

(a) Bidding Process Recommendations

Clear procurement processes which uphold the principles of fairness and equality to all bidders and which provide transparency in the public sector's decision-making process are necessary to encourage effective competition for PPP projects. This not only benefits foreign investors and funders by providing comfort that their bids will be treated on merit, but also benefits the public authority by achieving better value for money, as increased competition will help drive down prices and encourage better technical solutions.

The Government might want to consider:

1. Setting out in the law clear procurement processes which are suitable for PPP structures.

2. Ensuring that procurement procedures uphold the key principles of fairness, transparency and competition.

3. Ensuring that the procurement framework makes the public sector accountable for its decision, which must identify a winning bidder who has the ability to implement the project successfully.

4. Establishing a procurement process which is structured and includes procurement stages that reflect the scale and complexity of the project.

5. Designing a procurement procedure which includes conditions that encourage competition between bidders so as to allow public authorities to achieve better value for money.

6. Advertising projects appropriately, using accessible forms of media.

7. Using award criteria that are objective and transparent.

8. Advertising contract award.

9. Notifying unsuccessful bidders of decisions and provide an opportunity to debrief them on their bid, setting out the reasons for elimination.

10. Giving unsuccessful bidders access to clear rights of challenge and effective remedies.

(b) Allocation of Risk in PPP Projects Recommendations

The Government might want to consider:

1. Transferring the design and construction risk to the private sector. The public sector should be encouraged to make payments on a "no service no fee" basis, i.e. where payments to the private sector begin only on satisfactory completion of construction or demonstration of achievement of the specified performance criteria.

2. Defining the standard of work required in the PPP contract.

3. Applying incentives (penalties/bonuses) for the private sector to perform.

4. Making the construction contractor liable (either by contract or in law) for defects in the works for a defined period of time.

5. Allocating planning risks to the private sector but encourage the public sector to provide assistance.

6. Allocating responsibility for obtaining all other approvals (for example, construction permits) to the private sector, but the public sector should provide reasonable assistance.

(c) PPP Procurement Recommendations

A robust procurement procedure for PPPs needs to be developed as part of an established legal framework governing PPP transactions. The importance of this cannot be over-emphasised. Too often in numerous countries around the world, little thought has been given to the quality of tender documents or the process they attempt to describe. From an international investor's perspective, this creates a poor image from the outset. Well-structured and clearly considered tender documents are therefore a minimum requirement. Specifically, the tender documents should:

The Government might want to consider:

1. Identifying clearly the tender process that will be followed, including each process that needs to be followed and the approvals required in order to take the project from start to finish;

2. Setting realistic timetable for the process. Too often the quality and robustness of a project is jeopardised by an unrealistic assessment of the amount of time required in order to procure PPPs. If the time period in the tender documents is too short, this will almost certainly cause private sector developers to think twice about participating as it demonstrates an unrealistic expectation within government. A balance between a desire for speedy delivery and a realistic procurement horizon needs to be struck based on experience;

3. Identifying the objectives of the public sector and the evaluation criteria supporting these objectives for the PPP must be clearly established;

4. Ensuring that it has the capacity to negotiate and then implement the schemes. This has been a key issue facing all governments desiring to implement PPP programmes. In addition, our comments below in relation to the identification of pathfinder schemes should assist. At least in the early stages of the programme, the expertise and capacity of host government should not be spread too thin. Efforts should be concentrated on the successful delivery of a few key schemes. Thereafter, as knowledge and practice becomes more widespread, the programme can be expanded.

(d) Security Package Recommendations

We list below a standard set of securities usually required in international PPP projects. Lenders will expect a robust security package to protect their investments in the case of default by the borrower. The broad range of project finance securities normally available to lenders includes the following:

- Mortgages over any land and property held by the project company;

- Fixed and floating charges over shares of the project company and any plant and machinery, credit balances, book debts, intellectual property and other beneficial interests;

- Assignment of insurance policies by way of security;

- Assignment by way of security with respect to all receivables against the public authority, the subcontractors, the hedging counterparties, the insurance companies and the tax authorities and all rights in respect of any agreement to which the project company is a party;

