# PUBLIC-PRIVATE PARTNERSHIP (PPP) OPTIONS FOR FUTURE POWER GENERATION IN MONTENEGRO

## WORLD BANK

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**Final Report**

Submitted by:

**Cambridge Economic Policy Associates Ltd**

CEPA

PPIAF
PUBLIC-PRIVATE INFRASTRUCTURE ADVISORY FACILITY

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## DEFINITIONS

Throughout this report, we make occasional abbreviated or "shorthand" references to a number of documents, institutions or concepts. These include:

| | |
|---|---|
| Draft Energy Law or "Draft Law" | "Energy Law (Final Draft)" Ministry of Economic Development, April 2009 |
| Concession Law | "Law on Concessions", Official Gazette of the RoM № 8/09 |
| Recent SHPP Concession Act | "Concessionary Act For Concession Award To Exploit Water Streams For Construction Of Small Hydropower Plants In Montenegro", an undated 30-page Ministry of Economy document |
| EnCT | Energy Community Treaty |
| Energy Strategy | "The Energy Development Strategy of Montenegro by 2025 White Paper", December 2007 |
| Action Plan | "The Energy Development Strategy of Montenegro by 2025 Action Plan 2008 – 2012 Final Proposal", August 2008 |
| Ministry | The Ministry of Economy |
| EPCG | Elektroprivreda Crne Gore |
| RESS | Renewable Energy Support Scheme. This is a reference to a general sort of scheme, of which there are a number of different varieties, including (for example) that to be developed under Article 25 of the Draft Energy Law. |
| Renewables | Within the context of discussions of Montenegro's Draft Energy Law or future RESS, this refers to those producers eligible for preferential prices under the terms of Article 25 of the draft law (i.e., renewable energy sources (with hydro limited to that < 10 MW) and high efficiency cogeneration) |
| Water Law | "Law on Waters", Official Gazette of the RoM № 27/07 |
| State Property Law | "Law on State Property", Official Gazette of the RoM № 21/09 |

## EXECUTIVE SUMMARY

Montenegro has a number of good opportunities for the development of domestic resources for electricity generation. In the Government's Energy Strategy and Action Plan, it has set out a programme for development that encompasses a range of projects from large-scale hydro and thermal projects to smaller scale renewable energy projects. This programme calls for significant participation by the private sector in generation investment over the coming decade and beyond. The programme is intended to meet a number of objectives, important among which are included meeting international obligations regarding renewable energy utilisation and reducing the reliance of the country on relatively high cost imported power.

Implementing this programme and developing Montenegro's resources will require an appropriate Legal, Institutional and Regulatory (LIR) framework. In this regard, significant progress has already been made. An independent regulatory authority was established in 2004 and various relevant laws (including an Energy Law promulgated in 2003 which is now being updated, as well as a new Concessions Law promulgated in 2009, among others) have been put in place.

In terms of the industry itself, change has also begun. The former vertically integrated monopoly utility company (Elektroprivreda Crne Gore, or EPCG) has had the transmission network and system and market operator functions unbundled, and a new strategic investor has been selected to take a significant stake in the remaining generation / distribution / supply company. One tender round has already been completed for small hydro project development (with several concessions awarded and project developers currently engaged in the planning and permitting process) and another tender round is in progress.

However, significant work remains to be completed if all the objectives of bringing private sector investment in generation projects are to be met. This work includes updating the existing energy law and energy trading rules, as well as developing a number of other industry governing documents and subregulations among other tasks. We note also that while there are good international models for much of the industry governing documentation, such documents nevertheless must also be developed and implemented with recognition of certain "Montenegro-specific" characteristics in mind. These include issues such as the relative remoteness of certain project development opportunities, the existing industrial organisation / competitive structure of the generation sector, among others.

Our study has focused on several aspects of the LIR framework which we have grouped into broad areas roughly following the path of generation project identification, development, and operation.

In terms of the identification of projects, deciding their structure and awarding them to project developers, we have focused on two key laws – the Law on Energy and the Concession Law – and have also observed one example of a Concession "Act" for the development of small hydro projects. Some of our key observations include:

- The existing Energy Law is being replaced with a new Draft Energy Law which is expected to be adopted in due course. The new Draft Energy Law addresses a number of issues (particularly in the areas of renewable energy and market development) which were not addressed in the existing Law. This is a very positive step. However, we believe that there are some specific issues which still need to be urgently addressed in the Draft Law and there are areas where the current Draft Law could be improved from the point of view of potential investors in new generation projects.

- The Concession Law broadly defines the approach to be taken for generation projects. It appears to rely exclusively on a tendering approach for award of concessions for projects to be undertaken which involve State resources. This is an understandable and desirable approach given the presumed objective of preserving transparency and enhancing the value of such resources.

  However, in our review of this law and related laws (including the Water Law and the Law on State Property), we raise the question of precisely which resources qualify as "State" resources (and thus require a tendering approach under the Concession Law) and which – if any – resources would potentially not qualify as State resources. We believe that there is some scope to define non-hydro renewable resources (e.g., wind, solar, etc) as non-State resources provided they are exploited on non-State lands. As such, we believe that a positive case may be made for allowing in law exemptions from the tendering provisions of the Concession Law for such resources. Such an approach would allow the Government to exploit the skills and entrepreneurship of private investors and project developers to discover, define, and develop such projects, whilst the Government would retain the right to authorise such projects.

Once projects are identified, structured, and linked to an identified developer, they must be implemented. A significant part of this process involves the task of obtaining planning permission for a project and approval from various relevant Agencies and Government departments. It also involves obtaining physical connection to the network as part of construction. Some of our observations in this area include:

- The planning and permitting process appears somewhat cumbersome, but perhaps not always overly so in comparison with experiences elsewhere. A key concern is the relative lack of experience of some of the permitting agencies with generation sector projects; this lack of institutional experience may be heightened by the fact that some Agencies / departments are relatively new.

  At least two actions can assist with this. First, a central point of coordination and information could possibly assist both developers and the various approving Agencies / departments. Second, attempts should always be made by concessioning authorities (Ministry of Economy in the case of energy projects) to

maximise the input and requirements of permitting agencies to the extent feasible in the development of Concession Acts prior to the tender process.

- Projects in the development pipeline will need connections at both transmission level (e.g., for larger hydro projects and probably wind projects in the future) and distribution level (e.g., for smaller hydro projects). Formal connection agreements and use-of-network system charges have yet to be finalised. For projects which are in the future to be developed in remote regions under "preferential tariff" schemes, there will be a need to consider how to address and optimise the issue of sometimes significant connection costs in such support schemes.

When projects are constructed and fully licensed, their operation is subject to a number of industry governing documents (e.g., grid codes, etc) and commercial arrangements. Some of our observations in this area include:

- Some industry documentation has already been developed (e.g., an interim grid code is in place), but needs to be adapted for the new, unbundled industry. Some documentation is yet to be developed. It will be in the interest of almost all parties to see that adequate documentation is developed in a timely manner. There is probably a role for proactive coordination and leadership, probably by the regulator and the Government, in order to ensure that this occurs.

- Commercial arrangements remain to be fully developed. In particular, the new Draft Energy Law envisions a "preferential tariff" scheme for qualifying renewables projects; this scheme should be developed promptly so that potential concessionaires can understand the likely future economics of renewables projects. Similarly, the market rules which will govern the energy trading by traditional market participants should be put in place in order to facilitate trading.

While we have presented all the above observations (with more detail in the full report text) here in a sequential manner, following the broad stages of the project development process, it is important to note that from the viewpoint of a potential investor, all these steps and issues should ideally be fully resolved before the investor even considers developing a project. That is, an investor will not wish to tender for a project (in the early stages of "project identification and selection of developer") without full knowledge of what the ultimate commercial arrangements (in the third stage of "project operation") are to be. Neither should the Government, from its position as a steward of State resources, wish to approach the development of projects without a fuller set of framework documentation, lest it receive less than full value for State resources or less serious investor interest. Thus, there is a need to develop (to the extent practically possible) as full a set of relevant framework documentation as possible before starting at least the tendering process with potential investors.

We see the following near-term steps as important for moving forward:

- Several issues need to be considered before the Draft Energy Law is finalised. These include certain policy issues (e.g., approach to wind or solar projects on private land; the applicability of the new preferential tariff scheme to recent small

hydro tenders) and also clarifications or streamlining of language to make the law a more secure framework for investors. Given the timing of the potential approval of this Draft Law, this is either an urgent task, or a task for near-term amendments.

- While the activities of the Ministry of Economy in developing and moving forward with tenders for small scale renewables projects have been laudable and a significant undertaking, the time is probably right to shift focus to completing more relevant framework documentation before proceeding with further tenders. In particular, the development of the preferential tariff scheme envisioned under the new Draft Energy Law will be an important step in moving the development of renewable energy projects forward.
- Proactive coordination should begin in several areas. These include monitoring the Action Plan, developing relevant industry documentation (e.g., market rules, etc) to facilitate generation projects, and coordinating or facilitating the planning and permitting process. There is substantial overlap among these activities and it may be that a single coordinating group (perhaps with one or two subgroups) might be a reasonable way to begin this. The key members of such a coordinating group would include representatives from the Ministry of Economy, the Energy Regulatory Authority, the network licensees (both transmission and distribution), and the Ministry of Spatial Planning, possibly among others.

  We also make observations and recommendations for more medium term and longer term activities as well.

# 1. INTRODUCTION

This is the final report documenting Cambridge Economic Policy Associates' (CEPA's) work on the World Bank project "Public-Private Partnership (PPP) Options For Future Power Generation In Montenegro". In this introductory section, we briefly restate the overall goals of the project, summarise our approach to the work, and provide a brief overview of the report text.

**Project Objectives**

As the Terms of Reference for this project note, the principal objective of the project is to advise on the development of an effective Legal, Institutional, and Regulatory (LIR) framework to facilitate suitable options for private sector participation (PSP) and / or public private partnerships (PPP) for developing new power generation sources for Montenegro. The project proceeded through phases of initial review and understanding of the current LIR framework, understanding how progress is being made through the existing framework, and finally making recommendations for how best to move forward to encourage and facilitate the most practical development options.

These objectives are both clear and quite suitable to the situation today in Montenegro. However, we have had to recognise that there is an existing (and, as we note later, quite dynamic) LIR framework today in Montenegro, and project development is already underway for both large and small scale projects. Thus, to some extent, our recommendations have not been made from a "clean sheet of paper", but rather reflect our views of the best way forward given some of the foundations of the approach to PPP development options already in place in Montenegro. This in no way limits our recommendations as the conceptual foundations are generally quite sound. However, as we make clear, there remains some development work yet to be done in order to ensure a coherent system and LIR framework suitable for supporting PPP generation development.

## 1.1. Approach

Our work programme has included:

- Pre-Inception visit review of documentation.
- Inception visit including meetings with stakeholders; identification and review of additional documentation.
- Mid-Project visit including meetings with additional stakeholders as well as follow-up discussions with certain key stakeholders. (Note: Annex 1 provides a list of all stakeholders interviewed during the course of this work).
- Review by international legal advisor of certain laws available in English language (primarily the existing and new Draft Energy Law as well as the Concession Law; although the Law on Spatial Planning was also reviewed). Additional laws (including the Water Law and Law on State Property) were reviewed in local language by team members.

- Interviews with selected international investors regarding issues of potential investor concern (see Section 3 of this report).
- Preparation and submission of this draft Final Report.

Following submission of this report, we anticipate holding a workshop for key stakeholders in Montenegro in order to disseminate the conclusions of this work.

### 1.2. Overview of this Report

This report is organised in six sections with six annexes. Following this introductory section, the sections of the main report include:

**Background – The Current Situation:** This section provides a brief overview current relevant legal, institutional and regulatory (LIR) structure in Montenegro. We also note several key issues specific to the Montenegrin situation which are worthy of consideration for several issues going forward.

**An Overview of PPP Approaches:** In this section we focus on several issues of interest to PPPs generally. These include the range of different approaches to undertaking such projects and some of the key characteristics of generation projects which affect certain specific project implementation decisions. We also provide a brief overview of different international approaches to providing financial support to renewables projects, with an Annex focusing more specifically on various approaches used throughout Europe.

**The PPP Situation in Montenegro:** Here we summarise the key objectives for undertaking PPPs in Montenegro, as seen from the points of view of both the Government and potential investors. We also outline the relevant characteristics driving potential implementation choices for the types of projects likely to be undertaken in Montenegro.

**The Emerging PPP Framework in Montenegro:** In this section we provide observations on the existing and developing LIR framework in Montenegro as it relates to the various stages of generation project development. Many of these observations include recommendations for how certain of the key framework features might be improved going forward.

**Observations and Recommendations:** Here we summarise the key action items which we see as necessary in order to make progress towards a better developed LIR framework to support PPP generation projects. Several of these action items link to points made in the prior analysis of the emerging framework.

Following these sections seven Annexes cited throughout the text are provided. These are:

1. Organisations and Individuals Contacted During this Work;
2. Overview of Support Mechanisms for Renewables Projects;

3. Selected Details of the Current Permitting Process;
4. Connection Issues for Montenegro's Renewables Projects;
5. Investor Comments;
6. A Brief Overview of the Energy Situation in Montenegro;
7. PPP Development Units and Selected PPP Case Studies.

### 1.3. Report Addendum

Subsequent to the review of the draft final report and production of the Final Report, the Government of Montenegro adopted a revised form of the Draft Energy Law (the "Energy Law Proposal"). In order to update the comments made in this Final Report (see principally Section 5.2.2) to reflect this current Energy Law Proposal, CEPA has prepared an Addendum to this Final Report.

In general, most of the comments made in the Addendum regarding the Energy Law Proposal are essentially identical to those made in this Final Report relative to the Draft Energy Law (apart from differing numbering for the various Articles in the two laws). With the exception of two recommendations made in the final section of this report (Near Term recommendations 1 and 2, both of which suggest certain minor modifications to the Draft Energy Law which have not now been taken up in the Energy Law Proposal), the comments made here regarding the Draft Energy Law and their implications are broadly the same as our comments on the Energy Law Proposal.

# 2. BACKGROUND – THE CURRENT SITUATION

This chapter provides background information on the current situation in Montenegro with regard to the LIR framework as it exists today. We also provide comments on certain "Montenegro-specific issues" which influence several of our later recommendations in this report. We note that Annex

## 2.1. The Current Legal and Policy Context

The Government of Montenegro has made significant progress in recent years in putting in place the legal and regulatory framework for the electricity sector. We note that much of the substance in the framework as it is being developed derives from Montenegro's commitment under the Energy Community Treaty to adopt the EU Acquis in the areas of energy, renewable energy, and environmental issues. Consequently, many of the framework documents reflect many of these aspects.

Regarding the development of power generation, some of the key framework documents include:

- The Energy Law of Montenegro: The existing Energy Law (adopted in 2003) set out not only the general forward-looking structure and organisation of the sector (i.e., introduction of competitive markets, unbundling of EPCG etc), but also established the Energy Regulatory Agency. As of the time of writing of this report, a new Draft Energy Law is at an advanced stage of development and is expected to be adopted in the near future. This new Law addresses certain areas which were not addressed in detail in the existing Law and refines certain issues previously set out in that Law. We make several specific observations regarding this new Draft Law in Section 5.2.2 later in this report.
- The "Energy Development Strategy of Montenegro by 2025" and the final "Action Plan" (covering the period 2008 – 2012) were adopted by the Government in 2007/8 and set out the goals and objectives for the sector and the near term development plans (and associated required actions) to be undertaken. We provide a brief summary of these plans as regarding the generation sector in Section 5.2.1 later in this report.
- The "Strategy for the Development of Small Hydro Power Plants" of March 2006: this document (which pre-dates the current Energy Strategy and Action Plan) sets out a general approach for developing small hydro resources. We expect that it will largely be superseded by a renewable energy support scheme (RESS) to be developed under the terms of the new Draft Energy Law, though that RESS will probably be quite similar to the approach envisioned in this early strategy document.
- The Law on Concessions, adopted in early 2009 which replaced the previous "Law on the Participation of the Private Sector for the Delivery of Public Service". Importantly, the Law on Concessions details the procedures for developing State

resources, including those in the energy sector. We provide certain observations and comments on this Law in Section 5.2.3 later in this report.

- The Law on Spatial Development and Construction of Structures, July 2008. This law governs the process for gaining planning permission for a variety of structures, including power generation stations. We discuss the important aspects of its requirements together with the requirements of related permitting authorities in Section 5.3.1 and Annex 3 of this report.

In addition to these (and other laws and policy statements), there are numerous other subregulations and various regulatory documents (including licenses, grid code, etc) which are required for a well-functioning generation sector. Some of these are developed while others remain in process. We make further comments regarding their status in Section 5.4.1 later in this report.

## 2.2. Key Institutions and Their Roles

Among the key institutions in Montenegro relevant to this work are:

- The Ministry of Economy: The Ministry is responsible for, *inter alia*, defining and implementing long term energy sector policy. As such, it is the responsible authority for initiating tenders for concessions for energy projects and other key activities. We note that the Ministry has recently been changed in structure (formerly, it was known as the Ministry for Economic Development) with several areas of responsibility – including Spatial Planning – now resting with other bodies.

- Energy Regulatory Agency: Established in 2004, the Agency is currently performing its activities (as set out in the current Energy Law) including approval of energy tariffs, technical documents and so on. Today, it issues both an "authorisation" (to construct) and a license (to operate) to generation project developers. It is responsible for implementing many of the policies developed by the Ministry and / or set out in Law.

- The Ministry of Spatial Planning: This Ministry is responsible for the national spatial plan and coordinating the ongoing development of the 21 Municipal spatial plans covering the entire country. Generation projects must be included in the spatial plan, and it is the Ministry of Spatial Planning which also issues a Construction Permit once a developer has received approval from all (potentially up to 13) other agencies which input into the project planning process.

- The Environmental Protection Agency (EPA): This Agency is responsible for general aspects of environmental protection. A generation project developer must coordinate with this agency in order to receive the appropriate environmental conditions and restrictions on his proposed development, and to receive an EPA permit (subject to future inspections) to operate once the plant is constructed.

- Other Permitting Agencies and Authorities: in addition to the Ministry for Spatial Planning and the EPA, there are other organisations and authorities responsible for

issuing various permits for new power generation projects. For a small hydro project, for example, there are approximately a dozen different authorities from which a developer must gather various permits in addition to an operating license from the ERA. We describe this process in Section 5.3.1 and Annex 3of this report.

- EPCG is the formerly vertically integrated national electric power company. Today, it has been unbundled into two parts:

  (1) Prenos, which owns the HV transmission network and holds licenses for transmission network, system operation and market operation

  (2) EPCG which generation, distribution and supply assets and holds licenses for these activities. The Government has recently attracted a Strategic Investor (A2A of Italy) to participate with a significant minority equity stake in EPCG.

In addition to the organisations noted above, there are various other interested parties with at least some focus on the power development sector. Annex 1 lists the various parties with whom we have come in contact during the preparation of this report.

### 2.3. Key Issues Specific to Montenegro

In many ways, Montenegro is in the middle of undertaking a process which has become common throughout much of Europe since the early-to-mid 1990s. That is, driven by a variety of good policy objectives, it is unbundling its former vertically-integrated, centralised energy company and it is seeking to introduce competition into the sector and to attract private sector participation, particularly in the generation sector. This process, as by now has been shown in many countries, is certainly possible but not always easy and often results in evolutionary pathways rather than stable, single step changes.

While this process is challenging, Montenegro will also face certain additional challenges posed by circumstances which are either unique to Montenegro or at least more than usually influential in comparison to other countries. The detailed plans and actions taken by Montenegro to meet its goals and broad objectives will have to recognise and deal with these Montenegro-specific factors as well as possible. Some of these specific factors are noted below.

- *A Dynamic Legal, Institutional and Regulatory Framework*

It appears clear that the current LIR framework within Montenegro is quite dynamic. For example, the preparation of the new draft Energy Law comes only a relatively short time following the enactment of the current energy law; similarly, other relevant laws are also new. Institutionally, the scope of the Ministry of Economy has changed somewhat recently in its transition from the former Ministry of Economic Development; also other important institutions (not least EPCG) are changing. From an economic regulatory point of view, the regulatory agency is functioning, but is still short of having approved the full set of various subregulations and documents necessary to effectively implement the current level of market opening envisioned by Montenegro's commitment under the EnCT.

We do not mean to criticise this dynamism; indeed, it appears as if many actions and activities show forward steps toward achieving greater clarity of policy and policy implementation (for example, the current Draft Energy Law provides substantially more clarity on the policy approach to meeting EU targets for renewable energy requirements).

However, the full detail of the future legal and regulatory framework under the draft Energy Law and the Law of Concessions (and other relevant Laws) will in fact be contained in a number of different instruments that will have legal and regulatory force. These instruments include policies, stated strategies, action (implementation) plans, programs, concessions, licences, support schemes, regulations, bylaws, codes and rules. It goes without saying that these must all be internally consistent with no gaps or duplication, if they are to be able to both serve the sector well and also to attract investment in any type of generation project.

One difficulty is that investors will evaluate opportunities within Montenegro against opportunities elsewhere in the region or even more broadly; where legal and regulatory frameworks are "works in progress", investors will perceive additional risks to undertaking projects. To us, this underscores the need to achieve greater clarity of intent and structure in the legal and regulatory framework, particularly in advance of formal tenders for generation projects. If this increased clarity and completeness of structure can be achieved, perceived investor risks will be reduced, allowing scope for better results for both investors and Montenegro, achieved in a more timely manner.

- *A Difficult Transition to Competitive Markets*

Through its participation in the EnCT, Montenegro is committed to developing an open and competitive generation market and also to allowing consumer choice, leading eventually (in 2015) to full consumer eligibility.

These are conceptually worthy goals from an economic viewpoint, just as participation in the EnCT generally is a worthy activity from an even broader viewpoint. However, it will be important (especially for regulators) to understand that achieving these goals will not be easy and the transition to a competitive market will certainly not happen automatically and instantly once a target date is reached, even if all the necessary documentation is put in place.

The practical issue is that Montenegro itself is a very small market for generation, with a dominant legacy generator / supplier, and a customer base that itself is also dominated by a single large customer (KAP). It would be difficult to create a truly competitive wholesale electricity within the confines of Montenegro alone in the foreseeable future. Any future additions to the generation mix will – even if not controlled by the current dominant generator – be either non-competitive (e.g., renewable projects which are to be contractually removed from competitive pressures) or will arrive in a few "large lumps" which are unlikely to add a sufficient number of new competitors to enter in order to support a truly competitive market. The customer base could be increased over time, but that would of course depend on the ability of the country's economy to support more customers, particularly a greater industrial base.

One way forward of course is to integrate Montenegro's small market into a larger, competitive regional energy market. Much work is being undertaken in this direction which is a positive step, but it is necessary to recognise today that cross border transactions in the region do not yet always follow seamless and fully transparent paths, and that the region is probably in aggregate somewhat short of generation capacity in any case. Thus, a transition to effective competition may be slow and difficult regionally.

Policymakers will naturally need to address the underlying problems creating this situation, principally by continuing to pursue policies for greater regional market integration and facilitation of generation entry. However, it will be very important for regulatory authorities – both sector regulators and general competition authorities – to recognise the reality of the competitive (or non-competitive) situation as various calendar milestones are reached. The changing of price control regimes (i.e., from regulated to "free market") should not slavishly follow the schedule of dates set out in long-ago-agreed documents, but rather should be coordinated with the economic realities – including importantly industrial organisation and potential effectiveness of competition – at every point in time[2].

- *A Challenging Mix of Physical and Economic Geography*

Montenegro's combination of physical and economic geography pose certain issues which will have to be dealt with in various aspects of implementing generation projects. Broadly speaking, the situation is that many of the physical resources which can be developed for generation projects – especially resources important for meeting targets for renewable generation – are located in areas which are remote and somewhat isolated from the centres of population and economic activity, and hence, remote from existing network infrastructure. Some may also be environmentally sensitive.

This poses problems of how and where to build out network infrastructure if such resources are to be exploited. From a technical point of view, this problem is not difficult. However, the situation does have the potential to impose relatively high costs on certain projects, particularly the small-scale renewable projects which are being developed in response to policy imperatives and international commitments. In a later section of this report (see Section 5.3.2 and Annex4), we discuss how consideration of this issue might be incorporated into both network planning and also the future support schemes for renewable energy projects.

[2] In this regard, experience from England & Wales can provide a useful example. As the true magnitude of the task of implementing full retail competition in an electricity sector for the first time was learned during the early implementation period, the regulator adjusted the time goals to allow a practical implementation schedule on a regional (rather than national) step-by-step basis. Thus, the regulator recognised the practical realities of implementation while still keeping the overall goals in focus.

# 3. AN OVERVIEW OF PPP APPROACHES

This chapter provides background on various aspects of PPP structures and approaches which arise generally. These form some of the basis for much of our discussions in later Sections regarding Montenegro-specific recommendations.

## 3.1. Range of PPP Structures

### 3.1.1. Defining PPPs

PPPs are long-term contractual arrangements between the public and private sectors for the delivery of public services. The defining feature of PPPs, as against other forms of private participation in infrastructure, is that there is a significant degree of risk sharing between the two parties.

### 3.1.2. Types of risk and their allocation

Risks in a PPP arise due to uncertainty regarding the occurrence of certain events and their consequent impact on the project. Given the long term nature of the contract, there is a possibility of a number of different events occurring such as changes in government policy, delays in accessing land, decline in demand for the infrastructure service, etc, which can raise costs or reduce revenues, impacting on the effective delivery of the infrastructure service. One of the core elements of the design of a PPP is the appropriate allocation of these risks to the party that is most able (typically at the lowest cost) to mitigate and/or bear the risks should they occur.

Box 1describes the main types of risk in a PPP structure. Different risks may be relevant at different stages of the project, while some risks may be prevalent throughout the life of the project. For example, risks associated with the construction of the infrastructure are relevant only during the construction period, however political risks can be relevant throughout the life of the project.

**Box 1: Risks underlying a PPP structure**

At the highest level, risks for a PPP project can be classified into the following:

- **Market risk.** Market risks refer to risks that arise due to uncertainties on the market demand for the infrastructure service. These include for example, volume risks – which relate to uncertainties arising from the number of users and their frequency and intensity of use of the infrastructure service – or price risks, which arise due to uncertainties in the tariff that can be charged for the use of the infrastructure service. Thus market risks are closely linked to the users' willingness and ability to pay.
- **Development/ planning risk.** Development or planning risks refer to the risks arising from planning or preparing projects for private sector participation. Governments or the private sector may invest substantial amounts of money to develop a project (through payment for several scoping, feasibility and structuring studies) but bear the risk of the project being infeasible.
- **Project risk.** Project risks relate to uncertainties in relation to project construction, completion and operation (i.e. activities post award of contract and which occur while

implementing the PPP project) and financing and can be split into start-up risks such as capital cost over-run, completion delays as well as ongoing risks such as operating performance, operating costs, lifecycle costs, etc.

- **Political risk.** Political risks are risks that arise from wars, civil disturbances, terrorism, etc., and include currency transfer restrictions, expropriation, war and civil disturbance, and breach of contract. Political risks are more serious in certain regions of the world than in others.
- **Regulatory risk.** Risks that arise from the lack of a suitably developed regulatory system which for example ensures regulatory independence from the government, regulations for the participation of the private sector in infrastructure, appropriate periodic review of tariffs, etc can cause considerable uncertainties for lenders and investors in any infrastructure sector.
- **Financial risk.** Infrastructure projects are impacted by financial risks such as exchange rate appreciation/ depreciation, changes in the interest rates, etc which can have a substantial impact on costs and revenues. The ability to hedge financial risks depends on the level of development of capital markets and/or access to specialist hedging facilities.

### 3.1.3. Main types of PPPs

There are a number of models of private sector participation in infrastructure, primarily distinguished by two key factors, namely: (i) the degree of risk allocation between the public and private sectors; and (ii) the length of the contract period.

Table 3.1 provides some details on the various models for private participation in infrastructure, highlighting which models are considered as PPPs and which are not.

*Table 3.1: Models for private participation in infrastructure and their key features*

| | | Type of model | Description | Level of risk assumed by the private sector | Length of contract (number of years) | Capital investment | Asset ownership | Most common sector in developing countries |
|---|---|---|---|---|---|---|---|---|
| | | Service contract | Contract for infrastructure support services such as billing | Low | 1-3 | Public | Public | • Water utilities<br>• Railways services |
| Broad definition of PPPs | | Management contract | Contract for management of a part/ whole of the operations | Low/ Medium | 2-5 | Public | Public | • Water utilities |
| | | Lease contract | Contract for management of operations and specific renewals | Medium | 10-15 | Public | Public | • Water sector |
| | Core PPPs | Build-Own-Transfer contract | Contract for investment in and operation of a specific component of the infrastructure service | High | Varies | Private | Public/ Private | • Energy sector IPPs<br>• Highways<br>• Sanitation/ desalination plants |
| | | Concession | Contract for financing and operations and execution of specific investments | High | 25-30 | Private | Public/ Private | • Airports/ ports/ rail<br>• Energy networks |
| | | Divestiture/ Privatisation | Contract of transfer of ownership of public infrastructure to the private sector | Complete | Indefinite | Private | Private | • Telecoms |

As has been highlighted in the table, 'core PPPs' are models wherein a significant degree of risk is transferred to the private sector such as concession contracts and BOTs.[3] These contracts are usually long term in nature and involve substantial investment by the private sector, and therefore concomitant risk transfer, and are consequently viewed as core PPPs.

