



INSTITUTIONAL, REGULATORY AND COOPERATIVE FRAMEWORK MODEL FOR THE NILE BASIN POWER TRADE

SYNOPSIS FINAL REPORT
PREPARED FOR:



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COOPERATIVE FRAMEWORK MODEL FOR THE
NILE BASIN POWER TRADE**

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I CONCEPTUAL APPROACH

1. *NBI POWER TRADE GENERAL CONCEPT*

The region is characterized by big disparity in terms of power sector structures and regulatory environments. The existence of vertically integrated state owned companies and private sector participation restricted only to Independent Power Producers is however quite generalized. There is disparity in terms of policies and objectives for the power sector, in terms of financial and also human resources, among the biggest issues conditioning the NBI's Power Trade concept.

Under those circumstances, the proposed general approach for the NBI Power Trade is based on the following principles, taking advantage of experiences quite successfully used in other regional initiatives, and already discussed in other reports:

- Regional regulation, perceived as the rules for cross border trading, should not interfere with national legal/regulatory frameworks, and if necessary, limit that interference only to unavoidable issues (so, the alternative of introducing deep reforms to national legal/regulatory frameworks or of moving towards uniform national legal/regulatory frameworks to base the regional trading system is rejected)
- Cross border trading regulation will apply only to the interconnection points between countries. From those points towards the countries' interior, the only valid legal/regulation framework will be the one ruling each country's power sector.
- The NBI's Power Trade Regulation will only rule over transactions that require systematic treatment¹, because of the benefits that this brings to the member countries' common interests. However, for other activities whose benefits can only be measured in terms of the perception individual countries have of them, decisions and rules under which these activities will be decided and/or implemented are left to the parties to do so (typical example, as later further developed, are the investments of regional reach)
- The NBI Power Trade Model is based on the principle of minimizing mandatory obligations to countries and market participants (utilities and others), and creating the proper frameworks so as to let the economic interests of the parties to be the real drivers for the regional integration. Only win – win deals will promote the regional integration on a sustainable basis
- The proposed model minimizes, at least during the initial stages, permanent structures and staff, as a way to improve its sustainability by reducing the financial burden.
- The proposed model takes into account several other regional initiatives which in some way or another, have the "development of power trade" (or regional markets) among their objectives. It also takes into account other experiences (programs) within the NBI that can contribute in some way to the achievement of the objectives.

¹ "transactions that require systematic treatment" corresponds to those transactions that occur permanently or frequently and need to be standardized; for example the transaction in the day ahead market, the payment or transmission services, etc. It is used by opposition to those specific situations that occur from time to time and do not require standardization such as the negotiation of a joint project, or any other investment in the region.

2. NBI POWER TRADE PHASED DEVELOPMENT

2.1. GENERAL CONSIDERATIONS

The development of power trade in the region is foreseen in three different stages, these stages are flexible from the point of view that it is not necessary that all countries comply with the requirements to pass from one stage to the other for the region to evolve from one phase to the following.

2.2. STAGE I: INITIAL STAGE, PREPARATORY STAGE

This Stage starts from the present situation, and will last until its targets and institutional development have been achieved.

2.2.1. TARGETS:

1. Have the NBI Power Trade Treaty signed by all member countries. The Treaty sets out the principles based on which the NBI Power Trade will be implemented.
2. Ensure fluid information exchange among all member countries about their domestic system expansion plans and development procedures aimed at coordinating actions between countries.
3. Technical standards unification, aimed at having standards consistent with system interconnection requirements.
4. Regional Data Base development, based on the data gathering started through this consultancy and the updating procedures to be implemented shortly.
5. As a consequences of the information exchange among the countries and the creation of the Regional Data Base, the countries will prepare reports with a critical analysis of their own regulatory framework and the impediments those frameworks would impose to the development of next stages of the NBI Power Trade
6. As part of the NBI Power Trade Treaty, the countries will prepare their positions with regards to identifying enforcement mechanisms required to carry out regional trade and dispute resolution mechanisms for cases of dispute between member countries with regards to regional power trade (particularly long term).

