Manual for RERA Guidelines for Regulating Cross-border Power Trading in the SADC Region:

A User's Guide

Report to the Regional Electricity Regulators' Association of Southern Africa

May 2010

Acronyms and Abbreviations

AFREC	African Energy Commission
Ancillary services	Reactive power, reserves, black start capability, and other services that are required to maintain transmission and distribution system reliability and security
Benchmarking	Comparing the terms of alternative supply options taking into account the factors listed in Guideline 5.6(c)
Competitive tendering	A process where bids are received from alternative suppliers and the best supply option(s) are selected to negotiate supply agreements
Control area services	Services provided by a system operator within an electrical system bounded by interconnection metering and telemetry, such as generation scheduling and frequency regulation
CRM	Cost recovery mechanism issued by the National Energy Regulator of South Africa
Cross-border agreements	Any agreement relating to cross-border trade in electricity including any power purchase or supply agreement, transmission or interconnection agreement, or agreement for the provision of ancillary services
EoI	Expression of Interest
EPC	Engineer–Procure–Construct
IPP	Independent power producer
Licence	Any document issued by a separate National Regulatory Authority that allows an entity under its legal jurisdiction to undertake the relevant activity relating to importing or exporting electricity.
Liquidated damages	Damages specified by the parties during contract negotiations and collected by the injured party as compensation for a specific breach
MOU	Memorandum of Understanding
NEPAD	New Partnership for Africa's Development
NERSA	National Energy Regulator of South Africa
PPA	Power Purchase Agreement
Pre-application meeting	Meeting between the Regulator and the parties to a cross-border transaction prior to an application for a regulatory decision being submitted
Price-regulated customers	Consumers of electricity whose prices are set or controlled by a regulator and cannot negotiate electricity prices directly with their supplier
Regulated tariffs	Charges for electricity supply from a utility to price-regulated customers

Regulator	The authority responsible for making regulatory decisions. The Regulator may be an agency independent of Government, or may be a Government Ministry
RERA	Regional Electricity Regulators' Association
RfQ	Request for pre-qualifications
RfP	Request for proposals
SADC	Southern Africa Development Community
SAPP	Southern African Power Pool
Traders	Parties to cross-border transactions
Transit country	A country through which electricity is transported from the buyer to the seller, both of which are located in other countries
Transmission services agreement	An agreement relating to connection to or interconnection with a transmission or distribution system, or construction or use of a transmission or distribution system or systems located in one or more countries, including a transit country
Unsolicited offer	A process where a seller approaches a buyer with an offer to supply, without being selected through a competitive tendering process
WATRA	West African Telecommunications Regulatory Association

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1 Introduction and Background

There are currently a large number of proposed cross-border generation and transmission projects in Southern Africa that are not moving forward, despite being technically and economically feasible. To help address this situation, the Regional Electricity Regulators Association of Southern Africa (RERA) has prepared a set of guidelines for national regulators in the SADC region, which have been adopted by the SADC Energy Ministers. This section of the Manual provides some context for the guidelines and provides an overview of the purpose and contents of the Manual.

The Regulatory Guidelines improve how cross-border power deals are regulated

RERA has received a mandate from the Southern Africa Development Community (SADC) to help address major regulatory constraints in the enabling environment for cross-border power trading (Record of 29th Meeting of SADC Energy Ministers, 30 April 2008, Kinshasa). To help address the regulatory constraints facing cross-border projects, RERA has issued guidelines to establish consistent ways for national regulators to approach regulatory decisions for cross-border power projects (the "Regulatory Guidelines").

RERA is committed to improving the regulatory systems in importing, exporting, and transit countries that would affect cross-border power trading in SADC. RERA believes that a clear and credible regulatory environment is an important component of facilitating regional power developments in SADC. This is because the current market for cross-border power projects in Southern Africa is based on long-term deals, which need revenue certainty to encourage lenders and investors to finance large capital investments.

The Regulatory Guidelines have been approved by the SADC Energy Ministers

The SADC Energy Ministers noted and approved the Regulatory Guidelines at their meeting in Luanda in April 2010, and the Ministers urged SADC Member States to adopt the guidelines and use them as best regulatory practice. The Ministers added a requirement for RERA to develop modalities to support the **implementation** of the Regulatory Guidelines, and that RERA should ensure that the guidelines are made operational to facilitate new investment and expand cross-border trade.

RERA is committed to making real progress with these tasks to ensure that the Regulatory Guidelines serve as a first concrete step for harmonising national regulatory regimes as they affect major, cross-border power projects.

The Regulatory Guidelines are flexible to work in different national frameworks

In most SADC countries, the authority responsible for regulating cross-border trading is a separate national electricity regulator with the authority to make decisions on tariffs, licensing and service standards. However, Energy Ministers in most SADC countries also retain some decision making powers. In Namibia, Ministerial approval is required for licensing, and in Zambia the Minister needs to approve export licences. In South Africa, the Minister may direct the regulator to issue a licence if the Minister has decided that a particular generator or generation option is required. In Mozambique the regulator only has advisory powers; and a number of other SADC countries, such as Madagascar, Botswana and Swaziland, are in the process of establishing a separate regulator.

The Regulatory Guidelines focus on the regulatory decisions affecting cross-border trading that are made by some government entity, regardless of whether the decision-maker is an independent agency or the government. In the Regulatory Guidelines and

this manual, the regulatory decision-maker is referred to as the "Regulator", but this entity could be independent or part of the government. The Regulatory Guidelines have been drafted in this way to be flexible to allow for different country circumstances, while having a sufficiently broad application to promote consistent decision making.

Regulation is not the only factor required for an enabling environment

RERA believes that national regulatory action needs to be enabled and complemented through the actions of other institutions. Even if national regulators in SADC actively implement the Regulatory Guidelines, support will still be required from SADC and the South African Power Pool (SAPP).

Accordingly, RERA has been working with these other regional institutions to ensure that their initiatives are compatible with the Regulatory Guidelines. Specifically, RERA has focused its interactions on two complementary initiatives:

- **Ensuring political commitment to cross-border power trading**. RERA has engaged with the SADC Secretariat on way to mobilise political support for the actions taken by national regulators and regional organisations—particularly RERA and SAPP—in relation to cross-border trading. This political support provides an important commitment at the regional level by clarifying the legal status of regional power trading agreements and empowering RERA and SAPP to take specific actions to promote efficient regional trading developments.
- **Evaluating the technical impacts of cross-border transactions**. RERA has engaged with SAPP on the how it reviews the technical aspects of cross-border trading, and how proposed cross-border electricity transactions will be accommodated in the regional, interconnected grid. This analysis is needed for regulators to properly complete the required regulatory reviews, such as evaluating the impacts of proposed cross-border transactions on national security of supply. Regulators and governments must also rely on SAPP to monitor compliance with regional agreements once cross-border assets are commissioned, to ensure the ongoing reliability of the power system.

Even if regional institutions make good progress on political, technical and regulatory issues, other obstacles also need to be resolved to bring forward new investment. Table 1 presents a number of obstacles to cross-border trading in Southern Africa, and highlights which of these obstacles are addressed through the Regulatory Guidelines, or through the initiatives of the SADC Secretariat and SAPP.

Table 1: Possible Obstacles to Cross-border Trading

Political / Legal	Legal framework does not support cross-border power trading
	Uncertain political environment and high country risk
	Insufficient political support for regional power sector organisations
Financial	Lack of financial resources available for cross-border transactions
	Insufficient revenue certainty as a result of high regulatory risk
	Buyers do not have financial capability to enter into large transactions
Technical	Lack of understanding of technical impacts of cross-border projects
	Creation of unacceptable technical risks through a cross-border project
	Insufficient monitoring and operational discipline in interconnected system
Regulatory	Risk of regulatory expropriation after investments have been committed
	Regulatory decisions are unclear and subject to high level of discretion
	Benefits of cross-border transactions are not shared with price-regulated customers

Addressed through SADC initiatives

Addressed in the RERA Regulatory Guidelines

Addressed through SAPP initiatives

Taking one example from the table above, an obstacle to power trading in Southern Africa is the limited financial capability of buyers in the region to enter into large transactions. Even the largest national utility (Eskom of South Africa) has concerns regarding the financial impact of cross-border purchases. This issue is important, but is outside of the scope of work being completed by SADC, SAPP or RERA.

Purpose and contents of this Manual

This Manual serves as a companion to the Regulatory Guidelines by explaining the purpose of each guideline, and clarifying implementation issues in applying the guidelines. This Manual is intended to serve as a "user's guide" to the Regulatory Guidelines.

The remainder of this Manual is structured as follows:

- **Section 2: Purpose and Implementation of the Regulatory Guidelines.** This section describes the purpose of the Regulatory Guidelines in more detail, and considers how national regulators can give legal effect to the Regulatory Guidelines by adopting them through their own rule-making procedures
- **Section 3: Scope of the Regulatory Guidelines.** This section discusses the types of transactions and the different parties to cross-border agreements to which the Regulatory Guidelines should be applied
- **Section 4: Commentary on the Regulatory Guidelines.** This section explains the purpose of each of the nine Regulatory Guidelines, and discusses the major issues that will concern regulators in applying the each guideline.

2 Purpose and Implementation of Regulatory Guidelines

The Regulatory Guidelines are designed to establish a clear regulatory environment for cross-border power trading that provides sufficient certainty to investors and lenders to provide finance for long-term power transactions, while also protecting consumers in buying, selling, and transit countries. This section describes the purpose of the Regulatory Guidelines in more detail, and discusses how national regulators can give legal effect to the Regulatory Guidelines by adopting them through their own formal rule-making procedures.

The aim of the Regulatory Guidelines is to provide regulatory authorities in SADC with a set of consistent guidelines that can be used when making regulatory decisions that affect cross-border power trading. This will help to ensure that efficient cross-border deals are not constrained by unclear or complicated processes for making regulatory decisions. This broad objective is supported by three more specific goals:

- To clarify how the Regulator will carry out its powers and duties in regulating cross-border electricity transactions in order to minimise regulatory risks for power investors and customers
- To promote efficient and sustainable cross-border electricity transactions that are fair to selling and buying entities, are consistent with least-cost sector development and help to ensure security of supply
- To promote transparency, consistency and predictability in regulatory decisions.

The Regulatory Guidelines reflect the view that the principles and methodologies applied in regulatory decisions should be set out clearly in advance

Advance notice improves investment certainty by limiting the discretion of the Regulator in fulfilling its mandate. The national legislation that empowers the Regulator will typically be very broad, which creates the possibility that the Regulator will interpret legal requirements differently to the parties to a cross-border transaction. The Regulatory Guidelines aim to resolve this uncertainty by making explicit the rights and responsibilities of parties to a transaction, the roles of the Regulator, the criteria applied in regulatory decisions and the consequences of regulatory actions.

To effectively limit the discretion of national regulators the command "will" is used in the Regulatory Guidelines. For example, Guideline 4.5 states that where certain conditions are met, "the Regulator will allow power purchasing costs to be reflected in regulated tariffs". Once the Regulator has committed to the Regulatory Guidelines the Regulator will be expected to apply the rules. RERA will be responsible for monitoring how the Regulatory Guidelines are applied.

The only way that the Regulatory Guidelines can have legal effect is if national regulators choose to implement them in their own jurisdiction

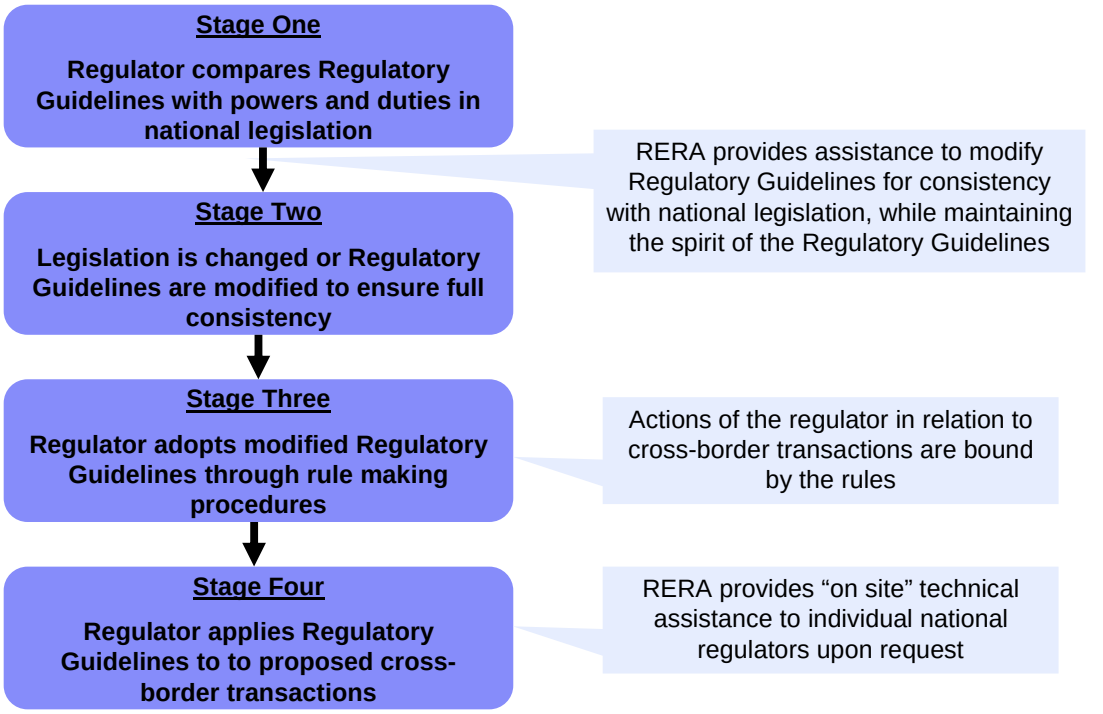
The Regulatory Guidelines and this manual are written in the form of principles and procedures for reviewing major, long-term imports and exports of power. Although approved by SADC Energy Ministers, the Regulatory Guidelines do not have a formal legal status over the decisions of individual national regulators at this time. The Ministers have asked RERA to support the implementation of the Regulatory Guidelines, and to

ensure that the guidelines are made operational to facilitate new investment and expand cross-border trade.

RERA's current thinking on implementation of the Regulatory Guidelines is shown in Figure 1, which sets out a four-stage process for adopting the Regulatory Guidelines as binding rules. We understand that other regional entities have successfully adopted a very similar process to implement regional guidelines. For example, the West African Telecommunications Regulatory Association (WATRA) has followed a similar approach to make its recommendations enforceable in the telecommunications sector.

- **Stage One**. The national Regulator compares the Regulatory Guidelines with the powers and duties in their national legislation. While the Regulatory Guidelines are written to be consistent with most SADC countries' regulatory and sector laws, certain Guidelines may not adequately reflect the national circumstances and priorities in particular countries
- **Stage Two**. To resolve any inconsistency between the Regulatory Guidelines and the empowering legislation, the Regulator could modify the RERA Regulatory Guidelines to ensure full consistency with national legislation, or the law could be changed to be consistent with the Regulatory Guidelines. The Regulatory Guidelines should be modified only where necessary, and preferably not in areas where consistent decision-making is important for facilitating cross-border transactions
- **Stage Three**. The Regulator adopts the modified guidelines through its rule making procedures, giving the guidelines legal status and effect
- **Stage Four**. The Regulator applies the Regulatory Guidelines to individual proposed transactions. RERA will also consider requests for "on site" technical assistance from its members in implementing the Guidelines.

Figure 1: Process of Implementing Regulatory Guidelines



The most contentious part of the implementation process is likely to occur in stage three when a decision needs to be made on whether the national legislation or the Regulatory Guidelines should be modified to ensure consistency. The approach that is adopted will depend on the nature of the inconsistency.