Annex 7 provides further discussion regarding the experience of PPP development units globally, as well as selected case studies on PPP development in several countries.

### 3.1.4. The PPP framework

A clear policy framework is the foundation for a PPP program for a country. The policy framework needs to lay out at least the following:

- The objectives and rationale for the use of PPPs.
- How the government plans to take forward its PPP program.
- Overall guidelines in terms of how the government will assess PPPs.
- The institutional structures and processes involved, including the role of different government departments for project selection, preparation, procurement and approvals.

The policy framework needs to be clear and transparent and is extremely important as it reflects the government's commitment to implementing a PPP program in the country.

Building on the policy framework, the government needs to develop a well structured investment framework which delineates the planned infrastructure projects and the level of investment required, covering both public and private sector projects (i.e. beyond simply a list of PPP projects). This would help the private sector also gauge the links between various infrastructure projects which might impact their feasibility, amongst other considerations.

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[3] There are a number of variants to the BOT contract for project delivery such as DBB (Design Bid Build), DBFO (Design Build Finance Operate), BOO (Build Own Operate), etc. These variants should be considered alongside standard BOTs. We recognise that in Montenegro the general approach to PPPs today is via the concession process, rather than any of the varieties of BOT. In many cases, the differences between concessions and BOT projects can be quite subtle; sometimes they differ only in the state of project development at the time of project start (i.e., whether a new operator is taking over existing assets (often entailing granting a "concession") or building new assets (more typically either BOO or BOT) ) and the determination of asset ownership (and any associated quality standards) at the end of the contract. In concept, one could design a concession (giving appropriate consideration to the disposition of assets at the end of the contract) which functions essentially as a BOT. The key point here is that the "dividing line" between these types of approaches is not always necessarily clear. It should be the details of the governing documents of either approach – not the name of the approach – which match the desired policy and economic goals of the State authorities.

The investment framework needs to be developed for the different infrastructure sectors of the economy.

The Government of Montenegro is relatively well advanced in developing an appropriate PPP framework, and has (as noted) already commenced a concessioning process for electricity generation. As will be further discussed below, a key challenge will be to develop a coherent and full policy that will maximise the chances of attracting high quality investors.

### 3.2. Project Characteristics and Implementation Mechanisms for PPP Projects

There will be a linkage between the implementation mechanisms (including mechanisms for project award and also commercial arrangements) for individual projects and the characteristics of those projects. Such linkages are common in many countries. In this section, we describe some of the general aspects of these issues and later in this report (see Section 4.2) we set out our views on how they should be approached in Montenegro.

- *Relevant Project Characteristics*

For Montenegro, probably the most important dimensions in this respect of project characteristics probably include (1) "economic" vs non-economic projects, and (2) projects involving exploitation of "State" resources vs projects not involving State resources. An additional dimension – projects involving "known" resources vs projects involving "undiscovered" resources – also has potential, though probably lesser, relevance. In the paragraphs below, we describe these various dimensions.

Economic projects are those which can be undertaken with the *ex ante* expectation that they will be able to produce energy at a cost allowing adequate returns from selling into a local or regional energy market.[4] Non-economic projects are those which would not be expected to meet this test. Thus, for implementation purposes, the key implication of the economic / non-economic distinction is that of commercial arrangements.

We should briefly note that in most product markets, non-economic projects would typically not be pursued. The situation is different in European electricity markets (and in Montenegro) since countries are obliged by international commitments to achieve certain levels of renewable generation targets. While current carbon prices (and, possibly, prices of other externalities) are at their current levels, many (indeed, most) of the opportunities for renewables projects appear non-economic relative to the marketplace. Nevertheless, such projects are pursued (typically via the imposition of some external renewable energy support

[4] Here we slightly look ahead to the more market-oriented future of the energy sector. In places (typically in the past) where monopoly utility companies select and develop projects under a regulatory regime, the concept of "economic" project would typically be one which formed part of an analytical least-cost generation plan or a so-called "least cost integrated resource plan".

scheme or RESS) in order to meet the international obligation. Section 3.3 below provides (together with Annex 2) a brief overview of general approaches to RESS.

The second dimension of importance particularly to Montenegro is that of projects involving the exploitation of "State" resources as opposed to projects using non-State resources. As we note later in our discussion of both the characteristics of projects in Montenegro (see Section 4.2) and the Concession Law (see Section5.2.3), we believe that there is some degree of lack of precision regarding the precise definition of what constitutes a "State" resource in Montenegro, and we make certain recommendations (see our discussion of the new Draft Energy Law in Section5.2.2) which we hope would clarify that issue in positive way.

For the purposes of this brief discussion, it is simply appropriate to note that the process of selecting developers for projects involving State resources certainly places a greater burden of care and transparency on the Government (or awarding body) than would be the case for projects not involving State resources. Thus, for implementation purposes, the principal implication of the State / non-State resource distinction is one of how projects will be awarded (i.e., how project developers will be selected). In section 4.2, we discuss our views of the appropriate definition of "State" vs "non-State" resources in Montenegro.

The final dimension is that of "known" resources – i.e., resources which are already identified and measured with sufficient certainty to allow consideration of project awards for resource exploitation – and "undiscovered" resources. Often questions of how to identify develop, and exploit subsurface minerals where there has been no preliminary exploratory work provide examples of how unknown resources might be dealt with. One of the key concerns for the resource owner (whether State or otherwise) is how best to balance the cost of exploration and identification of the (potential) resource with the possible desires for quick and efficient resource exploitation achieving maximum values for the resource.

- *Implementation Issues*

There are probably two important dimensions of implementation issues we wish to briefly discuss: project "award" via tendering vs authorisation, and project commercial arrangements via "market" vs subsidy.

Developers can obtain rights to undertake projects in different ways. The most common distinction (which is reflected in EU energy directives) is that of award via a tendering process or an "authorisation" process. The key difference for the purposes of this report is broadly that a tendering process is expected to be open and competitive, while an authorisation process is simply a response to a developer-generated proposal.[5]

[5] For clarity, we note that in some countries, the "authorisation" simply takes the form of an award of a License to a project developer. In Montenegro, all projects / developers require operating licenses (issued by

Commercial arrangements can also vary. Some projects can and will sell to a "market" which (in the EU context) might be a short term spot market, or might be a short-to-medium term bilateral contract, or might even be under the terms of a competitively offered long-term power purchase agreement. In some circumstances, projects will sell energy not under "market" arrangements (i.e., arrangements at least conceptually available to all sellers), but rather under special purpose contracts or other arrangements, often involving subsidies (e.g., RESS). We note that typically an energy sector regulator has a role to play all of these commercial arrangements (as well as many other aspects of energy markets and industry). Regulators often take responsibility for ensuring that market trading and / or rules are efficient and not subject to abuse, and also may be involved in either setting, reviewing or approving non-market tariff support schemes.

- *Linkages*

The linkages between the project characteristics and implementation arrangements we have outlined above should probably be relatively clear. In general, we would usually expect to see the following sorts of linkages for projects involving "known" resources:

> Economic Projects Exploiting State Resources: Projects awarded by competitive tender with "market" based commercial arrangements. The use of tenders for State resources generally is seen as part of the process of ensuring transparency and recovering appropriate value for State resources.
>
> Economic Projects Exploiting non-State Resources: Projects awarded by authorisation (possibly following a tender by the "owner" of the resources to be exploited), with "market" based commercial arrangements.
>
> Non-Economic Projects Exploiting State-Resources: Projects awarded by competitive tender, with some form of non-market commercial arrangements (e.g., RESS etc).
>
> Non-Economic Projects Exploiting non-State Resources: Projects awarded by authorisation (possibly following a tender by the "owner" of the resources to be exploited), with some form of non-market commercial arrangements (e.g. RESS etc).

For all these types of projects, depending on the relationship between the tendering or authorising authority and the purchaser of energy, tenders or authorisations might or might not be structured to address both the issues of resource exploitation and market arrangements (e.g., whether or not PPAs or equivalent arrangements form part of a tender package).

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ERA) regardless of whether the project arises from a tendering process or other process. Thus, we will attempt to avoid the use of "licensing" or "license" to suggest an authorisation process throughout this report.

For "undiscovered" resources, the decision of how to proceed would usually fall to the owner of the potential resource. For potentially significant undiscovered State resources which have high exploration costs, it is quite common to see a tendering approach used to allocate defined exploration rights which include the right to exploit found resources according to some pre-defined royalty or fiscal regime. The identification and development of subsurface minerals (including oil and gas) often follows this approach. For less significant (smaller than some certain well-defined threshold) undiscovered resources, sometimes adherence to a tendering scheme is followed, though sometimes exploitation is allowed to a resource discoverer following an authorisation procedure with some pre-defined royalty or fiscal regime. The use of an authorisation procedure for such less significant resources would enable the benefits of "self-initiative" to come into play, encouraging some level of independent exploration and project definition.

For non-State resources, the choice of how to identify and exploit resources is usually negotiated by the resource owner and any potential developer(s). Once the project and resource developer is defined (e.g., by negotiation or perhaps other means), an authorisation procedure could be used to allow the project to proceed. Such an approach would encourage self-initiative by either (or both) landowners or project developers to identify unexploited non-State resource opportunities and to then develop projects and bring them into production.

Later in this report (see Section 4.2) we describe briefly how these sorts of arrangements might be expected to be applied in Montenegro.

### 3.3. Mechanisms for Supporting Renewables Projects

Throughout the European Union, as well as in countries participating in the Energy Community Treaty, and in other countries, policymakers have adopted targets or objectives for introducing renewable energy projects into electricity supplies. One of the key problems faced in this area is that while the prices of environmental externalities (e.g., $CO_2$ emissions) remain low or un-reflected in the costs of production from "traditional" generation sources, many of the prospective renewables projects appear uneconomic. One of the policy reactions to this fact has been to put in place "renewables energy support schemes" (RESS) which attempt to overcome this problem. Presumably, once environmental externalities become fully reflected in market prices, such specialised support schemes will no longer be necessary, although that presumption is some time away from being tested in either the marketplace or among policymakers.

There are a variety of different types of support schemes, but all broadly act either (or together) to attempt to reduce the *costs* of renewables projects, or to set administered *prices* for renewables projects, or to impose *quantity* requirements which act to require consumers (or bulk suppliers) to take some minimum fraction of energy supplies from renewables projects more or less regardless of cost.

There are a broad number of individual schemes, but they may be thought to generally fall into the following types with the following general characteristics:

- Cost-Based Approaches

  *Fiscal Incentives:* In these schemes, a government might make certain defined renewables projects eligible for special taxation regimes, including possibly the use of accelerated depreciation for tax calculation purposes or lower tax rates. When these approaches are applied selectively to renewables projects, they can help close the apparent cost-gap between renewables and "traditional" generation economics.

- Price-Based Approaches

  *Feed-In Tariffs:* In these schemes, the authorities would typically offer medium-to-long term contracts with defined above-market prices to renewables projects. The prices in the contracts would typically be based on estimated project costs (most often differentiated by project technology) rather than energy marketplace prices. Usually, the authorities would be willing to accept all offers of projects qualifying for these tariffs, thus making the actual quantity of energy delivered under the scheme initially undetermined, though of known price. These schemes must be accompanied with rules that allow the above-market costs of the projects to be recovered. Such rules typically require that such costs must be apportioned pro-rata over all energy customers (or bulk suppliers), though sometimes other approaches (e.g., all transmission system users) are taken.

- Quantity-Based Approaches

  *Tendering Approaches:* In these schemes (e.g., the "renewables portfolio standard" (RPS) approach used in some US States), typically each bulk supplier in a marketplace would be required to tender for a certain fraction of its energy needs to come from renewables projects, typically via offering medium-to-long term contracts for such supplies. Suppliers would select the projects offering the lowest prices, up to the point where the supplier's quantity commitment was met. Thus, somewhat in contrast to the feed-in tariff approach, this approach allows greater certainty over the amount of energy taken, though it does not act to set the price of such energy (though tenders can use reserve prices to set maximum levels). The costs of the resulting contracts would be recovered from the bulk supplier's customers, possibly with (or without) arrangements made for customer migration risk in competitive supply markets.

  *Tradable Green Certificates (TGC) Approaches:* This type of scheme is somewhat similar to the tendering approach, but separates the need to have physical contracts from individual renewable generators to individual bulk suppliers from the desire to have bulk suppliers support some level of renewable generation. Broadly, each qualified renewable generator would receive a "green certificate" representing his output in a

certain period, and would proceed to sell his energy in the energy marketplace without any support prices. Separately, each bulk supplier would be required to purchase a specified amount (typically a percentage of his overall energy needs) of green certificates in a separate certificate marketplace. This latter requirement places a market value on green certificates and thus acts to provide extra value to the renewables producers who originate the certificates by virtue of their generation of renewable energy.

As with the tendering approach, this approach broadly allows each bulk supplier to know the quantity of renewable energy for which he is responsible, although the actual price is not known until the certificate prices are known. From a producer's point of view, this approach generally also offers him less ex ante information about the prices he will receive, compared to either the feed-in tariff or tendering approach.

It is important to recognise that the brief characterisations above do not address the myriad of details and differing implementation mechanisms used in the many different jurisdictions implementing RESS. It is probably fair to observe very broadly that the differing mechanisms do provide different opportunities and differing sets of risk allocation between producers and consumers.

Annex 2 provides a short overview of the variety of approaches (generally reflecting the categories above) used today in EU countries and also notes some issues related to the design of feed-in tariffs which is broadly the dominant approach used throughout the EU today. Later in this report (see section 5.4.2), we provide comments and observations on the approach which appears to be favoured in Montenegro today which (in terms of the above categories) can be thought of generally as a combination of a feed-in tariff approach with tendering for at least most projects.

# 4. THE PPP SITUATION IN MONTENEGRO

This Section addresses objectives for PPP projects and also the characteristics and types of implementation approaches to be undertaken for different types of projects. Following this, Section 5 covers more specific details of the legal and regulatory framework necessary to support such projects.

## 4.1. PPP Objectives in Montenegro

This sub-section considers the key objectives and requirements for both the Government of Montenegro and investors in developing the electric generation sector. Some of these objectives will be common, such as the desire to see a clear programme of development and investment activity, whilst others might inevitably create some conflicts, such as the need for adequate returns. The section makes some suggestions as to how these conflicts might be managed for the ultimate benefit of consumers.

### 4.1.1. PPP Objectives for the Government of Montenegro

The principal factor driving the development of Generation Sector PPPs in Montenegro is the Government's adopted Energy Strategy and associated Action Plan. These were themselves based on a number of factors, including local laws and the commitments made under the Energy Community Treaty to adopt the EU Acquis in the energy / renewables sector. The Strategy states a number of objectives, amongst the most relevant of which for PPP development are:

- Achieve a secure and diverse energy supply.
- Develop new domestic energy sources, with a focus on renewable energy (with a target of maintaining at least 20% of total primary energy consumption).
- Develop an appropriate Legal / Institutional / Regulatory Framework, particularly to support private sector investments.
- Establish a competitive energy market where possible (generation and supply), with a view toward integrating into regional energy markets as they develop.
- Sustainable production and utilisation of energy resources with regard to environmental protection.
- Fulfilment of obligations under the EnCT
- Supply energy to consumers at "realistic" prices.

- Exploit Montenegro's natural resources, including hydro and coal.[6]

Several of these objectives encourage the development of a range of generation facilities, including hydro (large and small), wind and coal. The development of a range of generation types will enhance security of supply as it will place less reliance on a single 'fuel' source.

In addition, as we noted in Section 2,3, integration into the regional market will allow better and lower cost management of reserve margins and will facilitate the development of some of the larger, more economic projects that may be too 'lumpy' for Montenegro alone. Similarly, further integration will of course facilitate investment into export-orientated generation plants. The focus on renewable will further encourage the development of hydro and wind. All this will be encouraging to the private sector, presenting, in principle, a range of investment opportunities across a range of different scale and technology. The challenge to both the Government and the private investor is more likely to be around the specific framework to facilitate this investment and the implementation of awarded projects.

The objective around supplying energy at 'realistic' prices can be approached from two angles:

- 'realistic' prices in terms of consumer affordability (principally retail customers, amongst which certain groups may not be able to afford cost reflective tariffs
- 'realistic' prices in terms of investor needs – private investors have certain return requirements, without which they will not invest n a given opportunity.

Reconciling these objectives and addressing consumer affordability or social issues is often an important task of Government policy.

The further development of competitive markets will be important and will offer both opportunities and challenges for investors. In generation, competition might, in the early stages of market development, take the form of transparent competitions for the opportunity to exploit state resources, rather than competition between generators on an hour-to-hour short term basis. For larger projects, this might take the form of competition for the right to sign a Power Purchase Agreement (PPA)[7]. For smaller projects, where transactions costs are a relatively higher proportion of project costs, this might be transparent bidding against clear Government criteria to earn the right to benefit from preferential tariffs, potentially combined with a bidding mechanism to reduce project costs for Government.

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[6] The Strategy, pp6-8, identifies a total of 35 individual Objectives and Strategic Commitments.

[7] Competitive procurement of energy by suppliers is quite common, though in today's fully competitive markets the term of PPAs tendered is often shorter than in previous markets lacking full customer mobility. We note additional issues related to this in Section 5.4.1 and 5.4.2.

Both Government and investor objectives should be aligned in terms of the Government objectives around environmental protection. Reputable investors will wish to meet Government and/ or international standards and to participate in well-designed schemes to encourage investment in renewables.

### 4.1.2. PPP Objectives as seen from Investors' Perspectives

This sub-section draws on CEPA's experience of working with investors across a range of generation investment opportunities, at different stages of development, as well as on the investor interview programme undertaken for this project.

Potential investors will be seeking to meet a number of generic objectives as they consider undertaking the generation projects identified in the Action Plan. These objectives will include:

- An opportunity (though not a guarantee) for the project sponsor/ developer to earn an adequate financial return on investment.
- Sufficient predictability of project cash flows to allow debt financing of a significant proportion of the total project cost, noting that lenders will often demand a shorter term investment life than the life of the project.
- An allocation of project risks resulting in mostly controllable risks (e.g. operating performance risk and aspects of construction risk) to be left with the investor, rather than non-controllable risks (such as hydrology).
- A transparent and stable regulatory environment.
- Some protection from future unforeseen adverse changes in taxation or other laws.
- Physical access to transmission and distribution networks on reasonable and predictable terms, and the ability to export power generated.
- A transparent, well-defined and efficient concessioning/ permitting / authorisation / licensing process.

Annex 5 provides a summary of CEPA's recent discussions with investors which reflect these summary goals. The paragraphs below address certain of these goals in slightly more detail.

The shape and level of potential return to investors is clearly foremost in investors' minds – private investors face a range of investment opportunities and without the required returns for a given risk profile they will not invest. Exact requirements will of course vary investor to investor, for example:

- Larger, strategic investors may be willing to take full regional market risk or economic projects, if they have sufficient experience of spot markets.

- Developers and financial investors into smaller, less economic or uneconomic projects will not take market risk and will expect stability of tariffs over time.

A related point is the needs of lenders. As part of their pre-investment due diligence, lenders are likely to be focused on two items: (i) the profile of the lead project sponsor; and (ii) the predictability of cash flows, and especially the management of downside risks. Lenders will start with due diligence on the sponsor, who will need to have a sufficient (and demonstrable) financial track record and to have secured the appropriate project development and operation skills. In terms of cash flows, they will require significant certainty over revenue levels and how uncontrollable risks will be managed, such as delays in permitting, hydrology /wind patterns and the ability to export power (from the generator, not necessarily outside of Montenegro), as well as more manageable risks, such as construction cost overruns.

They will also require comfort on the credit-worthiness of the off-taker for a specific project, and credit enhancement if that credit-worthiness is deemed weak or marginal. Credit enhancement can take different forms – either a more explicit form of third party enhancement, such as a guarantee mechanism, or in the form of more specific project structuring, such as the use of escrow accounts and export-related credit. This is of course in addition to any revenue enhancement that may be required for less economic projects, such as Feed-In Tariffs (FIT). It should be noted that any credit enhancement will come at a cost, so Government and project sponsors should consider taking advantage of any facilities provided by lenders with a greater risk appetite (e.g., perhaps by any multi-lateral lenders which do not place as great a premium on country-specific risks than commercial lenders)

Investors will also value clarity and consistency in the legal and regulatory framework, as well as transparency in the concessioning and permitting process within this framework. Ideally, investors will want to see the overarching regulatory framework set out in an Energy Act, with clear policies flowing from that. Critically, investors will also need to believe that the policies will be implemented in an even and consistent manner, and that significant subsequent changes to the framework will not impact their investment. So for example, there will not be a post-investment detrimental change to the terms of a concession, such as the level of tariff or the treatment of connection costs. This suggests that concession contracts will have to be written with adequate protection from such detrimental impacts.

Investors require a transparent and equitable procurement process in order for them to be willing to commit valuable resources to a costly bidding process. Investors will be put off bidding if there are perceptions of political interference in the allocation of resources, and in repeated concessions this will come at a cost to Government and consumers in the form of reduced and impaired competition for resources.

Investors will also be greatly concerned with the time taken to move from award of concession to operations, and a simplified permitting process. Investors are realistic about the required timelines to develop a project, being well aware that anything less than two

years is highly unlikely, but equally investors will, to an extent, prefer to trade-off increased certainty over timelines against clarity of process and cost allocation e.g. in connections.

### 4.1.3. Reconciling Government and Investor Objectives

As noted above, there will inevitably be some conflicts between Government and investor objectives, although these objectives will often be aligned. One such area of potential conflict is the required levels of financial returns on investment. To an extent, this potential conflict can be managed through careful ex ante assessment and analysis of likely investor costs and minimum return requirements for the perceived level of risk.

However, it will be important for the Government to recognise that many small-scale renewable projects will have costs that are quite high relative to current wholesale energy costs. This will likely be the case even with good management of a well-designed tendering process and a well-developed LIR environment. The Government will have to balance the likely high cost (and resultant tariff impact) of this energy with its other goals and commitments related to meeting a certain level of renewable energy consumption in the country in aggregate.

Government will also rightly want flexibility over time in how it awards and rewards power generation concessionaires, as its needs change and as it learns more about investor behaviour and costs. This will, however, need to be handled in a transparent and predictable manner, such that existing agreements are not harmed. This is a balancing act, as investors will expect and have made allowance for some changes e.g. local labour and insurance costs, but will not in terms of non-controllable revenue items. Clearly where changes are potentially beneficial to investors, such as a move to a more stable tariff regime, investors may be willing to move to this new regime. In this case the benefits to Government should be more projects completed in a timely manner.

Government can also facilitate new investment by removing much of the uncertainty around permitting, especially where this involves a range of central Government and Local Government actors. Where possible, processes should be harmonised and interdependencies eliminated. Having a Government 'champion' (perhaps as a process / information facilitator, rather than as a "one stop shop" may also assist with this.

## 4.2. Characteristics of Projects in Montenegro and Recommended Approaches

As we noted in Section 3.2 above, some of the key differentiating characteristics of project types include the extent to which a project is "economic" in the current environment, and the "ownership" of the resources it will exploit (i.e., State-owned resources vs other resources). Some aspects of the question of "known" vs "undiscovered" resources is also worth considering. The following paragraphs address these in turn within the Montenegrin context.

In terms of the first of these dimensions, Montenegro has a variety of potential known generation projects, ranging from large-scale economic projects (e.g., the Moraca River Cascade) to a large number of opportunities to execute smaller scale renewables projects which would probably be less economic on a standalone (unsubsidised) basis. There are also doubtless "unknown" (i.e., yet-to-be discovered or defined) projects as well, certainly at least in the smaller size range of the spectrum (such projects might include, for example, wind or solar projects). This range of projects, together with the desire (as stated in the Strategy / Action Plan) to develop the smaller scale renewables projects suggests that there needs to be both "market" and non-market (e.g., RESS) commercial arrangements available.

The second dimension – that of resource "ownership" – is somewhat more difficult to define in the Montenegrin context. As we note in our later discussion of the Concession Law, it is clear that exploitation of water and minerals[8] appear to be well-defined as public goods and require exploitation to be followed according to the procedures of the Concession Law. The open question is whether other key renewable resources – e.g., wind or solar or possibly certain biomass resources – are similarly State resources. We note that while the State Property Law does not specifically define them as public resources (in the same way as it does, for example, mineral and water resources), it does include generally "goods incurred naturally" as public resources.

The issue is one of importance regarding how the approach for exploiting these latter resources (e.g., wind, solar etc) is to proceed. In particular, we are concerned with the question of what projects might be eligible to be undertaken via a form of "self-initiative", where a developer can obtain a concession contract (and, importantly for non-economic renewable projects, a preferential tariff) without going through the tendering process envisioned by the Concession Law.

Self-Initiative projects bring potential advantages, but it is important also to recognise that the tendering requirements of the Concession Law also offer important safeguards. Generally, the advantage of allowing some projects to proceed via a non-tendering self-initiative approach (i.e., an approach where a developer identifies a potential project and obtains an authorisation and concession without tender) will allow the State to harness the energy and entrepreneurship of individual developers, particularly in identifying or "prospecting" for projects which are not currently known or identified by the State. A developer will not likely voluntarily invest time and money into a search for new, innovative projects if he is required to then submit them to open tender. On the other hand, the tendering requirements of the Concession Law are in place at least in part in order to prevent the non-transparent award of projects and also to ensure that the State receives appropriate value for exploitation of its resources.

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[8] See, e.g., Water Law Articles 13, 62, 133; also the State Property Law, Articles 10.

We believe that a balance between these competing factors can and should be struck in a way that allows the apparent intent of the current relevant laws (Concession, Water, State Property) to be met, to protect the State's interest and also to allow at least some scope for self-initiative. This balance would require recognising that while some resources (water, minerals) are clearly and unambiguously State resources regardless of where they occur, other resources (e.g., wind, solar) go together with land ownership.

If such a differentiation is recognised, then it would follow that any projects involving water or minerals in any location, or exploitation of any other resources occurring on State land would require a tendering approach as envisioned by the Concession Law. This would protect the value of the State's resources. At the same time, projects involving non-State resources (which we take to be wind, solar etc when occurring on non-State lands) could be granted authorisation and concession without tender. Because the State ultimately controls the availability of preferential contracts (as well as planning permission etc), there will still be some controls on the extent of this sort of self-initiative development which can take place.

In our discussion of the Draft Energy Law in Section 5.2.2 below, we point out that certain clarifications can be made in that draft law in order to provide a stronger legal basis for this approach.

A final point can be made regarding the issue of known vs undiscovered State resources. It seems clear that the intent of the current legal framework is that any potentially significant State resource should be exploited only subject to tender. Thus, for significant undiscovered (or not fully explored) resources (e.g., these might possibly include lignite deposits), a tendering approach should be taken. However, this might be done in different ways. One way would be to have the State fund initial exploration activities, in order to later design a tender around a well-defined (i.e., "known") resource. An alternative would be to tender for exploration rights, with the option to exploit any specified discovered resources according to a pre-set fiscal or royalty regime.

A practical question is whether certain small-scale State resources which have not yet been either identified or well defined might be possible candidates for exemptions from the tendering provisions of the Concession Law. A specific example would be whether a small hydro flow (for example, one with a demonstrable potential of less than perhaps 0.5 MW) might be exploited via authorisation rather than tender. Such an approach would obviate the need for the costly and relatively resource-intensive process of designing and running a tender for such a small resource and would also harness the value of some self-initiative.

While we see the potential value of such an approach for very small scale hydro, we recommend that such an exemption from the tendering requirements of the Concession Law not be made. Our rationale is that there appears to be significant contrast between the multiple and very specific references to hydro resources being State resources throughout

several laws, in comparison with the lack of any specific mention regarding the status of wind, solar, etc as State resources.[9]

On the basis of this strong contrast of reference in the existing legal base, together the likely low practical potential of granting exemptions for very small scale development, we have been inclined as noted above to not recommend an exemption of very small scale hydro from consideration as a State resource.

However, we recognise that others may have other views, particularly with regard to the intent and policy history of local laws. Certainly if a decision were made contrary to these recommendations to exempt very small scale hydro from consideration as a State resource, as long as such exemptions were also restricted to cases where a single owner controlled both banks of the hydro stream and the use of the stream demonstrably had no effects on either flow or energy potential of downstream hydro exploitation, such an exemption might well be workable. Nevertheless, the balance of this report is written from the point of view of our current position, i.e., that such an exemption would appear to go against what we see as the intent of several different existing laws and therefore probably should not be pursued.

If the views of the issues in the above discussion are agreed, then the range of approaches to different projects will follow that set out as the generally common approaches described in Section 3.2 above, namely:

- Economic Projects Exploiting State Resources: Projects awarded by competitive tender with "market" based commercial arrangements. Examples of these would probably include large scale economic projects such as the Moraca cascade. Also, if in the future it is decided to exploit new lignite resources (rather than simply extending the concession limits of existing resource exploitation areas), this approach would also probably apply.
- Economic Projects Exploiting non-State Resources: Projects awarded by authorisation (possibly following a tender by the "owner" of the resources to be exploited), with "market" based commercial arrangements. With current technological costs, it is not clear if there are any projects of this type at the moment in Montenegro, though in the future as carbon prices become more fully reflected in energy prices, some renewables projects may proceed under this approach rather than through RESS.

[9] For Water, consider Articles 13, 62, and 133 of the Water Law as well as Article 10 of the State Property Law, as well as Article 6.1 of the Concession Law. All of these either state directly or imply strongly that water (regardless of quantity) is considered a State resource and is to be exploited according to the conditions of the Concession Law. In contrast, neither wind, solar nor biomass are mentioned specifically in the State Property Law (or, to our knowledge other relevant laws) which only refers to "other goods incurred naturally" (Article 10) as State resources.