2.2.2. INSTITUTIONS

Once the Treaty is signed, the following institutions will be created:

- Power Trade Council of Ministers
- Steering Committee
- Power Trade Secretariat
- Working groups coordinated by the Power Trade Secretariat:
 - Cross-Border Trading Rules Working Group
 - System Expansion Planning Working Group
 - Operational Procedure and System Technical Standards Working Group

- Capacity building national coordination Working Group
- Regional Data Base Working Group

2.3. STAGE II: BILATERAL CROSS BORDER TRADING

This stage is proposed to be ready to start when member countries have already signed the Treaty. It may start even partially with those countries that have already signed the agreement.

The main features proposed for this stage are:

- Transactions are bilateral between contiguous countries. During this stage there are not foreseen yet transactions between not contiguous countries using the transmission system of third parties.
- The participants of the transactions are countries, not individual agents in each country, and the system operators (or equivalents) are the acting party in each country for the transaction.

The following figure presents schematically the features of trading in this stage.

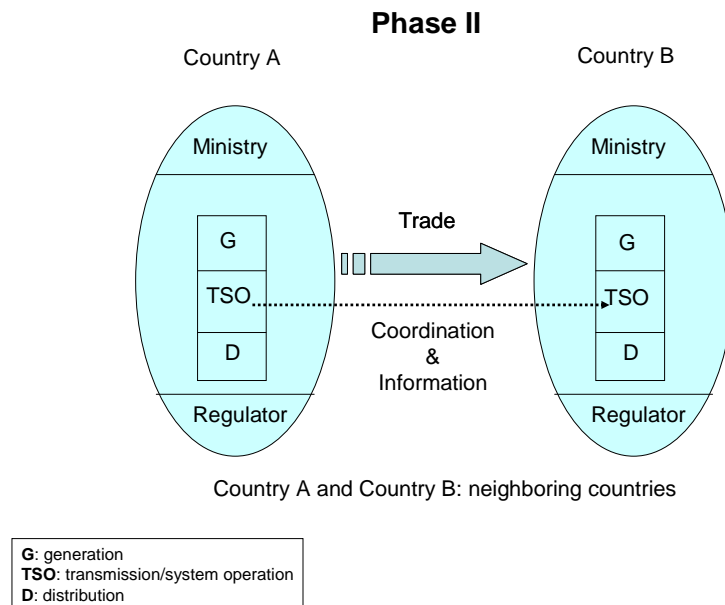


Figure 1: Trading scheme in Stage II

- With regards to the regional system expansion planning, the region, at sub-basin level, prepares coordinated expansion plans, further identifying projects of regional interest, at basin or sub-basin levels. The identified projects are put at disposition of the member countries

2.3.1. TARGETS:

The main targets for this stage are:

- Have the NBI Power Trade Regulation ready and approved by all the signatory countries of the Treaty. This regulation is the set of rules that will define the trading system for member countries.
- Have procedures, data bases, computational tools and professional capacity for the development of regional system expansion plans and identification of investment projects of regional interest (basin or sub-basin level)

2.3.2. INSTITUTIONS

No institutions are created during this Stage. The ones established during Stage I continue performing activities. However, it is prepared the establishment of the Regional Regulator and the Regional System Market Operator.

2.4. STAGE III: MULTI - PARTY TRANSACTIONS. TRANSITS

This stage differentiates from the previous one in following aspects:

- The Regional Regulation is ready to start having transactions between national power sector’s agents, with transactions not being restricted any more only to transactions between countries.
- There is potential for multilateral transactions, involving more than contiguous countries.
- There is potential of having countries providing transmission services (through national networks) to third countries trading electricity.
- There are more efforts made towards promoting regional investments.

The following figure presents schematically the features of trading in this stage.