In order to preserve a consistent regulatory approach on cross-border transactions in SADC, the Regulatory Guidelines should be modified in limited areas, and only where necessary. An example of where the Regulatory Guideline may need to be modified is to address any differences between licences and concessions. Most countries in Southern Africa with common law legal systems require "licences", while others (such as Mozambique, Angola, and DRC) grant "concessions". The term licence is used throughout the Regulatory Guidelines as a generic term for any document issued by a separate Regulator that allows an entity under its legal jurisdiction to undertake the relevant activity relating to importing or exporting electricity subject to conditions that impose regulatory requirements. Changes may be required to modify regulatory functions for concessions, and RERA could possibly provide any required technical assistance in this process.

An example of where the national legislation may need to be modified is in relation to regulatory decisions on access to transmission. Guideline 8.1 addresses this issue and provides for regulatory decisions "to ensure that access is non-discriminatory to the greatest extent possible under the law and the provisions of transmission licences". For this guideline to have effect, the national legislation needs to provide some framework for transmission access.

3 Scope of Regulatory Guidelines

The Regulatory Guidelines have been developed for regulatory decisions made in the SADC region with respect to proposed cross-border power transactions. This section of the Manual sets out the decisions and entities that the guidelines will apply to.

Only large, longer-term trading is covered by the Regulatory Guidelines

The Regulatory Guidelines are designed to apply to major, long-term cross-border purchases or sales of power involving transactions across national borders for more than 20 MW of capacity and with a duration of at least one year. This threshold has been set to recognise that the administrative costs of applying the guidelines to smaller and/or shorter-term transactions may be substantial, and would need to be assessed on a case-by-case basis. Separate regulatory guidelines for shorter term transactions, such as those on the Day Ahead Market operated by SAPP, may be developed in the future.

RERA considers that large, longer-term cross-border transactions are likely to produce substantial regional benefits in Southern Africa because of the economies of scale associated with the development of many low-cost power sources in the region. These transactions require access to both national and cross-border markets, and would benefit from the regulatory certainty provided by the guidelines.

The Regulatory Guidelines apply across a range of sector structures

The specific form of each regulatory review will inevitably depend on how a country's electricity sector is structured, and how functions are assigned among different entities within the sector. In the case of electricity imports and exports, the choice of a workable method of regulatory review will depend on whether there is a single-buyer arrangement or whether Independent Power Producers (IPPs) or large customers can trade independently across borders, whether there is effective non-discriminatory access to the grid and how purchases are procured (i.e. through competitive procurements or unsolicited, negotiated offers).

Within SADC at this time, the most common sector structure is a single state-owned national utility with full or partial monopoly power over imports and exports. Typically, the state-owned utility faces little or no competition for retail customers, and its retail tariffs do not always recover all operating and capital costs. The Regulatory Guidelines are designed primarily for this prevailing sector structure. However, some countries are considering allowing IPPs and large customers to trade directly across borders, and the guidelines make provision for these situations. As power sectors in SADC evolve towards greater competition, the guidelines will need to be modified to accommodate changes.

The Regulatory Guidelines will apply where the national utility is state-owned or has private sector ownership

If the utility is state-owned, regulatory decisions may mirror other government decisions for state-owned enterprises, such as public procurement or management legislation. In these circumstances, the government and the Regulator should work together to ensure that their decisions are consistent, and that any duplication of resources is minimised.

For example, in many countries the government needs to ensure that purchases by state-own enterprises that are not competitively tendered still provide value for money. Regulators also need to ensure value for money as part of regulating national utilities. These respective decisions need to be consistent to help ensure a climate that is conducive to new investment.

Domestic trading is not covered by the Regulatory Guidelines

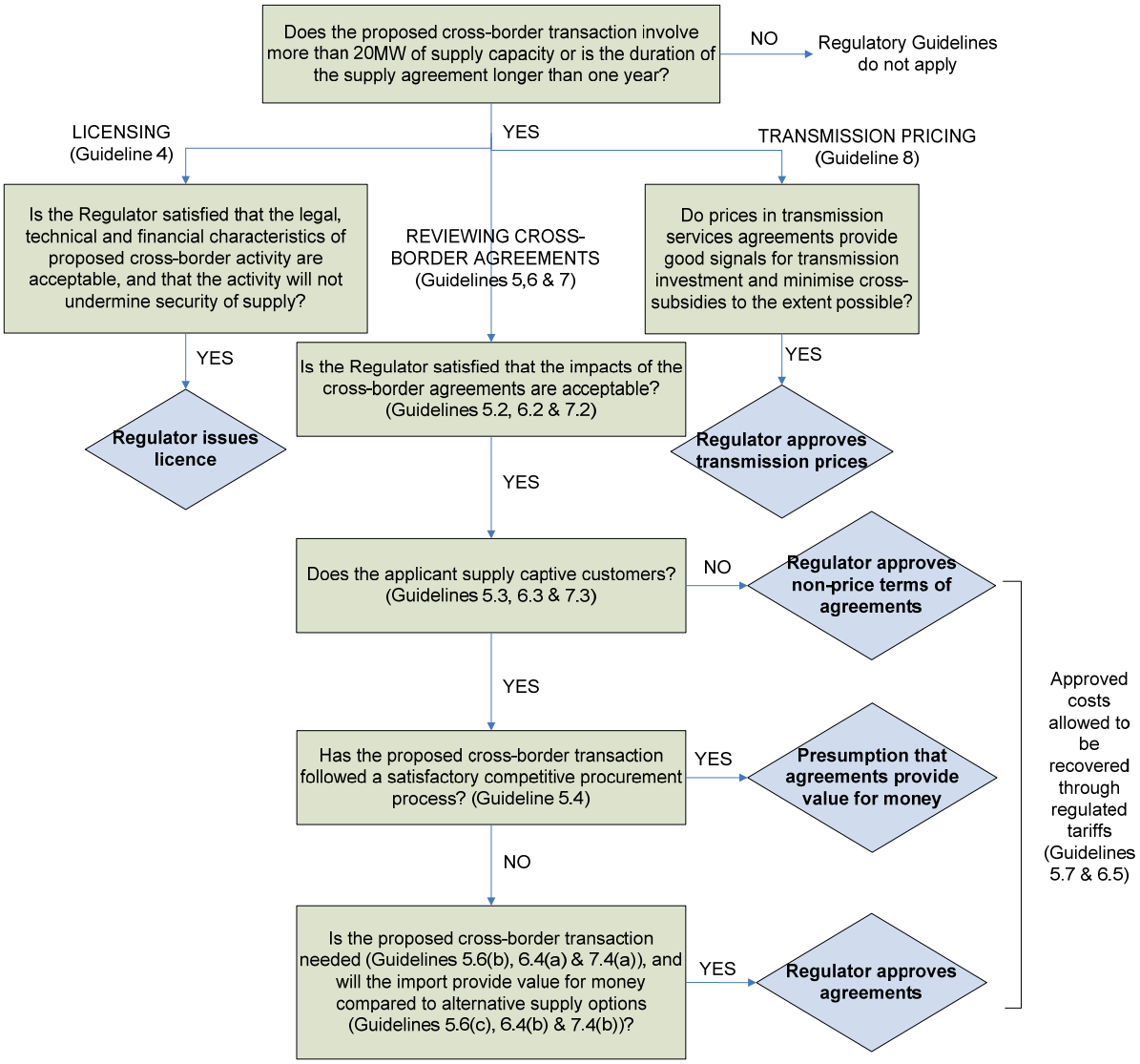
While the focus of the Guidelines is on major, long-term cross-border transactions, some aspects of the guidelines would also be applicable to domestic long-term power transactions. For example, many of the Guidelines share features with the Cost Recovery Mechanism (CRM) issued by the National Energy Regulator of South Africa for purchases made by Eskom from domestic IPPs.

Applying the Regulatory Guidelines in the process of regulatory decision making

Figure 2 shows the process of making regulatory decisions for proposed cross-border transactions. All cross-border transactions will require some form of regulatory decision on a licence application—either to extend the terms of an existing licence to include the proposed transaction or to issue a new licence. Licensing considerations are addressed in Guideline 4. Similarly, all cross-border transactions will require regulatory decisions on transmission pricing. This is because transmission is a natural monopoly service with regulated prices and access terms.

The agreements for cross-border transactions (power purchase agreements and transmission services agreements) will require a different level of regulatory review depending on the form of the transaction. Where cross-border transactions take place between merchant sellers and buyers—that is, where neither party serves price-regulated customers who have no choice of supplier—regulatory reviews will be limited to security of supply impacts. Where the party applying for regulatory approval of cross-border agreements supplies price-regulated customers, additional regulatory reviews are required—for power import deals to review the value for money provided by the power purchase and whether they might be passed on to regulated customers, and for export sales to evaluate the impact of the deal on national consumers.

Figure 2: Regulatory Decision Making for Cross-border Transactions



4 Commentary on Regulatory Guidelines

The nine Regulatory Guidelines cover a wide range of substance and process of making regulatory decisions on cross-border trading. This section explains the purpose of each guideline, and discusses the major issues that will concern regulators in applying the guidelines.

This section follows the same order as the Regulatory Guidelines, which are structured as follows.

- Guideline 1 establishes the boundaries of regulators' responsibilities, and clarifies the distinct roles of the Regulator, national governments, and regional organisations
- Guideline 2 seeks to ensure the compatibility of regulatory decisions with the decisions made by regulators in other SADC countries, and with decisions made by regional organisations such as SAPP and RERA
- Guideline 3 sets out a process for regulatory involvement in developing a cross-border transaction, before and after a formal application is submitted
- Guidelines 4–8 address regulatory decisions on licences, cross-border agreements, reflecting purchasing costs in regulated tariffs, and transmission access and pricing
- Guideline 9 describes how regulatory decisions will be communicated, and how information on regulatory decisions for cross-border trading will be made available to the public.

4.1 Regulator's Powers and Duties for Cross-border Trading

The Regulator's powers and duties are prescribed in the national legislation in each country. Some regulators in SADC have considerable independent decision-making authority under the empowering legislation, while legislation in other countries requires Ministerial approval for most regulatory actions. The respective roles of the Regulator and the relevant government ministry will ideally be specified in primary or secondary legislation to enable regulators to refer to the law, and use the law as protection, when their authority, independence or credibility is being threatened or questioned.

Guideline 1.1 reflects the position that regulators must act within the powers and duties specified in national legislation. Guideline 1.1 reads as follows:

> **1.1 When considering cross-border electricity trading, the Regulator will act within the powers and duties prescribed in national legislation.**

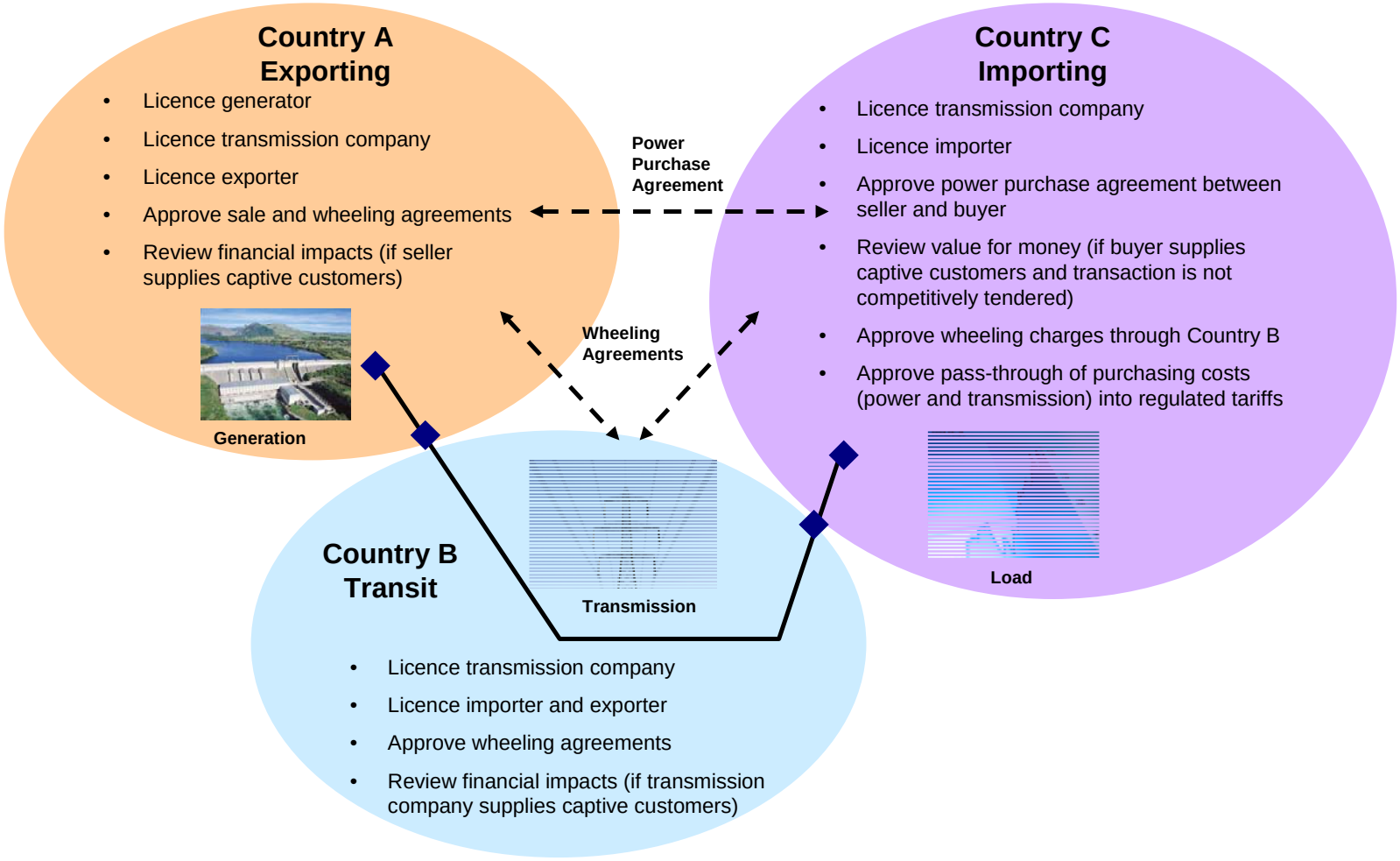
Although the powers of the national Regulator differ, the actual regulatory decisions that need to be made in each SADC country are effectively the same. Guideline 1.2 lists the regulatory decisions that need to be made for cross-border transactions to proceed—either by the Regulator, the government or some other agency. Detailed guidance is provided in later guidelines on how these decisions should be made.

Most cross-border developments will require multiple regulatory decisions to ensure that all facilities and activities are licensed, and that where price-regulated customers are being

supplied that all costs are reasonable. Figure 3 provides an illustrative example of a cross-border transaction that would require several regulatory decisions. To summarise the instances where regulatory decisions are required for cross-border transactions:

- **Exporting country (Country A**). The Regulator is required to licence new exporters, generators, and transmission providers, and will review the relevant agreements for the cross-border transaction. If the seller supplies price-regulated customers, the Regulator in Country A will need to assess the financial impacts of the transaction on the regulated utility and its customers
- **Transit country (Country B)**. The Regulator could be required to make licensing decisions, depending on how the transaction is structured. If the transmission provider in the country supplies price-regulated customers, the Regulator in Country B will also need to consider the financial impacts of the transaction agreements on the regulated utility and its customers
- **Importing country (Country C)**. The Regulator is required to licence new importers and transmission providers, and will review the agreements for the cross-border transaction. If the buyer supplies price-regulated customers, the Regulator will need to assess the value for money provided by the cross-border transaction compared to alternative supply options so that the purchasing costs can be reflected in regulated tariffs.

Figure 3: Illustration of Regulatory Decisions in Cross-border Trading



Guideline 1.2 reads as follows:

1.2 Typically it is expected that the Regulator would be responsible for making the following types of decisions within the Regulator's country in relation to cross-border electricity transactions (the "regulatory decisions"):

(a) Issuing licences to entities that will be engaged in cross-border electricity trading, such as electricity generators and transmission companies, traders, importers and exporters (Guideline 4);

(b) Approving the terms of power purchase agreements (PPAs) and transmission wheeling agreements in cross-border electricity imports and exports (Guidelines 5, 6 and 7) as they relate to technical system security issues;

(c) Approving the recovery of the costs of electricity imports through the tariffs charged to price-regulated customers (Guideline 5);

(d) Approving agreements to export electricity by parties that supply price-regulated customers to safeguard their interests (Guideline 6);

(e) Approving transmission wheeling agreements in transit countries where the transmission provider supplies price-regulated customers to safeguard their interests. (Guideline 7);

(f) Mandating access to transmission and distribution facilities for cross-border electricity trading in accordance with national legislation and transmission licence conditions (Guideline 8); and

(g) Approving domestic and cross-border transmission charges (Guideline 8).