- Arrangements relating to the proceeds account to channel the proceeds generated by the project through a blocked account usually kept with the leading bank; these usually provide for a payment order in accordance with a cash cascade (or waterfall) clause;

- Project support agreements: completion guarantee and/or cost-overrun guarantee from the project sponsors;

- Subordination of sponsor's capital and loans to the lender's facilities;

- Interest hedge/currency hedge arrangements;

- Collateral warranties such as direct duty of care agreements from subcontractors; and

- Direct agreements, which provide step-in rights for the lenders to step-in to the project in circumstances where the Project SPV has defaulted and is in danger of its contract being terminated (for example, by replacing the constructor or operator if they are not performing during a specified period of time or by transferring the contract to a suitable substitute). Direct agreements also usually provide for the subordination of the authority's rights to those of the lenders.

INNOVATIVE FINANCING OPTIONS FOR CLEAN INFRASTRUCTURE AND ENERGY EFFICIENCY DEVELOPMENT IN AZERBAIJAN

SECTION 5 INNOVATIVE FINANCING OPTIONS

In many emerging economies, clean energy generation is paid for by a small surcharge on consumer bills. There are some local content incentives in place to encourage domestic manufacture and domestic jobs. Brazil makes financing from the local development bank BNDES conditional on securing local content in the project.

In China the Chinese government introduced supportive policies for Chinese wind such as massive central and local government support for industries and power companies developing projects, in the form of land grants, low-cost credit and political incentives.

The Chinese also introduced a feed-in tariff level paid for by a surcharge on consumers. There are also central and provincial targets for wind and RE development from the five-year plans. Though not legally binding, they act as a form of soft renewable power purchasing

5.1. The Business and Financial Climate

From the discussions with different stakeholders, it appears that the business climate in the country improved considerably over the recent years. With different innovative approaches (online registration of legal entities, applying one-stop-shop principles in different state agencies, measures to increase legal certainty, new legal inspections, decrease in tax rates, reforms in financial markets, measures to increase transparency, consulting different stakeholders in the market (business and international organizations) over the actions to be taken, etc.) the business and financial climate is made more investor friendly.[28]

Under the *"Azerbaijan 2020: vision for future"* (approved 12/2012) the government also announced its plans to reform the custom procedures, to realize tax optimizations, to improve the employment situation, to protect the environment and to take measures for sustainability of the economy, etc. by 2020.

However, centralization of the economy in hands of certain holdings and groups, difficulties in market-access (requiring reforms in the customs system), inspection and licensing bureaucracy of the government authorities, inconsistencies and shortcomings of the rule of law system are observed to be the fields where the government has to implement further reforms in order to improve the business climate. The level of dependence on the government, government officials, etc. is still the source of mistrust by the private sector. The independent local private actors are also taking investment decisions based on these criteria.

In addition, the Azerbaijani financial market is one of the closest in the region although not detached from the global financial markets. Notably, the local banks are not in position to finance large projects and are usually focused on consumer credits. Currently consumer credits contain huge part of the local bank portfolios (in certain cases up to 75%). "Most banks remain small, with market shares of less than 1% and only a few with shares up to 6%. State-owned IBA, the only exception, has lost market share in recent years, but still accounts for 34% of sector assets"[29]. No case of local bank participation in clean energy projects had been identified during discussions with the stakeholders and through analysis of the publicly available documents.

[28] For more information see: ("National Action Plan for Open Government" 05.09.2012; Decree of the President on Certain Measures for improvement of the Enterpreneurship 30.04.2007; Law on Regulation of the Inspection of entrepreneurs and protection of entrepreneurial interests 2.07.2013).

[29] ADB Azerbaijan Financial Sector Assessment, 12/2012

In addition, very few foreign banks are present locally (e.g. Russian VTB, Turkish YapiKredi, German Commerzbank, and French Societe General). Some of the local banks have foreign capital. However, attracting finance from these banks is expensive, partly because the government is imposing a 10% withholding tax on interests and other charges paid to such banks.