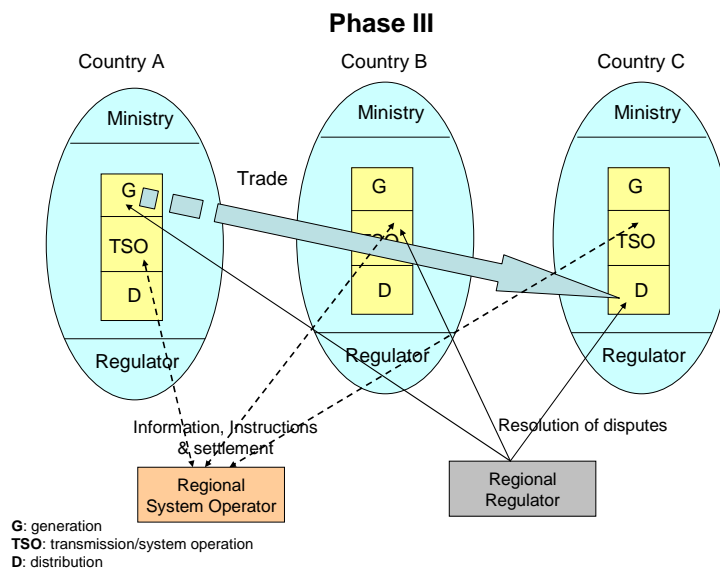


Figure 2: Trading scheme in Stage III

2.4.1. TARGETS

The new targets for this stage are:

1. expand the NBI Power Trade Regulation to make possible the participation of national power sector agents and countries
2. expand the regulation to have the required provisions for power transits through third countries
3. with regard to regional system expansions, which during Stages I and II were proposed to be developed within the frame of the Working System Expansion Planning Working Group, once this Stage III starts, it is considered that the market development will be mature enough to converge to a centralized coordination among countries, by a new regulation related to centralized regional investment opportunities identification and decision making process.

2.4.2. INSTITUTIONS

The following institutions are created as a condition to evolve to this Stage:

- Regional Regulator
- Regional System / Market Operator.

II INSTITUTIONAL FRAMEWORK

1. *THE TREATY*

The Treaty is a document that sets out the nature the Power Trade in the NB region, giving to it the proper political and institutional status, and specifically establishes the principles for power trade in the region, creates the key institutions, establishes their roles and relationship with other institutions.

The key definitions of the Treaty are:

1. The Treaty is a document signed by the Council of Ministers dealing with electricity issues of each of the countries. They will be the highest regional authority in charge of developing power trade in the region. This is done independently of the general structure of the NBI. This body is the NBI Power Trade Council of Ministers.
2. The previous point implies that once the Treaty is signed, all decisions regarding regional power trade will be responsibility of the NBI Power Trade Council of Ministers (PTCOM) created by the Treaty. This PTCOM is integrated by the Ministers in charge of Electricity of each of the member countries. This body will be the decision making organisation regarding regional power trade, it will have autonomy from other structures of the NBI always when the origin of the power does not involve use of water resources in the region (i.e. hydro generation). Always when there are water resources involved, its decisions will be subject to coordination and approval of the incumbent MBI structures (i.e. NBI Council of Ministers).
3. A NBI Power Trade Secretariat is created to carry out all the day to day activities required, coordinate actions between the different institutions and working groups, steer the general process and implement the Ministers' decisions. This is a permanent (though small) body since a "reference point" is needed to achieve power trade development in the region.
4. A Steering Committee is created integrated by high level officials of each country (i.e. Permanent Secretaries or equivalent). The main objective of this body is to facilitate communication with the Ministers of the Power Trade Council of Ministers and provide a high level instance for the treatment of those issues that required a decision before they reach the highest level (Power Trade Council of Ministers).
5. Definition of the actors participating in power trade in each stage.
6. Definition of institutions with roles and responsibilities in each stage; this point will be developed in the current section.

2. *INSTITUTIONS AND ROLES*

The introduction of the NBI Power Trade requires the establishment of certain institutions which are defined in the Treaty.

The following figure represents schematically the proposal of roles and responsibilities sharing of the institutions involved in the NBI Power Trade. Below the figure it is detailed the relationships.

