



---

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

---

### ANNEX 11: DELIVERABLE 13 – “LEGAL STATUS OF POWER TRADE”

PREPARED FOR:



---

Prepared by:

**MERCADOS ENERGY MARKETS INTERNATIONAL**

Together with:

**NORD POOL CONSULTING AND CEEST**

---

December, 2007

MADRID  
LONDON  
MOSCOW  
BUENOS AIRES  
RIO DE JANEIRO

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

**TABLE OF CONTENTS**

LIST OF ACRONYMS .....	3
FOREWORD .....	5
BACKGROUND AND CONTEXT OF THIS PROJECT .....	5
INTRODUCTION.....	7
DRAFT CONTENTS OF TREATY .....	8

## LIST OF ACRONYMS

ACCC	Australian Competition and Consumer Commission
AEMC	Australian Energy Market Commission
AER	Australian Energy Regulator
AFC	Available Flowgate Capability
ARR	Auction Revenue Rights
BA	Balancing Authority
CAT	Curtailment Adjustment Tool (in SPP)
CEB	Communauté Electrique du Benin
CEM	Common Energy Market
CIE	Compagnie Ivoirienne d'Electricité
CIS	Commonwealth of Independent States
CoAG	Council of Australian Governments
CR	Congestion Rights (SIEPAC)
CRIE	Regional Regulatory Agency (SIEPAC)
CVT	Variable Transmission Charges (SIEPAC)
DAM	Day Ahead Market
EAPP	Eastern African Power Pool
EAC	East African Community
ECOWAS	Economic Community of Western African States
EECI	Energie Electrique de la Côte d'Ivoire
EGL	Energie des Grands Lacs
EIS	Energy Imbalance Service
EOR	Independent system and market operator (SIEPAC)
EPC	Electricity Power Council (in CIS)
ESAA	Energy Supply Association of Australia
FCM	Forward Capacity Market
FERC	Federal Energy Regulatory Commission (US)
FTR	Financial Transmission Rights
GMS	Greater Mekong Sub Region
ICC	Information and Coordination Center (in WAPP)
ICE	Intercontinental Exchange (US)
ICT	Independent Coordinator of Transmission (SPP)
IDC	Interchange Distribution Calculator
IGA	Inter-Governmental Agreement on Power Trade in the Greater Mekong Sub-Region
IPP	Independent Power Producers/Project
IPSCIS	Interconnected Power System of Commonwealth of Independent States
JOA	Joint Operation Agreement
LIP	Locational Imbalance Prices (in SPP)
LMP	Locational Marginal Price
LOLE	Loss of Load Expectation
LSE	Load Serving Entities
LTR	Long Term Transmission Rights
MCE	Ministerial Council on Energy (Australia)
MER	Regional Electricity Market of SIEPAC
MISO	Mid-West Independent System Operator
MO	Market Operator
MOI	Memorandum Of interest

NBI	Nile Basin Initiative
NBPTF	Nile Basin Power Trade Framework
NE - ISO	New England Independent System Operator
NEM	National Electricity Market (Australia)
NEMMCO	National Electricity Market Management Company
NERC	National Electricity Reliability Council
NSI	Net Scheduled Interchange
OMVS	Organisation pour la Mise en Valeur du fleuve Sénégal
PAC	Participant Advisory Committee (Australia)
PJM	Regional Market of Pennsylvania, New Jersey and Maryland
PMU	Project Management Unit
PPA	Power Purchase Agreement
PRSG	Planned Reserve Sharing Group (in MISO)
PTC	Power Technical Committee
PTOA	Regional Power Trade Operating Agreement (in GMS)
RPM	Reliability Pricing Model in PJM
RPTCC	Regional Power Trade Coordination Committee (in GMS)
RPTP	Regional Power Trade Project
RRO	Regional Reliability Organization
RSC	Regional State Committee (in SPP)
RTEPP	Regional Transmission Expansion Planning Process in PJM
RTN	Regional Transmission Network (in GMS)
RTO	Regional Transmission Organization (US)
RTR	Regional Transmission Grid (SIEPAC)
SADC	Southern African Development Community
SADCC	Southern African Development Co-ordination Conference
SAP	Subsidiary Action Program
SAPP	Southern African Power Pool
SCED	Security-Constrained Economic Dispatch
SCUC	Security-Constrained Unit Commitment
SERC	Southeastern Reliability Council (US)
SIEPAC	Central American Regional Electricity Market
SMD	Standard Market Design (NE-ISO)
SONABEL	Société Nationale Burkinabè d'Electricité
SPP	Southwest Power Pool
SRMC	Short Run Marginal Cost
STEM	Short Term Energy Market (in SAPP)
SVP	Shared Vision Program
TSO	Transmission System Operator
TUOS	Transmission Use of System
UES	Unified Energy System
UPS	Unified Power System (in CIS)
USSR	Union of Soviet Socialist Republics
VOLL	Value of Lost Load
VRA	Volta River Authority
WAPP	Western African Power Pool
WSPP	Western Systems Power Pool