- Non-Economic Projects Exploiting State-Resources: Projects awarded by competitive tender, with some form of non-market commercial arrangements (e.g., RESS etc). Examples of these sorts of projects would include those undertaken via the recent SHPP tenders, with commercial arrangements to be governed by the support scheme envisioned in Article 25 of the new Draft Energy Law (see however also our later comments in Section 5.2.2 regarding the potential applicability of this envisioned scheme to these ongoing projects).
- Non-Economic Projects Exploiting non-State Resources: Projects awarded by authorisation (possibly following a tender by the "owner" of the resources to be exploited), with some form of non-market commercial arrangements (e.g. RESS etc). If our above views regarding the "ownership" of certain resources (wind, solar etc) are agreed, then these sorts of projects could be expected to be wind, or possibly solar or even biomass projects undertaken exploiting resources on private lands.

As a final note, we point out that the only two "policy" recommendations made in this section (first, the act of specifically defining wind, solar, and biomass resources as not State resources if they occur on non-State lands, and second, the view not to exempt very small scale hydro from tendering requirements) are not taken up, the resulting set of approaches would still be quite manageable although perhaps less than optimal. They would probably include more need for tendering (probably mostly of wind projects) than otherwise, but provided that adequate Ministry resources are available to execute such tenders, then project development should still be able to proceed, though with somewhat less input from developers providing "self-initiative" opportunities.

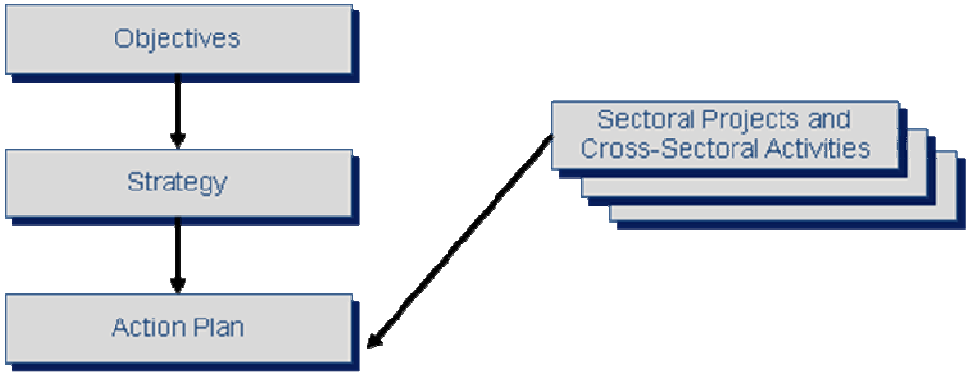
# 5. THE EMERGING PPP FRAMEWORK IN MONTENEGRO

This section provides review and comments on several key aspects of executing generation projects in Montenegro. The first subsection sets out the general execution framework for the key phases of implementing generation projects. The following sub-sections provide discussions of selected key aspects of each element of the execution framework as described in this initial section.

## 5.1. Overview: Stages of Project Execution

Executing PPP generation projects is part of a set of actions taken to implement Government goals. The flow of the various steps of this process are shown schematically in Figure5.1.

*Figure5.1: Flow of Implementation Process*




This is broadly the process undertaken by Montenegro. The broad objectives for the overall energy sector were set out (and have been discussed briefly in Section [ ] of this report) and led to the development of the country's Energy Strategy which in turn led to the Action Plan for implementing the Strategy. Various "projects" – including not only physical projects, but also projects for the development of documentation and regulations, institutions and institutional process etc – are undertaken generally on a sectoral basis (including in the electric generation sector) together with certain cross-sectoral enabling activities in order to implement the Action Plan.

Within the generation sector, we can for convenience view the project development process as consisting of three phases, each of which has certain principal enabling documents and activities. Figure 5.2 illustrates this.

*Figure 5.2: Stages of Generation Project Development Flow with Selected Key Activities & Actors*

***1. Identification, Structure and Award of Projects***

| | |
|---|---|
| Energy Strategy and Action Plan | Government, Ministry of Economy |
| Energy Law | Government, Ministry of Economy |
| Law on Concessions | Government |
| Concession "Act" | Ministry of Economy |

***2. Implementing Projects***

| | |
|---|---|
| Spatial Planning and Permitting | Ministry Spatial Planning, Agencies |
| Network Operator Activities | Network Operator, ERA |

***3. Operating Projects***

| | |
|---|---|
| ERA Regulations | ERA, Industry |
| Commercial Arrangements | Market Rules, Ministry of Economy |

Within each of these broad stages there are in fact a number of different activities and responsible parties. Table 5.1 shows the principal features of this greater detail in matrix form. As the comments in this Table note, certain of these individual items are themselves described in further detail in other sections of this report.

*Table 5.1: Key Activities and Roles for Generation Projects*

| | Activity | Principal Actor | Comments & References |
|---|---|---|---|
| 1 | Sector Policy | Government; Ministry of Economy | |
| 2 | LIR Framework Development | Government; Ministry of Economy | |
| 3 | Project Initiation | Ministry of Economy<br>Self-Initiative (If developed following recommendations of Section 4.2) | Ministry of Economy initiates process for all projects requiring concessions. Self Initiative projects (if permitted) proceed subject to Ministry Authorisation. |
| 4 | Project Award | Ministry of Economy | For projects requiring concession, subject to procedures of Concession Law |
| 5 | Construction & Use Permits | Ministry of Spatial Planning | See also Annex 3 |
| | Additional Permits & Authorisations Required to Obtain Construction & Use Permits: | | |
| 5.1 | Energy Approval | EPCG | Energy Law („OGRoM", 39/03) Interim distribution codex („OGRoM" 13/05) |
| 5.2 | Utility Water Approval | PC Water Supply and Sewage System | Municipal Decision on Construction and Use of Water Supply and Sewage System |
| 5.3 | Fire Safety Approval | Ministry of Internal Affairs and Public Administration, Inspectorate for Protection against Fire, Explosion, Hazard and Technical Protection of Objects | Law on Protection and Rescue, („OGRoM" 13/07, 05/08) |
| 5.4 | Environmental Approval | Agency for Environmental Protection | Environmental Law, („OGRoM" 12/96, 55/00, 80/05 and OGoM" 48/08) |
| 5.5 | Sanitary Approval | Ministry of Health, Service for Health and | Law on Sanitary Inspection, („OGRoM" 56/92, 27/94 and |

| | | | |
|---|---|---|---|
| | | Sanitary Inspection | „OGoM"14/07) |
| 5.6 | Transportation Approval | Ministry of Maritime Affairs, Transportation and Telecommunication<br>Or local Secretariat for Transportation | Law on Roads, („OGRoM" 42/04 and „OGoM" 21/09) |
| 5.7 | PTT Approval | Montenegro Telecom Company | Law on Electronic Communication („OGoM" 50/08") |
| 5.8 | Water Approval | Water Administration | Law on Waters („OGoM" 27/07) (for non-utility water use) |
| 5.9 | Agriculture Approval | Ministry of Agriculture, Forestry and Water Management<br>Or Local Secretariat of Commerce | Law on Agriculture Land („OGRoM" 15/92, 59/92, 27/94) |
| 5.10 | Geotechnical Approval | Ministry of Economy | Law on Geologic Research („OGRoM" 28/93, 27/94, 42/94, 26/07) |
| 5.11 | Cultural Heritage Approval | Ministry of Culture, Sport and Media | Law o Protection of Cultural Heritage(„OGRoM" 47/91, 27/94) |
| 6 | Operating License | ERA | |
| 7 | Market Documents | ERA, Others | See Section 5.4.1 |
| 8 | Connection | Prenos or EPCG; ERA | Dependent on voltage level of connection; subject to ERA overview |
| 9 | System & Market Operation | Prenos | |

*Note: For certain types of generation projects not yet undertaken in Montenegro (e.g., wind), the definition of required approving authorities might change in accordance with decisions of the Ministry of Spatial Planning.*

In the following sub-sections, we review and comment upon various aspects of the substance of the selected Key Activities identified in each of the broad stages of project execution shown in Figure 5.2. In some cases, our comments reflect our view of the appropriate approach to implementing different types of projects (particularly renewable projects) as outlined in Section 4.2 above.

## 5.2. The Current LIR for Project Identification / Structure / Award

The first phase of project execution involves identifying what projects will be done and to whom development rights will be granted. As noted in Figure 5.2 above, there are several key documents closely linked to this and we discuss each of these in turn below.

### 5.2.1. The Energy Strategy / Action Plan

#### *Background*

In 2007, the Government developed the "Energy Development Strategy of Montenegro by 2025" and in 2008 adopted an "Action Plan" (covering the period 2008 – 2012) for implementing that strategy. The Energy Development Strategy ('the Strategy') sets out *inter alia* the policy goals for the sector and the expected means to meet them. The Action Plan provides further details of the actions needed to develop the legal and regulatory framework necessary to implement the Strategy and also initial details of how the specific investments required by the Strategy might be undertaken.

Table 5.2 below sets out the generation projects identified to be undertaken in the Strategy / Action Plan. With the exception of the Komarnica project[10], we understand that all the projects have at least the potential to be undertaken by private sector developers (either alone or perhaps in partnership with State or municipal governments).

[10] We understand that the Komarnica project has previously been identified by the Government as a project to be undertaken jointly by EPCG and an Austrian company as part of intergovernmental cooperation. To facilitate this it was apparently legally removed from the usual requirements of Concession Law related to tendering etc.

*Table 5.2: Energy Development Strategy, Summary of Electricity Generation Projects*

| Project | In-Service Year | Investment (€ M) |
|---|---|---|
| Small HPPs – 20 MW | 2010 | 30.0 |
| Wind Farms – 10 MW | 2010 | 10.0 |
| TPP Pljevlja 2 -- 225 MW | 2011 | 175.0 |
| Moraca Cascade – total 238.4 MW<br>Including: | | 430.1 |
| HPP Andrijevo 127.4 MW | 2013 | 194.9 |
| HPP Zlatica 37 MW | 2013 | 84.7 |
| HPP Raslovici 37 MW | 2014 | 73.5 |
| HPP Milunovici 37 MW | 2015 | 77.0 |
| HPP Komarnica – 168 MW | 2015 | 134.1 |
| Wind Farms – 15 MW | 2015 | 15.0 |
| Small HPPs – 30 MW | 2015 | 45.0 |
| TPPs on Waste – 10 MW | 2015 | 32.0 |
| Wind Farms – 15 MW | 2020 | 15.0 |
| Small HPPs – 20 MW | 2020 | 30.0 |
| Biomass CHP – 2 MW | 2020 | 3.0 |
| Wind Farms – 20 MW | 2025 | 20.0 |
| Small HPPs – 10 MW | 2025 | 15.0 |
| Biomass CHP – 3 MW | 2025 | 4.5 |

*Source: Energy Development Strategy of Montenegro by 2025, White Book, December 2007*

At this time, we understand that the Moraca River Cascade is moving forward with the IFC selected as financial advisor.[11] There have already been two Concession "Acts" prepared for small hydro power stations, and several concessionaires (winners of a tender under the first of these Acts in late 2007) are in various stages of project design and preparation. Recently the Government released a call for expressions of interest in certain wind generation opportunities.

[11] We note that in commenting on a draft version of this report, the IFC noted that the current total (overnight; excluding interest during construction and inflation) cost estimate for the entire Moraca cascade project is €521 million, with in service dates to be all in the same year and no earlier than 2015, in contrast to the values shown in the Energy Development Strategy (as quoted in the table above).

***Comments***

We do not have specific comments on the substance of the Strategy / Action plan, though of course we recognise its importance in driving the overall effort to undertake PPP generation projects in Montenegro. We do note that the new Draft Energy law appropriately calls for periodic updates of the Strategy / Action Plan. We certainly expect that such updates will assess progress made on various projects and make recommendations for future efforts which reflect this process.

However, we note that future Strategy / Action Plan documents should probably also start to recognise several additional factors which were perhaps not explicitly discussed in the current documents.

1. *Future Action Plans should analyse and assess the state of the local (and, ultimately, regional) wholesale energy market with regard to effectiveness, participation, and competitiveness.*

This will be important since (as we noted in the section 2.3 of this report) we expect that the transition to a fully functioning competitive market will take some time and likely require extended regulatory intervention if (as we currently anticipate) the development of local and regional competitive dynamics (number of competitors, access to cross border transactions etc) takes some time to develop. The development of a fully functioning competitive market with open access to network services will also doubtless influence the interest and willingness of private investors to invest in new power generation projects as well.

2. *Future Action Plans should include an assessment of investments required to promote more effective regional market integration.*

The second factor is related to this first issue. Specifically, analysis of investments for future Strategy / Action Plans should consider what investments are necessary and economically efficient in order to further promote regional market integration. As we have noted earlier in this report, the small scale of Montenegro's domestic market will serve as one potential barrier to the rapid development of competitive generation (and supply) markets. Regional market integration will be one way to improve the transition to the desired goal of more competitive markets, and, ultimately, reduced energy costs for consumers.

3. *There should be an evaluation of Montenegro's progress toward meeting its commitments vis-a-vis renewable energy.*

This third factor will be to analyse and track overall progress towards Montenegro's commitments regarding renewables, including both quantity commitments and analyzing and calculating the tariff impacts (by customer class) that RESS subsidies are imposing. This information will be important for policymakers in assessing whether and when to either accelerate or reduce these efforts.

4. *Future Action Plans should include an assessment of tariff impacts of proposed investments, and, where appropriate, cost / benefit analyses of such investments.*

The economic basis for proposed investments should be fully understood by policymakers, together with the ultimate impact on tariffs paid by customers. These factors should be transparently set out in future sections of Strategy / Action plan documents.

Finally, we note that Articles 11 – 13 of the Draft Energy Law appear to give the Strategy and Action Plan essentially the force of law. Thus, they are clearly important documents and it would appear that they are intended to have greater weight than many of the regulations and other market documentation envisioned by the Draft Law. Thus, investors will be keenly interested in the detail of the current and future Strategy / Action Plan and future drafts should be designed in such a way that they encourage desired future investment.

### 5.2.2. The New Draft Energy Law

#### *Background*

Montenegro policymakers are currently working to produce a new Energy Law which will replace the existing Law on Energy (№ 39/03). This new law will be important for many reasons, not least because it will provide significant new guidance in the areas (e.g., renewables) which are both important to the implementation of the Strategy / Action Plan and not fully addressed in the existing law.

The Draft Energy Law covers a number of areas. We will not elaborate on all of these areas in this report, but we will draw attention to several areas which will be of importance to the development of PPP generation projects. These include:

- Establishing the Authorities: Articles 7 and 8 define the broad responsibilities of both the Government and the Ministry of Economy in the area of the energy sector. These include responsibilities related to the preparation and adoption of the National Energy Policy, Strategy, and Action Plan, among others.
- Creation of the Enterprise for the Action Plan: Article 16 establishes a new, separate legal entity with various responsibilities related to the efficient implementation of the energy sector Action Plan.
- Renewable Energy and Support Schemes: Articles 25 – 26, as well as Articles 72 – 77 allow for the provision of a new basis for promoting and supporting renewable energy projects.
- Providing for the Energy Regulatory Agency: Articles 27 – 49 provide substantial detail on the role and activities of the ERA. Also, Articles 50 – 64 deal with issues related to licensing and authorisations to be addressed by both the Ministry and the ERA.

- Energy Sector Participants: The roles of and various details related to generators, network providers and operators and related documentation are set out in Articles 70 – 90 as well as Articles 97 – 106.
- Electricity Market: Details of the intended structure and operation of the electricity market are set out in Articles 91 – 96.

***Comments***

The Draft Energy Law certainly has great potential to be very helpful in the future in assisting the Ministry of Economy to move forward toward its energy sector goals. However, there are certain areas where we believe that some modifications to the current draft might be included to both improve clarity and its scope of operations. In the points below, we note our areas of concern and, where appropriate, specific areas where modifications might be considered.

*1. Certain provisions of the Draft Energy Law are probably too prescriptive in terms of detail.*

The level of specific detail to be included in any law is a matter which depends at least in part on the subject matter of the law and also the legal style of the drafters. In general, it is probably necessary to use a level of detail or specificity which balances the need to ensure that the objectives of the law are met or not circumvented, with the desire to limit the need to pass new laws as circumstances or government policy evolve.

There are some examples of areas in the draft Law where we believe that the drafting has strayed too far toward detailed prescription to allow this balance to be struck. One example is in the description of the structure and some of the mechanics of the planned energy market (see principally Article 91, but also other aspects of Articles 91 – 96 as well as aspects of Article 77). While the general type of market described here is probably within the mainstream of the type of "bilateral contracting" markets which are common throughout many EU States and may indeed work well in Montenegro once a sufficient number of competitive players in the generation sector exist, by describing this level of detail in law, the implementers of the market are foreclosed (absent revision of legislation) from other options which may develop in the future as possibly better ways to achieve economic goals in Montenegro's energy sector. This is an example where the law may be better drafted by simply pointing to policy goals, or instead simply identifying those entities (government or the Ministry) responsible for setting policy goals as initial drivers of the ultimate market rules.

Along somewhat similar lines, we note the specification of a minimum period of 7 years for a connection agreement cited in Article 88 of the Draft Law. While it is certainly probable that connection agreements will be quite long (usually they would be expected to be life of plant), the precise timing should be a commercial matter between the connecting entity (distribution or transmission licensee) and the generator, subject if necessary to appropriate regulatory oversight. There may be, for example, some cases of existing generation stations

with little commercial life left nevertheless requiring a (short) connection contract with Prenos, necessary only now after the unbundling of EPCG. Thus, such a detailed level of prescription in the law is probably unnecessary and unwanted.

There are other examples of over-prescription which appear to be more problematic. For example, Article 74 envisages that a guarantee of origin for a renewable facility will be for a "precisely specified period of time and for a volume of electricity generated in that period" but that the validity will be a fixed period of 5 years from the date it was granted. This is a short period relative to the life of the plant and the period of the financing that could deter investment. (We make an additional comment on the substance of Article 74(5) below). This contrasts with Article 77 that relates to privileged generators where the status is valid for 12 years and may be renewed. Although it is considerably longer, 12 years is a short period from the perspectives of both the financing and the life of the plant. In either case, investors in privileged generation projects will wish to have status and guarantees which match the terms of their concession and / or the terms of the support scheme to be developed by the Ministry under the terms of Article 25. Since neither of these times is known (the support scheme has not been fully developed and may change from time to time; concession lengths are determined as part of the concessioning process on a case-by-case basis), investors will prefer if the law does not specify likely shorter durations for these (and other) important features.

Similarly, the limitation of the term of a licence in Article 54(6) to 15 years will certainly deter investment. It neither reflects the life of the plant, nor does it reflect that fact that at the end of 15 years for a generation project, even if lenders have been repaid, equity investors will still have a keen interest in the plant as it is then that they can earn much of their return on and of their initial investment.

The burden of renewing a licence and the enormous uncertainty of not knowing what conditions might be applied will present risks to investors looking at Montenegro that are not found in many other countries that are seeing to attract investment in new generation capacity. Most other countries reflect this desire to avoid this type of uncertainty by allowing the length of the license to match the useful economic life of the power station, for example for 30 years or so.[12]

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[12] A typical electric generation license in the UK for a significant power station is in fact technically unbound in time. While it can be removed through a defined process for cause (i.e., repeated violation of license conditions), in the absence of cause it is only cancelled if either it is voluntarily ceded by the license holder or after a twenty-five year notice period of cancellation given by the regulator. This twenty-five year notice of cancellation itself can typically only be imposed following the tenth anniversary of a license's issuance, thus making the minimum expected lifetime for a license to be thirty-five years.

2. *The role of the Enterprise for the Action Plan has good potential, but it is unclear why these functions should be separated from the Ministry.*

One important way to help facilitate PPP investments in generation (or indeed, potentially in all infrastructure) would be to create a small investment unit in the Ministry that would become expert in all the rules and procedures relating to investment in energy infrastructure and would assist with the necessary coordination among permitting agencies. The very existence of the unit would be viewed very positively by investors as it would reduce (but not eliminate) the need for investors to seek guidance from multiple institutions and individuals within institutions. The unit could hire its own professional help (including legal staff to the extent that it would not overlap with functions or skills provided by the Concession Committee) and help to develop capacity internally. It could, over time, become a champion for investment in the power sector. Some of this is already developing in the Ministry in the area of renewable energy, but the functions of process and legal management could be expanded to cover a wider area of different economic / analytic specialties (e.g., renewable energy, other energy generation projects, network management, other infrastructure etc).

At least some – possibly all – of this idea appears to be embodied in the concept of the "Enterprise for the Action Plan" envisioned under Article 16 of the draft law. Our only comment regarding this provision would be to question the need for it to exist as an extra-ministerial organisation, rather than a department within the Ministry. Certainly for a country with small population (and hence more limited human resources), Montenegro already appears to have an ample supply of self-financing non-ministerial agencies. In circumstances where it is desired to remove the functions of such an Agency from political influence (e.g., as with the logic underlying the creation of independent energy regulators), the case for independence is strengthened. However, we do not see the need for that sort of independence in such an investment-facilitation organisation; indeed by being placed within the Ministry such an organisation may be better placed to assist with the development and implementation of government policy and actions controlling the pace of concessioning and also be better placed in working with other Ministries.

Of course, it may be necessary to have representatives from multiple organisations within whatever group eventually performs this function. Defining the appropriate parties could begin by defining fully what functions the group is supposed to be performed (e.g., as set out in the Draft Law) and assessing which of these are today performed (or could be performed) by the Ministry and which functions by others. If significant input from others is required, then perhaps the function could be set up as an active working group chaired by the Ministry, but with additional participation.

Along these lines, we note that later in this report (see sub-sections 5.3.1 and 5.4.2) we also make recommendations where multi-party working groups can also help in the areas of the planning and permitting process and the more proactive development of industry governing

documents. It may well be that some or all of these three functions (particularly the grouping of assistance with planning and permitting together with the more Action Plan-focused function) may logically be grouped together in a single group. If so, this approach should be taken in order to streamline processes and avoid unnecessary duplication of effort.

3. *The Draft Law allows generally appropriate scope for the development of a support scheme for network-connected renewable energy projects. The details of that plan, and how the various Articles of the draft Law are ultimately harmonized, as well as how the plan is embedded within future concession contracts will of course be critical to its ultimate success. Consideration could also be given, however, to non-network connected projects.*

It is clear that in order to have successful, efficient, and effective development of renewable projects and participation by serious investors in concession tenders, it will be necessary to have a well-specified renewable energy support scheme (RESS) which can allow for appropriate tariffs and other terms to be reflected in concession contracts. Article 25 of the draft Law gives the Ministry the obligation to develop such a scheme for approval of the Government. The draft Law is (correctly, in our view) not overly specific in Article 25 and does not contain any obvious restrictions as to the nature of the tariff system ultimately to be adopted. It therefore has the potential to enable the Government to develop a good feed-in tariff approach that will attract investment for network-connected projects. Given the EU targets and the lead-in times, developing and publishing the detail of the tariff system should be a priority. Once it is in place and investors are relying on it, the tariff support will need to be entrenched against change (e.g., embedded within concession contracts), otherwise the financing may not be forthcoming or the costs could be increased to include a change risk premium.

There are several areas within the Draft Law where either issues or drafting might be re-thought in order to enhance the possibilities for the potential success of an RESS from the point of view of investors. These include:

- Specification and Status of "Privileged Producer": The law appears to envision (Article 77) the ERA as the authoritative body for certifying privileged status (and, presumably, therefore eligibility for the tariff system to be specified by the Ministry). Furthermore, some of the language of Article 72 might be read to suggest that privileged status might be changed from time to time or even revoked (similarly, Article 25 could be read to suggest that the Government could replace an existing support scheme with a new one at any time). Further uncertainty is contained in Article 78 (2) because of the power of the Government to impose unlimited and unspecified conditions when it determines the status of a privileged generator under Article 72(1).

  These features will raise concern for potential investors. Ideally it should be made clear – certainly within concession contracts and in tendering documentation – that

an investor has a guarantee of privileged status for tariffs and / or for despatch for a well-specified period of time (ideally, for the length of the concession, though that may depend on details of tariff formation). Investors will certainly not wish to negotiate a tender or concession contract with the Ministry only to later find that the ERA may not authorise privileged status, so either pre-authorisation is a necessity, or unification of decisionmaking (i.e., concession award and certification of privileged status) with regard to the RESS. In suggesting this approach we do not necessarily call into question the concept of using ERA as a decisionmaker. Instead, we wish simply to ensure that such decisions are made transparently according to well defined (and published) criteria, and (ideally) made and certified prior to any tendering process.

- Eligibility for privileged support schemes: Article 25 of the draft Energy Law establishes the concepts of "privileged producers" and "support schemes". Investors will be attracted by the idea of a support scheme for renewable projects in Article 25(2) but could be uncertain as to whether they will be able to benefit under Article 25(1) for two reasons. One is the use of the word "may" in paragraph (1) and the other is the lack of a reference to paragraph (1) in paragraph (2) that could easily make it clear that all plants other than hydro projects of more than 10MW either could or, better still, would benefit.

- Recovery of RESS costs: Article 26 envisages a levy ("compensation") paid by every final electricity consumer to fund the support scheme referred to in Article 25(2) but it does not deal with what is to happen if insufficient compensation has been collected to fund all schemes that qualify for support. It would be helpful if there was some machinery for an annual review of the levy and adjustment, perhaps administered by ERA.

- Implementation of Future Preferential Tariffs: As it is currently written, Article 77(5) of the draft Law could be interpreted as allowing a privileged generator to sell energy "on the market" at his own option, or under the terms of the privileged tariff, possibly changing from one approach to the other and back again depending on market conditions. If this is the intended meaning of the article, it is probably both a too-prescriptive condition imposed on the yet-to-be determined RESS to be proposed by the Ministry, and, if that RESS turns out to be a feed-in tariff system, probably a too complex system feature to allow for easy determination of economically fair (to both consumers and producers) feed-in tariff levels. If this is not the intended meaning of the article (for example, it is intended to instead to refer to a situation following a generator's participation in a feed-in tariff system after a contractual period of time), then it probably should be re-drafted to clarify the intent.

- Projects not Feeding-in to the Network: There may be some scope for Montenegro to meet its renewable energy obligations not just through network-connected

projects, but possibly also through off-grid or projects which do not feed in to the network (examples might be remote projects or use of small scale solar PV on industrial or commercial sites, etc). Unless the RESS to be developed by the Ministry is very broadly constructed, these projects might not benefit from the incentives to be offered; certainly if they do not feed-in to the network, feed-in tariffs might not be the best approach. The Ministry may well wish to consider alternative approaches – for example, the use of tax credits[13] – to encourage such projects if research (or customer demand) shows that they have potential to contribute to Montenegro's ability to meet its overall renewable targets.

4. *In order to apply the envisioned renewable energy support schemes to the existing SHPP projects being developed, it will be necessary to add language of that specific intention into the draft law.*

As eight concessions (and others undergoing the tender process currently) for hydro projects have been entered into that would benefit from a tariff system under Articles 25(2) and 72(2), it would be helpful to alter those concessions.[14] The easiest way to do this is by operation of law. This would require a short amendment to the draft Law stating to the effect that the relevant concessions for renewable projects will be deemed to be amended, subject to the agreement of the Concessionaire, so that the new scheme will apply to them once developed and brought into force. The drafting could be done in a way that respects the sanctity of the existing concessions and avoids cancelling them so that a new tender process would be unnecessary. This approach in such a circumstance is not uncommon in other legal / regulatory jurisdictions.

5. *The Draft Law should probably also incorporate language specifically exempting certain well-defined small scale renewable projects from the tendering requirements of the Concession Law, provided that the policy goal of promoting "self initiative" in certain areas is pursued.*

As we set out earlier in this report (see Section 4.2), we believe that there is some scope for allowing certain (small-scale renewable, non-hydro) "self-initiative" projects to be undertaken outside of the tendering process envisioned in the Concession Law. This, and issues related to it are discussed further in our subsequent comments on that law. We note here that in order to implement this policy initiative, it would be helpful to add clarity and

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[13] Certainly tax credits have the ability to provide significant incentives for renewable energy projects. Though not as widely used in Europe as feed-in tariffs, they have been shown – for example, as applied to wind energy projects on the East Coast of the US – to bring forth substantial new capacity if proper levels and structures are found.

[14] We understand – as noted in our discussion of the recent Concession Act later in this chapter – that both SHPP concession tenders to date have had concession contracts which embed the currently existing approach to SHPP tariffs which we understand is different to the approach envisioned to be undertaken by the Ministry under its to-be-developed RESS policy under Article 25.

basis to the legal situation by adding specific language to the draft Energy Law to grant exemptions from the tendering process under the Law on Concessions for cases where:

- The project is built on privately owned land and remains in the ownership of a privately-owned project company, and
- The project does not involve exploitation of well-defined state-owned wealth or resources (e.g., the project does not involve the exploitation of water or minerals, but might involve exploitation of wind or solar energy), and
- The project would otherwise qualify as a privileged project according to the specification of the Ministry's plan (e.g., under 10 MW, etc), and
- The project is not a project of public interest.

Such a project could, then, subject to ERA approval as a privileged producer, qualify for the then-existing RESS support scheme (which should include a sample self-initiative contract) developed by the Ministry. Such a provision in the law would clarify the approach to self-initiative and would allow this for some projects, thus both avoiding the costly and lengthy tendering process and exploiting the initiative of entrepreneurs to assist Montenegro in meeting its renewable energy targets.