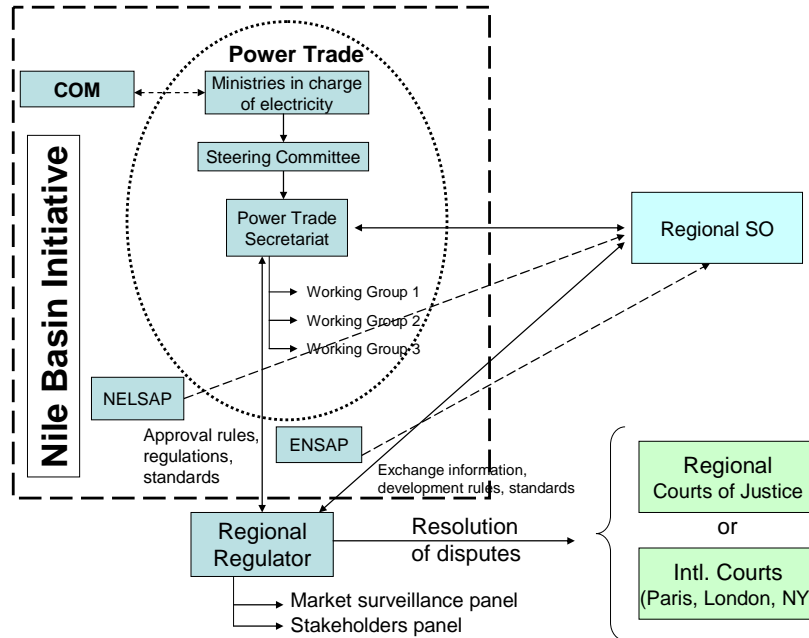


Figure 3: Articulation of Institutions in the NBI Power Trade

The articulation of the different institutions foreseen is as follows:

1. The NBI Council of Ministers, as the highest authority of the NBI, provides clearance to the initiative so Ministers dealing with electricity issues can sign the “Treaty” according to the procedures of the NBI.
2. The Treaty allocates in a body composed by Ministers in charge of electricity (NBI Power Trade Council of Ministers - PTCOM) the responsibility on issues dealing with power trade and development of regional power trade (market). The PTCOM is autonomous from the rest of the structure of NBI in its decision making capacities.
3. It is the PTCOM that will be the authority to give the final approval to agreements, rules, regulations, etc regarding power trade.
4. A Steering Committee (SC) is created as a body under the PTCOM. This SC will be in charge of a general overview of the process; approving and supervising activities of the PTS and will be the channel of communication of the NBI Power Trade Secretariat with the PTCOM.
5. The NBI Power Trade Secretariat will be created by the Treaty. It is a permanent organization in charge of day to day activities regarding power trade, coordination, administration, implementation, etc. It reports to the SC and is responsible for implementing the decisions made by the Ministers. In the future, once power trade is developed in the region the Secretariat can be dissolved.
6. The activity of planning and master plans development is allocated in the corresponding working group during Stages I and II. For Stage III, the working group can be dissolved and allocate this functions in the regional system / market operator. It is recommended that this activity is carried out with the participation of other regional institutions or programs such as NELSAP and / or ENSAP given their experience on these issues and the more general framework that they can provide. This activity can be even outsourced to external consultancies or to existing regional institutions / programs.
7. For the initiation of Stage III a Regional .System / Market Operator is created to coordinate power trade according to the proposed guidelines.

8. A Regional Regulator will be created for the beginning of Stage III. Key functions of this organism will be develop regional rules and regulations, enforce the approved regional rules and regulations and participate in the resolution of disputes.
9. For dispute resolution (arbitration), it can be chosen between a regional Court of Justice or international courts such as Paris, London, NY (private investors may prefer the latter than African courts).

3. THE INSTITUTIONS IN THE DIFFERENT STAGES

The different institutions foreseen as participating in the NBI Power Trade do not exist all of them, some need to be created, others will play a role from some stage onward. The next table shows how the different institutions are integrated in the different stages foreseen for the NBI Power Trade.