Each of these decisions and their purpose is addressed in the Regulatory Guidelines. To avoid creating incompatible national regulatory systems that will impede or block beneficial cross-border transactions within SADC, the Regulator should give substantial weight to the decisions and recommendations of regional organisations recognised by SADC, such as RERA and SAPP.

National Governments

The Regulator's decisions will be affected by the policies of the national government. Guideline 1.3 specifies particular policy choices that will directly impact on regulatory decisions. The following bullet points provide a further description of the policy matters listed in Guideline 1.3. This is not an exhaustive list of the areas where government policy will influence regulatory decisions:

- **Market structure**. Whether the incumbent government-owned utility has an exclusive single-buyer status or whether other producers and consumers can import or export directly
- **Security of supply**. Whether standards are specified for security of supply, such as the maximum amount of electricity that can be imported and/or exported, and how responsibility for monitoring and reporting on supply security is allocated
- **Planning of new generation and transmission facilities.** How planning functions are undertaken by the national government, or delegated to the national utility and/or national regulator, and whether licensing decisions need to be made with reference to the these projects included in these plans
- **Generation mix**. Which technologies can be used to generate electricity, and a desired mix of fuels or supply sources
- **Climate change policy**. Whether climate change mitigation policies have been adopted for the electricity sector, including targets for achieving emissions reductions and plans to introduce carbon pricing
- **Procurement**. Whether any requirements exist for procurement, such as competitive tendering, bidding or auction procedures, or mechanisms for dealing with unsolicited offers
- **Asset ownership**. Whether any incentives or limitations have been put in place to encourage public or private sector participation
- **Sharing benefits**. Whether any of the benefits from a cross-border transaction (either in terms of energy or revenues) should be reserved for domestic customers.

Guideline 1.3 reads as follows:

> **1.3 In making any regulatory decision listed in Guideline 1.2, the Regulator will have regard to all relevant Government policies such as power sector market structure, security of supply, desirable levels of imports or exports, restrictions on resource use, system or integrated resource planning, generation mix, open non discriminatory transmission access, climate change mitigation strategies, competition requirements, private sector participation, cost reflective tariffs and economic empowerment mandates.**

Guideline 1.4 clarifies that if government policies are not clear in any area, the Regulator will first request guidance from the government. The parties to the transaction should also be encouraged to bring policy uncertainties to the attention of the government. In the event that the government does not provide the requested guidance, Guideline 1.4 states that the Regulator will make decisions in a way that is consistent with its empowering national legislation.

This guideline does **not** encourage regulators to make policy, which is clearly not a Regulator's role. However, the guideline acknowledges that there will be situations where

regulatory decisions need to be made, even though policy framework continues to evolve.

Guideline 1.4 reads as follows:

> **1.4 Where Government policy is unclear on any matter concerning cross-border electricity trading, the Regulator will formally request guidance from the Government, and if no guidance is received then the Regulator will act in a manner that is consistent with the Regulator's powers and duties in national legislation.**

4.2 Working to Ensure Compatible Regulatory Decisions

The concept of harmonisation is commonly referred to as an objective in the activities of SADC. Article 5 of the SADC Treaty states (among other things) that:

> *Member states will work to harmonise political and socio-economic policies and plans*

Regulatory decision-making is one area where harmonisation across the SADC region can produce better outcomes. In this context, harmonisation does not mean that regulatory approaches in different countries need to be exactly the same, but rather that regulations need to be able to work together.

Because SADC does not yet have a regional regulator or reciprocal enforcement of legal awards, it is important that national regulators commit to working towards compatible decisions. Guideline 2 aims to formally recognise the value of consistent and compatible regulatory decisions.

Guideline 2.1 sets a relatively low threshold for the harmonisation of regulatory decisions made in different SADC countries—simply that regulators will take the decisions and practices of other regulators into account. This will be particularly important on issues that clearly have a regional impact, such as transmission pricing and technical standards. Guideline 2.1 reads as follows:

> **2.1 When making regulatory decisions, the Regulator will take into account regulatory decisions and practices in the other countries involved in a cross-border transaction, and will work to ensure compatibility between regulatory decisions made in other countries relating to cross-border transactions.**

To clarify how the Regulator will interact with relevant regional organisations, Guideline 2.2 specifies that where appropriate, the Regulator will gather input to regulatory decisions from SADC, SAPP and RERA. This guideline will help to make regulatory decisions more compatible by providing a central reference point for issues that clearly have a regional impact. To explain the areas where input from regional organisations will be appropriate, the roles of SADC, SAPP and RERA are described in more detail below.

SADC's responsibilities are described in the separate high-level principles mentioned in Section 1. The high-level principles encourage a commitment by SADC governments to:

- Promote cross-border exports and imports of electricity that allow for greater economies of scale, security of supply benefits, carbon reduction, and affordability
- Promote regional integrated resource planning in support of the above, including associated investment promotion activities
- Facilitate inter-ministerial and inter-agency coordination to achieve timely decision-making and to facilitate efficient investment, cross-border trade, and enforcement of contracts and agreed rules
- Strengthen SAPP and RERA as relevant regional institutions, including the establishment of a RERA expert panel to provide advice and also other assistance to the Regulator in implementing the voluntary guidelines designed to facilitate cross-border electricity transactions
- Work, over time, towards a greater harmonisation of power sector market structures that facilitate rather than hinder cross-border transactions; for example, whether single-buyer market structures might be adjusted to permit IPPs and large customers to trade directly across borders.

SAPP's roles in cross-border transactions are addressed in four governing documents—the Inter-Government MOU (amended 2006), inter-utility MOU (amended 2007), the agreement between operating members (amended 2008), and the operating guidelines (1996). These agreements establish that SAPP will:

- Assist in the development of regional transmission plans to encourage regional trading, security of supply, and minimise costs, and
- Assist with planning, developing, and operating a regional electricity market, transmission pricing, and ancillary services.

The SAPP Co-ordination Centre also has responsibilities to:

- Ensure reliability and security of the network is maintained
- Encourage cross-border trading energy efficiency through transmission network developments
- Communicate regional transmission plan, available transmission capacity, and future planned improvements, and
- Harmonise SAPP initiatives with individual country requirements.

RERA's responsibilities to help create an enabling environment for cross-border trading mean that it will:

- Submit proposals and guidelines to facilitate regional trading, such as the high-level political principles for SADC Energy Ministers and the SAPP checklist
- Promote harmonisation in the way in which national regulators make decisions regarding cross-border transactions through these Regulatory Guidelines, and
- Establish ways to implement good practices for cross-border power regulation and trading, such as through an expert advisory panel.

2.2 To promote the compatibility of national regulatory policies directly affecting cross-border electricity trading, when

making regulatory decisions the Regulator will take into account any decisions or recommendations of regional organisations, such as RERA and SAPP. The decisions or recommendations of regional organisations that are likely to be particularly relevant include but are not limited to:

(a) SAPP operating agreements between member countries and other agreements for regional system operations and control area services;

(b) Transmission pricing;

(c) The operation of balancing markets;

(d) The provision of ancillary services;

(e) The design and implementation of grid codes; and

(f) Procedures and information requirements for evaluating the physical effects of major new transmission and generation facilities on the operation of the interconnected regional grid.

4.3 Timing of Regulatory Interactions in Cross-border Trading

While regulatory decisions often occur *ex-post* (after a transaction has been concluded), there are some important advantages to obtaining early indications from national regulators on some issues. Allowing the parties to meet with the Regulator before a formal application is filed can reduce the risk facing project sponsors and national utilities that investment costs may not be recovered through regulated tariffs. This will help to enable lenders and investors to commit funding on satisfactory terms in advance of final regulatory decisions.

Guideline 3 addresses the timing of regulatory interactions during the project development process, before and after an application has been filed for a regulatory decision. The guideline also establishes a "propose-respond" process for regulatory decision-making, which requires applicants to define the scope of their requested approvals and regulators to make decisions on the basis of applications.

Pre-application meetings

Guideline 3.1 provides for meetings between the Regulator and the parties to a proposed cross-border transaction, before the relevant party has filed an application for a regulatory decision. Most of the Regulator's interactions in a cross-border transaction will be with the party resident in the Regulator's jurisdiction. However, Guideline 3.1 has been drafted so that either party can request a pre-application meeting with the Regulator, even the party that resides outside the Regulator's jurisdiction. The guideline limits these meetings to the **parties** to a proposed cross-border transaction, which excludes bidders in a competitive tendering process.

The guideline also makes clear that the purpose of such meetings is to share information and for the Regulator to provide high-level guidance on the proposed terms of the transaction. Electricity legislation in some countries in Southern Africa makes explicit provision for pre-application meetings with the Regulator. We are not aware of legislation in any SADC country that prohibits pre-application meetings.

Guideline 3.1 reads as follows:

3.1 Either or both of the parties to a cross-border transaction may request meetings with the Regulator prior to submitting a formal application for a regulatory decision (a "pre-application meeting"). The purpose of a pre-application meeting will be to:

(a) Share information so that the Regulator can develop a full and accurate understanding of all relevant terms and conditions of the proposed cross-border agreements;

(b) Enable the parties to obtain a better understanding of the principles advocated and supported by the Regulator;

(c) Enable the parties to obtain high-level guidance and general opinions from the Regulator on relevant terms and conditions in the proposed cross-border agreements and licences; and

(d) Provide an opportunity for the Regulator to indicate whether any terms and conditions are unlikely to gain final regulatory approval.

While the opinions expressed by the Regulator in pre-application meetings should not be binding, the statements made during the meetings need to be as accurate and well informed as possible. Otherwise, the pre-application meeting risks creating confusion, and making investors less confident in the regulatory process. Regulators are encouraged to say they don't know the answer to a particular inquiry, rather than to provide a response that could be misinterpreted or misleading.

Benchmarks, standard documents, and written guidance on tariffs and risk allocation are appealing for pre-application meetings because the Regulator and the parties can have greater confidence that it will make regulatory decisions that are consistent with these documents. These tools are encouraged in Guideline 3.2, which reads as follows:

3.2 To ensure that pre-application meetings are useful to all parties, the Regulator may require any of the parties to the proposed transaction to complete questionnaires or tables and to provide information designed to provide accurate and complete information about the price, risk and other elements of a proposed transaction.

Power purchase agreements (PPAs) and associated documents are often lengthy, and can contain complicated and subtle relationships between their different components. To ensure that the Regulator's initial opinions are both informed and objective, the Regulator may choose to hire one or more experts to conduct an evaluation of the information given to the Regulator. This will help improve the Regulator's understanding of the proposed terms of the transaction.

The Regulator, rather than the buyer and seller, would appoint any experts to evaluate the information provided by the buyer and seller. In addition, the terms of reference for experts' evaluations would be specified by the Regulator. The Regulator must be satisfied that the independent expert has no conflict of interest that would interfere with an objective evaluation of the proposed transaction. The cost of an expert evaluation could be borne by the seller or the buyer, or shared between the two parties as appropriate.

The ability for the Regulator to retain independent experts to assist in regulatory decisions and meetings is contained in Guideline 3.3, which reads as follows:

> **3.3 For all regulatory decisions and meetings, the Regulator may choose to hire one or more independent experts to improve the Regulator's understanding of the proposed transaction. The Regulator must be satisfied that the independent expert has no conflict of interest that could interfere with an objective evaluation of the proposed transaction.**

The concept of establishing an independent expert advisory panel on cross-border transactions has been suggested to RERA. Among its several functions, it is likely that this panel would be able to give advice and evaluations to national regulators in reviewing the terms and conditions of proposed cross-border transactions. If such a panel exists, it would desirable for the panel to undertake the evaluation of the proposed transaction to develop experience that will allow for benchmarking of PPAs within the region.

The Regulator may not be able to offer an opinion on all elements of the proposed transaction, especially where the transaction requires considerable government involvement. Government may need to provide support of one kind or another, or if one of the parties is a state-owned enterprise the ability to accept certain risks will depend on government decisions. Where there is uncertainty as to the government's position on a particular support package or risk allocation, the Regulator is encouraged to help the parties get clarification from the national government.

It is important to clarify that the Regulator will not directly participate in the negotiations between the parties to a cross-border transaction. This avoids any potential conflict of interest the Regulator might have if the issues it has negotiated are later the subject of a regulatory decision. However, in certain circumstances the Regulator may play a useful role as an observer to commercial negotiations. These situations would need to be acceptable to both parties to a cross-border transaction, and any statements made by the Regulator would not be allowed to prejudice any future decisions.

This status guidance given by the Regulator at any pre-application meeting is addressed in Guidelines 3.4 and 3.5, which read as follows:

> **3.4 Any guidance or opinion offered by the Regulator in a pre-application meeting will not be binding or legally enforceable. Decisions of the Regulator will only be made after the Regulator receives a formal application from a party to the cross-border transaction.**
>
> **3.5 The Regulator will not participate in any direct negotiations between the parties on the conditions and terms of cross-**

border agreements. However, at the joint request of the parties, the Regulator may attend the negotiations as an observer. The Regulator may instead decline to join the negotiations as an observer. If the Regulator joins negotiations as an observer, any statements of the Regulator will not be binding or legally enforceable and the Regulator's silence on any issue will not indicate approval of the terms negotiated.

The treatment of information is also important to the parties that are negotiating cross-border transactions. Guideline 3.6 provides that unless the parties agree otherwise, the Regulator will maintain the confidentiality of all information received until the time that a formal application has been lodged for a regulatory decision. The presumption in pre-application meetings is therefore in favour of confidentiality, which recognises that commercial negotiations may be at a sensitive stage prior to filing regulatory applications. This presumption is reversed once an application has been made, with all information received from that point to be regarded as publicly available, unless the parties show that the information is commercially sensitive.

3.6 In all interactions before a formal application for a regulatory decision has been received, the Regulator will maintain strict confidentiality of all matters discussed, unless disclosures are approved by both parties. Once a formal application has been received the Regulator may disclose any information received, unless any of the parties asks the Regulator to maintain the confidentiality of any information for reasons of commercial sensitivity. The Regulator will decide whether the request for confidentiality is justified.

Meetings between Regulators

In addition to meeting the contracting parties to a cross-border transaction, the Regulator may find value in meeting with regulatory decision-makers in other countries. Such meetings will generally only be necessary when both parties to the cross-border transaction have price-regulated customers, i.e. the cross-border agreements will be executed by two national utilities. This is because cross-border agreements between regulated sellers and regulated buyers will require considerable more scrutiny from both regulators.

The Regulatory Guidelines provide for meetings between regulators in Guideline 3.7, which reads as follows:

3.7 Prior to making any decision on cross-border trading, the Regulator will consider whether meetings with regulators in other countries affected by the proposed cross-border transaction would be valuable, and the Regulator will be available to meet with other regulators to:

(a) Share information (subject to any confidentiality requirements), so that each Regulator can develop a full and accurate understanding of all terms and conditions of proposed cross-border agreements; and

(b) Discuss any principles or substantive terms and conditions where there may be a difference of opinion, in order to reach a consistent or common approach to their decisions on the cross-border transaction.

Regulatory decisions

Regulators are required to make decisions **after** applications have been submitted covering any of the matters listed in Guideline 1 (above). This approach confirms that regulatory decisions for cross-border trading will use a "propose-respond" model, rather than taking place through the Regulator's own investigations. This limits the discretion of the Regulator, and helps to create certainty that the Regulator will not make unanticipated decisions that affect the value of an investment.