*6. Several additional provisions of the Draft Law probably require greater clarity or reconsideration.*

In addition to the several specific comments we have noted above about various provisions of the Draft Law, we also note:

- ERA Authorities: Article 40 gives ERA the authority to develop regulations, procedures and methodologies on a wide range of issues that will affect the development of generation projects and potential investment. This may not surprise investors but they will want to see all the detail and will want protection against certain change and the application of regulatory discretion. This can be done by a contract to which the Government is a party (or possibly by including such terms in a concession agreement to which the Government is a party).
- ERA Funding: Article 44, paragraph (3) relates to fees to cover the expenses of ERA. There should be some mechanism for formal oversight of the budgets of the Agency rather than leaving participants to use administrative proceedings under paragraph (7). We note that in many countries with independent (in policy and execution terms) regulators, there is usually some form of external budget oversight even if the regulatory bodies themselves are "self-funded" through license fees. (For example, in the UK, the Treasury has responsibilities for oversight of OFGEM's aggregate budget). This form of oversight might take the form of "ex ante" budgetary approval (as in the UK), or possibly the form of "ex post" auditing and assessment of value-for-money by some public auditing body. Other mechanisms

are no doubt possible as well. The key point is that some form of oversight is required that effective, but which does not also act as any form of barrier to the reasonable activities of the regulator carrying out its necessary duties.

The issue is important for generators because without some form of oversight, they might be charged fees that are disproportionate to the regulatory burden that they create. Indeed, in some countries, no generation licence is required because the only real regulatory obligation is to comply with the grid code and that can be imposed through the connection and transmission agreements, which are regulated.

- Criteria for Privileged Generation Status: Article 48 sets out a list of ERA activities in relation to renewable and cogeneration projects. It would be helpful if ERA were to publish in advance the criteria for remaining on the register of privileged generators, consistent with the support scheme and regulations referred to in Articles 25 and 72. Advance publication of the criteria for guarantees of origin would also be useful.

- Prices, Tariffs and Cost Pass-Through Issues: Generators will be naturally be interested in the way in which tariffs are set for connection and use of system to ensure that they are both transparent and fair. They will wish for the principles and methodologies to be published and subject to industry consultation.

  Generators may well also be interested in the tariff setting methodologies for regulated supply tariffs because Article 50(1) apparently allows ERA to intervene if the prices set bilaterally (or in the market) between buyers and sellers "are a component part of regulated supply tariffs". The power purchaser, if it is a public supplier or it serves tariff customers, will certainly not only want to see the methodology referred to in Article 51(3) but will also want assurances that it can pass through all of its power purchase costs to its customers using this methodology. If there is any uncertainty about this, it will not enter into a power purchase agreement with the project company sufficiently early to enable it to raise the necessary funding. Accordingly, ERA should develop transparent rules as to how it will approve power purchase costs for public suppliers and entities that serve tariff customers.

  In this context, Article 66(4) and (5) create some additional uncertainty in relation to this issue. Paragraph (4) appears to suggest that power purchasers that serve tariff customers or public suppliers can only purchase energy out of the "organised energy market or from import" and not (it would appear) under long term bilateral agreements with generators established within Montenegro (elsewhere in the draft law (as in Article 50(1)), a distinction is made between the organised market and bilateral contracts). Paragraph (5) requires the power purchaser to apply "the best business practice" to achieve prices "that have the most favourable impact on its

tariffs for supply of tariff customers". Power purchasers would need detailed guidance from ERA and the Government in order to know whether they had complied with this requirement before entering into a power purchase agreement with a generator.

As we note later in this report (see our brief discussion of issues related to the developing energy market in Section 5.4.2 below), it is certainly possible that there will be a need or desire to allow some long-term bilateral contracts to be put in place in order to support the financing of newly constructed generation projects. This makes these points quite relevant.

- License Modification, Revocation, and Suspension: There are a number of issues in this area raised by various articles in the Draft Law.

  First, investors will be nervous about the provisions of Article 57 that allow ERA to modify licences apparently unilaterally for a reason as vague as "clear and unforeseen change of circumstances". This test begs a number of questions as to the nature of the impact of the change of circumstances, what changes could be made and whether the licensee would be compensated for increased cost or reduced revenues as a result of the licence modification.

  Under paragraph 3) of Article 57(3) the licence can be revoked for any breach, however small. This should be limited to material breaches and revocation should only take place after the licensee has had a reasonable opportunity to remedy the breach.

  Paragraph 4) of the same Article begs the question as to who "the inspector" is and what powers he has these need to be clarified and specifically limited.

  Article 58 should not specify the grounds for suspension as many of them will be inappropriate for a generator. These grounds should be specified on a tailored basis in the licence itself. Placing grounds within the law as well could have the potential to create a situation where a license holder would have to be potentially answerable to both or either of the regulator or the Ministry (or possibly the judiciary) for an alleged license breach. Part of the concept of using licenses as regulatory instruments is to unify as much as possibly of the obligations and enforcing authorities related to the generator. Thus, creating multiple paths of potential oversight (something that might be termed a case of "double jeopardy" where a license holder might face multiple judges of his action) will be perceived as undesirable by both investors and lenders.

It may be that 60 days (in Article 58 (2)) will not be long enough to cure the problem (e.g. to order a new transformer) and it is normal to allow the regulator to extend the period to something that is reasonable.

Article 58(3) appears to give the inspector considerable power. Suspension is a very serious issue and ERA should not be permitted simply to "rubber stamp" a proposal from an inspector, leaving the licensee to appeal in an administrative lawsuit, which will doubtless take longer than the 60 day suspension period.

Article 59(2) is an unusually strong power to impose on a licensed energy undertaking. The article refers to a situation when an operator has had its license revoked. In such a situation, the operator would still (presumably) own its assets, but would be unable to operate them. This clause gives the State the power to take over those assets and operate (and, presumably, maintain or not) them as it sees fit. This potentially amounts to expropriation of assets without compensation. It could cut across property rights of the project owner and also the contractual rights of the lenders to intervene if things go wrong.

- Authorisation Criteria: The list of criteria for authorisations given in Article 61(6) is somewhat broad and less specific than investors would want. There should be some certainty as to what investors can expect (and they should not be subject to change). The Ministry will need to publish the detailed criteria that it adopts under Article 61(8) at an early stage. These should be consistent with EU Directives on the Internal Electricity Market.

- Conditions on Generators: Article 70 creates some broad obligations on generators that will require greater specificity. Examples include the detail of the access conditions referred to in (1) 3) and the market and operational rules referred to in (3) 2) (which should include at the end the words "applicable to them", so that, for example, generators operating under RESS contracts are not also obligated to obey other market trading rules).

  We note that it is highly unusual to impose energy efficiency obligations on generators as in (4). This is something that only suppliers normally undertake through their relationships with their customers. It is not clear what scope a generator would have to develop a meaningful programme of energy efficiency measures. It may be that the draft Law is poor in its translation and that it should refer to plant efficiency, rather than energy efficiency.

  The provisions of (5) will create uncertainty and it is unlikely to be acceptable to investors to find themselves suddenly subject to minimum efficiency levels. The provision may be unnecessary as the specification of the plant efficiency is usually

dealt with in the tender process and the power purchase agreement. The paragraph could potentially deter investment in small renewable projects.

### 5.2.3. The Law on Concessions

***Background***

Concession contracts will form an important basis to allow PPP investors the security they need to make long-lived investments in the Montenegrin energy sector. It is right that there should be a law that creates transparency and efficiency in granting concessions that are of great importance to society, in order to create more certainty for investors and to avoid the potential for corruption. However, we note also in advance of discussions below that it is also not unusual for exemptions to be granted from the need for a tender process for small projects that are regulated under a special regime created under sector-specific laws and which have fragile economic viability (and where tariff support may be needed).

Prior to further discussions of this point, we set out a brief description in the paragraphs below of several points most relevant to future potential PPP generation projects, including the Law's apparent overall scope, the type of process it envisions, and its approach to "self-initiative" (i.e., projects identified by individuals rather than the State).

In terms of scope, the Concession Law is potentially quite broad. In considering its potential scope of application to the electric generation sector, we note that Article 2(2) ("Concessions shall be awarded in order to . . . provide for the rational, cost-effective, proper and efficient usage of natural wealth"), Article 4(1) ("Concession shall mean the right . . . to use the state-owned natural wealth") and Article 6(1) (". . . a concession subject matter may be . . . usage of watercourses . . . [ and ] design, construction, maintain and using . . . energy –related and other structures for generation . . . of electrical energy") all suggest that concessions are either required or "may" be used to exploit "state-owned natural wealth" in the generation sector.

The law sets out in some detail the concession process. Broadly, this includes the preparation of a "concession act" by the competent authority (the Ministry of Economy in the case of electricity generation), followed by either a single-stage tendering process or a process involving an initial pre-qualification stage. (An "accelerated procedure" is also available, but appears to be applicable only to relatively short-term concessions). We note that the Ministry appears to have followed this process for its two SHPP tenders, relying on the single-stage process in its first tender, and the two-stage process in the current tender (see also our later discussion of the current Concession Act).

Article 41 of the law sets out the process for dealing with "self-initiative" – that is, instances where an entrepreneur or project developer brings a project requiring a concession to the attention of the relevant competent authority. The Concession Law requires that in such an instance, it is still necessary for that authority (e.g., in the case of significant energy projects,

the Ministry of Economy) to prepare a concession act and undertake a tender under the terms noted above. The party originating the project proposal would normally be permitted to participate in that tender, under the same terms as other bidders.

***Comments***

1. *There is some vagueness in the definition of the intended scope of the Concession Law, but a prudent investor may well believe that concessions awarded by tender may well be required for all energy generation projects.*

As we noted above, the law is somewhat clear that concessions awarded under this Law are intended to be used for projects involved in exploiting "state-owned natural wealth" and that they "may" be used for generation projects. This raises two important questions from the point of view of a careful investor: what is the definition of "state-owned natural wealth" and does "may" mean "must" in terms of its use in Article 6.

Regarding the first point, there are areas of both clarity and vagueness; we have already made reference to certain aspects of this previously (see Section 4.2). For example, Articles 13, 62, and 133 of the Water Law, as well as Article 10 of the State Property Law all suggest that exploitable watercourses are State resources and are subject to the terms of the Concession Law. Slightly in contrast, the State Property Law does not specifically identify other resources – including wind, solar, and biomass – as State resources. Instead, it simply refers to "other goods incurred naturally" (Article 10) as natural (thus State) resources.

Regarding the question of whether the wording in Article 6 absolutely requires (rather than simply permits) the use of concessions for all generation projects, the question is one of interpreting the drafting in the law. Certainly the language of Article 41 on self-initiative further suggests that the Law intends to discourage projects or concessions not undertaken according to the terms of the Law.

On the basis of these points, we believe that an investor – particularly a foreign investor performing cautious due diligence – will be very cautious in undertaking any new generation project which does proceed under the competitive tender regime described in the Concession Law. If this is the intended policy goal for the Government, then we suggest that probably greater clarity of the laws (including the definitions of precisely what constitutes state-owned wealth, etc) would be useful.

However, as we have previously set out in this report (see, e.g., section 4.2), we believe that the benefits of allowing self-initiative for some projects could be quite substantial. These benefits would include reducing the burden of preparing concession tenders, of finding and defining the resources even prior to the tender and so on. Our recommendations in Section 4.2 were made to reflect recognition of the clear intent of retaining water resources as State resources subject to the Concession Law, but of liberating other (non-mineral) renewable energy sources on non-state lands from its requirements. In our comments on the new

Draft Energy Law (see Section 5.2.2) we pointed out that adding certain language regarding these points in that law would assist in achieving these recommendations.

2. *Concession contracts should ideally be as "self-contained" as possible and protect investors from future changes in policy or economic views.*

Any investor making long-lived investments under a grant of concession will wish for an overarching concession contract with the Government that puts in place protections for the life of the project. This will enable the investor not only to obtain the necessary funding, but also to reduce the cost of funding by reducing the number and scope of the risks that it would otherwise bear if the contract had not been entered into. The concession contract will ideally entrench certain provisions from change, even if they are changed by law or regulation, and will enable the project company to be compensated if its costs increase or its revenues fall as a result of specified actions on the part of the Government or circumstances that are outside the control of the project company.

Examples of the key risks that are likely to be covered would include:

- Unilateral action by government (political risk)
- Change of law (including the development of new regulations, schemes, bylaw and rules)
- Regulatory risk (exercise of the discretion of the regulator or a licence change)
- Political force majeure
- Sector restructuring risk
- Market introduction and market change risk
- Change of tax regime (including loss of capital allowances)
- Import duties
- Permits and consents (and the conditions on which they are granted)
- Expropriation

One of the areas which will be particularly important for projects requiring economic support (i.e., non-economic renewables projects undertaken in response to the Government's RESS) will be to embed as much as possible of the support mechanism within the concession contract itself. Thus, investors will prefer concession contracts which set out forward-looking prices much in the same way many power purchase agreements do.

They would be less inclined to view favourably contracts which require periodic review of prices, even if by an independent regulator.[15]

*3. The Concession Act is clearly an important document and must be developed carefully by the competent authority.*

The Concession Law prescribes the use and general content of the Concession Act as the instrument to be used by the competent authority in tendering for concessionaires. It is necessary to recognise, however, that the competent authority may well (for many good reasons) wish to have input from potential investors into the structure and content of a proposed concession prior to the tender. This is quite common, particularly in large and complex projects where large-scale international investors have experience that concessioning authorities might not have.

There is nothing in the Concession Law preventing competent authorities from seeking general expert or investor advice prior to the development of the Act, though we would certainly that all advice be solicited and taken in the most open and transparent manners, especially when dealing with State resources. In addition, in the two-stage procedure, specific scope is granted within the Law to permit the use of "competitive dialogue" to help inform the competent authority regarding the ultimate details of the Act.

Once the Concession Act is prepared and approved, it is inconvenient to change (changes may require repetition of a public hearing and approval process). This may present inconveniences for larger projects (e.g., where investor due diligence subsequent to the "competitive dialogue" stage might reveal issues unknown at the time of the Act's creation). Consideration might be given to modifying the Concession Law in the future to allow limited (and defined) scope changes in a Concession Act in such circumstances, though these might be practically difficult to define in advance. Alternatively, the undertaking of additional relevant studies by the State itself in advance of the preparation of the Act, might help lead (one hopes) to a better designed Act.

In discussions, we have been told that recognition must be given to the fact that part of the structure and use (and potential perceived rigidity) of the Concession Act concept is to ensure adherence to a public and transparent process, thus intending to promote investor and public trust in the process. In any case, for projects (including large scale projects) undertaken today, the Law and the process of creating the Concession Act should be

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[15] There are of course many issues here which are more of regulatory approach theory than the more narrow focus of this report. For example, investors may be pleased to accept pricing formulas relying on observable values (e.g., inflation or market-price indexing). Also, we stress that the paragraph in the text refers specifically to non-economic projects requiring economic support; economic projects or projects with aspects of monopoly franchise face different conditions and investors will (or should) expect different regulatory or pricing treatment.

adhered to. If projects are deemed sufficiently large or of sufficient national importance to deserve special treatment or exemptions, the option does exist for parliament to remove them from the strictures of the Law (as parliament did for the Komarnica project).

### 5.2.4. The Recent SHPP Concession Act

***Background***

In September of this year, the Ministry of Economy issued a formal invitation to bidders for small hydropower concessions on any of several specific watercourses. This section describes several features of the process and the relevant "Concession Act"[16] for the tender. We note that this is the second such tender for small hydropower concessions undertaken by the Ministry, and several of the terms and features in this new Concession Act reflect some of the learning gained in that first process.

Prospective bidders were required to submit their prequalification material in late October. Following evaluation of the submissions and announcement of qualified bidders, bidders will then have 90 days to submit the required material for award selection. We briefly describe the criteria used for both of these phases – pre-qualification and award selection – below. Following this, we note several observations regarding the process.

- Prequalification Approach and Criteria

The tender addresses concessions on 10 different watercourses. These watercourses have been divided into three groups (one group of 4 watercourses and two groups of 3). A prospective bidder must pre-qualify for a specific group of watercourses in order to have the right (if pre-qualified) to submit bids for any or all of the watercourses within that group. A single bidder (or single consortium) may attempt to prequalify for only two of the three groups of watercourses. We understand that this feature of the process was introduced in order to increase the number of distinct bidding entities at the selection stage.

The pre-qualification criteria are divided into three categories: technical capacity, financial capacity, and evidence of business participation in Montenegro. There are several distinct measures for various sub-criteria in each of these areas (apart from financial capacity which has only a single measure). Generally the measures are based on observable quantitative factors. The Act defines a minimum score on these criteria (a total of 85 points calculated according to formulae in the Act) and all prospective bidders achieving that score will be pre-qualified. In case fewer than five bidders achieve the minimum score, then the top five scoring bidders will be prequalified (the Act does not address the possibility that fewer than five prospective bidders might submit materials for a given group of watercourses).

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[16] See "Concessionary Act For Concession Award To Exploit Water Streams For Construction Of Small Hydropower Plants In Montenegro", an undated 30-page Ministry of Economy document.

- Award Selection Criteria

Following the announcement of pre-qualification, bidders will have 90 days to submit the required materials for bid evaluations. Bidders are bonded to ensure that they will submit a bid for at least one watercourse in any group for which they are pre-qualified. The qualification criteria are divided into five groups (some of which have sub-categories). The criteria groups include financial (concession fee), concession duration, technical parameters, "multifunctional" solutions addressing broad design issues, and land accessibility. All but the latter two of these criteria are generally quantitative, while the latter two require at least some qualitative assessment (though these latter two groups account for only 15% of the potential award points).

We note that there is a significant change in the key financial parameter – concession fee – from the first SHPP tender. In the first tender, we understand that the concession fee was bid on the basis of a percentage of revenues earned from energy sales. However, that tender was difficult to evaluate because bidders were not bidding to a standard design (i.e., standard project size) and were not required to submit the relevant design information allowing bids to be quantitatively compared with their tender. In this tender, bidders are to compete on the basis of a concession fee based in annual gWh which we understand will be converted to money terms on the basis of the prevailing tariff. This new approach allows financial comparison of bids where developers might have different ideas about project size, conceptually allowing the Ministry to select the most financially advantageous bid. However, it raises several additional questions as noted in the brief discussion of comments below.

***Comments***

1. *The Draft Concession Contract apparently includes pricing / tariff terms based on the existing tariff system for SHPPs, rather than on the system of preferential tariffs envisioned under the Draft Energy Law.*

This feature of the Concession Act is identical to that used for the first SHPP concession tender. Both of these Acts rely on the current approach to defining tariffs for SHPPs, which is expected to be fundamentally different from that which will probably be implemented under the new Draft Energy Law. We understand that the Ministry will prefer to have the projects developed under both of these tenders to fall under what is expected to be the new tariff regime. We do not disagree with this desire, but urge that the Ministry seek local legal review (possibly with in-house counsel, or possibly with the Concession Committee or other Government body) to ensure that such a change would not jeopardise the integrity of either tender. We have also made comments in our previous discussion of the Draft Energy Law regarding provisions which should be inserted into that law in order to help facilitate this change.

As we note in our overall conclusions and recommendations, it will probably be better for several reasons to have a clearer tariff definition as well as clearer identification of how other

costs (e.g., connection and use-of-network) will be addressed before proceeding with subsequent tenders.

2. *The Pre-Qualification structure and criteria reflect additional goals and objectives, which while worthy, are not explicitly stated in the Energy Strategy.*

The Energy Strategy and Action Plan detail a number of broad goals and policy objectives for Montenegro's energy sector. Pursuing the development of small hydro resources through the concessioning process is clearly consistent with and an integral part of these goals. We do note however that the prequalification structure and criteria appear to add two additional objectives which were not stated in the Strategy or Action Plan. These relate to the structure of the tender specifically designed to increase the number of different bidders (through the limitation on the number of groups a single bidder might pre-qualify for), and also to the specific promotion of Montenegrin business experience as a pre-qualification point. Certainly both of these features – increased participation generally and increased participation of Montenegrin businesses – are worthy goals which might well be adopted enthusiastically by policymakers. In this instance, we simply suggest the use of continued prudent judgement on the part of the Ministry of Economy to ensure that ancillary goals such as these do not ever in fact act to limit the scope of opportunities for selecting the best bidders for exploitation of Montenegro's resources.

3. *The Pre-Qualification criteria are generally well structured, but could still be improved.*

We understand that the pre-qualification criteria have evolved as the Ministry has gained experience from its first SHPP tender experience. The process of continued improvement is appropriate.

In future concession tenders, we believe that one area of prequalification criteria which might be re-examined and improved would be in the area of the assessment of financial capacity. The current act uses the single measure of a bidder's (or consortium's) gross revenues over a three year period. While this measure certainly provides information regarding a bidder's financial size, it probably does not provide enough information to fully assess a bidder's ability to finance a project's construction and to undertake its successful operation.

We recognise that it is desirable to keep the presentation and analysis of criteria simple and transparent, though while still providing adequate information. We suggest that perhaps a migration toward a set of criteria which include both profitability (e.g., net income after taxes, but before extraordinary or non-cash charges) and creditworthiness (possibly either a demonstrated credit rating by a recognised agency or perhaps a minimum net equity position on the balance sheet) would be an improvement. There must be a practical recognition that many of the potential tenderers might be small companies and thus limited in some ways (e.g., they might not have formal credit ratings), though this ought not preclude using slightly more probative values from audited financial reports.

4. *The requirement to provide a preliminary/conceptual design with the qualification materials may be ambitious, unless the extent of the design is limited.*

From discussions with selected winners of the first SHPP tender, we understand that developing even a preliminary conceptual design can be a lengthy process, one which certainly might last longer than the 90 day deadline for submission of qualification materials. Thus, we suggest that to the extent any design information is indeed necessary (see also our comments raised in point 6 below), specific parameters only should be specified. For example, from the description of the award analysis in this Act, it would appear that only the target project capacity and energy would be required, rather than any further design parameters. If this is so, that should be specified and clearly limited in the data requirements.

5. *The principal financial tendering parameter addresses some concerns noted related to the first tender, but raises others.*

As we noted earlier, this Act envisions a financial parameter (gWh translated into money terms using tariff values) different from that used in the first SHPP tender (percentage of sales revenues). We understand that this change was implemented both to address the issue of lack of comparability of the measures in the first tender (due to lack of project size measures) and also to essentially guarantee a minimum annual payment to the State.

These are both good reasons for changing the parameter, though we note that the first reason (introducing proper comparability) could have been handled by retaining the percentage revenue parameter and combining it with project size information (of the same type required by the current Act in the assessment of "preliminary design").

The change, however, introduces a new complication: under this approach, the issue of hydrological / water flow risk is left essentially entirely with the investor, rather than (previously) shared between the investor and the State.

Because hydrological risk in particular is probably viewed as uncontrollable by investors, this is a relatively unattractive feature. We suggest that it may be possible to meet the Ministry's objectives by setting a two-part financial parameter – a fixed sum (expressed in gWh, to be converted to money) to be paid annually, together with a percentage parameter. The fixed sum could be set low enough (on a stream-by-stream basis) to allow it to be paid even in "low flow" situations and it could be pre-specified in the tender documentation. The bidders could then compete on a residual percentage of revenues figure, though unlike in the first SHPP tender, this would have no minimum level (that would be the purpose of the gWh component) and would also require technical parameters to be submitted to allow such percentages to be compared for differing project design concepts. Alternatively, different or further choices may well be presented as other large scale projects (e.g., Moraca) enter the tender design stage.

6. *Certain of the qualification measures appear possibly to somewhat overlap.*

As noted above, one of the reasons for moving to the gWh bidding parameter was to allow differing bids to be fully and fairly compared in financial terms  With this as the primary driver for the change, it seems perhaps not completely necessary that the current tender also includes (and evaluates) both planned capacity and energy for the project.  If the financial bidding parameter had remained percentage of revenues, then these parameters could have been used to allow different bid percentages to be fully compared.  However, with the move to gWh, this is no longer necessary.

It is worth noting that while it is important for the State to obtain the best value for exploitation of its resources, the State also has a goal of achieving a certain level of renewable energy production.  Selecting projects on the basis of maximizing the financial value to the State is certainly a logical approach, but might in some (probably rare) circumstances lead to cases where offers of highest financial value to the State may not also simultaneously maximise renewable energy production.  At the moment this does not appear to be a significant problem, but the Ministry should monitor the results of the bidding / tendering process to see if there is any significant divergence in the future between maximizing financial value and maximizing renewable energy production.  If such a divergence does appear, then possibly the bidding structure and /or evaluation process might be reconsidered.

7. *In certain areas, bidders may not have as much information as they might wish at the time of bid submission.  To the extent this is so, this works counter to the interest of both bidders and the Ministry.*

As noted elsewhere in this report, there are several important issues which have yet to be fully defined which will have the potential to greatly affect a developer's project value.  The most important of these of course is the energy pricing system and we have noted its transition (and therefore lack of certainty regarding future levels) in our first comment above.  In addition to this, there is little information about network connection costs and charges (if any) for the use of network.  This is at least in part due to the lack of documented connection policy terms (or procedures) as well as network tariffs.  While energy pricing is obviously the most important, we have learned in our discussion with investors that for remote projects (as many SHPP are), connection costs might well add as much as 10% or more to overall project costs.

When investors are placed in a situation of making financial bids for projects in the absence of key financial information, they will often tend to be rather conservative in their bids.  This situation actually favours very few actors in the situation.  The State will, if accepting "conservative" bids, be receiving less value for its recourses than it might have under an environment with greater available information.  Similarly, some good and experienced bidders may be put off or may reject opportunities to bid in a low-information environment.  Certainly, as evidence has shown, some bidders will compete, but it is doubtful that the competition will be as effective or as informed as might be desirable.  As a practical matter

therefore, the Ministry must either choose between or balance the desire for a "quick" process with the desire for a process which yields the best investors and the best values for the State.

It is also worth noting that this sort of information will be needed in order to assess the future costs of procured power generally in the analysis of future investments and Action Plan development (see also our comments in section 5.2.1).

## 5.3. The Current Approach to Physically Implementing PPP Projects

### 5.3.1. The Planning and Permitting Process

***Background***

Developing a power generation project in Montenegro is a complex, multi-stage process. However, that alone does not make the situation in Montenegro significantly different from that prevailing in other developed countries. There are, however, certain Montenegro-specific issues which have the potential to somewhat complicate the situation. Specifically, the currently somewhat dynamic legal and institutional framework, coupled with the fact that there have to date not yet been any projects developed through the latest framework both contribute to making the process somewhat more difficult at this time than one would hope it might be. These complications underlie our comment below (which is echoed in other sections of this report relating to both the new Draft Energy Law and the development of Industry Regulations and Documentation) regarding the need for increased proactive management and coordination of many aspects of the process.

The overall planning and permitting process itself is shown step-wise in Table 5.3 below. This table focuses around the three key threshold documents required for a project – the Construction Permit, the Use Permit, and the operating License. The steps are structured to reflect a process undertaken by a winner of a small hydro concession, since these are the most active projects undergoing the process at this time. Notes to the table point out where other types of projects might differ from this model.

The following paragraphs provide a brief overview of the process. The reader may wish to consult Annex 3 which provides some definitions for specific terms used in both the table and in our description of the process, as well as some amount of detail on phases of the process related to getting various approvals and permits from government departments or independent Agencies which are prerequisites for obtaining the required threshold documents referenced above.

The process of planning and permitting begins following the award of a concession (either by tender, as shown in the Table, or perhaps by direct authorisation if that option is pursued in the future for certain projects; these are steps 1 – 3 of the Table). From the perspective of the developer, the starting point is then to ensure that the project is reflected in the Spatial

Plan (either at the State or Municipal level) and to receive "urban-technical conditions" from the spatial planning authorities (steps 7 – 8 of the Table).

With these conditions in hand, the developer is able to prepare a so-called "conceptual design" which he can present to a number of different government departments and / or independent Agencies (collectively, "Agencies") which are responsible for issuing relevant permits or approvals (steps 9 – 10 of the Table). We note that Annex 3 provides more description of the processes undertaken by various of these Agencies.

The Agencies will each provide their own sets of requirements to the developer. The developer will then, typically through the use of a professional Architect / Engineer, produce a so-called "Detailed Design" for his project which reflects the requirements of the various Agencies (step 11 of the Table). The developer must then retain an independent Architect / Engineer to certify that the Detailed Design does in fact meet these requirements (step 12 of the Table). Following this, the developer will present this certification to the individual Agencies (step 13 of the Table).

With a certified Detailed Design, the developer should be able to receive a Construction Permit from the appropriate Spatial Planning authority and undertake construction of the project. Following construction (in some cases during construction), several of the Agencies will inspect the final project and provide certification that it meets the agreed requirements in their area (steps 14 – 16 of the Table). With this agreement, the developer should be able to obtain a Use Permit from the spatial planning authority and then apply for and receive an operating License from the energy regulator (steps 17 – 18 of the Table).