Therefore, the business and financial environment in Azerbaijan is still in need of improvement. At the same time, from the discussions with the government officials, it was understood that the government is open to consider different financial options for the development of clean infrastructure projects. From the intended/implemented clean energy projects (as listed in section 2 above) it can be seen that the government is already attracting private funds as well as resources from international multilateral organizations (especially the EBRD) to help finance clean infrastructure projects. Nonetheless, there is no consolidated financing approach for the implementation of such projects.

Any strategy to boost green and climate-friendly investments should therefore include considerations relevant for strengthening of the local financial markets, for improvements to the local banking sector and should include considerations and structures for phasing out obstacles to international capital investment.

5.2. Recommendations:

The government might want to consider:

1: Establishing a Clean Energy Fund to co-finance clean infrastructure projects. This would create certainty for the interested private participants with regard to the availability of financial resources as well as seriousness of the government in improving this field. The budget for the fund may be formed from various sources including: the state budget of Azerbaijan; fixed percentage allocations from energy export revenues (natural gas, oil, electric energy etc.) and the budget of which can be used to support pilot projects for clean energy development;

2: Introducing legally fixed clean energy targets and feed-in tariffs in order to provide clarity and certainty to the private sector and in order thus to attract finance from the private sector for clean energy developments. According to the recent UNEP report survey[30], feed in tariffs are considered to be the strongest policy instrument in leveraging private investment and finance. By guaranteeing the price and providing a secure demand, feed in tariffs reduce both the price and market risks, and create certainty for the investor regarding the rate of return of a project. It is import to ensure cost-efficiency of tariffs for society and feed-in tariffs do not need to be high they just need to be stable and durable;

3: Introducing tax incentives for clean infrastructure development which can be applied either to the investment costs or the electricity produced. Grants

[30] UNEP Financing Renewable Energy in Developing Countries 2012. http://www.unepfi.org/fileadmin/documents/Financing_Renewable_Energy_in_subSaharan_mol.pdf

and rebates such as capital subsidies are other types of public support mechanisms that promote the mobilization of private finance for clean energy development. By reducing the tax costs of projects, these incentives increase the profitability of a given project and/or technology and thus the returns on investment for any given level of investment risk. The effectiveness of tax incentives on the further deployment of clean energy technologies in developing countries was also confirmed by the views of those energy financiers who participated in the UNEP survey on *"Financing low carbon energy technologies and infrastructure in developing countries"*.[31]

4: Applying state-supported lending programs through the Central Bank with a minimal interest rate to encourage local or foreign private actors to engage in this field. Local financial market has to reform in a way that it is able and interested in financing clean energy projects.

5: Directing part of the resources of the State Oil Fund to co-fund clean infrastructure projects, as a measure to diversify the energy sector and to achieve the goal of increasing the share of the green energy to 20%;

6: Trying and taking advantage of the available international resources such as funds within UNFCCC and Kyoto Protocol, i.e. GEF, Adaptation Fund; Global Green Climate Fund (launch envisaged in 2013); Kyoto Protocol mechanism for the reduction of greenhouse gas emissions, Clean Development Mechanism and other international financing arrangements to support emission reduction efforts;

7: Using financial sources and know-how from international oil companies present in Azerbaijan to help develop clean energy know-how or pilot projects in Azerbaijan by allocating a percentage of fees from the production sharing agreements with such companies and from further co-operation with such companies in this field;

8: Improving its general investment and country risk profile. Country risk forms part of an overall assessment by investors before investing in PPP projects. Perceived investment risks can have more of an impact on the effectiveness of clean energy policies than do potential profits and costs, so that for national governments seeking to attract clean energy investors to the country, the question of risk must be directly addressed through various policies, actions and procedures directing at making the investment environment safe and reliable.

9: Introducing some of the laws designed to make investment more economically attractive to the private sector, these can include:

- Property and sales tax incentives;
- Production and investment tax credits;

[31] UNEP FI & Partners (2012) "Financing Renewable Energy in Developing Countries

- Grant or rebate programs for clean energy developers and owners;
- Loan guarantee programs;
- Clean energy interconnection standards; and
- Government mandated long-term off take agreements or feed in tariffs.