Once an application is received the Regulator will give interested stakeholders an opportunity to make representations on the proposed transaction. After considering stakeholder comments, the Regulator can approve the application, reject the application, or recommend changes to the application that would result in the application being approved. If the Regulator recommends changes, the parties will be responsible for carrying out any renegotiations, then amending and resubmitting the application.

Guidelines 3.8 and 3.9 read as follows:

3.8 The party to a cross-border transaction based in the Regulator's country will lodge an application with the Regulator for any of the regulatory decisions listed in Guideline 1.2. The Regulator will make regulatory decisions following a process that gives an opportunity to all parties to the transaction to make representations. The expected timing of a regulatory decision will be specified at the start of a regulatory decision making process.

3.9 If an application has been lodged pursuant to Guideline 3.8, the Regulator will review the application and make a decision to:

(a) Approve the application; or

(b) Reject the application; or

(c) Recommend changes to specific terms and conditions in the application or the relevant cross-border agreement that would result in the application being approved.

In some cases, the parties may need to alter a cross-border agreement after receiving regulatory approval. For example, in some cases the main terms of a power purchase agreement will be negotiated, and lenders then make small last-minute changes to financing conditions. Guideline 3.10 provides for some flexibility to accommodate any

changes to cross-border agreements that take place after regulatory approvals, provided that these changes have been justified by the applicant.

Guideline 3.10 only permits small changes to cross-border agreements from the date of application to the time that the final terms of the agreement are settled (i.e. financial close). This guideline does not allow the parties and their lenders to reopen negotiations after a regulatory decision is issued, either before or after PPA is finally executed.

3.10 A licence or approved cross-border agreement may permit a specified degree of flexibility for the applicant to agree to specified changes to the cross-border agreement, provided that the Regulator is satisfied that the intent of the regulatory decision would not be undermined by the flexibility or any permitted change. Where the parties to the cross-border agreement require flexibility to change terms after the relevant regulatory decision is made, the desired level of flexibility should be detailed in the application with reasons supporting the need for flexibility.

Different cross-border transactions could follow quite different processes for obtaining regulatory approvals. For some transactions, the parties may decide to complete all agreements and file applications for all regulatory decisions at the same time. For other transactions, the parties may obtain required licences as a first step, and delay seeking regulatory approvals of cross-border agreements.

Guideline 3.11 clarifies that parties are entitled to submit an application for more than one regulatory decision at once. The purpose of this guideline is to streamline the regulatory process where all cross-border transaction documents are ready for approval at the same time. The most common examples of this process will likely be where a party submits a licence application at the same time as an application for regulatory approval of a power purchase agreement, and where the applicant requests pass-through of purchasing costs at the same time as regulatory approval of the power purchase agreement.

Guideline 3.11 also provides for a phased decision-making approach, where an initial regulatory decision to issue a licence can be made subject to future approval of the underlying cross-border agreements. If the applicant is ultimately unsuccessful in negotiating a power purchase agreement, then the licence granted would expire as per the decision of the Regulator.

Guideline 3.11 states:

3.11 To streamline the regulatory approvals process, Regulators will permit parties to a cross-border transaction to make parallel or related applications for more than one regulatory decision at the same time. For example, the Regulator may make a decision on a generation licence application at the same time that a decision is made on an application to approve transmission access, services and pricing. Decisions on power purchase agreements will generally include a decision on pass-through of power purchase costs to price-

regulated customers. Alternatively, a phased approach to regulatory approvals may be adopted. For example, an application initially may be made for a generation licence which the regulator may approve on condition that approvals are obtained within a certain period for the associated power purchase and transmission services agreements. Some of these decisions may be within the purview of another Regulator, in which case relevant regulatory decisions and conditions will be communicated to that Regulator.

4.4 Licensing Cross-border Trading Facilities, Imports and Exports

Regulatory statutes in SADC countries require that the Regulator licences power generation, transmission, distribution, imports and exports. Some countries also require any trading of electricity to be licensed. The legal framework makes it an offence to carry out these activities without a licence granted by the Regulator. Guideline 3 addresses all issues related to licensing cross-border trading activities—the conditions to be satisfied to obtain a licence, the contents of the licence, the timing of decisions on licensing and how the licence will expire.

Licence conditions

The purpose of a licensing regime is to impose relevant conditions and requirements on a licensee throughout the period of the licence. This is typically a long time period related to the life of the underlying assets, or the duration of the cross-border transaction.

Licences are simple regulatory tools that can be written in plain language and tailored to the circumstances of the licensee and the requirements of the Regulator. The conditions contained in the licence do not focus on controlling entry to the electricity sector, but seek to influence the behaviour of the licensee over the term of the licence. The licence should only impose conditions that deal with "what you are afraid of that people will do" (or not do). This means that licence conditions should seek to ensure that the licensee behaves in a way that is consistent with applicable regulatory and policy objectives.

At a high level, these objectives are to protect the consumer and attract investment (recognising the tensions between these objectives). Ministries that carry out regulatory functions should be very sensitive to the need to avoid uncertainty and political risk (actual and perceived) that may deter or delay investment in this context. All Regulators need to be sensitive to investors' perceptions of regulatory risk (and uncertainty) in the way that licence conditions are imposed. License conditions should not impose conditions that increase cost or give the Regulator unnecessary discretion, for example, to impose unrelated conditions where approval to a change is sought.

Guideline 4.1 provides a list of criteria for issuing licences. This list is not exhaustive, and other considerations will be specific to national legal and regulatory frameworks, such as the fuel choice for generation, and the need to consider any national plans or priorities. These specific considerations would be captured by the general requirement in Guideline 4.1(a) that the application must comply with the applicable legal and regulatory framework.

Guideline 4.1 limits the criteria that the Regulator will consider for licence applications, and reads as follows:

4.1 Subject to national legal requirements, the Regulator will issue licences for generation, transmission, importing and exporting activities for cross-border power trading if the Regulator is satisfied that:

(a) The application complies with the applicable legal and regulatory framework;

(b) The applicant has demonstrated the technical expertise to construct, operate and maintain any associated power facility in compliance with any national grid code;

(c) The applicant has demonstrated sufficient financial resources to properly construct, operate and maintain the facility or to undertake the cross-border trading activity; and

(d) Issuing a licence would not undermine national security of electricity supply because:

(i) The resources that will be used for the proposed cross-border transaction(s) are not needed to meet forecast domestic demand, or if the resources are needed to meet forecast domestic demand there is no immediate prospect of a domestic buyer or buyers entering into transactions that are, in aggregate, of comparable size and on similar terms to the proposed cross-border transaction(s)

(ii) The technical impacts of the activity on the regional and national power system have been studied, and are considered to be acceptable to the Regulator, having taken all necessary advice from the appropriate national authorities and SAPP.

The decision to issue a license will be made public, along with a summary of the license conditions and terms.

The reference to SAPP in Guideline 4.1(d)(ii) reflects the fact that most Regulators will not have the technical capability to understand the full technical impacts of the proposed cross-border activity on regional security of supply. Other guidelines (Guidelines 5.2, 6.2, and 7.2) also create an opportunity for Regulators to seek advice from SAPP on security of supply in the interconnected grid.

The involvement of SAPP is consistent with the intention of SADC governments expressed in Article 4 of the Revised Inter-Governmental Memorandum of Understanding for SAPP dated August 2006. In this Article SADC governments commit to "cooperate with and assist their respective national power utilities and electricity supply enterprises in the performance and execution" of SAPP agreements. Although SAPP can play a constructive role in cross-border transactions, Regulators need to acknowledge that SAPP rules will not always apply to cross-border transactions because parties may not be members of SAPP.

Content of licences

Licences generally contain provisions to satisfy the Regulator that the licensee will maintain an appropriate financial status and technical compliance over the licence period. Licences will also contain specific provisions giving the licensee certain powers (such as to acquire property), or placing certain obligations on the licensee (such as to provide access to facilities).

A useful condition in any licence is a general requirement to provide the Regulator with information on request, particularly in relation to changes in circumstances. Such licence conditions can help to overcome the Regulator's inherent disadvantage in accessing information for regulated businesses. Obviously, requests have to be reasonable and relevant to the duties that the Regulator performs for cross-border transactions.

Other common conditions require compliance with any relevant planning, technical and market rules with which all regional and national participants in the electricity sector must comply in order to achieve grid and market discipline for the benefit of all participants. Typically, these are largely contained in grid codes and power pool rules, and it may well be appropriate to refer to SAPP rules in this context. Normally, rules are given regulatory force through licence conditions, and will also be enforceable between participants through separate agreements, such as the SAPP Agreement Between Operating Members.

Box 1 contains a list of the provisions commonly found in cross-border trading licences, as well as some specific provisions that might only be included in an import or an export licence.

Box 1: Terms Included in Import and Export Licences

Common to imports and exports

- Payments to relevant authorities
- Finance/prudential requirements
- Compliance with grid codes
- Information provision to the Regulator—including provision of information when applying to have PPAs approved or when changes to the agreements are made in writing or by conduct that affects tariffs or the allocation of risk
- Approval to be obtained in relation to changes to the agreements in writing or by conduct that affect tariffs and the allocation of risks
- Providing information to other parties—in particular importers will be required to provide information to transmission and distribution licensees and SAPP
- Powers given to licensee—e.g. eminent domain (compulsory acquisition powers)
- Use and reporting of revenues—creates obligation to declare revenues if required for regulatory tariff setting or review
- Dispute resolution
- Requiring adherence to SAPP agreements (where both parties are members of SAPP)
- Transfer of entitlements (which may be prohibited so that the transferee is required to apply for a new licence).

Imports only

- Conditions restricting total import capacity or volume.

Exports only

- Obligations in supply emergencies
- Minimum pricing requirements—for example, if prices must at least cover variable costs (i.e. no cross subsidies from domestic buyers to buyer located in another country).

Guidelines 4.2 and 4.3 address the content of licences and read as follows:

> **4.2 The licence will impose conditions to comply with prescribed planning and technical standards set out in national policies, any national grid code, and other legal or regulatory instruments.**
>
> **4.3 The licence will impose requirements to provide certain information to the Regulator:**
>
> **(a) That will be required for the Regulator to make other regulatory decisions in relation to the cross-border transaction;**
>
> **(b) To enable the Regulator to monitor compliance with the law or the terms of the licence;**
>
> **(c) To notify the Regulator of any major problems that may result in termination or renegotiation of a cross-border agreement;**
>
> **(d) To notify the Regulator of any subsequent change to a cross-border agreement that affects the approved tariff or risk allocation under the cross-border transaction; and**
>
> **(e) As per the reasonable request of the Regulator.**

Avoiding duplication between licence applications and other project stages

Many of the issues that regulators consider in cross-border trading licensing may already have been addressed through other stages of the project development cycle—other licence applications, competitive tendering processes, and contract negotiations. Where possible, duplication should be avoided to minimise regulatory compliance costs.

For example, it may not be necessary to impose conditions in an export or import licence that regulates the behaviour already covered in a generation, transmission, or trading licence. If generation, transmission, and trading licences are quite detailed it may only be necessary to impose requirements on an importer or exporter to comply with the grid code, SAPP technical, or market rules (where applicable) and to provide information to the Regulator. Transmission and distribution licences will frequently deal with many of the issues that relate to imports, and may be easily amended to impose the necessary additional requirements for cross-border transactions. If the licence is difficult to amend without a formal review and/or dispute resolution process, separate import or export licences may be useful in imposing necessary conditions.

Another common area of duplication relates to the qualifications and technical and financial resources of the licence applicant. The applicant may already have provided information that would satisfy the Regulator in the course of obtaining other licences to be a generation, transmission, or distribution company. If the cross-border trade has been the subject of a competitive tendering process, the qualifications and resources will almost certainly have been vetted as part of that process by the buyer, and may not need to be separately reviewed by the Regulator in any great detail. Reliance on conditions

imposed in a competitive tendering process requires the Regulator to be satisfied that the process has been properly carried out.

The Regulator should also attempt not to duplicate the requirements imposed on exporters under power purchase and transmission agreements. These agreements will be enormously detailed, will be enforced by the parties, and will be closely scrutinised by lenders and investors. The Regulator will be able to satisfy itself as to the impacts of tariffs and risk allocation under the processes discussed in Guideline 5.

Similar principles apply in relation to assessing the technical impact of cross-border trading. Regulators should be able to rely on the expertise of transmission companies and system operators to assess compliance with the national grid code requirements, and on SAPP to assess likely regional impacts.

Guideline 4.4 aims to minimise duplication in the different regulatory decisions that need to be made, and assurances that are provided through other means. Guideline 4.4 states:

> **4.4 Where feasible, the Regulator will avoid duplicating requirements in licence procedures that have already been demonstrated through competitive tendering processes or are specified in cross-border agreements.**

Timing of regulatory decisions on licensing

As discussed in relation to Guideline 3.11 above, the process for obtaining a licence may or may not be combined with other regulatory approvals, depending on the applicant's approach to obtaining regulatory approvals for the transaction. Guideline 4.5 clarifies that the Regulator's decision to grant a licence does not confer other regulatory approvals on cross-border agreements.

The approval of cross-border agreements could be regarded as equivalent to the grant of a licence, because the Regulator may be able to rely on the parties' agreement to ensure desired behaviour. However, the Regulator should expressly state in its decision which applications have been received and which regulatory decisions have been made.

Guideline 4.5 reads as follows:

> **4.5 The decision of the Regulator to issue a licence for cross-border trading activities will not automatically confer regulatory approval of any associated power purchase agreements or transmission services agreements, or guarantee that any associated costs will be reflected in regulated tariffs.**

Expiry and termination

Investors will be sensitive to regulatory conditions that provide for the expiry or ability to terminate a licence.

A major issue in this area is whether licenses should automatically terminate if they are not used. One view is that because the timing of these projects can be difficult to predict, licenses should remain in place in order to minimise commercial risks. An alternative

point of view is that if security of supply is harmed through the license remaining in place, or the licensee is failing to perform, then the license should expire or be revoked.

RERA agrees that timing of cross-border projects is difficult to predict, but that "evergreen" rights associated with a project that is not proceeding can also create problems for other new projects. Guideline 4.6 strikes a compromise between the two views on this issue, stating that a licence will be valid for a specified time period in which the project must commence construction and file a schedule for completion. For example, a license condition may specify that the underlying project must commence within five-years, with the option of re-applying to the regulator to extend in this time period. In this way, the project proponent has certainty (within a time period), but the rights attached to projects that never proceed will ultimately expire.

4.6 Once approved, the licence will be valid for a specified time period in which the project must commence construction and file a schedule for completion, or the licensed activity must become operational. The licensee may re-apply to the Regulator to extend this time period.

The parties, project lenders and investors will be sensitive to decisions that give powers to the Regulator to terminate the licence, or to impose conditions that make performance of their investment or their agreements more expensive. Lenders and investors will also want to avoid "double jeopardy", where both the counterparty to the agreement and the Regulator could take action in relation to a single event. They will argue that the licence should not impose conditions to comply with the relevant power purchase or transmission agreement that would enable the Regulator to take action but, rather, that the licence should simply be capable of termination when the agreement terminates, for whatever reason.

However, it is appropriate for a Regulator to include in the licence a condition requiring compliance with the relevant PPA or other cross-border agreement because the Regulator has an interest in compliance. However, the consequences of non-compliance from a regulatory standpoint must be made clear, and must not be so broad as to give the Regulator the right to revoke the licence in the event of any breach of the agreement. Typically, the licence will be expressed to terminate when the relevant agreement terminates. The licence should require that the Regulator is provided early information on any major problems that may result in termination or renegotiation of the PPA. The licence would also require the approval of the Regulator to be obtained not simply in relation to the initial agreement, but also in respect of any subsequent changes that affect the approved tariff and risk allocation under the agreement.

Guideline 4.7 provides a process for terminating a licence early, and states that:

4.7 The licence for most cross-border trading activities will be expressed to expire when the associated cross-border agreement terminates. Where the regulator proposes to terminate a licence before the expected expiry date of an associated cross border agreement, the Regulator will:

(a) Base its intention to terminate on grounds stated in the licence for termination

(b) Inform the applicant of the reasons for the proposal to terminate the licence and the actions that the applicant can take to remedy the termination event;

(c) Give the applicant an appropriate opportunity to make representations;

(d) Provide the applicant with reasonable time to remedy the termination event;

(e) Give final notification to the applicant prior to terminating the licence.