	Institutions and their Functions per Stage		
	Stage I	Stage II	Stage III
NBI Council of Ministers	<p>Already exists as the highest level authority in the NBI.</p> <p>Gives clearance to the initiative so Ministers of electricity can sign Treaty according to NBI procedures.</p>	<p>Coordinate with PTCOM only in those issues where "water" intervenes.</p>	
NBI Power Trade Council of Ministers	<p>Created through Treaty in Stage I</p>	<p>Performs activities established in the Treaty</p>	
Steering Committee	<p>Created through Treaty in Stage I</p>	<p>Performs activities established in the Treaty</p>	
NBI Power Trade Secretariat	<p>Created through Treaty in Stage I</p>	<p>Performs activities established in the Treaty</p>	
NELSAP	<p>Participates in regional planning activities</p>		
ENSAP	<p>Participates in regional planning activities</p>		
Regional System / Market Operator		<p>Created at the end of Stage II as requirement to begin Stage III</p>	<p>Leads and coordinates regional planning.</p> <p>Performs the function of Regional System / Market Operator</p>

Regional Regulator		Created at the end of Stage II as requirement to begin Stage III	Performs the function of Regional Regulator as established in the Treaty.
Regional Court of Justice	Already existing in international regional institutions		Provides its Court of Justice as forum for dispute resolution.

Table 1: Institutions and their functions per stage

4. INSTITUTIONS & ACTIVITIES PER STAGE

4.1. ALLOCATION OF ACTIVITIES IN THE INSTITUTIONS FOR EACH STAGE

A final element for completing the NBI Power Trade is the allocation of specific activities (responsibilities) to each institution (or program) in the different stages foreseen.

The following table presents the key functions that each institution should perform in each of the stages of power trade in the Nile Basin.

	STAGE I	STAGE II	STAGE III
NBI Council of Ministers	Gives clearance to the initiative.	Coordinate with PTCOM in matters where water intervenes.	
PTC/PMU ⁽²⁾	<ul style="list-style-type: none"> ▪ Negotiate text and get approval of Treaty. ▪ Develop working groups terms of reference ▪ Create working groups ▪ Coordinate and supervise working groups activities ▪ Cross border trading rules development and approval ▪ Coordinates initiation and negotiation of regional standards. ▪ Establishment of NBI Power Trade Secretariat 		
Ministers dealing with electricity issues	Sign the Treaty which initiates the process after NILECOM gives clearance to the initiative.		

² Until the Treaty is signed and the Power Trade Secretariat can be created, the current PTC/PMU will have to play the role of this entity (during Stage I – the preparatory phase).

	STAGE I	STAGE II	STAGE III
NBI Power Trade Council of Ministers		<ul style="list-style-type: none"> ▪ Provides high level guidelines for power trade development ▪ Approves strategic and action plan. ▪ Approves rules, regulations and agreements submitted by the NBI Power Trade Secretariat. 	<ul style="list-style-type: none"> ▪ Provides high level guidelines for power trade development ▪ Approves strategic and action plan. ▪ Approves rules, regulations and agreements submitted by the NBI Power Trade Secretariat.
Steering Committee		<ul style="list-style-type: none"> ▪ Oversees the process of development of power trade at high level. ▪ Oversees activities of NBI Power Trade Secretariat. ▪ Reviews products issued by the NBI Power Trade Secretariat that need to be presented to the PTCOM for the final approval. ▪ Serve as channel of communication between PTS and PTCOM. 	<ul style="list-style-type: none"> ▪ Oversees the process of development of power trade at high level. ▪ Oversees activities of NBI Power Trade Secretariat. ▪ Reviews products issued by the Power Trade Secretariat that need to be presented to the PTCOM for the final approval. ▪ Serve as channel of communication between PTS and PTCOM.
Power Trade Secretariat		<ul style="list-style-type: none"> ▪ Implements the policies defined by the PTCOM. ▪ Creates or eliminates working groups. ▪ Defines terms of reference of working groups. 	<ul style="list-style-type: none"> ▪ Implements the policies defined by the Ministers of Energy Body. ▪ Creates or eliminates working groups. ▪ Defines terms of reference of working groups.