5.3. Conclusion

Clean infrastructure development can contribute further towards the diversification of Azerbaijan's economy through the creation of a national green economy whilst at the same time mitigating climate change and addressing environmental and social concerns. By undertaking clean infrastructure development in the country Azerbaijan will be well prepared to adapt production and exports of hydrocarbons to the lower future global demand for fossil fuels. At the same time, in the short term, reducing hydrocarbon energy consumption domestically can result in an increase in quantities of hydrocarbons for export, resulting in a win-win scenario for the government. By diversifying at this stage Azerbaijan will be perfectly placed to take part in the new energy-industrial revolution and to take advantage of the technological leapfrogging available for its domestic clean technology development.

In order to take advantage of the technological leapfrogging in the clean infrastructure space Azerbaijan might want to consider developing part of its clean infrastructure via the collaboration with the private sector through PPPs. The private sector is often considered to provide greater efficiency than the public sector when managing infrastructure projects and delivering infrastructure services. Most importantly involvement of the private sector has the potential to introduce the newest technologies, to increase operating efficiency by making investments in new technologies, to bring innovative solutions, and to encourage more transparent organizational structures.

As mentioned throughout this report, it is vital that a strong legal and regulatory framework is put in place to govern PPP transactions as without this it will be almost impossible to attract private sector investment. In view of the nature and the lengthy time frame of such projects it is imperative that the interests of both the public and private sector are protected by law. It is evident that an established legal framework governing PPP transactions creates an incentive and an enabling environment for prospective investors. As Azerbaijan presently lacks a legal and regulatory framework governing PPP arrangements, it is recommended that it embarks upon such reform as this would create an incentive for prospective investors.

As expected at this stage of PPP development, Azerbaijan does not yet have the necessary subject matter expertise or skills within either the public or private sectors, to develop and deliver a major PPP programme. Institutional capacity building at lead and line ministries is needed in order to improve the skills of public officials dealing with PPPs. On a more positive note, there appears to be a degree of commercial expertise within the public sector in contract dealings with the private sector, especially in the oil and gas industry.

Solid technical skills and knowledge are prerequisites for effective design, installation, commissioning, operation and maintenance of clean infrastructure projects. Many of the clean infrastructure related capacity building projects have focused too much on training activity that is not well integrated into actual project development and implementation. A narrow set of capacity building tools, mainly seminars and workshops have been employed with little recourse to practical training and programs based on learning by doing. In our view, it would be beneficial to invest

in pilot scheme projects through which local government and public authority practical capacity building could be achieved.

A sizeable PPP programme for clean infrastructure development in Azerbaijan would be affordable for the public sector, provided that strong economic development continues. If the Government of Azerbaijan intends to use the PPP model as a procuring mechanism for infrastructure projects, it should take significant steps to raise awareness about the importance of PPP for its infrastructure development and clean infrastructure development in particular. An awareness programme should be introduced at all levels of the government and the private sector in the country including an identification of a pipeline of PPP pilot projects in the near future. With the right political and institutional conditions, Azerbaijan could focus its attention on key selected projects. Such projects if delivered successfully could play an essential role in creating a reputation of Azerbaijan as a destination for PPP investment.

SECTION 6 BIBLIOGRAPHY

ADB Azerbaijan Financial Sector Assessment, 12/2012

Assessment of Sustainable Energy Investment Potential in Azerbaijan. 2008, European Bank for Reconstruction and Development: Azerbaijan.

Azerbaijan: Country Environmental Analysis. 2005, Asian Development Bank.

Azerbaijan: Renewable Energy Development Project. 2007, Asian Development Bank: Azerbaijan.

Baker, R. & Safarzade, E. (2009), Azerbaijan Alternative Energy Sector Analysis and Roadmap

Doing Business 2010: Reforming through Difficult Times. 2010, The International Bank for Reconstruction and Development / The World Bank: Washington, D.C.

EBRD Assessment on Commercial Laws of Azerbaijan, 2011

Energy Charter Secretariat 2013. In depth review of the energy efficiency policy of Azerbaijan. For more information see: http://www.encharter.org/fileadmin/user_upload/Publications/Azerbaijan_EE_2013_ENG.pdf

Energy Efficiency: a New Resource for Sustainable Growth. Researching Energy Efficiency Practices Among Azerbaijani Companies. 2008, International Finance Corporation (IFC).