4.5 Approving Cross-border Agreements in Importing Countries

Regulators in an importing country will typically have the greatest level of regulatory involvement in a cross-border transaction. This is because the proposed power purchase will have direct impacts on the buying utility and the price for electricity paid by domestic customers. Guideline 5 sets out how the Regulator in importing countries will review cross-border agreements to help to ensure that the power purchased provides enhanced reliability and value for money.

Guideline 5.1 lists the agreements that the Regulator will need to review, which will typically be a subset of the overall contractual framework for a new power plant. Agreements that may not require direct regulatory review include shareholders' agreements, financing documentation, EPC contracts, and resource concessions. The Regulator will only need to review documents other than the PPA and transmission services agreement where required to properly understand and assess the terms of those agreements on the final outcome of price and risk to the purchasing entity and its price-regulated customers. These might commonly include any transfer or substitution agreement that ensures the continuity of supply in the event of default, or an operating agreement that imposes obligations referred to in the cross-border agreements.

Guideline 5.1 reads as follows:

5.1 The Regulator in an importing country will review the following cross-border agreements;

(a) The power purchase agreement (PPA);

(b) Transmission services agreements; and

(c) Any other agreements required to properly evaluate the PPA and transmission services agreements.

Guideline 5.2 addresses security of supply in the importing country. This is a significant issue because while cross-border power trading will generally improve security of supply, imports can introduce risks because the source of supply will be located in another country. Guideline 5.2 contains four criteria that regulators will use to help to ensure that the transaction does not undermine security of supply:

5.2 To review the impacts of the cross-border agreements on security of supply, the Regulator will confirm that:

(a) The technical impacts of the transaction on the regional or national power system have been studied, and are considered to be acceptable to the Regulator, having taken advice, where appropriate, from the relevant national authorities and SAPP;

(b) The transactions conforms to the SAPP operating agreements between member countries;

(c) The consequences of power system emergencies and the failure or inability of either of the parties to perform the obligations according to the terms of cross-border agreements are clearly addressed;

(d) Transmission capacity in any transit country is available to provide a physical and contractual transmission path for transporting the electricity traded on a firm basis; and

(e) Any explicit government restrictions on the quantity of power that can be imported are honoured.

Guideline 5.3 states that the remaining provisions of Guideline 5 only apply to cross-border transactions where the buyer supplies price-regulated customers. The reason for this focus is that the prices and allocation of risks in deals between sellers and large buyers consuming power for their own use (such as industrial customers) can be assumed to be fair and reasonable. The remaining provisions of Guideline 5 will apply regardless of whether the buyer with price-regulated customers explicitly asks the Regulator to pass-through the costs of the import into regulated tariffs. Although there are certain circumstances where current regulated tariffs will adequately compensate the buyer (e.g. if the import price is lower than the buyer's current average cost of supply), the Regulator will still be interested in the overall impact of the import on the buyer's costs.

Guideline 5.3 limits the scope of regulatory reviews of cross-border agreements in importing countries, and reads as follows:

5.3 If the buyer supplies price-regulated customers, the Regulator will require that the remaining provisions of this Guideline are met to ensure that regulated tariffs reflect reasonable costs of supply. The remaining provisions of this Guideline do not apply to cross-border transactions where the buyer does not serve price-regulated customers.

Competitive tendering

There is currently considerable uncertainty in Southern Africa on the issue of competitive tendering requirements for power trading. The difficulty of developing projects on a non-competitive basis gives rise to two questions:

- How can the Regulator be satisfied that an agreement represents good value for money for price-regulated consumers if the agreement does not result from a competitive tendering process?

- Are publicly owned organisations permitted to enter into large agreements that do not result from a competitive tendering process?

Only the first of these issues is relevant to the Regulatory Guidelines. However, government departments reviewing a transaction against public finance legislation might rely on many of the procedures used by the Regulator to ensure that a particular deal represents good value for money (depending on the wording and interpretation of the relevant legislation). Other Government departments that have oversight responsibilities for public procurement may consider relying on the determinations of the electricity regulator on major cross-border power procurements, rather than conducting a separate review. Such an arrangement could be formalised through a Memorandum of Understanding (MOU) between the Regulator and other government departments.

Simply following the steps of a competitive tendering process may not be sufficient to ensure real competition for an opportunity. For example, tender documents can be deliberately or inadvertently drafted in a way that excludes many possible suppliers. The Regulator will therefore need to ensure that the competitive process is well designed and actually adhered to, resulting in real competition.

Competitive procurement for cross-border transactions has additional challenges compared to tenders conducted within one country. Regulators in both countries will need to agree on competitive procurement procedures and criteria. To show that has followed a competitive tendering process, the parties to a cross-border transaction will need to show the Regulator that at least the following steps have been taken:

- Open communication on the scope and details of the project and the tender process
- Widely publicised invitations for expressions of interest (EoI) or a request for pre-qualification (RfQ)
- Transparent and fair pre-qualification and short-listing of bidders, according to clear and pre-specified criteria
- Issuing of a request for proposals (RfP) and comprehensive tender documentation with detailed specifications and bid criteria to all pre-qualified bidders
- Transparent circulation of subsequent clarifications or amendments to tender documents to all bidders
- Exclusion of any bidder who is guilty of attempted or actual bribery, corruption, or collusion, and
- Transparent, objective, and fair award of tender in accordance with pre-specified criteria.

Competitive procedures can apply to the generation expansion plans of the national utility (i.e., the "self-build" option) in addition to other purchasing options to introduce direct competition between all supply possible options. Under this approach the Regulator or another independent party (such as an independent system operator) calls for offers to supply a certain amount of generation capacity or energy. The national utility is entitled to submit offers into the procurement process as virtual power purchase agreements (PPAs), and competes head-to-head with the offers submitted by IPPs.

In many respects, this option is the best solution for ensuring value for money in new generation because the Regulator can use competitive forces to ensure value, and does not need to rely on a more detailed analytical benchmarking of prices and risks.

However, this option may not be practical in Southern Africa at the present time. There is very little experience in the region with competitive procurement, with most deals moving forward on a negotiated basis.

Guideline 5.4 states that competitively tendered transactions will be presumed to provide value for money without the need for analytical benchmarking process. The guideline also provides an indication of the type of transactions that regulators expect would be competitively procured. Guideline 5.5 lists three criteria that the Regulator will use to determine if a particular procurement process is satisfactory.

5.4 If the Regulator decides that a cross-border transaction has followed a satisfactory competitive tendering process for the cross-border supply of electricity, the tariffs under the cross-border agreements will be presumed to provide value for money. Regulators will expect competitive tendering processes for cross-border transactions with the following characteristics:

(a) A well-defined product (for example, capacity, energy or ancillary services);

(b) Specifications for the tendering process that would be likely to lead to several competing bids;

(c) Existing preferences or pre-specifications of risk allocations; and

(d) The existence of available transmission capacity so that few or no additional transmission investments are needed.

5.5 When considering whether a cross-border transaction has followed a satisfactory competitive procurement process, the Regulator will consider whether the following factors are present:

(a) The conditions of the tender are clear and do not unreasonably favour one bidder over other possible bidders;

(b) The number of parties that pre-qualify and submit bids for tender evaluation is sufficient to achieve a competitive outcome; and

(c) The selection process is fair, and the selection of a preferred bidder is consistent with any pre-specified selection criteria.

The evaluation of offers in a competitive procurement process by the buyer may be on the basis of price and non-price characteristics, such as transmission impacts, timing of project delivery, power plant performance requirements and re-dispatch implications on other resources. The competitive procurement process may include post-tender negotiations with one or more of the short-listed bidders. The Regulator may make use of independent experts to assist it in reviewing the process used by the buyer. The Regulator must also take account of the requirements of any relevant public procurement laws

and rules and the decisions of government bodies responsible for implementing these laws and rules.

Ensuring effective procurement from unsolicited offers

Most significant cross-border power transactions in Southern Africa are currently proceeding as unsolicited offers rather than competitive procurements. Major coal and hydro concessions in the region are already controlled by individual developers, and therefore non-competitive proposals for power projects are a reality. These projects are usually developed on a non-competitive basis due the size and unique characteristics of the transaction.

Regulators in importing countries will have a number of objectives in reviewing whether unsolicited offers provide an effective procurement option, including:

- Protecting price-regulated customers from high prices due to the buyer paying too much or assuming inappropriate risks (for example, by imposing an obligation to make economic purchases)
- Discouraging a buyer from constructing new generation assets when it would be cheaper to buy from an independent power producer
- Protecting price-regulated customers from the cost of buying from an affiliated supplier when a non-affiliated supplier is willing to offer better terms
- Preventing or minimising the exercise of market power by sellers
- Providing incentives for the buyer to appropriately manage risk
- Providing the buyer with sufficient revenues to ensure reliable supplies
- Minimising procurement costs
- Ensuring that sellers have sufficient financial incentives to develop innovative and valuable new supply options
- Ensuring that sellers have sufficient financial incentives to supply over the life of the contract
- Minimising regulatory risks through timely regulatory decisions
- Ensuring that purchases are consistent with explicit government policy objectives.

Given these important objectives it is desirable to allow buyers sufficient flexibility to respond to potentially innovative and creative solutions from unsolicited offers. However, few countries in Southern Africa have developed explicit policies, procedures, and criteria for dealing with unsolicited offers and non-competitive deals.

Guideline 5.6 states that the Regulator will analyse cross-border agreements that result from non-competitive processes through a process of analytical benchmarking.[1] The details of this benchmarking approach are provided in Guideline 5.7 below. Guideline 5.6 also describes the type of transactions that regulators would expect to be developed as unsolicited or negotiated deals.

[1] This Guideline builds upon the work of the Nigerian Electricity Regulatory Commission, as developed in their proposed rule: NERC, *Notice of Proposed Rulemaking (NOPR) For Review of PPAs to Supply Price-regulated Customers,* December 2006. The proposed rulemaking can be downloaded from the NERC website www.nercng.org.

5.6 Where a cross-border transaction results from an unsolicited offer, or from a process where the competitiveness of the procurement is in doubt, the Regulator will benchmark the terms of the cross-border agreements to ensure that the cross-border transaction qualifies as a satisfactory procurement that provides value for money. Unsolicited offers accompanied by extensive negotiations may be expected for cross-border transactions with some or all of the following characteristics:

(a) High up-front development costs for the seller;

(b) Unique specifications on project size, timing or technology that would make direct competition from other projects unlikely or unviable;

(c) High uncertainty about the full dimensions of risks associated with the project and the risk allocation that will be acceptable to the buyer and seller and the relevant governments;

(d) Significant investments in new transmission facilities required to transmit the power; and/or

(e) The need for government support agreements, such as inter-governmental memoranda of understanding.

To benchmark a cross-border transaction, the Regulator will compare the value for money offered by the transaction to alternative supply options taking into account the factors listed in Guideline 5.7(c).

The guideline is deliberately drafted to allow the Regulator some flexibility to consider transactions developed as unsolicited offers that do not exhibit the characteristics listed in Guideline 5.6. This flexibility is desirable because it is not possible to clearly distinguish between transactions that should be competitively bid from transactions that will only emerge as unsolicited offers. Rather than preclude potentially valuable supply these transactions, the Regulatory Guidelines require the steps in Guideline 5.7 to safeguard against uneconomic deals being struck.

The Regulatory Guidelines specify three elements to ensuring an effective procurement from unsolicited offers (discussed under the subheadings below):

- Ensuring agreements are consistent with the regulatory decisions
- Reviewing the need for the transaction
- Assessing value for money, both in terms of the price paid by the buyer and the allocation of risk between the buyer and the seller.

Ensuring agreements are consistent with the regulatory decisions

It is important that the Regulator is able to assure itself that the PPA is as complete as possible in order to minimise the likelihood of unnecessary future disputes. To do this the Regulator needs to understand the provisions that are essential to a well-functioning

PPA. Box 2 contains a list of the typical provisions in a PPA, and the schedules that provide details on technical specifications and tariff calculations.

Box 2: Typical Contents of Power Purchase Agreements

Term
Definitions
Conditions precedent, including:
- payment of performance bond
- obtaining permits
- financing (financial closure or release of debt funding)
- giving EPC contractor final notice to proceed
- final design specifications (plant and transmission interconnection)
- possession of site

Consequences of failure to fulfil conditions precedent
- forfeiture of performance bond if breach by seller
- termination and buy-out if breach by Buyer

Representations and warranties
Construction
Commissioning
Consequences of delays in commissioning facilities
- liquidated damages provisions
- limitations of damages

Purchase rights / obligations for capacity, energy and other services (reserves, black start)
Compliance with applicable grid codes
Availability obligations and outage notifications
Right to inspect and test facilities and metering
Insurance
Billing and payment terms, payment under letter of credit, other collateral arrangements
Dispute resolution
Force majeure
Events of default and termination
- definition of seller and Buyer default events
- notice requirements

Remedies--damages claims, buy-out rights and obligations
Schedules
Detailed technical specifications on voltage and frequency requirements, generating unit specifications and interconnection specifications and consent requirements
Tariff calculations

Guideline 5.7 deals with the conditions required for regulators to approve the price terms of cross-border agreements by buyers supplying price-regulated customers that have not be subject to a satisfactory competitive procurement process. Guideline 5.7(a) describes the first requirement that the Regulator will consider, and requires that cross-border agreements (such as PPAs) are concluded and consistent with regulatory approvals:

5.7 The Regulator will allow the costs of power purchases and transmission services from a cross-border transaction to be reflected in regulated tariffs where:

(a) The cross-border agreements have been executed and have come into force in accordance with the terms and conditions reviewed and found acceptable by the Regulator

Reviewing the need for the transaction

The Regulator will also want to ensure that the transaction is needed in order to meet demand, and therefore provides a direct benefit for the cost imposed. Guideline 5.7(b) requires the applicant to show that the transaction is needed to meet any of the four needs listed—peak demand, energy demand, location-specific demand or ancillary services. This test is intended to be relatively straightforward, and does not require the applicant to prove that the transaction is prudent given possible alternative investments.

Power utilities, government entities and SAPP all have some responsibilities for power sector planning, and many countries are moving towards implementation of integrated resource planning approaches. These power sector plans should assist the Regulator in assessing whether the power purchased proposed in the PPA is needed to meet future demand.

5.7 (b) The cross-border transaction is shown to be needed to either:

(i) Meet forecast peak demand;

(ii) Meet forecast energy demand;

(iii) Meet demand in a particular location, given the physical characteristics of the transmission network; or

(iv) Meet a specified system reliability purpose, such as through the provision of cross-border ancillary services.

Assessing the value for money of negotiated deals

Assessing value for money is the most analytically challenging and contentious part of benchmarking a transaction that is not competitively tendered. The explicit factors that need to be taken into account when assessing value for money are set out in Guideline 5.7(c), which states that:

5.7 (c) The price of power to be purchased represents value for money compared to alternative supply options (including any generation investments proposed by the buyer), taking into account factors including:

(i) The relevant physical characteristics of the cross-border transaction, including size and time of delivery;

(ii) The level of reliability and interruptibility to be provided by the cross-border transaction;

(iii) The risks allocated between the seller, the buyer, the buyer's price-regulated customers, and the relevant transmission or distribution company, which should accord with the principle that risks are allocated to the party best able to control the risk;

(iv) Explicit government policies on power generation technologies, such as climate change and fuel diversification objectives; and

(v) Explicit government policies on the ownership of generation assets, such as targets for private investment in generation.

The Regulator may make use of an independent expert to assist it in evaluating whether the price of power to be purchased represents value for money compared to alternative supply options, through long-run marginal cost studies or other benchmarking exercises. Alternatively, the Regulator may follow other processes to ensure value for money.

Assessing value for money given the factors listed in Guideline 5.7(c) will involve at least the following three steps:

- **Step One**: Calculating the average price of power supplied under the PPA
- **Step Two**: Understanding how risks are allocated between the seller and buyer
- **Step Three**: Assessing the prices and risks in different supply options.