*Table 5.3: The General Overall Generation Permitting Process*

| | Activity | Principal Actor(s) |
|---|---|---|
| 1 | Identify Resources to be Developed; Prepare Concession "Act" | Ministry of Economy |
| 2 | Public Consultation on Concession Act; Revise as Necessary; Government Approval of Final "Act" | Ministry of Economy |
| 3 | Release Tender; Evaluate; Recommend Award; Receive Government Approval on Recommendation | Ministry of Economy |
| 4 | Development and Submission of Pre-Conceptual Design to Ministry of Economy for Approval (See Notes) | Developer |
| 5 | Review and Approval of Pre-Conceptual Design (See Notes) | Ministry of Economy |
| 6 | Presentation of Pre-Conceptual Design to (several) individual Agencies | Developer |
| 7 | Submit Pre-Conceptual Design to Ministry of Spatial Planning | Developer |
| 8 | Incorporate project into Spatial Plan and issue Urban-Technical Conditions | Ministry of Spatial Planning (State or Municipal level) |
| 9 | Develop Conceptual Design incorporating UTC | Developer |
| 10 | Provide Comments or Initial Conditions on Conceptual Design | Agencies (e.g., Ministry of Agriculture, Environmental Protection Agency etc) |
| 11 | Development of Detailed Design | Developer |
| 12 | Obtain Independent Audit of Detailed Design, Confirming that it Complies with Agency Conditions | Developer |
| 13 | Review & Approval of Independent Audit and Detailed Design by Individual Relevant Agencies | Agencies |

*Note: None of the initial winners of small hydro concessions have yet passed this stage*

| | | |
|---|---|---|
| 14 | Obtain Authorisation for Construction (See Notes) | Energy Regulatory Agency |
| 15 | Obtain Construction Permit | Ministry of Spatial Planning |
| 16 | Inspections of Final Construction by individual Agencies | Agencies |
| 17 | Obtain post-construction "Permit for Use" | Ministry of Spatial Planning |
| 18 | Obtain Operating License | Energy Regulatory Authority |

Notes: This table excludes issues related to land acquisition for projects. See Annex 3 for definitions of certain specific terms (e.g., "pre-conceptual design" etc)

Steps 4 and 5 may be shortened in time or made unnecessary by the requirement (as in the recent SHPP tender) for the submission of certain pre-conceptual design details with tenders (step 3).

The commenting and approval process (i.e., step 10) of certain agencies is also multi-step; see the Annex for illustrations.

For larger projects, some amount of any of steps 4 through 8 might be completed pre-tender, depending on the level of pre-tender engineering specification work undertaken at the recommendation of financial advisors.

Step 14 will be removed by the current version of the new Draft Energy Law and replaced with the tendering or authorisation authority of the Ministry of Economy.

***Comments***

Our observations and comments on this overall procedure are set out below.

*1. Proactive coordination of the process, and a central informational point for investors would be helpful.*

The planning and permitting process is somewhat complex and multi-step, with many different organisations involved. This fact – especially when coupled with the fact that there is very little institutional experience among the various Agencies with independent power station development – suggests to us strongly that a small group to undertake the tasks of coordination and information transfer among Agencies, as well as acting as an information / facilitation point for project developers would be a positive step. Such a group should probably include representatives of the Ministry of Economy, the Ministry for Spatial Planning, the ERA and probably also the network businesses; key Agencies could also participate as required. The group could meet either monthly or bimonthly to report and monitor on the progress of all ongoing development projects, and provide a real-time information service to project developers. This group might in fact be the same as (or a sub-group of) the organisation we discussed for monitoring the Action Plan earlier in section 5.2.2.

In addition, in our later discussion of industry regulations and governing documentation, we also call for more proactive coordination and development activity. The group which would undertake that would likely have much the same makeup as the group identified here (possibly excluding the spatial planning functions). Thus, there may well be scope for identifying a single coordinating group addressing both project development and industry regulation issues.

There will be some further overlap of members of this group with whatever organisation performs the functions of the "Enterprise for the Action Plan" as envisioned in the new Draft Energy Law. As we noted in our discussion of that proposal earlier in this report, it may be that that function is better performed with ministerial representatives, rather than acting as an independent Agency. If that recommendation is taken up, then there will be further overlap with some of this group.

We do believe that the number of "coordinating bodies" should be kept to as few as necessary or possible, particularly when the technical substance of what requires coordination has significant overlaps. Thus, we believe that there should certainly probably be unification of the "development process" and "industry documentation" coordination and possibly with Action Plan monitoring as well.

*2. A developer often has the option to approach either State or Municipal planning authorities. This is satisfactory, provided that there is adequate coordination among the planning authorities and that there is an obligation on the State authorities to act if municipal authorities are unable to do so.*

For projects below a certain minimum size (as specified in the Law on Spatial Planning), a developer has the option to approach either State or Municipal planning authorities in order to get his project included in the relevant Spatial Plan and to obtain the urban-technical conditions required to produce a Conceptual Design (projects above the minimum size are fully in the scope of State authorities).

We see this as a potential advantage, provided that there is adequate coordination between the different levels of planning authorities. We have noted some comments that from time to time municipal-level authorities are potentially constrained in resource terms which renders them unable to respond in a timely manner to the needs of project developers. We believe that in such circumstances, there should be a positive obligation on the State authorities to undertake the approval activities of a project if a developer desires to avoid delays presented by municipal authorities.

3. *At least some Agencies recognise the difference between "small" and "large" projects and provide streamlined processes for "small" projects. This should be encouraged, to the extent possible.*

Some agencies have different procedures for different projects, depending on the relative importance of that project to the particular Agency's interest. For example, the Environmental Protection Agency can exempt certain small projects from the requirement of obtaining an Environmental Impact Assessment (and its concomitant need for public hearings). Where opportunities such as this arise, they should be undertaken as much as possible. One of the tasks of the coordinating group referred to in point 1 above might be to observe where such streamlining might be possible.

4. *Maximising the technical and Agency input into the Concession Act, to the extent possible, will yield both improved tender bids and also a faster permitting process.*

The more information available to a potential developer at an early stage of the process will yield better-informed tender responses and could also potentially shorten some later approval stages. Naturally, the ability to do this would probably depend at least to some extent on the scale of the project to be undertaken. For example, we would expect that it may be possible for some of the larger projects (where some degree of engineering or pre-feasibility work is undertaken prior to the tender process) to have some or even all their urban-technical conditions defined prior to the tender. For all projects, there may well also be certain uniform standards which should apply (e.g., possibly minimum flow rates of rivers, or physical distance parameters governing wind turbine separation from either populated areas or land boundaries). To the extent possible, such information should be incorporated into Concession Acts.

5. *Investor uncertainty should be minimized through making the process as parallel (rather than sequential) as possible.*

Any developer / investor will wish to minimize his uncertainty or "at risk" development costs. A great deal of this uncertainty can and should be addressed through the development of a clear and transparent set of documents governing commercial arrangements for all projects (i.e., Market Rules and RESS). In terms of the development process, some uncertainty might also be reduced through improvements to the structure of the process in order to make it as "parallel" as possible. For example, we understand that the application and award of an operating License for a project comes only at the end of the planning / permitting / construction / inspection process. This (as just one example) could be improved in terms of perceived risk by allowing the application for and possibly even issue of a License (subject to the operator obtaining all required permits and consents) earlier in the overall process.

6. *There is some anecdotal evidence that some Agency regulations or processes may not yet be fully in place or harmonised with all relevant laws and regulations.*

As we noted early in this report, one of the key Montenegro-specific challenges faced by investors will be the dynamic legal and regulatory framework and the resulting step-by-step adaptation of processes and procedures undertaken by Agencies and others in response to the sometimes quickly changing framework.

In our discussions with various Agencies, we have learned of some examples where processes, procedures, development of subregulations and so on are not quite keeping pace with the higher level legal and organisational changes. For example, in the area of telecoms, the intention to remove the permitting authority from the now-privatised Telecom has not yet been implemented; also the new Law on Electronic Communication is still not passed. Similarly, the Law on Construction came into force in late 2008, but the full set of subregulations related to it remain to be developed.

Some problems such as this can be expected in any country as laws constantly change. In Montenegro the problem is perhaps a bit more acute since there have been relatively a large number of changes in a rather short time. It is not clear at this time what effect these problems might have on the ability of various Agencies to issue required permits and consents. This lack of clarity is simply because no project developer has yet reached the stage in the development process of approaching an Agency with a fully specified Conceptual design. We point out the potential for this problem here as a matter for the coordinating body (see point 1 above) to recognise and consider going forward.

7. *The need for and requirement of a design audit for an independent architect / engineer should be considered carefully.*

We understand the desire of the spatial planning authorities and agencies to ensure that an investor's plan in fact faithfully incorporates the various technical and design conditions imposed on a project. However, the requirement for the retention of a second qualified architect / engineer to provide such certification poses practical problems (we understand that there are in fact few such qualified organisations in Montenegro, particularly insofar as energy projects are concerned) and perhaps seems to be overly-cautious. We note that the Agencies themselves have the ability to review Detailed Designs and with the large staffs some Agencies have, might well be able to satisfy themselves internally. Furthermore, many Agencies have post-construction inspection to satisfy themselves of faithfulness to design requirements, and several have ongoing inspections during project operations. In this context, the requirement for the independent audit appears to be potentially over-cautious. We believe that the spatial planning authorities (and / or other Agencies as appropriate) should consider if this is truly necessary in today's environment of multiple independent Agencies with their own staffs.

8. *The planning and permitting process should ensure that projects with significant social impacts receive appropriate review from this point of view.*

A significant number of Montenegro's planned development projects include exploitation of hydro resources; some of these (particularly larger ones) may well involve creation of significant storage reservoirs (i.e., flooded areas behind dams). We note that the planning process should

ensure adequate social impact assessments for such projects, in addition to the more common environmental or physical design assessments. This issue may also arise if new coal mines are to be developed.

### 5.3.2. Network Connection Issues

#### *Background*

Network connection charges are an important aspect in almost every decentralised electricity system. In long-standing systems with ample regulatory experience, many aspects of network connections, including policies defining the approach to charging, the commercial terms and conditions of charging, obligations on providers with respect to providing quotations and constructing connections, tariffs and so on are well-defined and documented. In some large markets, there are also sometimes elements of contestability or competition in the provision of connection services as well.

Montenegro is today only at the beginning of the process of introducing new commercial generators to its system and is yet to develop a full set of documented principles and procedures covering the various issues noted above. However, it is important to make progress in this area (as in many other areas, including network use-of-system charging) because generators are today evaluating the economics of various opportunities for projects. They will need an understanding of the basis for charging and the magnitude of such charges in order to make effective evaluations and thus effective and reasonable responses to tenders for opportunities.

As with several issues in Montenegro, the issue of network charging is influenced not just by the various factors which drive the structure of charges in many other countries, but also by Montenegro-specific circumstances. Primary among these circumstances is the physical geography of Montenegro, where there are opportunities for renewable projects (of both small and large scale) in cases where the project resources – particularly in the case of wind and hydro resources – may be relatively far from built-up areas or (more importantly) network connection points. In addition, there is precedent of municipal involvement in providing connections, at least for large customer connections.

#### *Comments*

Our analysis of and views on the important Montenegro-specific connection issues are set out in Annex 4. Taking these together with experience on approaches to handling the development of connection policies and charges in other countries we have the following views of key points for the way forward for forming a useful connection policy for Montenegro:

1. *A Connection Policy must be developed and approved. It will form the basis for the development of future individual connection charges.*

A written connection policy setting out principles for forming charges (at both transmission and distribution levels) should be developed through a consultative process including representatives of the Ministry, network providers and operators, and new and existing generators. It should be

subject to ERA approval. In addition to addressing the "standard" sorts of issues related to connections[17], we recommend that the policy include:

- There must be coordination of planning for both connections and network expansion between the network companies and other key actors. This latter group includes not only network system users (i.e., new and prospective generators, large customers etc) but importantly also the Ministry of Economy (in its role as planner and executor of tenders for new generation projects) and probably also the Ministry for Spatial Planning (in its role as planner of development of new and existing land areas throughout Montenegro).
- The group developing the connection policy should consider the practicality and value of the potential for allowing scope for "dynamic" connections (see Annex4) to be applied in certain specifically designated circumstances. The group should consider whether it is feasible to adequately identify opportunities for such connections and estimate the possibility of aggregate present value savings through such an approach. If it is potentially feasible and not overly burdensome, then it should be provided for in the connections policy.

2. *The licensed network businesses should have an obligation to offer terms for connection, at least for preferential generation projects undertaken in response to Government tenders.*

We understand that today, at least for new connections for large customers, often municipalities are involved in providing connections and the financing of new connections is often left to be determined as a commercial matter between the municipality and the customer.

We believe that if it is not already the case, the approach for generation connection (particularly for small scale generators undertaken in response to Government tenders) should rely in the first instance on an obligation (possibly imposed via license conditions) on network businesses to offer terms for connections which will include requiring the network business to finance the connection. This will help to remove several potential barriers to connecting generators (barriers including capital cost and potential requirements to deal with municipalities). We note that generation connection still might be contestable (i.e., there should be no obligation on generators to accept terms if they can obtain a connection to satisfactory standards via alternative sources), though we expect that as a practical matter for a small market such as Montenegro it will remain a low-competition activity (possibly large generation projects will self-construct) with a need for regulatory controls.

3. *If the Ministry's future RESS incorporates a feed-in tariff, it should be structured to be as cost-reflective as possible, including in terms not just of generation technology, but also connection costs.*

There are a variety of mechanisms in which connection costs can be incorporated into feed-in tariffs or other RESS mechanisms. In Montenegro, the approach to be taken is probably more

[17] Examples would include so-called "shallow" versus "deep" connections, the potential (or lack thereof) of contestability for the connection business, approaches to regulation and cost control, formal planning and consultation processes, etc.

important than in other countries since connection costs have the potential to be an unusually large portion of total costs for some renewable projects located in remote regions. The Annex presents several options for approaching this issue; the third option in the relevant section of the Annex (incorporating a connection element which is expressed as a cost per km of connection and differentiated by voltage level) probably achieves the best balance between cost-reflectivity and practicality.

As a final comment regarding this discussion, it is important to reiterate that we have focused on connection issues specifically because there are "Montenegro-specific" factors which need to be pointed out. At the same time, it is still important to recognise that the myriad other aspects of network services – including importantly use-of-system charges for both transmission and distribution – together with other related industry documentation (see section 5.4.1 below) remain as vitally important in Montenegro as they are in other systems.

## 5.4. Operating Issues Related to PPP Projects

### 5.4.1. Industry Regulations and Related Documentation

***Background***

The development of industry regulations, procedures and so on has been ongoing in Montenegro for some time. Much of this work of course has been undertaken by the Energy Regulatory Agency (ERA) which began its work in early 2004. However, in common with practice in many other countries, some documentation (particularly technical documentation) is developed in the first instance by industry participants, subject to later regulatory approval.

Today, Montenegro has a set of industry documentation which can support the technical and commercial operations of what has essentially been a vertically-integrated industry. However, with the recent separation of Prenos from the remainder of EPCG, as well as the targets for introducing customer eligibility according to the time schedules of the EnCT, there is already a need for an increased number of formal documents, subregulations and so on, as well as increased concern regarding the implementation details of all documents. The introduction of new private-sector participants in the generation sector will further increase these needs.

Table 5.4 below summarises what we see today as the most important of the new documentation requirements necessary to support PPP generation projects. In the comments which follow, we make points regarding several of these, as well as offer observations regarding other issues of a general regulatory nature which have the potential to impact future participants in the generation sector.

*Table 5.4: Summary Status of Selected Key Regulatory / Market Documentation to Enable Generation Projects*

| Document | Required to Support: | | Comments |
|---|---|---|---|
| | Preferential Projects | Large Scale Projects | |
| *Existing Documents* | | | |
| Current Market Rules | × | × | December 2008 version currently supports EPCG operating essentially as a "buyer of surplus energy" from any other producers. Must be revised for decentralised / competitive market operation |
| Grid Code | ✓ | ✓ | "Interim" code adopted in 2005; missing only market-related elements |
| *Required Documents* | | | |
| Support Scheme for Renewable Energy Generation | ✓ | × | Required to be developed by Ministry of Economy per Article 25 of the new Draft Energy Law. Should include (or lead to) development of tariffs / contracts for preferential producers |
| Rules for Acquisition and Cost Allocation of Preferential Energy | ✓ | × | Required to specify how Market Operator and System Operator balance despatch of preferential energy and allocate payment obligations among energy suppliers / customers |
| Market Rules | × | ✓ | Required to support bilateral trading market as described in new Draft Energy Law. May also require separate transmission allocation rules, depending on market design. |
| Network Connection Policy | ✓ | ✓ | Statement of charging principles (e.g., shallow vs deep; static vs dynamic, etc), obligations to offer terms & designs, maintenance and access arrangements etc. (both transmission and distribution) |
| Network Connection Agreements | ✓ | ✓ | Commercial agreements defining payment terms and obligations related to |

| | | | |
|---|---|---|---|
| | | | network connections (both transmission and distribution) |
| Network Use-of-System Charging Methodology and Tariffs | ✓ | ✓ | Necessary only if generators are to pay (as is common) a portion of transmission and / or distribution (non-connection) network costs |

*Note: Not all "existing" documents shown. In addition, both "existing" and "required" documents listed are those which are most important for generation projects. The full industry requires additional documents, including (for example) those related to retail pricing, customer service, etc. The precise definition of which individual documents will be drafted will depend in part on the details of market design, as well as decisions made regarding to what extent various issues will be covered in individual documents as opposed to larger multi-topic master documents. In this regard, the documents noted in the above table might be regarded as "typical" of many energy markets, though their substance might be combined in different ways in different markets.*

***Comments***

1. *The current market rules do not support the kind of decentralised generation market envisioned in the new Draft Energy Law. However, only relatively simple rules will be necessary to support the introduction of "preferential producers" into the industry in the near term.*

We understand that the current market rules essentially require producers to sell "surplus" energy to EPCG (in its role as Public Supplier) at ERA-regulated prices under annual contracts. This approach (and thus, the rules) will clearly need to be changed in view of the type of energy market described in the new Draft Energy Law.

Developing detailed market rules for energy trading is a difficult task, though today many examples of rules for the type of market envisioned in the new Draft Energy Law exist in Europe. Such new rules will be necessary to support the development and operation of the currently planned new, large, economic generation projects (e.g., the Moraca river project).

It is important to note however that for the "preferential producers" envisioned under the new Draft Energy Law, it may not be absolutely necessary to have full competitive market rules in place to support operations. This is because the energy from these producers will be non-despatchable and must be taken by the market / system operators. The energy costs and quantities will then be applied pro rata over all energy suppliers, requiring them simply to adjust their other (despatchable) energy sources and make payments for their pro rata share of preferential production. A relatively simple set of operational and accounting procedures could be devised to support this approach if it turns out that preferential producers are ready to operate in advance of the development of full market rules. We recommend that Ministry of Economy monitor and assess the development process of full market rules (which should also be expected to address the mechanics of handling preferential producers) in order to see if it becomes necessary to implement a shorter "bridge" version of special rules for preferential producers in advance of the implementation of full market rules.

2. *The principles for network charges and tariffs covering both use-of-system and connection are necessary today, for both existing industry participants and prospective new entrants.*

For both the transmission and distribution networks, it will be necessary to have clear statements of principles regarding the formation of charges (e.g., whether connections will be "shallow" or "deep"; how network usage charges might be split between generators and suppliers, etc) as well as formal tariffs or contract charges which are based on these principles. In section 5.3.2 of this report we discussed certain of the Montenegrin-specific issues related to connection charging which may have to be considered. These, together with other issues common to other network systems throughout Europe will have to form the basis for principles and tariffs. These tariffs are needed now, not just to support the recently-unbundled Prenos, but also to assist active developers (and active bidders for concessions) in assessing their costs and prospective financial investments in generation projects.

3. *Developing many of the required documents will require at least some industry input, as well activities by ERA and others. There should be proactive coordination to ensure that this work is accomplished in a timely manner, as projects requiring this documentation are underway.*

Completing the required set of market rules, contracts, subregulations and so on is a substantial undertaking, even if Montenegro takes advantage of (as it should do to the extent possible) the fact that by now there is substantial experience and reference documents for such markets throughout the EU. In most countries, completing this sort of documentation often incorporates either consultation with or active participation of at least some industry participants (e.g., transmission companies often originate drafts of connection or use-of-system agreements and so on). This participatory approach can and probably should be used in Montenegro (subject of course to the usual regulatory or government oversight where appropriate).

We note however that the situation in Montenegro today is such that completion of some of these documents is made more urgent by the fact that several projects which will depend on such documents (for economic analysis in addition to operation) are actually underway at various stages of implementation. In addition, the government appears to be quite eager to continue the process of awarding generation concessions apace.

In this circumstance, we believe that the Ministry of Economy (as it is the primary motive force initiating generation projects via concession) should play an active role, together with the ERA in order to coordinate (or at least to monitor) the development of such documents with a view to focusing on their timely completion.

4. *The period for operating licenses appears to be restricted by law. New entrants will desire licenses which have lifetimes at least matching their concession durations.*

From our discussions, we understand that currently licenses for electricity generation may be issued only for a maximum of 20 years. The new Draft Law on Energy (Article 54) appears to set a new maximum limit of only 15 years. Investors in generation facilities will certainly want to have licenses which will be valid for the lifetime of their power stations or the duration of their concessions (which would typically be up to a maximum of 30 years, though possibly even longer).

In concept, it should not present a difficulty to the regulatory agency to issue such longer term licenses, provided that the license documents themselves include appropriate wording requiring the licensee to adhere to the license conditions and application requirements throughout the period of license validity.

5. *As the generation sector begins to act more as a "market", it will become increasingly important to eliminate tariff cross-subsidies or make subsidy systems transparent and unable to be bypassed.*

We believe that as market pricing is introduced in the generation sector, those prices must begin to be reflected in end-user tariffs in a fully cost-reflective sense (i.e., not be cross-subsidised). Any efforts made to avoid this effect (apart, possibly, from introducing government-funded subsidies directly into retail prices) will probably have negative effects on the development of the generation market, or might lead to that market being developed in an export-oriented manner.

6. *As Montenegro's energy market is liberalised, attention will still probably need to be paid to competition issues in the generation sector, at least until either local or regional markets become more active.*

We note that as a practical matter, the Montenegrin and regional generation markets are not likely to pass suddenly from a state of near-complete monopoly to a state of perfect competition. Certainly in Montenegro itself, where existing generation is dominated by a single producer and regional interconnections have limited capacity (to countries which sometimes themselves are prone to energy shortages), it is likely that a transitional period of markets with a dominating producer will exist for some time. We believe that the ERA should be reasonably cognizant of this in its future actions. We note that as with the above comment, this is not likely to be an issue affecting "preferential producers" since they are effectively removed from the market via contract during their period of economic preference.

### 5.4.2. Project Commercial Arrangements

In this section, we set out first several comments related to the development of an energy market in Montenegro, followed by a separate set of comments on the approach to RESS.

- ***Development of an Energy Market***

As we have noted above in several places (see, e.g., Sections 2.3, 4.1.1), Montenegro is and should continue to be committed from moving from its current set of energy trading arrangements to a system more suited to supporting market-based energy trading among decentralised entities acting in a competitive environment, likely in a regional context. The broad outline of the type of market as set out in the current Draft Energy Law certainly has the potential to support such trading and also appears (prior to the development of any implementation details or rules) to be broadly consistent with the type of markets in several EU countries. If this sort of market is implemented in a timely and effective manner (and integrated well with regional trading), it has the potential to provide a good framework to support existing generation and new economic generation projects.

There are still a number of important points to address in moving toward this energy market. First and foremost among these of course are the important and challenging tasks of simply developing the appropriate market rules documents themselves, followed by the necessary market metering and accounting systems required to support market operations. In addition to this, we note below several additional points that need consideration.

1. *The transition to market operations (and pricing) must recognise the realities of current industrial organisation.*

In our previous discussion of "Montenegro-specific" issues in the early part of this report (see Section 2.3), we have pointed out that the transition to effective market operations in Montenegro will require recognition of the fact that there is a large (dominant) legacy generation company and supplier, with relatively few individual large customers. Thus, it may turn out that even once full "market infrastructure" (rules, data, and accounting systems etc) are in place, the industrial organisation (e.g., number of competitive generators and suppliers) in place may not be

adequate to support a perfectly competitive market.[18] This is an important issue for ERA to consider as it relaxes (or not) its price controls on generation.

We do note that there is quite a bit of experience in some EU countries with regard to putting in place transitional arrangements (e.g., imposing regulated-price medium-term contracts on legacy generators, or placing temporary price caps on market-price bidding) for markets with inadequate industrial organisation characteristics at the time of market opening. These have the potential to be effective, provided at least in part that a future world of more effective industrial organisation is within reach.

*2. A longer-term goal of moving toward a regional market should be pursued.*

Certainly one of the most desirable ways to both mitigate the industrial organisation issues noted above and also improve the scope and effectiveness of energy trading will be to expand the overall market size through integration of individual country-specific markets into a single regional market. This is a difficult exercise for a variety of reasons, but is certainly being pursued through the EnCT process and institutions. Montenegro would probably stand to benefit greatly from more effective, transparent and efficient cross border trading and should support these initiatives.

*3. A bilateral contracting market can provide needed support to new generation projects, but this must balance considerations of competition policy and "State Aid" issues.*

On of the potential positive features of a new set of market rules is that they should, in contrast to the existing set of trading arrangements, support the use of multi-year bilateral power purchase contracts among market participants. This could well be a desirable feature in order to support the financing of new generation projects. Broadly, we believe that the options to allow market participants to enter into such contracts should be incorporated into the new energy market rules for this reason.

Regulators and policymakers will, however, need to be cognizant of competition policy concerns which might arise. Within the EU context, there are often concerns raised related to the use of long-term contracts in the energy sector if they are perceived to be evidence of forms of "State Aid" – specifically, if they are perceived to either give particular advantages to a specific enterprise, or to distort competition, or to affect trade between Member States, among other

[18] This fact is in part due to the manner in which EPCG has been unbundled, but probably more due simply to the small overall scale of the Montenegrin energy market. Because generation is usually available in discrete capacity units, and there are also minimum efficient scales for suppliers, it is generally accepted that the smaller and more isolated (in terms of cross border trade) a system is, the more difficult it will be to truly have an effective competitive market. To provide some perspective, the original (no longer in force) EU directive on electricity markets (96/92/EC) identified a "small isolated system" (eligible to apply for derogation under the Directive) as one which had consumption of less than 2500 gwh in 1996 with less than 5% of its supplies coming from imports. Today's consumption in Montenegro would, apart from KAP, approximately meet that 1996 overall market size criterion, though Montenegro does have more than 5% imports. We point this out not to suggest that Montenegro might wish to avoid implementing markets, but rather to underscore (1) the position Montenegro is in with respect to the boundary of what market size might be feasible for implementing competitive markets and (2) the importance of future moves to regional market integration which could increase the effective overall market size.

issues. The threshold for the tests as to whether competition is distorted and / or trade between Member States is affected are quite low. The EU Commission has, for example, attacked power purchase agreements in Poland as a form of State Aid.

Broadly, the ability of a generator to sell all it wants to under long term contracts is permitted if it can be demonstrated to be necessary to underpin the financing of that generator. However, the ability for the power purchaser to purchase the capacity and energy of a specific plant on an exclusive basis has been cut back by the Commission to 15 years. Generally, if the project is awarded as a result of a fair, competitive tender process, an element of State Aid that is available to any bidder that is successful is more difficult to attack as conferring a particular advantage; this factor may help support the use of long term contracts as part of tender packages for new projects.

Montenegro will of course operate under its own competition policy framework, though this may well be influenced by the adoption of the various EU Acquis via the EnCT or by other international agreements which are in place.

- ***Approach to Renewable Energy Support Schemes***

As noted in Section 5.2.2 above, the new Draft Energy Law has provisions requiring the Ministry to develop and implement (subject to Government approval) a support scheme involving "preferential prices" to support renewable energy projects. In reading this draft law and in discussions with counterparts in the Ministry, it seems clear that the desired structure for this support scheme will be that of a Feed-in Tariff approach.

As we discussed earlier in this report, Feed-in Tariffs are a common and well-accepted approach to RESS in many European countries. We believe that a well-designed Feed-in Tariff system certainly has the potential to facilitate reaching Montenegro's stated goals in the renewables sector. Furthermore, an initial Feed-in Tariff system can serve as a "starting point", allowing observation of results. If changes to Feed-in Tariffs are desired or if other features (e.g., fiscal incentives), they can be made after some time as a result of direct experience with an initial Feed-in Tariff system.

It is not the purpose of this work to propose a specific design or level of any Feed-in Tariffs. However, in Annex2, we have summarised a number of issues which are frequently addressed in the design of Feed-in Tariffs. In addition to these rather general issues, there are several additional points we note below.

1. *At the start, tariff design and structure should only be as complex as it needs to be in order to achieve basic economic cost-reflectivity. Further details or features might be added in the future as experience is gained.*

As some of the issues noted in the Annex make clear, tariff design might incorporate any number of complexities. The extent to which the ultimate tariff is more simple or more complex should probably be determined not by the number of complexities or features which it might be possible to introduce, but instead by what features are required in order to make the tariff as economically cost-reflective as possible and to simultaneously minimise the likelihood of undesired outcomes, for either the producer or consumer.

As an example, it seems clear that one likely area of "complexity" would be the need to address the potential variability of capital costs with project size. This sort of differentiation would probably be very helpful for small hydro projects where there might be substantial per-kw cost variability over different size ranges, but perhaps less important for wind projects. Another area of complexity which might be considered (again for hydro projects) would be the question of whether there is a need for within-time period (e.g., intra-month) differentiation of prices for variations in output level. In this case, the need (or not) for such variation would be driven by an assessment of the underlying hydrological variability and the potential that such variability might (or might not) lead to unanticipated "windfall" gains or losses for producers. For these and other issues, the Ministry needs to make an assessment of the likely impact of variations on project economics, and to choose a tariff design which addresses the most significant drivers of variation, thus allowing the tariff to be as reasonably economically cost-reflective as possible.