Energy Information Administration (2012), Country Analysis Briefs-Azerbaijan

Energy Saving International AS (2004), Cleaner Production and Energy Efficiency Capacity Building in Azerbaijan-Progress Report June 2004

European Bank for Reconstruction and Development (2007), Azerbaijan Country Profile

International Energy Agency, 2012 World Energy Outlook. http://www.worldenergyoutlook.org/publications/weo-2012/

International Energy Agency, Energy Statistics, www.iea.org

IPCC: Special Report on Renewable Energy Sources and Climate Change Mitigation. http://orbit.dtu.dk/fedora/objects/orbit:63951/datastreams/file_5672879/content

Loiter, J.M. and V. Norberg-Bohm, Technology policy and renewable energy: public roles in the development of new energy technologies. Energy Policy, 1999. 27(2): p. 85-97.

Promotion of Renewable Energy, Energy Efficiency and Greenhouse Gas Abatement (PREGA). 2005, Asian Development Bank.

REN21 Renewables 2013 Global Status Report. http://www.ren21.net/Portals/0/documents/Resources/GSR/2013/GSR2013_lowres.pdf

Renewable Energy & Energy Efficiency Partnership (2011), Energy Profile Azerbaijan, www.reegle.info

Researching Energy Efficiency Practices among Azerbaijani Companies International Finance Corporation (2010), Energy Efficiency: A New Resource For Sustainable Growth

Researching energy efficiency practices among companies in Armenia, Azerbaijan, Belarus, Georgia, Russia, and Ukraine Mammadov, F. (2012), Development of Renewable Energy Market in Azerbaijan, Baku Second Review, New York and Geneva

State Oil Fund of Azerbaijan. 2010 Available from: http://www.oilfund.az.

State Programme on Poverty Reduction and Sustainable Development in the Republic of Azerbaijan for 2008-2015 (2007), http://www.cled.az/pdf/others/Azerbaijan%20Poverty%20Program%20for%202008-2015.pdf

Sustainable Energy Initiative: Action and Results 2006-08. 2006-2008, European Bank for Reconstruction and Development (EBRD).

The State Program on Use of Alternative and Renewable Energy Sources in Azerbaijan Republic. 2004, Presidential Decree N462.

Tracking Clean Energy Progress, IAE input to the Clean Energy Ministerial 2013. http://www.iea.org/publications/TCEP_web.pdf

UNECE, 2009. Available at: http://w3.unece.org/pxweb/quickstatistics/readtable.asp?qs_id=43 (2011). Enabling Conditions: Supporting the Transition to a Global Green Economy.

UNECE. (2010). Environmental Performance Reviews: Azerbaijan, Second Review. United Nations. United Nations Economic Commission for Europe.

UNEP Green Economy Scoping Study Azerbaijan 2012. For more information see: http://www.unep.org/greeneconomy/Portals/88/documents/research_products/UNEP%20GESS%20Azerbaijan_English_12nov_low%20res.pdf

UNEP. (2009). Energy Efficiency and Energy Intensity in the Republic of Azerbaijan (draft paper). United Nations.

UNEP. (2011). Green Economy Report: Agriculture. United Nations. United Nations Environment Programme. http://www.unep.org/greeneconomy/Portals/88/documents/ger/GER_2_Agriculture.pdf

UNEP. (2011). Green Economy Report: Renewable Energy. United Nations. United Nations Environment Programme.

UNEP. (2011). Towards a Green Economy. United Nations. United Nations Environment Programme. http://www.unep.org/greeneconomy/GreenEconomyReport/tabid/29846/Default.aspx

UNFCC. (2011). Appendix II - Nationally Appropriate Mitigation Actions of Developing Country Parties. United Nations. United Nations Framework Conventionon Climate Change. http://unfccc.int/meetings/cop_15/copenhagen_accord/items/5265.php

United Nations Development Programme, about Azerbaijan, www.un-az.org

United Nations Economic Commission for Europe (2010), Environmental Performance Reviews-Azerbaijan

U.S. Department of State (2012), Background Notes on Azerbaijan, www.state.gov

World Bank, Country Statistics, data.worldbank.org