It is expected that the party applying for regulatory approval will be responsible for the first two steps in this process, and the Regulator will then assess the prices and risks involved, possible with assistance from external advisors.

Step One: Calculating the average price under the PPA

Guideline 5.7 states that the price needs to provide value for money compared to "alternative supply options". This means that once the need for additional supply has been established under Guideline 5.7(b), the utility needs to consider how this need will be met—by procuring additional supplies, or through voluntary demand response, or by restricting demand through costly measures such as load shedding.

In evaluating the cost of different measures to meet the need for new supply, an appropriate benchmark is the marginal cost of new supply for the utility—that is, the cost that the utility will incur on any new capacity and energy that it contracts or builds. It is important to note that this benchmark can be quite different from retail power prices, which are calculated as average prices that spread the total costs incurred by the utility across demand from all customers. This means that an efficient price in a PPA

could be above or below the average retail price paid by the utility's customers. A recent survey conducted by RERA suggests that average retail tariffs in many RERA member countries are below levels that recover all costs, which suggests that prices for new incremental supply sources may well be above existing average retail prices.[2]

PPAs typically contain at least three different price components:

- **Fixed capacity charges**—Periodic (usually monthly) fixed payments that are typically related to the available production capacity as periodically verified according contract procedures. These charges are usually set to cover the Seller's development and construction costs (including financing charges and a return on investment), and fixed operating costs
- **Energy purchasing charges**—Charges levied on the volume of energy supplied and set to cover fuel costs and variable operation and maintenance costs (short run marginal costs).
- **Other charges**—Set to recover any other costs (such as start-up costs), or for providing any other services (such as reactive support, reserve energy, and back-start capability).

Different PPAs will contain a different balance of fixed and variable charges, and therefore pricing terms need to be converted into an average cost for a meaningful comparison. Details on this calculation are contained in Box 3. The assessment adds the total payments under the PPA then divides this total by the total expected power to be supplied. This is only a first screen for reviewing value for money, as other features of the transaction (such as size, reliability, time of delivery, and risk allocation) will also need to be considered.

Box 3: General Formula for Calculating the Average Purchase Price under a PPA

To benchmark the prices of different PPAs, the Regulator needs to calculate an average or levelised price in a PPA. The three components of the average purchase price (P_{AVG}) are:

- Capacity Payment (also known as the availability payment) (P_{CAP})
- Energy Payment (P_E)
- Other payments for incurring additional costs (such as start-up costs) or providing additional services (such as ancillary services) (P_{OTH})

The average price in a PPA is simply the sum of the expected monthly payments under the PPA divided by the total expected power to be supplied, i.e.:

$$P_{AV} = \frac{P_{CAP} + P_E + P_{OTH}}{Energy}$$

where **Energy** is the amount of electrical energy to be supplied each month at the delivery point specified in the PPA (expressed in kWh/month).

The **Capacity Payment** (P_{CAP}) covers the following cost components:

- Investments in power plant and equipment, dedicated fuel supply infrastructure, and dedicated transmission interconnection
- A return on capital (including an appropriate allowance for the cost of capital)
- Fixed portion of operations and maintenance costs
- Insurance

[2] RERA Publication on Electricity Tariffs and Selected Performance Indicators for the SADC Region, April 2009.

- Administration costs.

These costs are usually expressed in terms of US$/kW/month. The capacity payment is made regardless of the amount of energy actually supplied during any time period.

The **Energy Payment** (P_E) covers the following cost components:

- Fuel
- Variable portion of operations and maintenance costs.

These costs are usually expressed in US$/kWh and are charged only on the amount of energy actually supplied during any time period. The energy payment will usually be adjusted to account for changes in the cost of fuel by indexing fuel costs to prevailing market prices. This passes the fuel price risk to the buyer.

Other payments (P_{OTH}) covers costs such as plant start-up and ramp-up costs above a maximum number of such events per period specified in the PPA (in which case the monthly charge is the charge per event times the chargeable number of these events), as well as the costs of providing ancillary services specified in the PPA. These payments are usually expressed in US$/month.

Source: ESMAP "Regulatory Review of Power Purchase Agreements: A Proposed Benchmarking Methodology", Formal Report 337/08, October 2008

Step Two: Understanding how risks are allocated between the seller and buyer

Risk is defined as the possibility of a deviation between expected outcomes and actual outcomes and includes the possibility of unexpectedly good, as well as unexpectedly bad, outcomes.

Allocating risk in a PPA means apportioning responsibility for bearing the costs or benefits that result from each identified risk event occurring. Risks in a PPA may be allocated to the seller or buyer, or shared between the parties. Some risks may also be transferred to third parties, such as the Government or power consumers. Risk allocation is achieved by including terms in the PPA that defines who will bear each risk and by what mechanism. Mechanisms for bearing risks include minimum purchase agreements, guarantees (such as payment or exchange rate guarantees), price adjustment clauses, defined compensation mechanisms and performance bonds.

The point of reviewing a PPA is not to try to transfer all risk from the buyer to the seller (because the seller may demand a premium for assuming a risk), but instead to have each risk borne by the party that is in the best position to manage this risk and/or mitigate its effects.

To achieve an optimal risk allocation, each identified risk should be allocated to the party that is best able to manage the risk. Risk management in a PPA comprises three elements:

- **Probability.** Best able to control the likelihood of the risk event occurring
- **Impact.** Best able to control the impact of the risk on project outcomes—for example, by anticipating the risk event or by reducing its potential cost
- **Mitigation.** Best able to minimise and absorb the risk at the lowest cost.

Often, but not always, one party to a PPA will be best able to control the probability and impact of the risk, and will also be best placed to absorb any associated cost. Some risks can be insured against, and PPAs should indicate the party responsible for taking out insurance and how the benefits of insurance protection will be divided.

The risks to be allocated in a PPA can be grouped into the following seven categories:

- **Government, regulatory, and policy risks**: Risk that the government will exercise its powers and immunities (including but not limited to the power to legislate and determine policy), in a way that adversely impacts the project
- **Financing risks**: Risk that investors and lenders will not provide or continue to provide funding to the project, or that financial parameters (such as interest rates, tax rates, foreign exchange rates) will change
- **Completion risks**: Risk that the design, construction or commissioning (start-up) of the facility are carried out in a way which impacts the completion of the project through cost overruns (in the design, construction, or operations), delays, and/or poor service delivery
- **Operations risks**: Risk that the process for delivering the contracted service or facility function will be adversely affected in a way which prevents the private firm from delivering the contracted services or facility function according to the agreed specifications and/or within the projected costs, including the risks associated with fuel supply
- **Transmission and distribution risks**: Risk that the network(s) needed for the seller to deliver power will be removed, not adequately maintained or otherwise changed in a way that hampers the delivery of the contracted services or facility function, or affects the quality of the specified outputs; or affects the viability of the project
- **Security of supply risks**: Risk of failing to achieve any of the following three outcomes:
  - **Resource adequacy**. Firm generation resources that are sufficient to meet forecast demand
  - **Reliability**. The ability to meet demand in the event of unexpected equipment failures or other factors reducing available electricity supply
  - **Commercial security**. Acceptable emergency and default arrangements in cross-border agreements.
- **Commercial and market risks**: Risk that the due to commercial parameters (such as demand for a service or the use of a facility) will vary from forecast levels, generating less revenue from users than expected.

These risk categories can be further broken down into specific risks, which will be allocated according to the terms of the contract between a buyer and seller. Some general guidance on how to allocate specific risks is provided in Appendix A.

Once the allocation of risk is understood by the Regulator, the Regulator will need to make a determination of whether a proposed PPA is "high" or "low" risk from the perspective of the costs that will be borne by price-regulated customers. The Regulator should avoid second-guessing the risk allocations that are agreed in commercial negotiations. However, the Regulator needs to be assured that project risks are allocated in a way that does not adversely affect price-regulated consumers.

Comparing utility generation investments to power purchases

The self-build programme of a national utility is an "alternative supply option" for a cross-border power purchase. To achieve the regulatory objective of meeting future demand at a reasonable cost, a utility's self-build investment programme should be

directly compared to alternative supply arrangements offered by power purchases, and *vice versa*.

However, making a direct comparison between the cost of purchasing power from a third party and the utility building new generation is complicated because:

- **Utility self-build investments do not transfer risk from consumers**. A new generation investment undertaken by the national utility will often not transfer any risk from consumers. Provided that capital expenditures are still considered prudent, the utility will typically be entitled to recover the costs of any adverse risk events, such as a construction cost overrun, through regulated tariffs. This means that the utility's cost estimates may initially appear low compared to power purchases, but any adverse risk event will result in higher power prices than first estimated
- **Project owners may expect different rates of return**. Where utilities are state-owned (as in Southern Africa), the government may be prepared to accept a lower rate of return than the investors in an IPP. This can make a utility's self-build programme appear cheaper in regulatory reviews, when in reality tax-payers are subsidising the utility's investment
- **Self-build investments can achieve greater economies of scale**. Power utilities have existing assets that can be leveraged for new investments, whereas most IPPs use limited recourse project financing. This means that utilities' self-build programmes can capture more of the economies of scale that may be present in developing new generation sources. For example, in South Africa Eskom is building new coal-fired power stations with an installed capacity of more than 4,000 MW, while the most advanced coal-fired IPP in the region at this time (the Mmamabula project in Botswana) is 1,200 MW.

Analytical approaches have been developed to overcome these challenges and enable a meaningful comparison of the value for money offered by a utility's self-build programme against power purchases. These approaches adjust the estimated cost of a self-build option to reflect the full expected costs that would be borne by an IPP if the power was purchased.

One way to adjust the costs of different supply options to reflect risk is to apply different discount rates to the different levels of uncertainty attached to the projects. This approach is often relied upon to address the transfer of systematic risk using the Capital Asset Pricing Model (CAPM), which calculates a discount rate using the following formula:

$$Ra = Rf + \beta a(Rm - Rf)$$

Ra is the required return on assets, *Rf* is the risk free rate, βa is the asset beta reflecting the variance between returns of that asset class and the market, and *(Rm-Rf)* is the expected premium of investors over the risk-free rate.

The term in the CAPM formula that will change if a project is developed by an IPP instead of the national utility is $\beta a(Rm - Rf)$. This is because IPPs will often be allocated risks that would be borne by the utility if it is responsible for constructing a new generation asset. IPPs will need to be compensated for taking risk either by increasing the discount rate applied in calculating payments to the IPP, or lowering the discount rate applied to the more certain project benefits achieved by an IPP.

The discount rate should only be altered to reflect systematic risk—risk that cannot be diversified away by investors by holding a broad portfolio of investments. Systematic risks will include broader economic impacts, residual asset value, inflation risk and demand risk. Some of these risks would be transferred to private parties under a PPP transaction structure, and the proportion of transferred risk is compensated through the premium applied to the discount rate for bid evaluation. Because the IPP is given a higher discount rate (once the premium is applied), IPPs will be entitled to earn higher payments to compensate for the additional risks incurred.

In addition to systematic risk, IPPs will also accept a number of project risks that are generally not appropriately priced by utilities when building new generation assets. These risks can be adjusted to obtain an expected value of the cost of risks assumed by IPPs that are not factored into the investment cost estimates provided by utilities. This would involve factoring in additional costs where market prices are known, such as where foreign exchange risks can be hedged at a known price.

Where the cost of bearing the risk is not known, an expected value can be calculated by considering likely upper and lower parameters for the cost item, and a possible distribution of outcomes given the risk profile facing the asset. Once these parameters are decided upon, the Regulator can calculate an expected value that corrects for any optimism bias. Studies have shown that the actual optimism bias in the United States and Europe for construction risks is between 24-26 percent.[3] A study by the World Bank estimated that the average cost overrun on 130 World Bank-funded thermal and hydro plants from 1965 to 1986 was 21 percent.[4]

Step Three: Benchmarking prices and risks in different supply options

There is a trade-off between the average price of power purchased under a PPA and the amount of risk that the buyer is exposed to under the PPA. For well-developed PPAs, a lower purchase price will usually be associated with a higher risk exposure, and vice-versa. The Regulator need to assess this trade-off because a greater risk exposure may cause the buyer actually to pay more over the life of the PPA than the average purchase price (based on the initial rates for capacity and energy purchase charges in the PPA).

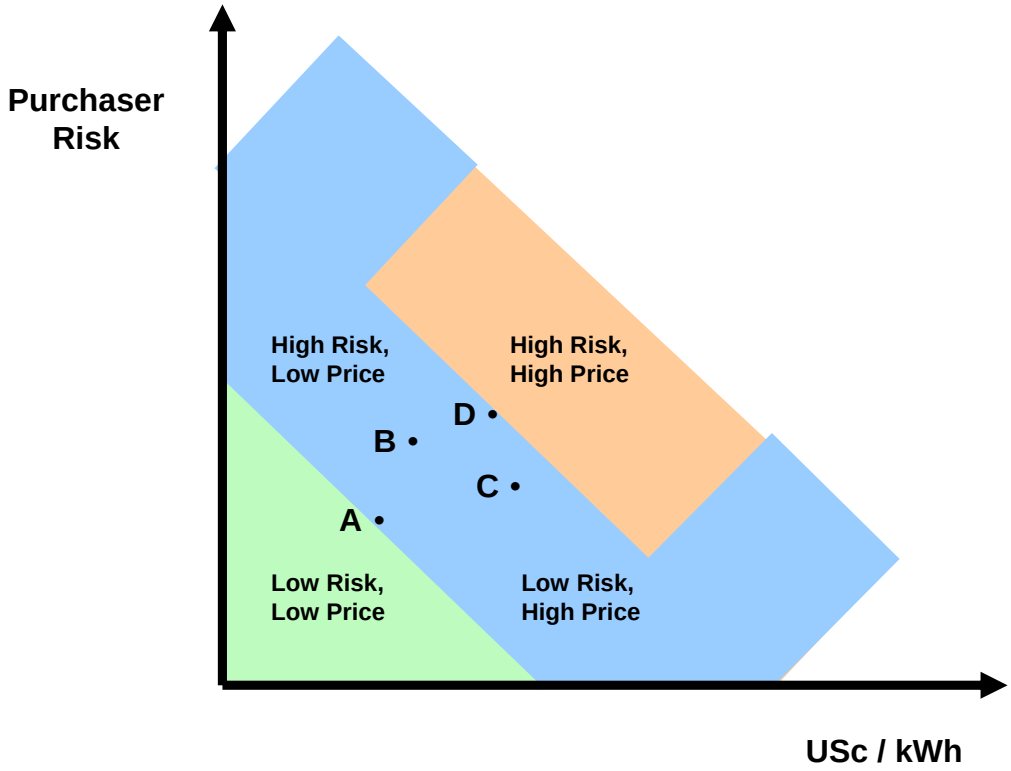
The Regulator should consider price and risk parameters in PPAs to identify the supply options with the best combinations of purchase price and risk exposure. This will provide an indication of the trade-off between risks to which the buyer is exposed under PPAs and the actual purchase price.

The approach of considering price and risk together is depicted in Figure 4. The horizontal axis represents the average purchase price computed according to the formula given in Box 3. The vertical axis represents the level of risk assumed by the buyer, which can be assessed against the general risk matrix presented in Appendix A.

[3] *Underestimating Costs in Public Works Projects: Error or Lie?* APA Journal, Summer 2002, Volume 68, No 3, p279.

[4] Bacon, R, Besant-Jones, J, and Heidarian, J *Estimating Construction Costs and Schedules: Experience with Power Generation projects in Developing Countries* World Bank Technical Paper No 325, Energy Series 1996.