2. *Certain Montenegro-specific issues should be addressed in the tariff.*

Connection costs will almost certainly be a more significant and variable component of project costs in Montenegro than in other, more densely and uniformly populated and networked countries. We do recommend that tariff design incorporates recognition of the variability of such costs across different projects, possibly through structures discussed in Annex 4.

3. *Tariff levels are quite difficult to estimate, but Montenegro's approach of using tendering for certain (state resource) projects will provide some degree of "automatic correction".*

One of the overall goals of a Feed-in Tariff system will be to stimulate investment in renewables projects by offering an investor an attractive expected return. However, this has to be balanced by the recognition that it is also necessary to act in the interest of consumers (who ultimately pay the tariff costs) by not offering investors "excessive" returns. It is this balance that drives our observations that one goal of tariff design will be to achieve tariffs which are reasonably economically cost-reflective.

This is of course a difficult task, especially for projects which are sometimes of unique design (as many hydro projects are) and which in all cases are unknown in precise detail at the time the tariff is developed. Thus, the Ministry will have a challenging and important task to undertake (probably together with ERA and perhaps others through consultation) in order to obtain reasonable estimates of capital and operating costs as well as investor returns for projects which are not yet defined.

We note however that the fact that many (if not all) of these projects will be awarded under tender will have the potential to ease the burden of this task. If, for example, the Feed-in Tariff is somewhat high (i.e., would allow for excess financial returns) for a particular potential project, at least some of the "excess price" should be recovered by the Ministry in the form of higher bids from competitors in the tendering process. Conversely, if a specific project has costs which are not supportable under the advertised tariff, bidding information will reveal that fact as well. This feature does not remove the need to attempt to achieve accurate tariff levels and cost-reflective structures, but does act to improve the results of the overall process. We do note of course that if our recommendations regarding allowing certain projects to be undertaken via self-

initiative without tender, then the burden of developing an appropriately cost reflective tariff for those projects remains high.

4. *The tariff should, at least at the start, probably not combine linkages to market prices (or pricing "options"); it should instead focus on cost-reflectivity.*

In most countries implementing Feed-in Tariff systems today, the tariff is offered as a defined set of prices over a defined time period. However, some countries have experimented with structuring Feed-in Tariffs instead as "margins" over observable energy market prices, or have given producers "option pricing" allowing them to choose the higher of either market prices or the pre-defined tariff at any time the producer wishes.

For Montenegro today, we believe that the initial approach to Feed-in Tariff design should not be linked to market prices in any of these ways. This is because not only is there no observable market today, when such markets (either within Montenegro or regionally) do develop, it would be appropriate to consider their degree of liquidity and competitiveness before adopting them as components of RESS design. Even then, evaluating the value of implicit options or market price volatility would present a more challenging component of estimating the appropriate Feed-in Tariff level.

We have noted earlier (see section5.2.2) in our discussion of the new Draft Energy Law that Article 77(5) of this draft could be interpreted as allowing for some of this sort of "market or Feed-in Tariff options". It is worth pointing out again that not only is this probably an example of a too-prescriptive condition in the draft law (we believe that the terms of the RESS should be defined by the Government support scheme to be adopted according to Article 25 of that draft and not have elements of that scheme pre-judged later in the draft law), but also it is undesirable if its intent is to allow a producer to switch back-and-forth at will between a Feed-in Tariff contract and a market price.[19]

5. *The preferential pricing scheme should apply to yet-to-be-constructed projects, not to existing renewable generation projects.*

One of the overall goals of the RESS is to stimulate investment in new renewable energy projects. In light of this, it would not seem to make sense to apply any new preferential pricing scheme retroactively to any already-existing projects, such as any small (< 10 MW) hydro facilities already constructed and operated by EPCG or others. Such projects should continue to be subjected to whatever regulatory approach governs them today, or to whatever regulations or market prevails in the future.

6. *Consideration should be given to supporting non-network renewable projects, if they are able to help achieve Montenegro's policy goals.*

As we have noted earlier (see Section 5.2.2), there may be some scope for Montenegro to meet its renewable energy obligations not just through network-connected projects, but possibly also

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[19] It may be that the intent of Article 77(5) is to allow the producer to make a one-time decision upon award of his concession regarding whether he will from that point forward accept the preferential price contract or instead accept the market price. This would not be a poor intent, though the language should be clarified if it is intended as such.

through off-grid or projects which do not feed in to the network (examples might be remote projects or use of small scale solar PV on industrial or commercial sites, etc). The Ministry may well wish to consider alternatives to a feed-in tariff system (e.g., tax credits) to support such projects if it is judged that they have potential scope to help meet Montenegro's energy policy goals.

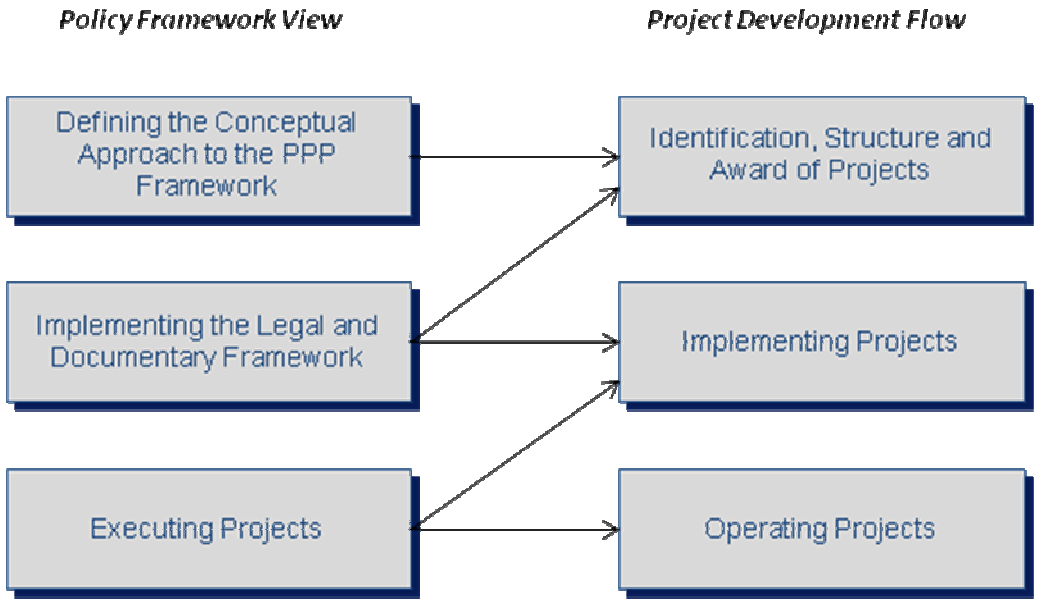
# 6. OBSERVATIONS AND RECOMMENDATIONS

In this section, we first briefly summarise a broad view of our observations regarding the developing PPP framework for generation in Montenegro. This summary is then followed by recommendation for actions to be taken over time, ranging from immediate steps to longer term activities.

## 6.1. Defining and Executing the PPP Framework: Summary Comments

Throughout this report (principally in Chapters 4 and 5), we have set out numerous comments related to the various legal, regulatory, and policy aspects of the developing PPP framework for generation projects in Montenegro. These comments have generally followed the "Project Development Flow" which was illustrated in Figure 5.2. From the point of view of policymakers and State institutions, it is probably more helpful to first summarise the overall thrust of these comments in terms of a "Policy Framework View". This is illustrated in Figure 6.1 below, with the general principal linkages to the various aspects of the Project Development Flow.

*Figure 6.1: Policy Framework View*




***Note: Arrows show principal linkages, though in reality all stages have interlinkages***

Our overall observations regarding each step of the Policy Framework View are summarised below.

*1. Defining the Conceptual Approach to the PPP Framework*

The key aspects of the desired PPP framework are generally well defined by the new Draft Energy Law, together with the Energy Strategy / Action Plan. The principal component missing from these documents is greater clarity regarding whether (and if so, how) certain "self-initiative" projects which are exempted from the tendering requirements of the Concession Law are to be permitted. As we have set out earlier in this report, we believe that there are potential advantages in allowing this, and that such an approach can be undertaken in a way that still protects the State's main interests. If it is agreed to take this approach, then certain (probably small) modifications to the new Energy Law should be introduced (as we note in the section on Actions below). Another important, but relatively simple, missing component is to amend the Draft Energy Law to allow existing relevant concessions to be deemed to be amended so that any new RESS will apply to them in due course. This would increase certainty for investors and should allow for more rapid development and eventual operation of current concessions.[20]

*2. Implementing the Legal and Documentary Framework*

It is clear that a number of key implementing documents for the desired framework remain to be completed. These range from the new Draft Energy Law to a wide variety of implementing contracts and documents (e.g., market rules, Feed-in Tariff design and levels, connection terms and agreements, etc), several of which were noted in Section 5.4.1 above.

With the broad approach to the PPP framework defined and agreed, focus should turn to completing these implementing documents in order to allow efficient project award and execution. This is a significant task, made more urgent by the fact that a variety of projects are actually underway, at least at various planning and evaluation stages. As we noted above in Section5.4.1, it will be desirable to have proactive efforts to coordinate and push forward the required industry and agency input in many of these areas.

*3. Executing Projects*

Montenegro has already begun to award concessions for some PPP generation projects (through the first small hydro concession tenders) and is in the process of awarding others (through the second small hydro concession tender) and is at expression of interest stages for others (including wind energy projects and the Moraca river project).

While it is certain that beginning the process of project definition and award is both a significant undertaking (and accomplishment) and also an important step to meeting indicative time targets set out in the Energy Strategy / Action plan, we believe that the lack of certain key

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[20] As noted in the Introduction, subsequent to the formal review, modification and completion of this Final Report, the Government adopted (though not yet passed by Parliament at the time of this writing) an updated Energy Law Proposal. Comments on this Energy Law Proposal have been incorporated into a separate Addendum to this report; in many cases they are identical (apart from Article reference numbering) to those made on the draft Law. Regarding the two points discussed in this paragraph, as we note in the Addendum, the Energy Law Proposal has not taken these up and and so alternative means of implementing them – should the Government decide to adopt them – will need to be undertaken.

documentation for implementing the PPP framework at this stage risks making at least some of this activity premature. The potential problem is probably more acute with the smaller projects where in some cases tenders for concession fees have already been solicited and accepted. In order for the State to both achieve the best value for its resources and to be able to attract the most capable, serious, well-informed project developers and investors, it will be necessary to have more progress made on the implementation framework, particularly regarding pricing and other regulatory issues. We note that this problem is slightly less acute with the larger generation projects (e.g., Moraca) as they are probably still somewhat distant in time to the point where tenders will be submitted, but the issue is still important. Our discussion of actions to be taken in the next section reflects this general view, through a recommendation of a near-term slight re-focus of priorities.

We also note that there are some opportunities to bring some greater clarity to and perhaps slightly improved sequencing of the multi-faceted permitting process faced by developers. Experienced developers will be aware that permitting is always a time consuming process, but there are opportunities for the Ministry of Economy (or a defined group as discussed in section 5.3.1 above) to lead a process to improve information flows and co-ordination and to eliminate any unnecessary inter-dependencies between separate institutional actions. Also, the Ministry should endeavour to include as much Agency input and permitting requirements in Concession Acts as feasible. To a certain extent, the process should also improve "naturally" as institutional experience among the diversity of (often relatively new) Agencies is gained and as more "standardised" terms and conditions of permitting various types of projects become known and adopted.

### 6.2. Actions to be Taken

The tables below set out what we see as generally the most important actions identified in this report required in order to effectively execute the desired PPP framework. They are presented in different time-frame groups for convenience, though there is not necessarily a clear dividing line in time among groups. Probably the most well-defined time linkage is that several of the "near-term" items, reflecting issues which should be addressed either as revisions to the current Draft Energy Law, or subsequent amendments (if the draft Law passes without the changes recommended herein).

*Table6.1: Near-Term Actions*

| No. | Action | Report Reference | Principal Actor |
|---|---|---|---|
| Near-Term 1 | Implement modifications to Draft Energy Law to clarify and ensure applicability of RESS pricing system to recent and current SHPP tenders | 5.2.2 | Ministry of Economy |
| Near-Term 2 | Implement modifications to Draft Energy Law to allow precisely defined self-initiative projects, if desired | 4.2, 5.2.2 | Ministry of Economy |
| Near-Term 3 | Implement various clarifications to Draft Energy Law | 5.2.2 | Ministry of Economy |
| Near-Term 4 | Develop RESS (at least in terms of defined principles / outline) in anticipation of Article 25 of the Draft Energy Law. Develop initial proposals for Feed-in Tariffs (at least for small hydro) in advance of further concession tenders | 5.2.2, 5.4.2, Annex 2 | Ministry of Economy, ERA |
| Near-Term 5 | Begin coordinating actions among relevant actors to facilitate timely development of industry subregulations and documentation. This should include at least the documentation identified in section 5.4.1, possibly in addition to other necessary documents, grouped in a manner according to market design. | 5.4.1 | Ministry of Economy, ERA, EPCG, Prenos |
| Near-Term 6 | Begin establishment of Action Plan coordination / implementation with definition and continued updating of relevant process / procedural information for project developers. Begin monthly coordination meetings among Ministry, Ministry Spatial Planning and selected Agencies | 5.2.2, 5.3.1 | Ministry of Economy |

*Table 6.2: Mid-Term Actions*

| No. | Action | Report Reference | Principal Actor |
|---|---|---|---|
| Mid-Term 1 | Resume process of renewables concession tenders as documentation & pricing terms become more fully developed and approved | 5.4.1, 5.4.2, 5.3.2, Annex 2, Annex 4 | Ministry of Economy |
| Mid-Term 2 | Develop financial terms to be offered by the network owner to developers of smaller generation projects for connections. | 5.4.1, 5.3.2, Annex 4 | Ministry of Economy, EPCG |
| Mid-Term 3 | For smaller generation projects, identify sites where dynamic connections (i.e. future shared connections/ networks) are possible and develop policies for cost allocation | 5.3.2, Annex 4 | Ministry of Economy, Ministry of Spatial Planning, EPCG |
| Mid-Term 4 | Ensure future Concessions entrench certain provisions from change to protect investors | 5.2.2, 5.2.4 | Ministry of Economy, Ministry of Finance |
| Mid-Term 5 | Adopt project structure for major concession projects (e.g., Moraca) in conjunction with analysis from advisors. Consider and evaluate any potential competition policy issues long-term contract structures might present | 5.4.2 | Ministry of Economy, ERA |
| Mid-Term 6 | Resolve any remaining aspects of non-harmonisation in Agency permitting / approval processes. Building on Near-Term Action no. 6, develop a central point of coordination and information for project planners and developers. | 5.3.1, Annex 3 | Ministry of Economy (coordination), relevant Agencies or Ministries |
| Mid-Term 7 | Harmonise and if possible optimise Agency permitting processes in relation to new generation projects, following actions undertaken via Near Term Recommendation 6 | 5.3.1, Annex 3 | Ministry of Economy |
| Mid-Term 8 | Continue to incorporate in Strategy Action Plan consideration of transmission system expansion / reinforcement as necessary in order to promote regional markets. Consider cost/ benefit analysis, inter-TSO compensation payments etc as necessary as part of economic analyses. | 5.2.1, 5.4.2 | Ministry of Economy, with assistance from ERA, Prenos and others as necessary |

*Table 6.3: Longer-Term Actions*

| No. | Action | Report Reference | Principal Actor |
|---|---|---|---|
| Long-Term 1 | Monitor generation market for effectiveness of competition. Maintain (or remove) economic regulatory controls as long as competition policy concerns require | 5.4.2 | ERA |
| Long-Term 2 | Monitor progress toward renewable energy commitments. Adjust pace of concession tenders as required and / or availability of Feed-in Tariffs for self-initiative projects in accordance with progress toward overall renewables goals. | 5.4.2 | Ministry of Economy |
| Long-Term 3 | Further develop cross-border trading arrangements | 5.4.2 | Ministry of Economy, with assistance from ERA, Prenos and others as necessary |

## ANNEX 1: ORGANISATIONS AND INDIVIDUALS CONTACTED DURING THIS WORK

**Ae-capital:** Ivana Semeraro

**Airtricity** (currently being re-branded as SSE Renewables): Emeka Chukwreh, Airtricity Regulation

**Agency for Environment Protection**: Ilija Radovic, Independent Advisor for License; Danilo Kujovic; Lidija Stepanovic; Milana Batakovic; Sava Vuletic; Zoran Mitrovic

**Croling Company,** Sasa Saveljic, Director

**Directorate for Transportation:** Radojica Poleksic, Senior Advisor; Marko Spahic, hydro technician

**EBRD:** Marek Lorinc, Head of the Office; Milos Grkinic, Senior Analyst

**Electric Power Company (EPCG), Velimir Strugar ,** Head of the Distribution Network Department

**EPCG:** Boris Buskovic, Member of the Board; Mirko Kilibarda, Director, Srdjan Vujadinovic, Director of Division for Development and Engineering

**Energy Regulatory Authority:** Dragan Bojovic, Chairman of the Board; Momir Skopelja, Deputy Director

**Hemera Capital:** Predrag Jovanovic, Director; Oleg Obradovic, Founder and Owner

**Iride-mercato:** Ing Castellaro, Beverini, Vachhelli

**Ministry of Agriculture, Forestry and Water Management:** Zorica Djuranovic**,** Senior Advisor; Dragana Djukic, Senior Advisor; Zdenka Ivanovic, Senior Consultant

**Ministry of Economy:** Igor Kovacevic, Head of Department for Energy Efficiency and Renewable Energy Sources; Mija Nenezic; Ms Lucia; Radmila Damjanovic, Senior Adviser; Mr Vujadinovic

**Ministry for European Integration:** Aleksandar Drljevic, Deputy Head

**Ministry of Finance:** Dragan Darmanovic, Senior Advisor; Ivan Petrovic, Senior Advisor III

**Ministry of Health, Sanitary Inspectorate,** Ljiljana Jovicevic, Chief Inspector

**Ministry of Interior, Fire Safety Department:** Zoran Begovic, Head of the Department

**MIPA:** Petar Ivanovic**,** CEO

**Ministry of Spatial Planning and Environment Protection:** Branislav Gregovic, Assistant Minister; Rajka Radulovic, Department for State Planning Documentation

**NLB Montenegrobanka:** Mira Lakovic, Head of the CEO's Office; Samo Jovicevic, Adviser

**Public Company for Water Supply and Sewage System:** Lela Radonjic, Financial Director; Sonja Kljajevic, Director of the Department for legal issues; Ljiljana Micanovic, Head of the Department for technical preparations

**Stucky Ltd:** Antoine Dubas, Director,

**Telecom Company**: Zoran Markovic, Coordinator for Access Network

**World Bank:** Franz Gerner, Senior Energy Economist

# ANNEX 2: OVERVIEW OF SUPPORT FOR RENEWABLES PROJECTS

This Annex provides a brief overview of the variety of renewables energy support schemes (RESS) used in the 15 western EU countries, as well as some comments on design issues related to Feed-in Tariffs (FITs) which today is probably the most widely used approach among the EU15.

## A2.1 Variety of Support Schemes

Renewable energy Support Schemes (RESS) can in general be categorized along three main approaches: price, quantity and costs. Within the EU15, there is some use of approaches where the main focus was based on each of these mechanisms:

Price-Based Schemes: 10 out of 15 countries employed FITs as the main support mechanism

Quantity-Based Schemes: 4 employed Quota/Tradable Green Certificates (TGC) based approaches

Cost-Based Schemes: Finland relied on tax and investment incentives as the main support.

However, it is common to see these approaches combined to a lesser or greater extent. For example, 8 EU countries employ investment subsidies or tax rebates, in parallel to their main schemes.

Table A2.1 (at the end of this Annex) illustrates the principal aspects of approaches to RESS in these countries.

It is important to note that the "simple" descriptions shown in the table in fact cover substantial differentiation in detail in how individual schemes are actually implemented. Examples of these sorts of variation include:

- Variation in Support Type: In some instances, project developers can choose among options for different support types, or sometimes different support types are offered to different types of projects. For example, in Italy plants of less than 1 MW capacity can opt for FITs in place of the more widely used TGC approach. In Denmark, wind based technologies can apply only for a premium over spot prices or for tender procedures in place of FITs. In France, plants over 12 MW can only apply for tendering procedures in place of FITs.
- Variation of the Duration of Support: As the table shows, the length of schemes (a feature most directly applicable to the contract-like FIT schemes) ranges from about 10 to 20 years.
- Variation of FIT Support Levels Over Time: There are (at least) two important ways in which support tends to vary over time. One way is in the time pattern of the multi-year

tariff which a developer receives[21]. Some of these are structured to have equal annual tariffs (ether equal in real or possibly nominal terms), while others might be structured to offer higher prices in the early years of a long-term tariff (typically to assist a developer in meeting debt service cash flow requirements), followed by lower prices later.

The second way in which support levels vary over time is through the process of periodically resetting the tariffs which are offered to new projects. Some countries do this with formal periodic step-change re-sets, while others define a time-pattern of "digression" between re-set periods. For example, if a FIT tariff offer is set and offered to any projects in a given year, it might be stated that for the following years until the next scheduled re-set, the tariff to be offered to any new project might be reduced by a stated percentage (e.g., 1 – 2%) from the initially offered tariff. The logic behind this sort of approach is that it is intended to address technological change during the period between tariff-resets, allowing the resulting offer to be more cost reflective at any time.

- Linkages of FITs to Market Prices: Most FITs are set out as a pre-specified price level or trajectory, designed to be reflective of the cost of building and operating the relevant technology, rather than reflective of market conditions. One country (Spain) has instead opted for an approach of a FIT as a premium over spot market prices, subject to minimum and maximum bounds. Another country (Netherlands) has experimented with both this sort of premium approach and also a "higher of FIT or market" tariff offered to developers.

### A2.2 Some Issues of FIT Design

The FIT approach to RESS currently appears to be the most widely used among the EU15, though there are variations as to how individual countries implement the approach. This is not surprising since although the FIT approach is relatively simple in concept, even simple concepts can raise detailed issues when implemented. For Montenegro, if it progresses toward a FIT approach (as we understand is the current intent), some of these more detailed implementation issues may prove unnecessarily complex for at least initial implementation. However, we outline some of the issues here in order to possibly assist the current and future planning and development process.

The broadest objectives for defining the level and structure of an FIT are often to provide a tariff which will encourage the development of new generation sources while at the same time ensuring that consumers do not pay more "over market" costs than they must in order to meet the country's renewables objectives.

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[21] Here and throughout our comments on FITs, we are generally recognising the fact that most FITs are implemented in fact as a medium-to-long term contract with a pre-specified level (or trajectory) of prices throughout the lifetime (typically 10 – 20 years) of the contract. We make this point simply to differentiate between the sense in which "tariff" is also sometimes used to refer to a price which is typically not contract-fixed and might change more frequently.

At the simplest level, meeting these kind of objectives could be achieved if we could estimate the investment and operating costs of a renewables project and its output. A simple tariff could then be structured on the basis of the annualised (in a financial sense) capital costs and returns together with annual operations and maintenance costs divided by annual output. However, even at this very simple level, it is already possible to see some of the practical difficulties of developing FITs. The very act of estimating capital costs is difficult, especially for small hydro projects which tend to be more "individually custom-designed" compared to conventional generation (e.g., steam or combustion turbines) or even wind projects. Furthermore, it is also necessary to estimate a typical developer's required rate of return (included the costs and proportion of debt finance) and maximum acceptable investment duration and so on. If there is a systematic estimation bias in one direction for all of these factors, tariffs might be too low to bring about the desired investment. If there is a systematic bias in the opposite direction, customers may in fact be forced to pay more than they otherwise should have and more energy projects than desired will come about.

At least part of the solution to dealing with this sort of problem will be to recognise the variations in certain key tariff cost parameters and structure the tariff in "categories" or "bands" in order to match the variation in underlying cost parameters. For example, if we believe that there is substantial variation in investment cost / MW for a SHPP (i.e., if we believe that in fact there are scale economies in construction across the range of capacities we are considering), we might develop one FIT for projects of 0 – 2 MW scale, another applicable to 2 – 5 MW and so on. The variation "bands" would be chosen to try to minimise the differences in unit capital costs within each band. A similar approach might be taken with connection costs by developing tariffs that provide a connection "allowance" expressed in annual €/km of connection distance.

Another (simultaneous) approach to dealing with the problem of getting good cost-reflective tariffs in an environment of cost uncertainty will be to rely on the procedural approach to awarding (at least most) FIT contracts in Montenegro currently. So far, Montenegro is taking an approach of requiring competitive tenders for projects which, once built, will be able to earn FITs[22]. This requirement to tender is a burden, but provides a key benefit: if the level of competition in the tender is adequate, and if the tender documents and LIR framework contain adequate information on costs, and if the tender itself is well-structured, then to at least some extent the tender fees bid by the competitors should act to help remove any "excess" costs built into the FIT[23].

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[22] This is not strictly the exact approach taken in either the first or second SHPP tenders which – at the time they were run – were designed not with an FIT in mind but instead the "old" approach of a periodic tariff calculated by ERA on the basis of system avoided costs rather than on the basis of SHPP investment costs etc. But we understand that the "tender for FIT" kind of approach is indeed the vision for the future.

[23] Indeed, if the level of competition is quite good and information adequate, there should really be little difference in result between letting investors bid a "discount from a stated FIT" (which appears to be the desired direction currently) and a "pure tendering" approach subject to pre-defined pricing structures.

An additional approach to dealing with uncertainty issues is of course to observe the dynamics of responses to tenders, paths of investment and so on. If tenders do not bring forth adequate investment, then there are several potential problems, including possibly the problem that FIT's are simply unattractively low (additional problems might also be lack of information, risks imposed by an undeveloped or evolving LIR framework, lack of access to capital, and others). In this circumstance, it would be necessary to analyse the situation to determine the true driver. However, if the opposite result prevailed – that is, if more investment or projects appeared than planned or desired (as quite possibly occurred during recent years with Spain's experience with solar FITs), then a policymaker can probably conclude that current FIT levels are quite possible too generous.

As Montenegro begins to implement its approach to using FITs (together with tendering), it is probably best to begin with as simple approach to FIT calculation and structures as practical. As experience is gained, additional issues can be considered. Table A2.2 lists as examples several of the issues that might be addressed throughout the course of this process.

*Table A2.1: Summary of Principal Aspects of RESS in the EU15*

| Country | Principal Support Mechanism | Support Variation | | Term (years) |
|---|---|---|---|---|
| | | Technology | Location | |
| Austria | Feed-In Tariff | ✓ | | 10 typical |
| Belgium | Quota / Tender | | | 15 Wallonia<br>10 Flanders |
| Denmark | Feed-In Tariff | ✓ | | 20 |
| Finland | Tax Incentives / Investment Grants | ✓ | | N/A |
| France | Feed-In Tariff | ✓ | ✓ | 20 typical |
| Germany | Feed-In Tariff | ✓ | | 20 |
| Greece | Feed-In Tariff | ✓ | ✓ | 12 typical |
| Ireland | Feed-In Tariff | ✓ | | 15 |
| Italy | Quota / Tender | ✓ | | 15 |
| Luxembourg | Feed-In Tariff | ✓ | | 15 |
| Netherlands | Feed-In Tariff | ✓ | | 10 |
| Portugal | Feed-In Tariff | ✓ | | 15 |
| Spain | Feed-In Tariff | ✓ | | No limits |
| Sweden | Quota / Tender | | | 15 |
| United Kingdom | Quota / Tender | | | N/A |

*Note: This table reflects the most common approach to RESS in each country. As noted in the text, there is sometimes variation within an individual country's scheme for different types of projects or sometimes for developer choice.*

*Table A2.2: Examples of Issues for FIT Structure and Implementation*

| Issue | Comments |
|---|---|
| Price Concept | Approaches to FIT might be: renewable project production cost-reflective, "market influenced" (i.e., defined premia over market prices), or based on system avoided costs. Montenegro will likely use the first of these approaches in the near term. Note that the choice of price concept also to some extent effects which other issues might or might not be relevant. |
| Estimation of Capital Costs | Capital costs vary by technology and, to differing extents, by project scale within individual technologies. FIT's will tend to have greater production cost-reflectivity to the extent that they structured to match the underlying variation in capital and operating costs. |
| Duration of Tariff and End-of-Term Arrangements | FIT's will typically offer pre-specified payments over a period from 10 to 20 years. Tariffs which are designed to allow recovery of a certain amount of investment cost will in general be greater when they have shorter durations. Important related issues in this area will be the willingness of investors to accept longer or shorter payback periods, effects of tariffs on consumer prices, the level (full or partial) of estimated investment costs to be recovered during the tariff period, and the end-of-tariff arrangements – i.e., will the investor retain the asset for continued sales under non-FIT arrangements following the duration, or will the asset be transferred. |
| Tariff Counterparty and Cost Recovery | The FIT needs a formal buyer who is of adequate creditworthiness to support FIT investors. There must also be specification of how the buyer's costs will be recovered and from whom. |
| Eligibility for Tariffs | When implementing a FIT, it will be necessary to specify whether it will apply to all new generators (of specified technology type) or if new generators will have options to "opt out". In addition, it will be necessary to specify whether any existing generators extant at the time of the introduction of the new system will be eligible for the FIT. The answer to this latter question should be defined by consideration of the goals of the FIT (i.e., if it is intended to bring forth new investment, then there will be little point in applying it to legacy generators), |
| Shape of Tariff Over Years | A FIT might be uniform (either in nominal or real terms) over its duration, or it might be shaped (typically in a NPV-neutral way) to achieve certain objectives – for example, in order to allow developers to recover debt-related cash flows early in a project's life. |

| | |
|---|---|
| Shape of Tariff Within a Year | A "simple" one-part (i.e., per-kwh) FIT will be formed on the basis of some assumption regarding annual project output. In this circumstance, continued over- or under-production by a project will affect financial returns and customer costs. For larger projects, more economically efficient and traditional two-part (availability plus energy payments) tariff structures might be appropriate. If these are difficult to implement for smaller projects (e.g., due to the needs for availability testing etc), tariff structures with a "declining block" per-kwh charge might be implemented to at least minimise the possibility of excessive investor returns (leading to excessive customer costs) in high-output years. |
| Currency Risk Adjustments | An investor who must purchase capital goods and obtain credit in a currency different from the currency defined in the FIT will desire some form of exchange rate risk adjustments. We note that as a practical matter, Montenegro's participation in the Euro probably minimizes this need, although doubtless some inputs will come from non-eurozone neighbouring countries. |
| Adjustment to FIT Offers Over Time | The authority setting / authorising FIT tariffs will need to choose whether to set a new offer annually, or to allow a previous years' offer to remain constant, or perhaps to specify a "digression" rate (annual decline) or inflation rate for offers to be available in years between formal tariff re-setting operations. In addition, the authority may wish (and pre-specify the conditions for when) to "close the door to new acceptances" at some point in time when the goals of its RESS have been reached, for example if volume targets are met. |

*Note: This table shows selected examples only; it is not intended to be exhaustive.*

# ANNEX 3: OVERVIEW OF THE CURRENT IMPLEMENTATION PROCESS IN MONTENEGRO

In section 5.3.1 of the main text, we have provided a general overview of the permitting / approval process for power stations in Montenegro. In that overview, we noted that various approvals or permits are required from a number of different Government departments and independent Agencies (collectively, we refer to all these groups as "Agencies" in both the report text and this Annex). Obtaining these Agency approvals / permits is an integral part of obtaining the key documents for the overall process (i.e., the Construction and Use permits, and the operating License) as described in the main text.