## FOREWORD

The purpose of this report, named “LEGAL STATUS OF POWER TRADE”, is to present a draft text for the Treaty that would be the legal support and govern the power trade framework in the region.

This report is Deliverable 13 and corresponds to Activity 11: “*Drafting of Memoranda and Legal Documents*” of the project’s revised terms of reference agreed during the inception mission in Dar es Salaam.

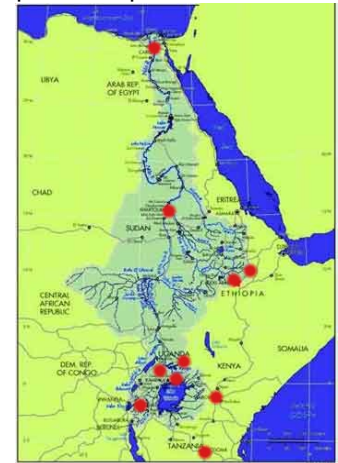
## BACKGROUND AND CONTEXT OF THIS PROJECT

**The Nile Basin Initiative (NBI):** Formally launched in February 1999 by the Council of Ministers of Water Affairs of the Nile Basin States, the NBI provides a forum for the countries of the Nile to move forward, towards a cooperative process in order to achieve tangible benefits in the Basin and to build a solid foundation of trust and confidence.

The NBI has two primary areas:

- Basin-wide projects - “Shared Vision Program” (SVP), to help create an enabling environment for action on the ground
- Sub-basin projects - “Subsidiary Action Program” (SAP), aimed at the delivery of actual development projects involving two or more countries

**The Regional Power Trade Project (RPTP)** is one of the thematic projects to be implemented basin-wide, to help establish a foundation for trans-boundary regional cooperation and to create an enabling environment conducive for investment and action on the ground, within an agreed basin-wide framework.



The RPTP aims to establish the institutional means for coordinating the development of regional power markets (such as a Power Pool) among the Nile Basin countries, through the creation of a power trade framework which can contribute to achieve poverty reduction including expanding access to reliable and low-cost power supply, in an environmentally sustainable manner.

The broad benefits envisaged from the NBI are poverty alleviation through improved, sustainable management and development of the shared Nile waters, and enhanced regional stability through increased cooperation and integration among the Nile states.

Project activities are coordinated by the Project Management Unit (PMU) at the regional level and by the PTC members at the country level. Activities include the establishment and operation of a power trade framework, the conduct of a comprehensive basin-wide analysis of long-term power supply, demand and trade opportunities, the identification of potential development projects within the NBI’s SAPs, the preparation of a public participation plan and stakeholder analysis, and the development of knowledge management tools. These activities are carried out through studies, consultations, workshops, seminars and other modalities, for

which the project may seek assistance from national and regional research and training institutions, NGOs, consultants and other public or private organizations from the Nile basin region.