Figure 4: Benchmarking Price and Risk Parameters in a PPA



Source: ESMAP "Regulatory Review of Power Purchase Agreements: A Proposed Benchmarking Methodology", Formal Report 337/08, October 2008

Using this characterisation, supply options will fall into four categories:

- **Low price, low risk**. PPAs that offer a combination of relatively low average purchase price and relatively low risk exposure, shown as the green shaded area in Figure 1. These PPAs have the best trade-off for economical purchase of power, and therefore should be the first to be selected by the buyer and should receive regulatory approval
- **Low price, high risk**. PPAs that offer a combination of relatively low average purchase price and relatively high risk exposure, shown as part of the blue shaded area in Figure 1
- **High price, low risk**. PPAs that offer a combination of relatively high average purchase price and relatively low risk exposure, shown as part of the blue shaded area in Figure 1
- **High price, high risk**. PPAs that offer a combination of relatively high average purchase price and relatively high risk exposure, shown as the red shaded area in Figure 4. The Regulator would be reluctant to approve these PPAs, unless other supply options are extremely limited.

Consequences of regulatory decision to approve purchase

To provide certainty for the buyer in entering into a cross-border agreement, the Regulator needs to assure the buyer that all costs in an approved deal will be recoverable

in tariffs over the life of the contract. The various costs that might reasonably be incurred by the buyer (listed in the recent decision of the South African regulator, NERSA, on the Cost Recovery Mechanism (CRM)) include:

- Power purchase payments made to the seller under the power purchase agreement, including any fixed capacity payments, variable energy payments, and other payments as set out in the PPA inclusive of any prescribed indexation of such payments
- Payments for other services provided under the PPA, such as black start and ancillary services purchased outside of (or in addition to) the terms and conditions of the PPA
- Hedging and other insurance costs incurred by the buyer in mitigating against the costs of increases in the price of fuel and foreign exchange
- Administration costs of PPAs including professional services, and the contract management services required to develop, manage, monitor and account for financial obligations under the PPA
- Industry restructuring costs, including costs that may result from the transition to a wholesale market and integration of an IPP into the market, or costs resulting from industry restructuring such as stranded asset costs
- Termination costs; including the cost to the buyer associated with a seller termination event
- Any other costs as determined as appropriate by the Regulator.

Guideline 5.8 has been drafted to be completely consistent with NERSA's CRM, given that Eskom South Africa will be a major buyer in future cross-border transactions.

5.8 If the Regulator finds that a cross-border agreement provides value for money, the buyer will be entitled to have all costs incurred in complying with the cross-border agreement reflected in its regulated tariffs. The Regulator will include costs in estimates of revenue requirements used to establish tariffs for price-regulated customers. Since projected costs are unlikely to equal actual incurred costs, the Regulator will establish a balancing account that will be used to make periodic increases or decreases to tariffs to align actual and forecast costs.

4.6 Approving Cross-border Agreements in Exporting Countries

The Regulator in a country exporting power will have an interest in ensuring that the cross-border transaction is reasonable, although the scope of a regulatory review of export PPAs will generally be narrower than for import PPAs. This is because sellers have strong commercial incentives to maximise the revenues earned under cross-border transactions, and to minimise the risks accepted in export PPAs.

Guideline 6 sets out the considerations to be taken into account in regulatory decisions relating to export agreements—including the scope of the Regulator's decision making powers, the treatment of export revenues, and the criteria for obtaining regulatory approval.

Scope of Guideline on export agreements

The cross-border agreements that will be reviewed by the Regulator in the export country are the same as described above for the Regulator in the importing country.

6.1 The Regulator an exporting country will review the following cross-border agreements.

(a) The power purchase agreement (PPA);

(b) Transmission services agreements;

(c) Any other agreements that it requires to properly evaluate the PPA and transmission wheeling agreements.

Guideline 6.2 is similar to the requirement in the importing country that helps to ensure security of supply risks are adequately managed, but includes an additional measure to ensure that the exporting country does not suffer unnecessary power shortages. This requires the Regulator to consider a two-part test:

- First, whether the resources used for export are not required to meet forecast national demand requirements, and
- Second, whether there is a reasonable prospect of a domestic buyer or buyers agreeing to a transaction on similar terms as the proposed cross-border deal.

A common way to assure the Regulator on these tests is for the seller to publicly notify the terms of the sale, and to offer buyers within the country the first opportunity to buy the power. If no buyers respond to such an offer, the Regulator can feel confident in approving the export deal.

Guideline 6.2(b) states that:

6.2 To review the impacts of the cross-border agreements on security of supply, the Regulator will confirm that:

(a) The resources that will be used for export are not needed to meet forecast domestic demand, or if the resources are needed to meet forecast domestic demand there is no immediate prospect of a domestic buyer or buyers entering into transactions that are, in aggregate, of comparable size and on similar terms to the proposed cross-border transaction;

(b) The technical impacts of the transaction on the regional or national power system have been studied, and are considered to be acceptable to the Regulator, having taken advice, where appropriate, from the relevant national authorities and SAPP;

(c) The transaction complies with the requirements of any applicable SAPP planning and operating agreements;

(d) The consequences of power system emergencies and the failure or inability of either of the parties to

perform the obligations according to the terms of cross-border agreements are clearly addressed

(e) Any explicit government policies on the quantity of power that can be exported, or the terms of any export sales, will be honoured.

As with power imports, Guideline 6.3 specifies that the Regulator will focus on reviewing cross-border agreements for export involving sellers that serve price-regulated customers. Under this approach, the prices and risk allocation in deals between independent (non-utility) sellers and foreign buyers are assumed to not have a materially adverse impact on domestic consumers.

Guideline 6.3 reads as follows:

6.2 If the seller supplies price-regulated customers, the Regulator will require that the remaining provisions of this Guideline are met to ensure that regulated tariffs reflect reasonable costs of domestic supply. The remaining provisions of the Guideline do not apply to cross-border transactions where the seller does not serve price-regulated customers.

Regulators in exporting countries have an obligation to ensure that domestic consumers are able to be supplied with cost-effective power. When approving an export transaction, the Regulator will need to be assured that the sale will not adversely affect the ability to cost-effectively supply domestic customers. This will include an evaluation of the domestic supply impacts of the deal, and whether the transaction involves any cross-subsidy from domestic consumers that increases local power prices.

6.4 The Regulator will review cross-border agreements for export to ensure that:

(a) The sale will not adversely affect the ability to:

(i) Meet forecast peak demand of national customers;

(ii) Meet forecast energy demand of national customers;

(iii) Meet demand in a particular location within the exporting country, given the physical characteristics of the transmission network;

(iv) Meet a specified system reliability purpose, such the provision of ancillary services; or

(v) Supply domestic customers in a manner that does not subsidise the cross-border electricity transaction.

To ensure that export sales do not increase prices for domestic consumers, the Regulator will need to understand how prices in the export PPA are determined. As with import PPAs, retail tariffs are not the relevant benchmark for evaluating prices in export PPA. Retail prices are usually set with reference to the average cost of sales, whereas export sales will only impose costs on the incremental capacity and energy sold under the export agreement.

In a country with excess supply capacity and low levels of demand growth, the Regulator would want to ensure that the price of an export at least covers the variable costs of supply and some contribution to capital costs. However, since power demand is growing in all Southern African nations—and most are short of generation capacity—it is reasonable to expect that export deals will recover both capital and operating costs. This means that the long run marginal cost of new generation capacity is the relevant benchmark for assessing export sales, along with a requirement to earn a return on the capital employed.

Guideline 6.4(b) addresses these export pricing issues. Where new facilities are developed to serve an export market the price should include a capital recovery component, as per Guideline 6.4(b)(i) and a component to recover variable costs as per Guideline 6.4(b)(ii). The intention of Guideline 6.4(b)(iii) is to retain some flexibility for the party negotiating an export transaction to take advantage of a commercial opportunity that might not fit neatly into the usual pricing structure. An example of where this flexibility might be needed is for a plant developed jointly for domestic consumption and export trading. In such as situation the regulator might be satisfied with an export price that recovers only part of the capital cost, because the plant might provide an option to meet future demand domestically at a lower cost.

Guideline 6.4(b) reads as follows:

6.4 (b) The price or tariff for the cross-border transaction:

(i) Requires payments that will recover all of the capital costs of providing the power for export; and

(ii) Requires payments that cover at least the variable costs of providing the power for export; or

(iii) Contains an alternative payment structure that is shown to be more beneficial to national price-regulated customers than set out in Guideline 6.4(b)(i)-(ii).

There are a number of additional issues for export deals that are policy issues, and therefore fall under the policy-making powers of the national government, rather than being regulatory responsibilities. These are not directly covered in this guideline, and include the possibility of:

- Allocating specified amounts of electricity to domestic consumers at a specified tariff
- Providing fiscal concessions and other forms of government support to encourage the development of export projects

- Limiting exports in emergency events on terms that differ from those agreed between parties to a PPA.

Regulatory treatment of export revenues

Guideline 6.5 addresses how export revenues should be treated when the Regulator approves an export deal, under two possible regulatory accounting approaches:

- **Ring-fenced accounting.** Regulators may require the costs associated with export sales to be ring-fenced from the utility's business serving domestic consumers—costs that are recovered through regulated tariffs
- **Combined accounting**. Regulators may allow the utility to subtract export revenues from the total revenues allowed by the Regulator.

The guideline explicitly states that ring-fenced accounting follows regulatory best practice to protect price-regulated customers from providing cross-subsidies to export-related activities. The Guideline also states that if the costs of providing the export service are included in national tariff applications, then the revenues earned by the seller must be used to set off the revenue requirements set by the Regulator. This will help to ensure that the seller is not entitled to recover export costs twice—first through unregulated export revenues, and second through national tariff setting procedures.

Guideline 6.5 states that:

> **6.5 The Regulator will check whether the financial accounts of the export transaction are kept separate from the financial accounts of the regulated activities of a utility that serves price-regulated customers. This type of ring-fenced accounting follows regulatory best practice to protect price-regulated customers from providing cross-subsidies to the export transaction.**
>
> **(a) If separate financial accounts are maintained and price-regulated customers have not provided funding for the export transaction, the Regulator will allow the exporter to retain any export revenues earned from the export transaction. In these circumstances, the Regulator will not allow any financial losses from the export transaction to be reflected in regulated retail tariffs.**
>
> **(b) If the financial accounts are not kept separate from the financial accounts of the regulated domestic supply and the tariffs of price-regulated customers have helped to fund the export transaction, the Regulator will specify the portion of the export transaction revenues earned that will be set-off against the revenue requirements of the utility for serving price-regulated customers.**

4.7 Approving Cross-border Agreements in Transit Countries

Guideline 7 addresses the review of cross-border agreements to be conducted by the Regulator in the transit country—i.e. a country through which electricity is transported from the buyer to the seller, both of which are located in other countries. Most of the provisions in Guideline 7 mirror the requirements of Guideline 6 for exporting countries, as many of the Regulator's concerns will be the same.

One difference between Guideline 7 and Guideline 6 is that the Regulator in a transit country will not need to review the terms of the PPA. This is because the contractual obligations under the PPA fall on parties that are outside the Regulator's jurisdiction. Regulatory reviews in transit countries will therefore focus on transmission services agreements with the aim of ensuring that the transmission services provided in the transit country adequately manage supply risks, and do not have materially adverse impacts on domestic consumers.

7.1 The Regulator in a transit country will review any transmission services agreements entered into between a transmission company located in the transit country and the buyer or the seller for the elements prescribed in Guideline 7.2.

7.2 To review the impacts of transmission services agreements on security of supply, the Regulator will confirm that:

- **(a) The technical impacts of the transaction on the regional or national power system have been studied, and are considered to be acceptable to the Regulator, having taken advice, where appropriate, from the relevant national authorities and SAPP;**
- **(b) The transaction complies with the requirements of any applicable SAPP planning and operating agreements;**
- **(c) The consequences of power system emergencies and the failure or inability of any of the parties to perform the obligations according to the terms of the transmission wheeling agreements are clearly addressed;**
- **(d) Transmission capacity in the transit country is available to provide a physical transmission path for transporting the purchased power on a firm basis; and**
- **(e) Any explicit government restrictions on the quantity of power that can be imported to or exported from the transit country are honoured.**

7.3 If the transmission company in the transit country supplies price-regulated customers, the Regulator will require that the remaining provisions of this Guideline are met to ensure regulated tariffs reflect the reasonable costs of domestic

transmission services. The remaining provisions of the Guideline do not apply to transmission services agreements where the transmission company in the transit country does not serve price-regulated customers.

7.4 The Regulator in a transit country will approve transmission services agreements where:

(a) The cross-border transaction will not adversely affect the ability of the transmission company to:

(i) Meet forecast peak demand of national customers;

(ii) Meet forecast energy demand of national customers;

(iii) Meet demand in a particular location within the exporting country, given the physical characteristics of the transmission network; or

(iv) Meet a specified system reliability purpose, such the provision of ancillary services;

(v) Supply domestic customers in a manner that does not subsidise the cross-border electricity transaction.

(b) The price or tariff for the relevant transmission services:

(i) Requires payments to be made that cover all capital costs associated with the relevant transmission services; and

(ii) Requires payments to be made that cover at least the variable costs of the relevant transmission services; or

(iii) Contains an alternative payment structure that is shown to be more beneficial to national price-regulated customers than set out in Guideline 7.4(b)(i)-(ii).

4.8 Approving Transmission Access, Transmission Pricing and Ancillary Services

Ensuring transmission access and investment is a regulatory function as part of ensuring competition in generation. Adequate transmission resources will help to unlock least-cost generation resources, enabling generators to compete with each other to supply utilities and consumers.

Transmission access

The governments in SADC have generally provided for open access to transmission to facilitate investment in generation, although the terms for providing access are frequently contained in transmission licences. Transmission access issues vary depending on the

market structure in each country. Where the transmission provider also owns and develops new generation discrimination can clearly be a significant concern.

Most SADC countries have vertically-integrated industry structures, with a national utility that owns generation, transmission, and distribution assets. This structure can have advantages and disadvantages. Vertical integration creates an incentive for the utility as owner of both generation and transmission assets to provide more favourable terms of access for its own generation assets. For example, an integrated utility may tend to allocate any remaining capacity on an existing transmission line to its own generation assets rather than provide access to an independent power producer.

Guideline 8.1 states that the Regulator will oversee transmission access to ensure non-discrimination to the greatest extent possible with the law. Where access to transmission is denied by a transmission owner, the party seeking access (usually an independent power producer) can make a complaint to the Regulator. The Regulator will then consider the merits of the complaint and the transmission owner's reasons for denying access.

Guideline 8.1 states that:

8.1 The Regulator will oversee access to transmission for cross-border transactions to ensure that access is non-discriminatory to the greatest extent possible under the law.

Transmission pricing and investment

Guideline 8.2 clarifies that the Regulator's review of transmission pricing will involve both national and cross-border transmission prices. Guideline 8.3 then establishes some basic principles for transmission pricing that the Regulator will look for as the entity responsible for approving transmission prices in the cost of serving domestic consumers.

In considering transmission pricing approaches, the Regulator should allow some freedom for planning transmission expansion based on a least-regret principle or a speculative expansion principle. This will allow for transmission planning and development for known, but not yet approved, future sources of generation. For example, the Mozambique transmission backbone will allow at least three potential sources of new generation to access the regional transmission network (Cahorra Bassa North Bank, Mpanda Nkuwa, and Moatize coal). Each of the generation projects individually would probably be unable to justify the full transmission cost involved. However, if the transmission capacity is in place, the generation capacity could be opened to tender and the cheapest selected. As more generation capacity is required the other projects could follow, essentially using the same transmission path.

SAPP is responsible for developing a regional transmission pricing methodology that applies to cross-border power trades. When agreed, the SAPP methodology is likely to incorporate many of the principles contained in Guideline 8.3.

Guidelines 8.2 and 8.3 read as follows:

8.2 The Regulator will review transmission services agreements for cross-border transactions to confirm that prices for domestic transmission services and cross-border transmission services reflect the principles referred to in Guideline 8.3.

8.3 The Regulator will review transmission prices to ensure that good signals are provided for transmission investment to the extent possible and that cross-subsidies between domestic and cross-border sales are minimised. In particular, the Regulator will check that transmission prices for cross-border transactions:

(a) Provide incentives for participants to make economically efficient decisions on the location of new facilities;

(b) Recover the costs of transmission facilities associated with cross-border agreements as an essential condition to encourage transmission investment;

(c) Are transparent and predictable to encourage participation in transactions that involve separately specified transmission prices;

(d) Achieve the greatest possible harmonisation between national and cross-border pricing arrangements; and

(e) Do not unnecessarily restrict opportunities for cross-border trading.