In this annex, we present some of the details of the requirements of the approval processes of several of these approving Agencies.

- *Commonly-Used Terms*

Prior to these descriptions, it is useful to summarise several terms (for different levels of project design documents, etc) which appear throughout the overall process. These include:

| | |
|---|---|
| Pre-Conceptual Design | An initial set of documentation showing the proposed physical design of the project, but omitting Urban-Technical Conditions or Agency Conditions. Such a design might be of the type submitted for the recent SHPP tender. |
| Urban Technical Conditions (UTC) | A set of design conditions, issued either by the State or municipal Spatial Planning authorities, which provide limitations or guidance for certain design features of the project (e.g., access to roads, public utilities, etc). |
| Conceptual Design | A set of project documentation which brings together the pre-conceptual design and the UTC. |
| Agency Conditions | Specific design or operational requirements for the project issued by individual Government departments or independent Agencies. |

| | |
|---|---|
| Detailed Design | A set of project documentation which incorporates Agency Conditions into the Conceptual design in order to create a full design. This (almost certainly as well as the Conceptual Design) will probably be produced by a registered Architect / Engineer. |
| Independent Design Audit | As part of the process of obtaining the Construction Permit, a project developer must have his completed Detailed Design approved by an independent Architect / Engineer. This approval certifies that the Detailed Design meets the UTC and Agency Conditions. |

- *Agency Approvals*

For the small scale hydro projects currently under development, approvals are required from a number of Agencies prior to the issuance of a Construction Permit by the Ministry of Spatial Planning. The table below sets out the required documentation.

*Table A3-1: List of permits required for issuance of Construction Permit by the Ministry of Spatial Development and Environmental Protection of Montenegro*

| Sector | Issuing Authority | References |
|---|---|---|
| Energy | EPCG | Energy Law („OGRoM", 39/03)<br>Interim distribution codex („OGRoM" 13/05) |
| Utility Water | PC Water Supply and Sewage System | Municipal Decision on Construction and Use of Water Supply and Sewage System |
| Fire Safety | Ministry of Internal Affairs and Public Administration, Inspectorate for Protection against Fire, Explosion, Hazard and Technical Protection of Objects | Law on Protection and Rescue, („OGRoM" 13/07, 05/08) |
| Environmental | Agency for Environmental Protection | Environmental Law, („OGRoM" 12/96, 55/00, 80/05 and OGoM" 48/08) |
| Sanitary | Ministry of Health, Service for Health and Sanitary Inspection | Law on Sanitary Inspection, („OGRoM" 56/92, 27/94 and „OGoM"14/07) |
| Transportation | Ministry of Maritime Affairs, Transportation and Telecommunication<br>Or local Secretariat for Transportation | Law on Roads, („OGRoM" 42/04 and „OGoM" 21/09) |
| PTT | Montenegro Telecom Company | Law on Electronic Communication („OGoM" 50/08") |
| Water | Water Administration | Law on Waters („OGoM" 27/07) |
| Agriculture | Ministry of Agriculture, Forestry and Water Management<br>Or Local Secretariat of Commerce | Law on Agriculture Land („OGRoM" 15/92, 59/92, 27/94) |
| Geotechnical | Ministry of Economy | Law on Geologic Research („OGRoM" 28/93, 27/94, 42/94, 26/07) |

| | | |
|---|---|---|
| Cultural Heritage | Ministry of Culture, Sport and Media | Law o Protection of Cultural Heritage(„OGRoM" 47/91, 27/94) |

For other projects (e.g., wind, etc), it is likely that approvals from most of these Agencies will also be required, though it will be necessary to specifically agree the required set of approvals with the Ministry of Spatial Planning at the time wind projects begin to enter the planning queue.

In the diagrams which follow, we illustrate the general steps which are required by several of the most important of these approving Agencies. Note that this is not intended to be a comprehensive guide for developers, which might be developed separately, as referenced in Section 6.2. We note that there is a common general approach for most of these: specifically, the project developer typically approaches the Agency with a Conceptual Design and receives some form of design input (i.e., Agency requirements for the design) from the Agency[24]. These requirements are incorporated by the project developer into his Detailed Design. The Detailed Design itself is then subject to an Independent Design Audit which should lead to the issuance of a Construction Permit. Following construction, some Agencies perform physical inspections of the project, and some also perform periodic inspections over the course of the project's operation.

The individual Agency processes shown in the following diagrams should be seen within this context, as well as within the context of the overall approach described in the main text of this report. In particular, we note that the following diagrams generally omit the preliminary stages of reaching the "Conceptual Design" stage, as well as various intermediate stages necessary to achieve the "Detailed Design" and final stages related to obtaining a Use Permit and operating License. These various stages (applicable to the overall process, rather than a single Agency-specific approval) are shown in the table in Section 5.3.1 of the text.

[24] Some Agencies require at this stage not simply the Conceptual Design, but rather an almost finished Detailed Design – that is, a Detailed Design reflecting not just the UTC, but also the requirements of all other approving Agencies.

*Figure A3.1: Process for Environmental Protection Agency Approval*

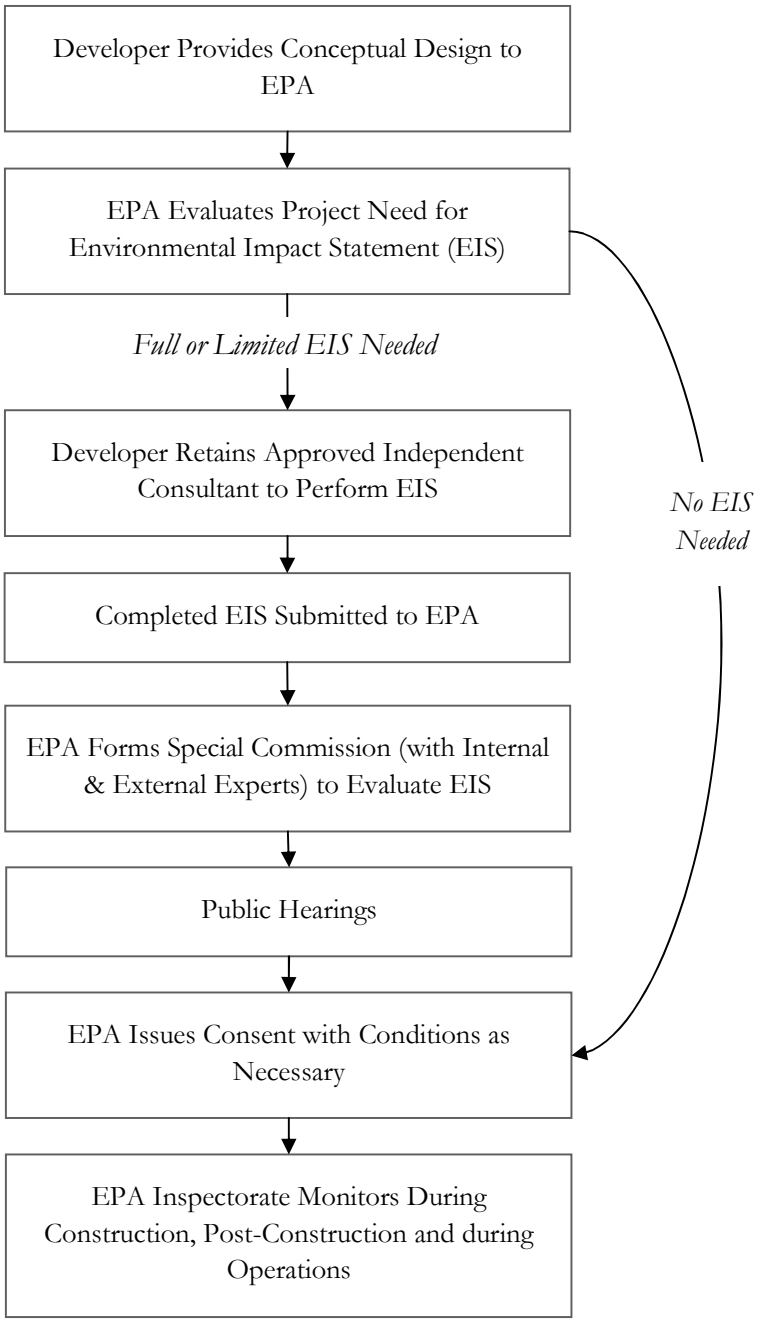


*Figure A3.2: Process of Approval from Ministry of Agriculture, Department of Water Management*

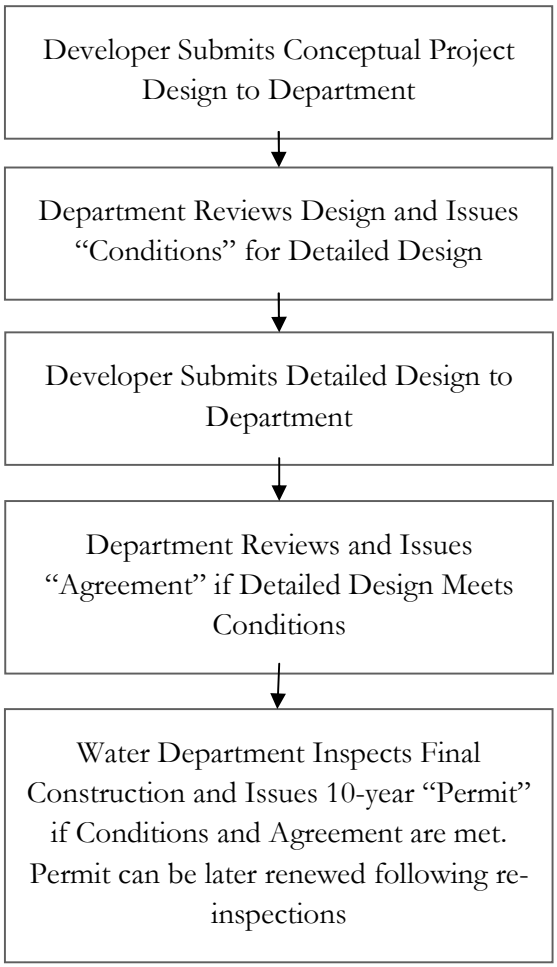
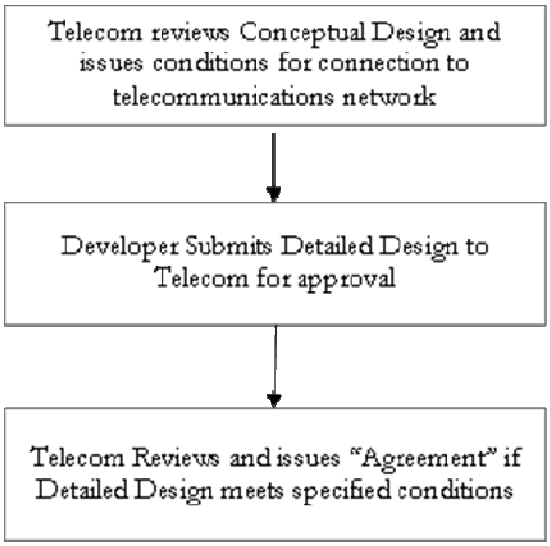
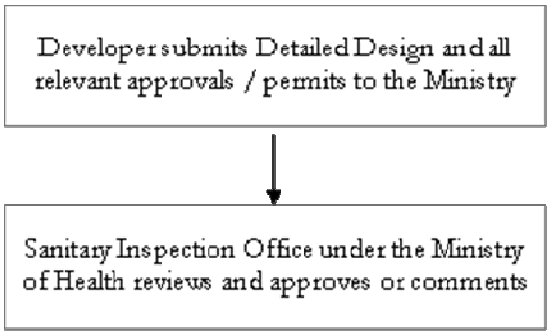


*Figure A3.3: Process of Approval from Montenegro Telecom Company*




Note: Following the privatisation of Telecom, it was envisioned that the responsibilities for issuing permits would be transferred to the appropriate Government Ministry. This has not yet happened as of the time of writing of this report. In addition, we understand that various relevant subregulations (including those related to the Law on Construction which came in force in September 2008) have yet to be completed.

*Figure A3.4: Process of Approval from Ministry of Health, Service for Health and Sanitary Inspection*




Note: the Sanitary approval comes "last" in the process of Agency approvals. The Ministry of Health requires not only to review the Detailed Design, but also all the other relevant Agency approvals and conditions.

*Figure A3.5: Process of Approval from Ministry of Maritime, Transportation and Telecommunications*

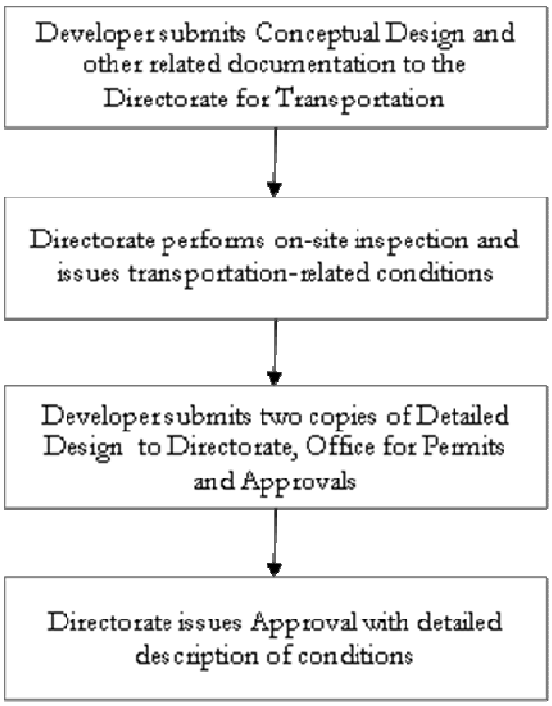


*Figure A3.6: Process of Approval from Public Company Water Supply and Sewage System*

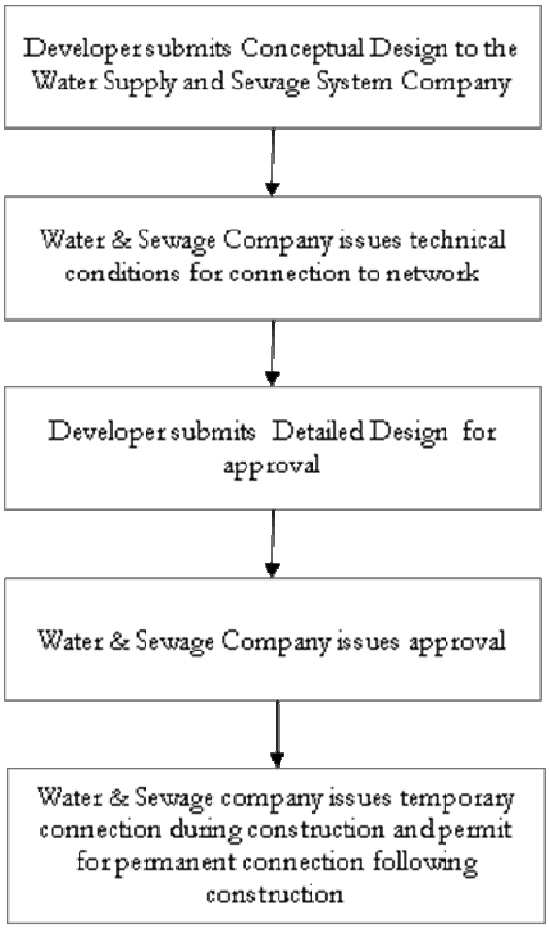
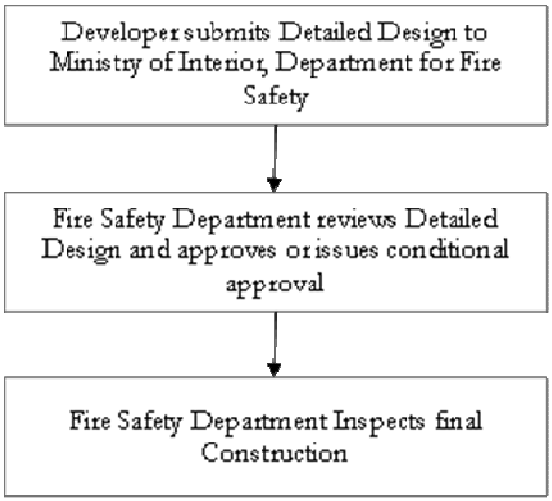


*Figure A3.7: Process of Approval from Ministry of Interior, Department for Fire Safety*



# ANNEX 4: CONNECTION ISSUES FOR MONTENEGRO RENEWABLES PROJECTS

*Introduction*

In this Annex, we discuss and make recommendations regarding certain issues specific to providing connections to small-scale renewables projects in Montenegro. We focus on small-scale renewables for several reasons, including the fact that due to Montenegro's physical geography, connection costs are likely to comprise an unusually large portion of overall project costs for such projects. Where appropriate, we draw parallels or contrasts with how such issues might be addressed for larger scale economic projects.

We note also that in addition to the issues discussed here, there are other factors of both substance and process to consider in defining a complete connection policy[25]. Approaches to such other issues should be considered, developed and combined with those here to ultimately create an overall generation connection policy document which can be approved by the ERA and implemented by the network businesses.

## A4.1 Planning and Design of Physical Connections: "Static" versus "Dynamic" Connection Policy

In Montenegro, there are opportunities for renewable projects (of both small and large scale) in cases where the project resources – particularly in the case of wind and hydro resources – may be relatively far from built-up areas or (more importantly) network connection points. If a relatively traditional approach to connection planning and implementation is taken (i.e., connecting the project to the nearest appropriate connection point), the result could be a relatively high connection cost for that project. This problem would probably tend to be more acute as a percentage of overall project costs for smaller projects, all other factors being equal.

In some cases, this kind of simple approach to connection – we may term it a "static" connection approach since it envisions the connection from the narrow and unchanging perspective of serving a single generation project – may simply be a "fact of life". If a project is distant and in an area which is and will likely remain isolated, then there is little scope to offer anything other than a simple, "static" connection, which may be a significant cost for the project.

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[25] Examples would include so-called "shallow" versus "deep" connections, the potential (or lack thereof) of contestability for the connection business, approaches to regulation and cost control, formal planning and consultation processes, etc.

There are certain circumstances where a combination of careful advance planning and successful realisation of planning assumptions can result in reduced connection costs for apparently distant projects. The opportunities for this are, however, very specific to individual circumstances. One example would be a circumstance where although a project might be distant from settled areas and the network, it might nevertheless be close to sites where other project might be developed in subsequent years. In such circumstances, the geography of the situation may mean that by laying out the connection line to the first project in an indirect way, other future nearby projects may be able to share a portion of the initial connection facilities, reducing the overall aggregate costs of the (multiple) connections. Another example might be a case where an isolated project is nearby an area which the municipality plans to develop for residential or other use in the near future. Again, in such a case it might be possible to re-route the connection so that while initially longer than necessary, it might in the future serve as part of a network backbone for the area to be later developed.

In these sorts of circumstances, we can think of the initial connection as being "dynamic" since it will over time evolve to serve other needs (a partially shared connection in the first example above; a combination of connection and network assets in the second). Its ability to evolve gives it potential scope to create an overall lower cost of connection / network charges to all system users over its lifetime.

In order to take advantage of the potential savings offered by this sort of "dynamic" connection approach, it will be necessary to meet at least four separate challenges:

1. Sites where dynamic connections (either as future shared connections or shared network) are possible must be identified, ideally during the development of the relevant Concession Act. The locations must not only meet the physical requirements for the potential use of dynamic charges, but also show the potential for estimated present value cost savings over the lifetime of the proposed assets.

2. The future "yet to be developed" projects or land use must be sufficiently well defined to allow the design of an initial connection line to be able to take advantage of the future sharing opportunities (i.e., the network business must be able to specifically identify (probably with advice of the Ministry and / or the Ministry of Spatial Planning) the path of the dynamic connection).

3. A charging system (set of rules) for the initial connection must be developed so that the initial project pays no more than it would have were a "static" connection to have been used. As the connection evolves into a shared facility, the savings in overall connection costs should be shared among all users, including both initial and later users. Note that this will require some initial period of time when a portion of initial connection costs are not charged to the individual generation project but are instead either capitalised

or charged to all users (via either the Draft Energy Law Article 26 provisions or through general use-of-system charges).

4. The State and the Regulatory Agency must be willing to accept that if the forecasts of future development (points 1 and 2 above) fail to materialise as planned, then they will be left with "stranded" (i.e., unnecessary) connection assets the costs of which cannot be charged to the initial project. In such a circumstance, a policy decision must be made whether to allocate the stranded costs to all customers or if they are to be paid by the State (i.e., whether such stranded asset costs are to be financed through charges on energy tariffs or through general taxation).

We note that in concept, opportunities to create savings through a dynamic connection approach will potentially apply to both large and small projects, though the greater number of small projects will naturally mean that more potential opportunities might arise with them. Regardless, if the decision to take a dynamic connection approach is taken (particularly giving consideration to point 4 above), then there is probably no reason not to apply it to both large and small projects in cases where it is feasible and appropriate.

### A4.2 Financing Connection Costs

For small projects, connection costs can in some circumstances be as much as 10 percent or more of overall capital investments. This represents a significant hurdle for some smaller scale developers.

The issue which we wish to address here is not who ultimately pays for the connection over time (typically we would expect the project to pay for both the investment cost (and financial return) and maintenance of connection assets over the assets' lifetime), but rather who has the obligation to finance and construct the assets at the beginning of their lives. We note that in many western European countries, it is most common for the network businesses to be required to at least offer to finance a connection. This is in at least slight contrast to Montenegro where we understand that at least for large customers requiring connections sometimes network businesses leave the matter to the customer and the municipality to sort out.

In general, we would recommend that particularly for small generation projects undertaken in response to government tenders, there should be a requirement on the network businesses (either distribution or transmission, as appropriate) to "offer terms" for the construction and later charging for connection assets. There are several reasons for this. First, for smaller project developers, it will be possible to reduce their initial financing needs by possibly up to 10%. Similarly, the larger network businesses should have greater (and lower cost) access to capital than these investors, thus lowering the ultimate cost of the connection. Finally, since the government controls the pace of tenders, it therefore can

control the pace of the (small) extra financing burden it is placing on the network businesses. Finally, as we noted above, this sort of obligation on network businesses is broadly in line with much international practice.

For larger economic projects or for future projects possibly arising via self-initiative, different approaches are possible. For larger economic projects, where some level of project design is undertaken prior to international tender, the question of how connection assets are to be handled might well be part of the overall design and economic assessment of the potential project. For self-initiative projects, the decision of whether or not to include them among the same sort of obligations as for small-scale tendered projects, the decision of what to do should probably be based at least in part on the Government's desire (high or low) to encourage such projects as well as the Government's position vis-a-vis its overall renewable energy goals.

### A4.3 Paying for Connection Costs

For projects which are undertaken in the context of the preferential support scheme to be developed by the Ministry, there is a question of how that scheme will incorporate the costs of connection into the preferential prices it pays to eligible projects.

The question arises because the likely structure of the support scheme is expected to involve non-project specific pricing, quite possibly in the form of a Feed-in Tariff which would be differentiated by technology type (and / or size within the limits of allowable project sizes). This type of "generic" tariff presents a challenge in Montenegro's circumstances because even if the capital costs for a project's core infrastructure (turbines etc) could be estimated accurately, the connection costs for an individual project will depend on the detailed project design which will only be known following an investor's tender for the project. The fact that connection costs can be quite significant for remote, small projects, makes this an important risk for project developers and one which the Ministry should logically attempt to clarify in order to obtain the best tenders for projects.

There are several different options for how connection costs might be included into Feed-in Tariffs. Broadly, we would recommend that the objective in choosing among them would be to attempt to achieve a Feed-in Tariff structure which can be as cost reflective of any particular project's underlying costs as possible, while still at the same time being reasonable to implement in terms of both complexity and ability to acquire necessary estimated data. A range of different options, set out in generally increasing order of potential cost-reflectiveness, might include[26]:

[26] Note that in the list which follows, we focus only on tariff differentiation along dimensions relevant to connection. Tariffs may well be (almost certainly will be) additionally differentiated along other important dimensions, including technology and possibly project size.

1. A Feed-in Tariff which is differentiated by voltage level of connection only, with no distance element (i.e., is based on a "typical" or standard distance).
2. A Feed-in Tariff which is differentiated by voltage level of connection, and provides different levels for "bands" for projects requiring different connection lengths (e.g., 0 – 2.5km; 2.51 – 5km etc).
3. A Feed-in Tariff which is differentiated by voltage level of connection and includes a per-km charge for connection (e.g., € x/km for connection at 35kV or less; €y/km for connections at greater than 35kV).
4. Remove the connection cost element entirely from the Feed-in Tariff and similarly remove the obligation of the generator to pay for it during the generator's period of economic support (i.e., length of the Feed-in Tariff). Instead, during the period of economic support recover all connection costs for supported projects via the Article 26 surcharge. When a project leaves its period of economic support with economic life and wishes to sell in a market environment, impose a connection charge to it on the basis of the depreciated net asset value of its existing connection.

Of these different options, only the first really provides any incentive for a generator to attempt to minimise his connection costs, though it does so not by sharing any savings but instead by allowing the generator to keep any savings made. Of the options which directly incorporate some form of estimated connection costs into Feed-in Tariffs, probably option 3 has the potential to have the greatest degree of cost-reflectivity and probably requires no more estimated cost data for tariff determination than options 1 or 2. Option 4 manages to avoid the problem of having to place estimated connection costs in a "generic" Feed-in Tariff, but at the price of both appearing somewhat non-standard and possibly introducing (probably incorrect) suspicions of economic advantage compared to economic generators or large customers facing identifiable connection costs.

We note that the situation is essentially entirely different for larger projects which are undertaken on an economic basis. Such projects should bear their own connection costs; if they cannot, then their economics do not in fact support their implementation.

## ANNEX 5: INVESTOR COMMENTS

CEPA has contacted a number of actual and potential investors in new power generation PPPs in Montenegro and the wider south eastern Europe region (companies and individuals contacted are listed among the contacts in Annex 1). The views of these investors are summarised in Table A5.1 below. Views are grouped under the following broad headings:

- Political risk.
- Legal and regulatory risk [this could be merged with above].
- Market risk.
- Project risks, including concessioning, connection, planning and environmental issues.

Not surprisingly, 'certainty' is prized by investors above many other concerns, such as in relation to cost sharing mechanisms. Certainty of course relates to levels of revenue, but also timing of approvals, including planning and connections. For smaller, less economic projects, and again not surprisingly, a clear and sustained level of Government support is required, whilst for larger economic projects certainty of access to market might be sufficient. Table A5.1 below provides a summary of the more detailed views.