The current project: “CONSULTANCY TO DEVELOP AN INSTITUTIONAL, REGULATORY AND COOPERATIVE FRAMEWORK MODEL FOR THE NILE BASIN POWER TRADE” falls within the RPTP framework. Key project objectives include:

1. Assisting the RPTP and the NBI Power Technical Committee (PTC) in reviewing institutional arrangements adopted by regional power trade organisations, and submitting discussion papers to the RPTP, comparing and contrasting the different arrangements.
2. Conducting an information gathering tour so as to collect basic information of the countries in the region, which will permit developing in the future recommendations and performing an informed decision making process.
3. Proposing a model for developing Regional Power Trade at the Nile sub-basin and basin levels.
4. Drafting Memoranda and legal documents as required.

## **INTRODUCTION**

This report consists of the draft contents of the Treaty that would provide a legal basis to the power trade framework and its principles and guidelines for power trade development.

## DRAFT CONTENTS OF TREATY

The Ministers dealing with electricity issues of the Nile Basin countries,

- Taking into account the objectives given by the Nile Council of Ministers, to its basin wide Regional Power Trade Project of:
  - achieving compatibility in the policy and regulatory environment, establishing common technical operating standards and access rules, and fostering the appropriate framework within which trade can occur and
  - facilitating infrastructure development for power trade by promoting key regional investments, particularly backbone interconnections
- And the convenience and opportunity to harmonize these objectives with other valuable initiatives present in the Region,

Decides to sign this Treaty, to give a strong and necessary framework to the development of regional markets and the regional transmission infrastructure to carry out trade across the region at the possible extent.

### 1. Between the Ministers of electricity of the Nile Basin countries (The Parties)

Considering:

- a. The NEPAD principles of good governance, security and sustainable political and socio-economic development, African ownership and leadership, as well as broad and deep participation by all sectors of society; anchoring the development of Africa on its resources and resourcefulness of its people, partnership between and amongst African people and acceleration of regional and continental integration for building the competitiveness of African countries and the continent,
- b. The recognition of COMESA Member States that a secure supply of energy at competitive prices is a precondition for economic development, and that to ensure competitively priced supplies of energy to all Member States requires both the development of local or renewable energy resources and the rational management of existing resources, and for those purposes Member States undertake to co-operate in the joint development and utilization of energy resources including hydro, fossil and bio-mass and shall, in particular, co-operate in the: (a) joint exploration and exploitation of hydro and fossil fuel; (b) creation of more favorable investment climate to encourage public and private investment in this sub-sector; develop a mechanism for facilitating trade in energy fuels, such as coal, natural gas, petroleum and electricity co-operate in interconnecting national electricity grids.
- c. EAC's fundamental principles of mutual trust, political will and sovereign equality, peaceful co-existence and good neighborliness; peaceful settlement of disputes; good governance including adherence to the principles of democracy, the rule of law, accountability, transparency, social justice, equal opportunities; equitable distribution of benefits; and co-operation for mutual benefit



and in particular the adoption of policies and mechanisms to promote the efficient exploitation, development, joint research and utilization of various energy resources available within the region.

- d. The existing agreement of governments of EA countries to establish a regional Power Pool (the EAPP) with the objectives of securing power supply, optimizing the usage of energy resources available in the region, reducing electricity costs by using power system interconnections, creating a conducive environment for investment and facilitating the development of electricity markets in the Region,
- e. The Nile Basin Initiative countries' shared vision to "achieve sustainable socioeconomic development through the equitable utilization of, and benefit from, the common Nile Basin water resources" by developing the River Basin in a cooperative manner for benefit-sharing within and across national boundaries, and promoting regional cooperation, integration, peace, and security.

And recognizing that

- f. The region is endowed by enormous energy resources but, however, it is still very poorly electrified,
- g. It is necessary to create a strong legal framework between the Regional Partner States to make feasible the joint development of big regional projects both in generation and transmission, attracting public and private investment and materializing the physical integration of the regional electricity systems

Now, therefore, the Parties decide to create through this Treaty, a Power Trade Framework and agree as follows:

- 2. The relationship between the Parties for the creation and implementation of the Power Trade Framework will be based on the principles of Cooperation and Reciprocity, Gradualism and Environmentally Sustainable Development.
- 3. The objectives of this Treaty are:
  - a) To create conditions for fair, efficient and reliable cross border trade within the region
  - b) and for steady growth of installed power capacity and infrastructure
  - c) by establishing a Regional Market for trading electricity through bilateral mid and long term firm contracts and through short term transactions
  - d) Providing a legal framework that gives incentives to public and private investment
  - e) Promoting mutual reliance between countries and facilitating the joint development of multinational regional projects
  - f) Implementing in a gradual manner the necessary institutional framework, assigning specific roles to existing regional bodies and/or creating new ones when necessary

- g) Progressing towards a true common market of electricity across the region where any company irrespective of its national location could sell and buy,
  - h) Putting in place objective, non discriminatory pro efficiency rules for regional trading that
    - o Allow for the gradual convergence between the different national frameworks on the basis of equality and reciprocity;
    - o Promote efficiency, security of supply and increasing quality of service
    - o Ensure the transference of the benefits of increasing energy availability and efficient regional trade to the people
4. The Parties assign to the Power Trade Council of Ministers the responsibility for policy direction and supervision of the whole process of designing and implementing the Power Trade Framework under this Treaty. The Power Trade Council of Ministers is integrated by the Ministers dealing with electricity issues of the member countries.
  5. A Steering Committee integrated by a high level representative of each country will overview the general process, prepare decision making for the Power Trade Council of Ministers and supervise the Power Trade Secretariat.
  6. The Power Trade Council of Ministers will create an executive and permanent unit to manage the process: The Power Trade Secretariat. The location of the Secretariat's headquarters will be decided by the Council of Ministers.
  7. The principles that rule the implementation of this Treaty are the following:
    - a) The Power Trade Framework is a voluntary power pool.
    - b) The process of implementation recognizes the diversity of the Region, in which each country starts from a diverse starting point in the development of their electricity industries.
    - c) The implementation process will be gradual: successive targets will be defined by the Council of Ministers and several phases of implementation will be defined for the Secretariat to comply with.
    - d) The implementation process will be phased in accordance with the availability of the necessary infrastructure and institutional framework.
  8. The Power Trade Council of Ministers will ensure the necessary coordination between other regional organizations, and the Power Trade Secretariat, with the objective of a swift and complete harmonization of goals in developing power trade in the region.
  9. During the first stage the PT Secretariat will work out the following four relevant products:
    - a) the general design and phasing of the successive steps of implementation of the regional Power Trade, including the preparation of the regional rules, and the necessary harmonization strategy with the existing rules in each country;

- b) the development of operational procedures required by the Power Trade Framework and the definition of regional technical standards, as well as the road map to achieve them;
  - c) the development of a regional data base to facilitate information sharing among member countries and regional planning;
  - d) the development of regional system expansion planning
  - e) the design or redesign of the permanent institutions that will take charge of operating the regional interconnected system in real time, administrating the power trade, and acting as the regional regulator in the long run.
10. The second stage will be focused on promoting cross border trading between neighboring countries with the aim of improving efficiency using the existing infrastructure.
  11. In the third stage the Regional Power Trade will be fully operative, with the necessary infrastructure and institutions in place. Transactions, both long term and short term, will be allowed between participants across the Region.
  12. During the third stage the independent Regional System and Market Operator will administrate a Regional Expansion Planning System with the participation of the Parties, namely other programs existing in the NBI as well as other regional institutions. Once the third phase of this process is reached, the members of the Power Trade will also be included in the Planning System process.
  13. During Stage II the Power Trade Council of Ministers will appoint the members of the Regional independent Regulator and will decide on its HQ and budget. Essential functions of the Regional Regulator will be: to prepare specific regulation and rules necessary for the Regional Power Trade to comply with its objectives; to provide guidance and support to the process of regulatory harmonization between national and regional environments; to settle disputes between participants in the power trade or between participants and the System and Market operator, carry out a market surveillance to detect eventual abuse of market power. It is a condition for the beginning of Stage III that the Regional Regulator is in place.
  14. During Stage II the Power Trade Council of Ministers will take the required decisions so the Regional System Market Operator is established for the beginning of Stage III.
  15. Transmission assets, irrespective of ownership or if they are of a national or a regional nature, will make available the spare capacity of transmission determined by the agreed mechanism to determine the cross border trading transmission capacity and its allocation. The charge for, and administration of, access and use by third parties of the regional transmission assets will be established by a specific regulation to be issued by the Regional Regulator and approved by the Power Trade Council of Ministers.
  16. it is an obligation of the Parties, and of the future active members in the Power Trade, to commit themselves in the following:
    - a. Participate in open exchange of information for planning and operation.