Ancillary services

Ancillary services are required to maintain power system reliability. Ancillary services include the procurement of operating reserves, reactive power and black start capability. The requirements for ancillary services are usually contained in grid codes. However, not all countries in SADC have adopted grid codes, which would help to provide more clarity around system reliability. SAPP has developed targets for ancillary services, and is considering an additional proposal that would enhance the procurement and cost allocation of ancillary services.

The Regulator should ensure their system operators procure sufficient ancillary services (and if applicable control area services) to meet SAPP agreements. These requirements will apply to cross-border trades. The Regulator will also be responsible for monitoring domestic ancillary services requirements specified in national grid codes and licences.

Guideline 8.3 addresses the procurement of ancillary services and states that:

8.4 The Regulator will use its powers to require that the procurement of ancillary services by system operators and control area services satisfies minimum requirements for national and regional ancillary and control area services. The Regulator will also review the costs of procuring ancillary and control area services to use its powers to require that costs are reasonable in all the circumstances.

Due to the regional nature of decisions on transmission pricing and ancillary services, regulatory decisions on these issues may benefit from the involvement of SAPP. Where SAPP has made rules or recommendations on these issues, Guideline 8.5 states that the

Regulator will consider SAPP's input. This is consistent with Guideline 2, which fosters the compatibility of regulatory decisions.

8.5 In making decisions on the pricing of transmission and ancillary services, the Regulator will consider any relevant rules or recommendations made by SAPP on the regional pricing of transmission and ancillary services.

4.9 Promoting Transparency in the Regulation of Cross-border Trading

Transparency is essential if investors and consumers are to believe that regulatory processes and decisions are fair, credible, and legitimate. The regulatory decision-making process needs to be understood by participants, which requires a conscious decision from the Regulator to make deliberations, decisions and reasons available for public review and comment.

Guideline 9.1 states that the Regulator will publish criteria for decision-making in advance (for example, through these Regulatory Guidelines), will notify interested stakeholders when a particular transaction is under review, and will publish its decisions with reasons. Guideline 9.1 reads as follows:

9.1 The Regulator will promote transparency in its procedures and processes and in making regulatory decisions by:

(a) Publishing procedures and criteria used in regulatory reviews and decisions in advance;

(b) Notifying relevant parties that an application for a regulatory decision has been made, and affording interested parties an opportunity to make representations;

(c) At the same time as a regulatory decision, or after a pre-determined period is announced, the Regulator will publish:

(i) A clear statement of the decision;

(ii) A description and analysis of all evidence consideration;

(iii) A summary of views offered by participants to proceedings; and

(iv) A full discussion and explanation of the reasons for the decision.

A checklist of issues to be covered in announcements of regulatory decisions is provided in Box 4.

Box 4: Issues Covered in Announcements of Regulatory Decisions

- Begin with a clear statement of the regulatory decision
- Describe the nature of the application and the legal basis for review and decision-making
  - Licence for generation, transmission, trading, importing, or exporting of power
  - Power purchase agreements (PPAs) and allowed cost-pass through to retail tariffs
  - Transmission pricing and technical standards for interconnection and for quality and reliability of supply.
- Summarise government policy relevant to the issues being reviewed
- Provide details of the applicant and an overview of the cross-border transaction
- Summarise the application
- Summarise the process followed to review the application
- Summarise the views offered by participants to the proceedings
- Highlight contentious issues
- Describe and analyse all evidence taken into consideration in arriving at the decision
- Provide a full discussion of the reasons and rationale for the decision
- Summarise any conditions attached to the decision.

Guideline 9.2 provides some narrow exceptions to the situations in which regulatory proceedings will be made public. Issues of commercial sensitivity are often claimed in regulatory proceedings, and the Regulator will need to consider what prejudice would be suffered as a result of releasing the information. Domestic legislation dealing with public access to information may also provide regulators with guidance on what material should remain confidential.

Guideline 9.2 states that:

> **9.2 The Regulator will publicly issue a summary of the information used in making regulatory decisions, subject only to limited exceptions where interested parties have shown that breaches in commercial confidentiality would materially prejudice licensees or any of the parties to a cross-border transaction (notwithstanding the other provisions of these Guidelines) or the national interest. The summary will include the prices in the cross-border agreements, a description of how the main risks have been allocated between the parties, and any other relevant information.**

Appendix A Risk Allocation in Power Purchase Agreements

Table A.1 provides a description of the principal risks, a common risk allocation and the mechanisms for allocating risk normally found in PPAs.

The column labelled "Party Allocated Risk" shows the risk allocations that are most commonly observed in PPAs that exist in developing countries. However, these particular allocations are not set in stone. Every country's situation is different, so the particular pattern of risk allocation shown in the table may not be appropriate in every SADC country.

To ensure a systematic review of risk allocation, the national Regulator should require the seller and buyer to summarise the risk allocations proposed for the PPA that the Regulator is being asked to review. The table filled out by the seller and buyer should also include references to the specific sections of the PPA or related documents. If there are differences between the risk allocation in the cross-border agreements and the risk allocation shown in **Error! Reference source not found.**, these differences should be highlighted and explained to the Regulator. This will make it easier for the Regulator to identify and discuss deviations from normal patterns of risk allocation.

Table A.1: General Risk Allocation Matrix for Power Purchase Agreements for Cross-border Trading

Description of Risk	Party Allocated Risk (preferred)	Rationale for Allocation	Allocation Mechanism
A. GOVERNMENT, POLICY AND REGULATORY RISKS			
A1. Permits and approvals: Risk that required approvals (for example, environmental permits, water use rights, generation licence) may not be obtained or obtained subject to conditions that increase costs	Seller, unless: ▪ Government changes approval requirements in a discriminatory or project-specific way.	▪ Seller is responsible for obtaining necessary project permits ▪ Seller should not be held responsible for direct or indirect expropriation.	▪ Seller warranty to obtain necessary permits ▪ *Force majeure* for expropriation, except in cases of seller default.
A2. Government policy: Risk that a change in law, policy or other government action increases the estimated cost of the power supply	▪ Seller, if and when changes occur in general policy / law and are not project specific ▪ Buyer, if changes are anticipated at time of contract, such as industry restructuring risk.	▪ General policy / law changes affect all businesses in the country ▪ Seller should not be exposed to policy / law changes that are specific to the project or anticipated at time of contract signing.	▪ Contract clause allowing price increase in limited circumstances when policy / law changes
A3. Environmental liabilities: Risk that power production over the contract term results in significant environmental liabilities (greater than anticipated at contract signing) other than a change in law	Seller, although can be shared with buyer to limit liability to financial amount or to within selling country	▪ Seller is able to manage the environmental impact of the asset through maintenance and refurbishment.	▪ Contract clause defining environmental liabilities and any limitations on seller.

Description of Risk	Party Allocated Risk (preferred)	Rationale for Allocation	Allocation Mechanism
B. FINANCING RISKS			
B1. Availability of finance: Risk that debt and/or equity is not available when required by the seller to develop the project	Seller	▪ Seller is responsible for arranging finance.	▪ Contract clause requiring firm letters of credit ▪ Performance bond ▪ Contract clause requiring payment of additional collateral.
B2. Sponsor insolvency: Risk that seller is unable to provide required services due to insolvency	Buyer	▪ If risk materialises, there is no seller to transfer risk to.	▪ Performance bond and letters of credit ▪ Contract clause requiring minimum financial ratios.
B3. Interest rate: Risk that interest rates move adversely after the contract is signed	Seller	▪ Seller is responsible for selecting and arranging long-term financing.	▪ Contract clause holding Buyer harmless ▪ Requirement for seller to obtain additional stand-by finance.
B4. Exchange rate: Risk that exchange rates may move adversely after the contract is signed, affecting the seller's ability to service foreign denominated debt and obtain its expected return on investment	Shared: ▪ Buyer / consumer assumes part of risk by allowing total or partial indexing of payments to exchange rate ▪ Seller assumes remaining risk.	▪ Buyer has more experience and information regarding the factors that influence exchange rates in purchasing country ▪ Seller can select and arrange local and foreign currency mix for long-term financing.	▪ Tariff or payment adjustment contract clause ▪ Contract clause requiring foreign exchange hedging by seller ▪ Requirement for seller to obtain additional stand-by finance.

Description of Risk	Party Allocated Risk (preferred)	Rationale for Allocation	Allocation Mechanism
B5. Refinancing impact: Risk that seller can / cannot refinance as expected after project commissioning	Seller or shared	▪ Seller is responsible for selecting and arranging long-term financing ▪ Expected value of refinancing should be factored into bid.	▪ Contract clause specifying how refinancing benefit will be shared.
B6. Tax changes: Risk that before or after completion, tax rates change	Seller, if and when ▪ Changes occur in general tax law and are not project specific.	▪ General tax changes affect all businesses in the country ▪ Seller should not be exposed to tax changes that are specific to the project.	▪ Contract clause providing compensation terms for discriminatory tax changes (e.g. buy out option).
C. COMPLETION RISKS			
C1. Site: Risk that unanticipated conditions at the site are discovered during construction adding cost or delay	Seller	▪ Seller has best information on site characteristic and can undertake studies prior to contracting.	▪ Seller warranty on land use conditions / rights ▪ Performance bond ▪ Liquidated damages clauses.
C2. Design: Risk that design of the facility is not able to deliver supply at expected cost and specified level of service	Seller	▪ Seller has more experience, knowledge, and control over design process.	▪ Performance bond ▪ Liquidated damages clauses.
C3. Construction: Risk that events occur during construction which prevent the facility being delivered on time and on cost	Seller, except: ▪ In the event of *force majeure* ▪ If incomplete information exists that affects the technical specifications for the project.	▪ Seller has more experience, knowledge, and control over the variables that influence construction cost and control over construction process (i.e. schedule, equipment, materials and technology, etc.) ▪ *Force majeure* risks cannot be managed by either party.	▪ Buyer termination rights ▪ Payment of performance bond ▪ Liquidated damages contract clause (e.g. delay damages clauses) ▪ Partial cost overrun guarantee for complex construction.

Description of Risk	Party Allocated Risk (preferred)	Rationale for Allocation	Allocation Mechanism
C4. Industrial relations: Risk that industrial action (for example, strikes, lockouts, work bans, work-to-rules, blockades, go-slow action, etc.) negatively affect the viability of the project	Seller	▪ Seller has a direct relationship with employees and ability to resolve disputes.	▪ Performance bond ▪ Liquidated damages clauses.
C5. Commissioning: Risk that commissioning tests required for supply to commence cannot be successfully completed on time, or have higher than anticipated costs	Seller	▪ Seller is in control of construction process and is therefore better able to manage the risk.	▪ Performance bond ▪ Liquidated damages (until all physical and operational tests are passed).
D. OPERATING RISKS			
D1. Inputs and fuel supply: Risk that required inputs (such as fuel) cost more than anticipated, are of inadequate quality or are unavailable in required quantities	▪ Seller for most inputs ▪ Buyer for input costs that are known to fluctuate and can be indexed.	▪ Seller controls the selection of inputs and can manage risk through long term supplies ▪ Seller can affect input costs through plant design decisions ▪ Some input cost fluctuations cannot be adequately managed.	▪ Contract clause setting prices that do not vary with input costs, or tying prices to relevant indices ▪ Competitive procurement requirements for fuel.
D2. Maintenance and refurbishments: Risk that the facility incurs higher than anticipated maintenance and refurbishment costs	Seller	▪ Seller is in control of the design and construction process.	▪ Contract clause imposing penalties for non-performance.
D3. Plant performance: Risk that plant does not provide contracted capacity, energy or other services (reserves, black-start capability), or experiences higher than expected outage rates	Seller	▪ Seller controls plant performance and can influence performance parameters through plant design and construction.	▪ Contractual clauses specifying output requirements ▪ Damages.

Description of Risk	Party Allocated Risk (preferred)	Rationale for Allocation	Allocation Mechanism
D4. Output requirements: Risk that output requirements (capacity or energy) are changed after contract signing, whether before or after project commissioning	Buyer	▪ Buyer best understands purchasing requirements and output specifications.	▪ Contract clause providing compensation for changes in output requirements ▪ Buy-out option if changes make project unviable ▪ Operating performance bond.
D5. Operator failure: Risk that operator (including an operating subcontractor) fails financially or fails to provide contracted services to specification	Seller	▪ Seller is fully and primarily liable for all operating obligations, irrespective of whether risks have been passed to subcontractors.	▪ Contract clause (and possible termination) for breach ▪ Operating performance bond.
E. TRANSMISSION AND DISTRIBUTION RISKS			
E1. Transmission access: Risk that seller is not provided access to networks required to deliver power as per contract conditions	Seller (can be Buyer if best placed)	▪ Seller is responsible for negotiating interconnection agreement with transmission provider.	▪ Specification of delivery point at Buyer's facility.
E2. Transmission investment: Risk that cost of connecting facility or transporting power to Buyer's facility requires further investment in the transmission network	Seller (can be Buyer if best placed)	▪ Seller is responsible for arranging transmission to point of delivery, assured through technical studies.	▪ Buyer termination rights ▪ Liquidated damages clauses.
E3. Transmission constraints: Risk that transmission constraints impose costs on power delivers under contract terms	▪ Seller up to delivery point ▪ Buyer from delivery point.	▪ Seller responsible for arranging firm transmission rights to delivery point ▪ Buyer responsible for ensuring transmission path from delivery point to point of consumption.	▪ Specification of delivery point at Buyer's facility.

Description of Risk	Party Allocated Risk (preferred)	Rationale for Allocation	Allocation Mechanism
F. COMMERCIAL AND MARKET RISKS			
F1. Demand risk: The risk that the demand for a service or the use of a facility will vary from forecast levels, generating less revenue from users than expected	Shared, primarily Buyer	▪ Buyer is best placed to generate accurate demand forecasts or push for additional sales.	▪ Contract clause providing availability payments that achieve minimum revenue requirements.
F2. Non-technical losses: Risk that end users of the service will fail to pay for electricity (due to either theft, non-billing, or non-payment of bills)	Buyer	▪ Buyer controls relationship with end-users and is responsible for collections	▪ Contract clause holding seller harmless for non-payment by end users.
F3. Non-payment: Risk that buyer is unable or unwilling to pay purchase price for contracted services	Buyer	▪ Buyer has best understanding of likely future financial position.	▪ Payment guarantees (including Government guarantees) ▪ Damages ▪ Termination clauses.
F4. Economic obsolescence: Risk that costs of providing contracted services are able to be provided at lower cost from alternative suppliers	Buyer	▪ Buyer has a better understanding of alternative supply options and potential new entry.	▪ Buy out rights.
G. OTHER RISKS			
G1. Security of supply risks: Risk that plant outages will negatively effect security of supply on the Buyer's electricity system	Shared ▪ Seller takes risks relating to plant performance ▪ Buyer takes risks relating to impacts from the point of delivery.	▪ Seller has the best information and ability to manage plant performance ▪ Seller cannot be held liable for system security risks past the delivery point.	▪ Guaranteed availability commitments ▪ Outage notification requirements ▪ Damages / payment reductions.

Description of Risk	Party Allocated Risk (preferred)	Rationale for Allocation	Allocation Mechanism
G2. *Force majeure*: Risk that inability to supply power (pre- or post-completion) is caused by reason of *force majeure* (no fault) events	▪ Seller takes risk of loss of income or damage to asset if loss in insurable (for example, fire, earthquakes, drought) ▪ Costs lie where they fall for uninsurable *force majeure* events (for example, terrorism, acts of war, civil unrest).	▪ Seller should obtain insurance to mitigate impact of *force majeure* where cost-effective ▪ Seller cannot be held liable for other *force majeure* risks.	▪ Careful definition of *force majeure* events ▪ Suspension of contract terms in cases of *force majeure*.

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