	STAGE I	STAGE II	STAGE III
		<ul style="list-style-type: none"> ▪ Supervises and coordinates activities of working groups ▪ Extracts conclusions from the different studies and submits recommendations to the Steering Committee. ▪ Prepares implementation of Regional Regulator and Regional System Operator. ▪ Establishes the required relationships and coordination with other regional institutions. ▪ Submits to the Steering Committee, to be presented to the PTCOM for final approval, rules, regulations, agreements, etc. ▪ Prepares action plan for next 3 years and submits to Steering Committee for revision and presentation to the PTCOM 	<ul style="list-style-type: none"> ▪ Supervises and coordinates activities of working groups ▪ Extracts conclusions from the different studies and submits recommendations to the PTCOM through the Steering Committee. ▪ Establishes the required coordination with other regional institutions. ▪ Submits to the Steering Committee, to be presented to the PTCOM for final approval, rules, regulations, agreements, etc. ▪ Prepares action plan for next 3 years and submits to Steering Committee for revision and presentation to the PTCOM.
NELSAP	<ul style="list-style-type: none"> ▪ Participates in activities of regional planning and development of regional master plan as coordinated by PTS with corresponding working group. 	<ul style="list-style-type: none"> ▪ Participates in activities of regional planning and development of regional master plan as coordinated by PTS with corresponding working group. 	<ul style="list-style-type: none"> ▪ Participates in activities of regional planning and development of regional master plan in coordination with Regional System Market Operator.

	STAGE I	STAGE II	STAGE III
ENSAP	<ul style="list-style-type: none"> Participates in activities of regional planning and development of regional master plan as coordinated by PTS with corresponding working group. 	<ul style="list-style-type: none"> Participates in activities of regional planning and development of regional master plan as coordinated by PTS with corresponding working group. 	<ul style="list-style-type: none"> Participates in activities of regional planning and development of regional master plan in coordination with Regional System Market Operator.
Regional System / Market Operator			<ul style="list-style-type: none"> Plays the role of Regional System Operator (and Market Operator). Coordinates and leads activities of regional planning and master plan
Regional Regulator			<ul style="list-style-type: none"> Enforces the regional regulation Develops rules and regulations to be presented to the PTCOM for final approval. Participates in resolution of disputes as established by the Treaty.
Regional Institutions with Courts of Justice			<ul style="list-style-type: none"> Provides its Court of Justice as forum for resolution of disputes

Table 2: Institutions and activities per stage

4.2. ROAD MAP FOR IMPLEMENTATION

Stage I, which is mainly a preparatory stage, can be organized in a logical sequence and activities and the time for their execution estimated. Stage II and III are currently less predictable.

4.2.1. STAGE I

The key milestones for this stage are shown below, together with an initial estimation of the times required for their accomplishment.

1. Final NBI Power Trade Comprehensive Proposal, including the NBI Power Trade Treaty's first draft: approved by PTC end of 2007
2. Presentation of NBI Power Trade Project to the NBISEC
3. Presentation of NBI Power Trade Treaty and Action Plan to NBICOM
4. NBI Power Trade Treaty signing by Member Countries
5. NBI Power Trade Treaty implementation
6. Working Groups terms of reference approval
7. Request to Member Countries to nominate Working Group Liaisons
8. Working Groups activities and meetings
9. Working Groups Final Reports
10. Cross – Border Trading Rules approval by Steering Committee
11. Cross - Border Trading Rules approval by PTCOM
12. Beginning of Stage II