*TableA5.1: summary of investor views*

| Topic | Investor comment |
|---|---|
| Political risk | • Investors confirmed the importance of transparency of process and a lack of political interference in the procurement and legal and regulatory process as being of fundamental importance to attracting credible investors – there is a perception that this has not always been the case in Montenegro<br>• Credit rating for any Government providing support to projects with longer-term debt is key<br>• A Government 'steering committee' may be helpful, and help to avoid lack of co-ordination issues and local-level interpretations |
| Regulatory risk | • Independence of the regulator is key, with power to enforce rules<br>• The clarity and completeness of core energy regulation documentation is very important<br>• The current approach in Montenegro of re-setting tariffs every six months is not conducive to attracting investment into smaller, less economic projects (see Market Risk) |
| Market risk | • For smaller, less economic projects, including wind, a FIT or equivalent Government support mechanism is essential – without this there is very |

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|---|---|
| | limited prospect of raising debt finance (as confirmed by current SHPP concessionaires in Montenegro)<br>• FITs may be preferable to Green Certificates due to their relative price stability - Green Certificates tend to be linked to a market price<br>• Duration of FIT trades-off with level and stability of tariff over time, thus 15 years may or may not be acceptable<br>• Stability of tariff is helpful in structuring finance package, although many banks have closed their project finance desks at present – projects with an appropriate FIT can achieve very high gearing (Debt: Equity ratio)<br>• For FITs, a volume target is preferable to a time-limited process<br>• For larger economic projects, and where the likely investor has good knowledge and experience of trading in spot markets, a long-term PPA may not be required<br>• Nature of supply market is important: if there is a central buyer, generator may not secure good value for its power; if there is competition in the supply market that is better for a generator; best of all is if the generator is integrated with own supplier (but this requires a minimum scale, which will be a factor in Montenegro)<br>• Ability to export and trade green certificates is attractive cf. Albania's treaty with Italy on renewables |
| Development / Planning Risk: Concessioning | • Government should place significant weight on investor/ developer experience to avoid 'cowboys'<br>• Perception that, in Montenegro, smaller energy projects have, in the past, not been concessioned in the most transparent manner<br>• Concessionaires in Montenegro have faced considerable challenges in obtaining/ agreeing conditions with multiple institutions, with some of those conditions interdependent<br>• It is beneficial to have a coherent and stable legal and regulatory framework in place before running concessions<br>• SHPP concessionaires in Montenegro noted the importance of defining water streams coherently |
| Development / Planning Risk: Grid related issues | • Concessionaires in Montenegro noted that clarity is required as to responsibility for and funding and remuneration of connections<br>• Connections: [state] utility needs a strong incentive to connect in a certain timeframe e.g. a performance bond. Timing is of key importance to the investor, and more important than mechanics of sharing connection costs.<br>• For smaller, less economic projects, any lengthy connection will render the project uneconomic e.g. greater than 20 kms - a SHPP concessionaire in |

| | |
|---|---|
| | Montenegro noted that, not surprisingly bearing the full cost of a connection would make the project less economic<br>• Possible grid constraints will need to be considered and how any constraints will link to payments to generators<br>• Cost of transmission losses can have a very significant impact on generator investor returns<br>• Only larger developers/ investors will have experience to build connections |
| Development / Planning Risk: Planning | • A 2 year process can be considered very acceptable – investors often experience 4 to 5 years or more<br>• Governments should consider bringing together the planning and connection permissions, such that once a connection permit is issued planning automatically follows |
| Development / Planning Risk: Environmental | • Government will need to clarify its intended project design when it has wider implications e.g. on downstream irrigation; in other cases Government may be better specifying outputs rather than physical design<br>• Most international banks will demand adherence to World Bank environmental and social standards as a minimum |

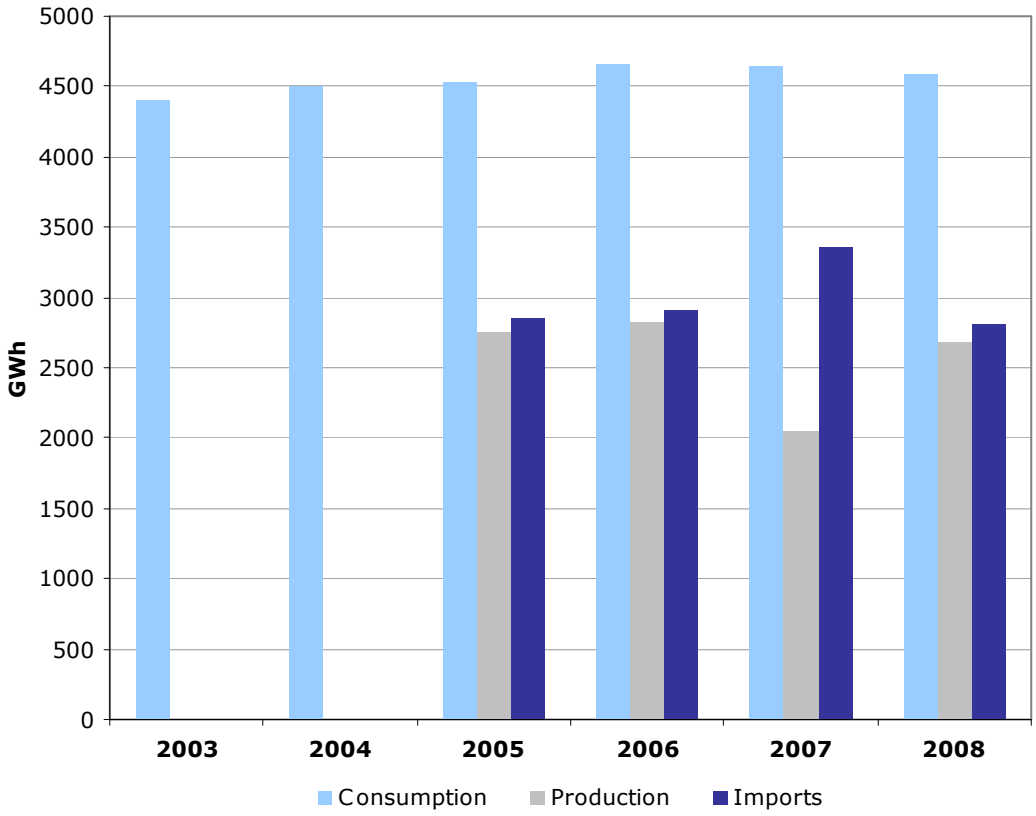
# ANNEX 6: A BRIEF OVERVIEW OF THE ENERGY SITUATION IN MONTENEGRO

This brief overview section summarises information on recent aspects of the Montenegrin electricity sector. Various quoted values and statistics have generally been obtained from the most recent available sources, though we recognise that such are updated continuously.

## A6.1 Electricity balance and consumption

Figure A6.1 below shows Montenegro's electricity consumption from 2003 to 2008 next to domestic electricity production and electricity imports for 2005 to 2008. From this figure, one can note the rise in electricity consumption until 2007, followed by a slight decrease in 2008, and the significant, but variable, domestic electric power production deficit (vs total consumption). This deficit has had to be met by increasing electricity imports from neighbouring countries (principally the Republic of Serbia and Bosnia & Herzegovina).

*Figure A6.1: Montenegro electricity sector consumption, production and imports*




*Source: Energy White Paper & EPCG*

Elektroprivreda Crne Gore's (EPCG) 2008 annual report also noted that the average cost of imported power for the year 2008 was approximately € 80.89/MWh, which is almost at the level of distribution customer retail tariffs.

Table A6.1 below shows the structure of consumption in Montenegro's electricity sector by customer group. The table shows that one of the three HV-connected customers in the country - Aluminium Plant Podgorica (KAP) – was (in 2008) responsible for over 35% of consumption while distribution-connected customers are collectively responsible for slightly more than 50%. Naturally, as the dynamics of KAP's consumption change, this could have a significant effect on the country's energy balances.

*Table A6.1: Structure of electricity consumption in Montenegro (2007 & 2008)*

| Consumer | Net consumption | | Consumption (GWh) | |
|---|---|---|---|---|
| | 2007 | 2008 | 2007 | 2008 |
| KAP | 43.4% | 38.5% | 1,950 GWh | 1705 GWh |
| Iron and steel works | 4.1% | 5.2% | 182 GWh | 228 GWh |
| Railways | 0.5% | 0.5% | 23 GWh | 22 GWh |
| Gross distribution | 52.0% | 55.8% | 2,334 GWh | 2473 GWh |

*Source: EPCG Annual Report 2007 & 2008*

Another notable feature of Montenegro's electricity system and demand-supply balance is its somewhat high levels of energy losses, particularly from the distribution network. According to EPCG, total losses in the distribution network in 2007 amounted to approximately 23.0% of distribution customer consumption; in relation to the total consumption in the system, distribution losses amounted to 12.4%.

## A6.2 Tariffs

Electricity tariffs are set by the Energy Regulatory Agency (ERA). Table 2.2 below shows tariff levels by customer group for 2007 and 2008. The realised average selling price of electricity in the period January - December 2008 amounted to 7.22 c€/kWh. The realised selling price for direct consumers (KAP, Iron Works Niksic and Railways of Montenegro) amounted to 4.14 c€/kWh, whereas for distribution-level consumers it amounted to 9.56 c€/kWh.

*Table A6.2: Electricity tariffs (average realisation by customer class 2007 & 2008)*

| Consumer | €/kWh (2007) | €/kWh (2008) |
|---|---|---|
| KAP | 0.0397 | 0.0369 |
| Iron Works Niksic | 0.0579 | 0.0629 |
| Railways of Montenegro | 0.0610 | 0.0651 |
| Distribution consumers | 0.0905 | 0.0956 |
| Overall | 0.0691 | 0.0722 |

*Source: EPCG Annual Report 2007 & 2008*

## A6.3 EPCG generation plant and transmission system

*EPCG generation plant*

EPCG is at present the only company in Montenegro generating power for public consumption. EPCG is in the process of being legally unbundled, with the Transmission Company recently split from the rest of EPCG and in the process currently of obtaining new operating licenses. Throughout this brief section, we speak of "EPCG" as a collective entity, though we recognise that this unbundling process is proceeding.

EPCG's power generation portfolio includes two large hydro power stations (HE Perucica and HE Piva), several smaller hydro stations, and one coal-fired thermal power station (TPP Pljevlja). Total production from each of the plants in 2007 and 2008 is shown below in Table A6.3.

*Table A6.3: EPCG plant production (2007)*

| Plant | Production in 2007 (GWh) | Production in 2008 (GWh) | Capacity (MW) |
|---|---|---|---|
| HE Perućica | 738.6 | 878.2 | 285 [27] |
| HE Piva | 523 | 634.2 | 342[28] |
| TPP Pljeevlja | 766.4 | 1,155.4 | 210 |
| Small hydro | 16.7 | 19.1 | 8 |

*Source: EPCG 2007 & 2008 Annual Report*

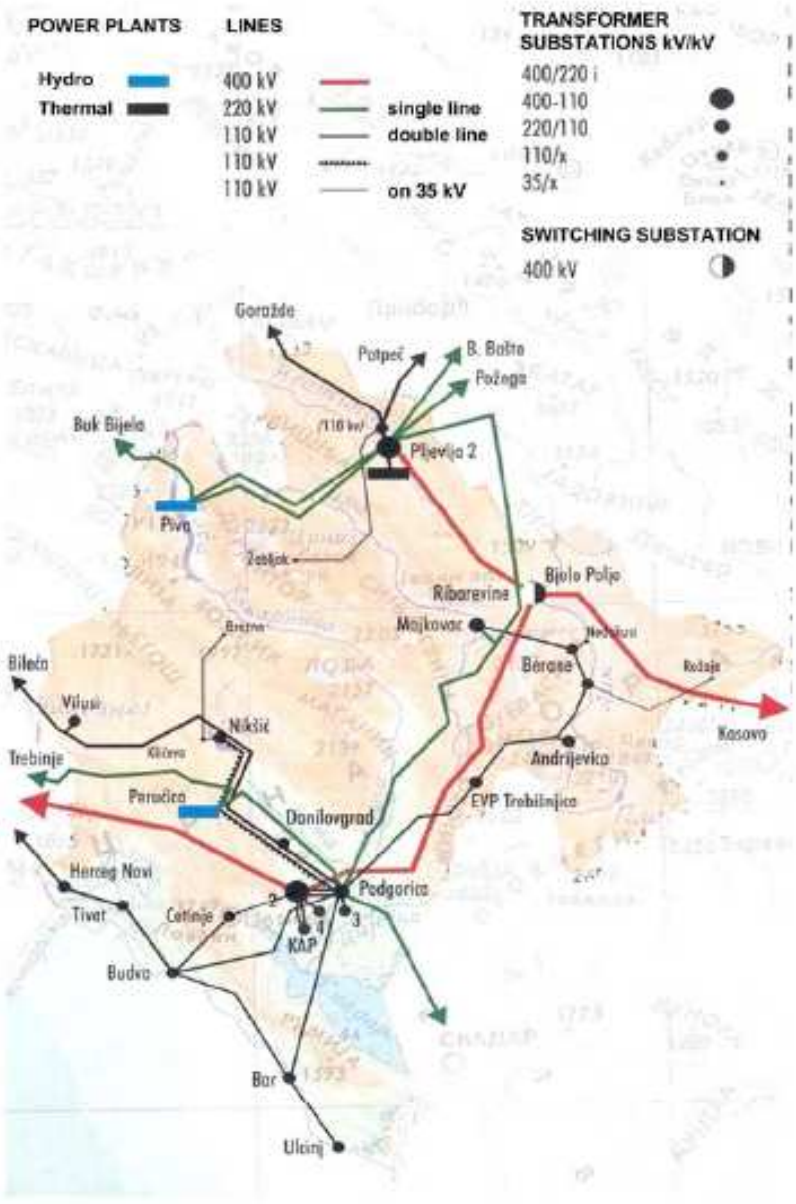
*Transmission system*

Figure A6.2 below provides an illustration of the location of EPCG's major power plants as well as the existing transmission lines and transformer substations that form Montenegro's transmission system. We note that in addition to the existing transmission network shown, there are plans (described in the Energy Development Strategy as noted below) for upgrading or reinforcing the existing system, as well as discussions regarding future possibilities for further interconnection (e.g., undersea cable to Italy).

[27] Maximum available capacity.

[28] Total installed capacity.

*Figure A6.2: Power plants, transmission lines and transformer substations in Montenegro's power system*




*Source: Background note on the power sector in Montenegro - Professor Ilija Vujosevic*

# ANNEX 7: PPP DEVELOPMENT UNITS AND SELECTED PPP CASE STUDIES

In this Annex, we first set out a discussion of experience gained from PPP development units globally, followed by a brief set of case studies covering PPP experience in selected countries.

## A7.1 Lessons Learnt from Experience of PPP Units Globally

International experience of PPP units in both developed and developing countries shows that PPP units are neither necessary nor sufficient to create successful infrastructure PPPs in a country. However, if carefully designed and structured, PPP units can provide considerable support to progress a country's infrastructure PPP plan. The variety of PPP units to date provide useful lessons for the future and highlight some fundamental issues that must be considered before the establishment of the unit, as presented below.

### Need for political support

A high level of political support is crucial to ensure the success of a PPP unit. During its initial design and implementation stages, it is extremely important that the unit has a 'champion' who can put forward the unit's establishment within the overall government structure. Once established, the unit needs to have strong political commitment to ensure the unit can discharge its roles and responsibilities effectively.

World Bank and PPIAF (2007) provides an insightful review of eight PPP units, wherein they find that PPP units in the UK, South Africa, Portugal and Victoria have thrived under strong government support, whereas PPP units in the Philippines, Bangladesh and Jamaica have been much less successful due to lack of political commitment.

### A functional and institutional structure that takes into account potential conflicts of interest

PPP units can perform a range of different functions; however, some of the roles have potential for conflict of interest. For example:

- *Developing policy versus its implementation (for instance, through a transaction capability)* – these are typically best kept at arm's length, as the former involves 'setting the stage' while the latter involves a high degree of sponsorship of individual projects.
- *Transacting and then monitoring or ensuring contract compliance*, do not go well as they can involve the monitoring of own design; and

- *Project design and development vs. public funding/ financing* – as project development involves promotion by the sponsor of the project, there may be considerable pressure to fund an activity even if it isn't bankable.

If conflicts of interest are evident, confidence in the whole PPP approach will be undermined. Thus, if these activities are housed together, they must be appropriately "ring-fenced". In more mature PPP regimes with sufficient scale, roles can be separated into different institutions, as they are for example in the UK, with roles split between the Treasury Task Force for PPP and Partnerships UK. Any conflicts between the unit and existing line ministries or departments must also be minimised.

**Institutional location of the unit**

The institutional location of the unit has considerable implications on its effectiveness. This not only links up with the conflicts of interest issue highlighted above, but also, on the one hand, it is important that any unit has the right level of sponsorship, and on the other that it cannot be allowed to become overly politicised or to become part of an individual or group of individuals' power base. The location of a unit must fit as seamlessly as possible with other institutions. They must avoid replication, conflicts or just serving to add another level of red-tape.

As a PPP unit works across infrastructure sectors, it is usually located in a cross-sectoral ministry such as finance or planning. In certain cases, the unit could be well placed as a free-standing institution. However these units do not gain from the associate authority and cachet provided by host institutions. In Portugal, Parpública exists successfully as a separate body, but most staff are hired from the Ministry of Finance.

PPP units may be set up at the central or state government level, as appropriate. In India for example, given the relatively large number of PPP transactions, the government has decided to set up PPP cells at both the Central and State levels.

**Development and retention of relevant infrastructure PPP skills**

To function effectively, PPP units must be able to assess, structure and review infrastructure PPP projects, requiring a clear understanding and experience of issues such as risk allocation, financial structuring, etc.

The skills required to do this, and that are acquired through transaction experience are highly valued by the private sector, making it difficult to retain them in-house or procure them externally. Where PPP units have been constrained in this manner, they have used a number of creative solutions including:

- use of consultants for short- (South Africa, Bangladesh) or long-term (Philippines BOT centre, Pakistan) contracts;
- consultants hired as advisors for specific tasks (Partnerships Victoria, Parpública);
- internal negotiation based upon "special skills";
- performance-based contracts or bonuses; and
- secondments from private sector (UK Treasury PPP Task Force).

The dangers of relying on learning-as-doing, and leakage of internally developed skills provide the emphasis on the use of external skills. For example, the first head of the South African PPP Unit was brought in from the World Bank, and others were brought in on secondment from Partnerships UK. However these are expensive solutions and incentives must be aligned to motivate staff to take the right risks while still providing good value for money.

**Key references:**


- World Bank and PPIAF (2007) "Public-Private Partnership Units: Lessons for their Design and Use in Infrastructure", PPIAF and EASSD/World Bank http://www.ppiaf.org/documents/other_publications/PPP_units_paper.pdf
- Sanghi et al. (2007) "Designing and using public-private partnership units in infrastructure" Lessons from case studies around the world", Gridlines Note Number 27, PPIAF http://www.ppiaf.org/documents/gridlines/27PPP.pdf


### A7.2 Case studies on PPP experience in select countries

This section discusses the experience of three countries in implementing their PPP programmes. These include:

- The state of Victoria in Australia, where PPPs have been successfully facilitated by the well-known PPP unit Partnerships Victoria;
- South Africa, an example of a developing country that has achieved much success in implementing its PPP agenda; and
- Bangladesh, a country which has had some success in PPPs in the energy sector thus far and is now also looking towards further developing its PPP agenda.

**Victoria, Australia**

The federal structure of Australia sees most PPP activity being run by the individual states. As of December 2008, Victoria was the most active Australian state in terms of the number of PPP projects contracted (18), just ahead of neighbouring New South Wales (NSW) (17).[29]

The composition of the Victorian PPP portfolio is heavily based on social PFI projects, although it has pursued a small number of core infrastructure projects in the transport, and water and sanitation sectors. This focus on core infrastructure PPP projects has been higher in the other Australian states, where there have been a greater proportion of road and water projects.

Maguire and Malinovitch (2005)[30] split the evolution of PPP policy in Victoria into three stages:

- "Late 1980s-1992: Off balance-sheet financing" - The motivation for PPPs was to gain off balance sheet financing for projects outside the limits set by the Australian loan council. The PPPs in this period had little impact on service delivery arrangements. Private finance was utilised but backed by government indemnities and guarantees, which limited risk transfer. Consequently projects were brought forward but were often structured in an inefficient manner that was later costly to unwind. Examples of projects from this period are the St. Vincent's Hospital redevelopment (1991) and the Melbourne Magistrates Court Complex.
- "1993-1999: Belief in competition and efficiency of the private sector" - An Infrastructure Investment policy for Victoria was introduced in 1994. This shifted the motivation for PPP to the pursuit of private sector efficiency and risk transfer. Projects involved high levels of risk transfer and were no longer supported by significant guarantees from the government. This produced some large, unsustainable projects created in a system of weak evaluation and assessment. Projects from this period include the Melbourne CityLink road project (1996) and Port Philip Prison (1996).
- "2000 to present: Value for money in the public interest and optimal risk transfer" - The Victoria Department of Treasury and Finance set up Partnerships Victoria[31] in

[29] http://www.pppforum.gov.au/national_pipeline/projects_contracted.aspx

[30] Maguire, G. and Malinovitch, A. "Development of PPPs in Victoria" *Australian Accounting Review* Vol 14, No.2 (2004) http://www.partnerships.vic.gov.au/CA25708500035EB6/WebObj/DevelopmentofPPPsinVictoria/$File/Development%20of%20PPPs%20in%20Victoria.pdf

[31] http://www.partnerships.vic.gov.au/

2000. Their first project was the Victoria County Court in 2002, typical of the social PFI style projects they have pursued since then with a strong emphasis on value for money and optimal risk transfer through whole-of-life-costing. Projects were implemented under Partnerships Victoria policy and guidance material including the use of Public Sector Comparator analysis and the use of standardised contract documentation. Other examples from this period include the Eastlink, Mitcham-Frankston Freeway (2004) and the Echua/Rochester Wastewater Treatment Plant (2004).

Victoria, along with the other states, has entered a further stage since 2008 - the process of integration and creation of a national market for PPPs. The National PPP forum[32] was established in 2004 to pool knowledge and resources, and to share lessons learned in each state. The biggest step towards integration was the introduction of National PPP Policy and Guidelines in December 2008.[33] PPPs in Victoria since January 2009 must now comply with these national policies, supplemented by Partnerships Victoria policy in areas where the guidelines allow some state-level flexibility.[34] One of the requirements in the new national guidelines is to consider PPP as a procurement option for any project with capital expenditure over AU$50m. One of the first projects to be completed under the guidelines is the construction of a AU$3.5bn desalination plant at Wonthaggi, expected to reach financial close in September 2009.

**South Africa**

The South African experience with PPPs has been well noted worldwide, especially since the establishment of its PPP unit in 2001. Compared to other developing Commonwealth countries, South Africa has been a relatively early mover, borrowing significantly from the Partnerships UK approach. Between 1980 and 2006, 24 projects with private sector participation reached financial close in the core infrastructure sectors of energy, transport, and water and sanitation.[35] Of these, 16 projects were before 2001 (i.e. before the establishment of the PPP unit). The South Africa PPP unit reports a further 16 PPP projects in the health, education tourism and other sectors as at January 2009 and 45 projects in the pipeline at both national and municipal levels.[36] Apart from one cancelled project in the

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[32] http://www.pppforum.gov.au/

[33] http://www.infrastructureaustralia.gov.au/public_private_partnership_policy_guidelines.aspx

[34] http://www.partnerships.vic.gov.au/CA25708500035EB6/WebObj/PartnershipsVictoriaStatement-February2009/$File/Partnerships%20Victoria%20Statement%20-%20February%202009.pdf

[35] Source: World Bank and PPIAF database.

[36] http://www.ppp.gov.za/Documents/QuarterlyPubs/Feb_2009.pdf

water and sanitation sector (management contract) in 1995, there have been no cancellations or out-right project failures in South Africa.

The beginnings of an integrated national PPP strategy came in 1997 with the establishment of an inter-departmental task team to develop policy and reforms to facilitate PPPs. This was supported by the setting up of the Municipal Infrastructure Investment Unit in 1998 to provide municipalities with technical and grant assistance. Before the full PPP framework was operational, several pilot PPP schemes were undertaken by government departments and municipalities.[37] An important PPP concession project during this period was the N4 Toll Road, (a US$426m investment reaching financial close in 1997[38]) linking South Africa and Mozambique. This toll road is an example of a difficult cross-border project that has performed well. Another project from this period was the Bloemfontein prison, one of two prisons reaching financial close in 2000. Plans for 11 PPP prisons were made, but higher costs than expected resulted in only two projects being taken forward.

The Cabinet endorsed a Strategic Framework for PPPs in 1999 and Treasury regulations for PPPs were issued in 2000. The culmination of this process was the creation of a PPP unit in the Treasury in 2000 with international support from USAID, DFID and GTZ.[39] The Treasury Regulation 16 on PPPs, issued in terms of the Public Finance Management Act (PFMA) in 2004 is the key legislation for PPPs in the country, outlining the procedure, approvals and management of PPPs.[40] The various modules of the PPP Manual and Standardised PPP Provisions are issued as Treasury PPP Practice Notes in terms of the PFMA.[41]

The PPP unit has acted as a focal point for PPPs in the country. It has facilitated the completion of 18 projects, with no failures to date (although the Chapman's Peak Drive toll road has been closed for an extended period following rock slides in June 2008). While it has engaged in some core infrastructure projects (for example transport), the unit's projects have leaned to the social end of PPPs including health, tourism, IT, and government accommodation. Typical of this is the first PPP unit supported project, the R4.5bn Inkosi Albert Luthuli Hospital, a state-of–the-art, but underutilised hospital located near Durban. In contrast to this is the controversial Gautrain (high speed train) R23.09bn linking Johannesburg and Pretoria, which reached financial close in 2006. This project has been

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[37] Toll roads by the SA National Roads Agency, prisons by the Department of Public Works and Correctional Services, two municipalities (for water projects) and SA National Parks.

[38] Source: World Bank and PPIAF database

[39] The PPP unit was originally staffed by five professional staff, but has now grown to approximately 15.

[40] http://www.ppp.gov.za/Documents/ppp_legis/Reg16_January2004.pdf

[41] http://www.ppp.gov.za/PPPLegislation.html

criticised for its substantially large investment costs as compared to other public transport projects in the country, and one that will primarily benefit the well-off.[42]

The South African experience highlights the important role of a well functioning PPP unit in facilitating PPP. The unit has received considerable political support as well as being staffed with highly qualified advisers – both factors contributing favourably to its performance. The country's relatively more sophisticated financial and investment sector and overall enabling environment has also been an important supporting factor. However despite this, the rate of project closure in the country has historically been slow (about two projects a year), highlighting the inherent complexities in developing PPPs.

**Bangladesh**

Bangladesh's PPP programme commenced in mid-1990s when the government adopted a policy to promote private sector participation in the power sector. Subsequently, and up to 2007, seven IPP projects have achieved financial close and are also currently operational, providing approximately one quarter of the country's generation capacity.[43] However, their success has been mixed – the large Haripur and Meghnaghat IPPs[44] reaching financial close in 2001 have been regarded as reasonably successful but questions have been raised about the quality of the projects implemented since then.[45] In addition, over this period, Bangladesh has also undertaken five significant BOO fixed access telecom PPPs and three transport management contracts (a bridge, seaport terminal and airport).[46]

Bangladesh's PPP experience is built on the 2004 Bangladesh Private Sector Infrastructure Guidelines (PSIG).[47] This introduced the Private Infrastructure Committee (PICOM), designed to advance and monitor projects, while also providing a coordinating role between departments. PICOM is under the Prime Minister's Office (PMO), however it has been contended that it has not received the political support required thus far. Beyond PICOM there are three main agencies supporting PPP in Bangladesh:

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[42] Yescombe, E. R. "Public Private Partnerships: Principles of Policy and Finance" Butterworth-Heinemann (2007) pp47-48

[43] Source: World Bank and PPIAF database.

[44] Please refer to Annex 5 for a detailed case study on the Meghnaghat IPP.

[45] Sanghi et al. (2007) "Designing and using public-private partnership units in infrastructure" Lessons from case studies around the world", Gridlines Note Number 27, PPIAF http://www.ppiaf.org/documents/gridlines/27PPP.pdf

[46] Source: World Bank and PPIAF database.

[47] http://www.bangladeshgateway.org/egovernment/Guideline-BOi.pdf

- **Infrastructure Development Company Ltd. (IDCOL),**[48] a government sponsored company established in 1997 to promote private sector investment in infrastructure. IDCOL provides project finance and financial intermediation services and as of June 2009 had financed 22 (BDT13bn) infrastructure projects, of which seven were BOO and two were BOTs. (see Box 5.2 in Section 5 for case study)
- **Investment Promotion and Financing Facility (IPFF),** [49] established in 2007 as a five year investment promotion and financing facility, providing long-term finance for government endorsed infrastructure. Its focus has been in the energy sector, bringing three BOO power projects to commercial operation and two further projects nearing completion.
- **Infrastructure Investment Facilitation Centre (IIFC),**[50] a government sponsored company established in 1999 to assist government bodies formulate project proposals, screening and technical assistance. It became a fully commercial operation in 2007 when it began operating without any government or donor support. Sanghi (2007)[51] criticises the design of the facility as leading to its limited role, and that it has done little to address investor perceptions of risk.

The infrastructure sectors are also supported by independent regulators for the energy and telecoms sectors.

The government recognises that although these initiatives have been useful in supporting PPP infrastructure project development in the country, they are not sufficient to cater to the needs and potential for the country. More recently, it is expected that Bangladesh's PPP programme will gain a renewed focus, with the new government claiming considerable support for the PPP approach. The Minister of Finance, Abul Maal Abdul Muhith, has expressed the government's commitment to support the PPP initiative with five key actions being planned by the end of 2009[52]:

1. reform of guidelines and institutional framework in the 2004 PSIG;
2. establishment of a PPP unit for budget formulation and implementation;
3. creation of a significant budgetary allocation for PPP (proposals for FY2009-10 include BDT21bn for project financing, BDT3bn for Viability Gap Funding and BDT1bn for technical assistance grants;

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[48] http://www.idcol.org/

[49] http://www.bangladesh-bank.org/

[50] http://www.iifc.net/

[51] See footnote 118 for a detailed reference.

[52] http://mof.gov.bd/en/budget/09_10/ppp/ppp_09_10_en.pdf

4. introduction of tax incentives for PPP investors; and
5. increased publicity for the new PPP initiative.