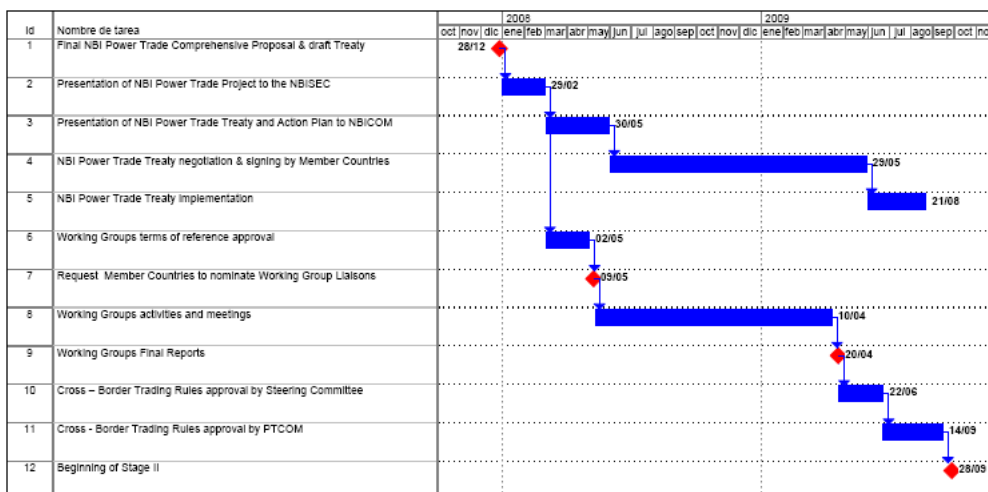


Figure 4: Road map for implementation

III TRADING RULES

1. NBI POWER TRADE – CONCEPT

NBI Power Trade is a platform to carry out electricity transactions among the Nile River recipient countries. In its initial stages, in those places where infrastructure allows it, there will be possibilities of having bilateral cross border transactions between countries. Once the infrastructure allows it (more interconnectors in the region), more complex transactions will be possible including multilateral transactions or transactions comprising third countries providing transmission services (transit) without participating in actual energy trading.

Thus, for the time being, it is not possible to conceptualize the NBI Power Trade like a regional power market, rather as a number of cross border transactions, decided by the member counties, which over time will evolve into a multiple buyers and seller market.

2. NBI POWER TRADE – PHILOSOPHY & PRINCIPLES

The biggest challenge for developing a power trade platform for the Nile River recipient countries has several dimensions:

- Ability to follow the infrastructure development: from very limited cross border trading capacity to a fully integrated region, with its countries' networks interconnected, and also with links to other regional trading systems, such as SAPP, MAGREB and further deeper north
- Ability of properly address the fact that there are natural sub-regions in the Nile Basin Recipient countries.
- Requirements related to develop necessary infrastructure, the institutional framework and the rules to create a common space for the countries to develop their internal power sectors but in conjunction with increasing bilateral and multilateral trading possibilities.
- The need to keep a proper balance between national interests and regional interests, by means of creating structures and trading mechanisms allowing the individual countries, or group countries, to choose whether to participate or not (or at what extent) in the NBI Power Trade. Benefits and fairness should be the big promoters of integration, not just mandatory rules.

3. TRADING ARRANGEMENTS GUIDELINES

3.1. GUIDELINES

The purpose of the Trading Arrangements is:

- Ensure that the rules for the use of cross-border transmission capacity and trading will work together with efficient coordination and appropriate participation;
- Provide the framework for an efficient, transparent and reliable electricity trading among participant countries;
- Set out the responsibilities of domestic utilities and System Operators in relation to trading, cross-border transmission operation coordination, economic dispatch of opportunity offers-bids, metering, settlement and payments;

- Regulate the economic and efficient dispatch within the reliability, security and quality standards harmonized among participating countries;
- Progressively harmonize the operation and pricing system of power transactions;
- Ensure an efficient, transparent and predictable settlement system and regulate payment obligations;
- Establish the principles for a governance mechanism;
- Provide a framework for the resolution of disputes among participant countries or agents; and,
- Provide an efficient and transparent process for amending the NBI Power Trade Regulation.

3.2. PARTICIPANTS AND TRANSACTIONS

3.2.1. PARTICIPANTS

Participants in the NBI Power Trade are all signatory countries of the NBI Power Trade Treaty. During Stage II participants are countries and transactions are agreed through the national TSOs. In Stage III, recognized market participants in any of the national power markets, will be allowed to be participant in the NBI Power Trade.

3.2.2. TYPE OF TRANSACTIONS

There will be three types of transactions:

1. Bilateral contracts
2. Short term transactions
3. Support in emergencies

The following table shows the participants and transactions during each Stage.

	Stage I (Preparatory Stage)	Stage II	Stage III
Participants	<ul style="list-style-type: none"> • Countries. 	<ul style="list-style-type: none"> • Contiguous countries 	<ul style="list-style-type: none"> • Any two countries. • Recognized market participants at national levels.
Transactions	<ul style="list-style-type: none"> • Transactions continue as today. • New transactions take into account future developments of regional power trade. 	<ul style="list-style-type: none"> • Bilateral contracts • Short term (agreed by TSOs) • Emergency 	<ul style="list-style-type: none"> • Bilateral contracts • Day ahead (managed by Regional SO) • Emergency

Table 3: Participants and Transactions