- b. Provide the necessary facilities within their territories for studies and construction.
  - c. Ensure access to the grid to third parties participating in regional transactions according to the agreed mechanism to determine cross border trading transmission capacity and its allocation.
  - d. Participate in the activities of the Regional Planning System.
  - e. Contribute to the effort for Regional regulatory convergence.
  - f. Do their best (including national legislation) to attract investment.
  - g. Do not alter in favor of the national utility, the needed neutrality of the national regulation.
17. The Power Trade Council of Ministers will ensure the necessary collaboration of the national authorities, regulators and system operators with the objectives of this Treaty.
18. The decisions of the Power Trade Council of Ministers will be made through a voting process. Each country will represent one vote. Decisions involving investments in regional infrastructure, investments for the institutions that are part (or will be part) of the power trade framework or the establishment of the expenses of the different institutions that are part (or will be part) of the power trade framework will require at least a number of votes equal to or superior to sixty five percent of the member countries to be approved. All other decisions will be approved simple majority.
19. The quorum required for a session of the Power Trade Council of Ministers is at least fifty percent of the member countries.
20. The condition of State partner of this Treaty does not preclude the right of any country to participate as a member in other regional power pools, provided such membership does not create obligations upon other Parties of this Treaty. The Power Trade Council of Ministers will provide guidance to the PT Secretariat in order to coordinate and harmonize the relationship within this Regional PT and other agreements of similar kind in neighboring regions.
21. To become a participant of the Power Trade Framework a country will have to sign this Treaty.
22. To become a participant in the transactions of the regional market during Phase III the candidates will require the approval of the System and Market Operator and sign the Power Trade Operation Agreement that will be approved by the Regional Regulator.
23. This Treaty will be ratified by the Parties according to their respective national procedures. Each Party shall notify its ratification or acceptance to the other Parties.
24. The Parties will make their best efforts to involve the private sector in the investment necessary to develop the Regional market, including the use of Public Private Partnership schemes. Regarding investments corresponding to the public sector agreed by groups of countries, or by all the countries in the

region, the countries commit themselves to provide the resources and procure financing along the agreed principles of Cooperation and Reciprocity.

25. Parties will bear the costs of agreed mandatory investments and will share the investment costs according to the benefits that each of the Parts receive for the investment.
26. Parties agree to share the costs for the setting up and functioning of the regional market institutions. To share these costs the countries will be classified in three groups according to the size of their power sectors. The size of the power sector will be represented by the total energy generated by a country in a year.

Countries with bigger power sectors: XX YY WW

Countries with average power sectors: AA BB CC

Countries with smaller power sectors: DD EE FF

Since the total energy generated is an indicator that evolves every year, the limits that define the groups of countries will be updated by the Power Trade Council of Ministers periodically.

27. A “basic contribution” will be established for countries of medium size power sectors, countries with smaller power sectors will contribute with a quota equal to 50% of the basic contribution and countries with bigger power sectors will contribute with a quota equal to two times the basic contributions.

The total collected through the quotas must cover the budget approved by the Power Trade Council of Ministers.

28. The Parties are aware of several initiatives relating to regional power trade in their region and in neighboring regions. The Parties therefore assign responsibility to the Steering Committee for all initiatives promoting regional trade in the region, in order to avoid duplication of efforts and to enhance the benefits of cooperation. The Parties shall continue to respect their rights and obligations under the existing regional agreements or conventions in which they are also parties.
29. Any of the Parties may withdraw from this Treaty giving a one year written notice to the other Parties. Withdrawal will not affect complying with agreements or contracts signed on the basis of this Treaty until those agreement or contracts expire.
30. Amendments to this Treaty will be possible through the signature of complementary Protocols. A Protocol will take effect once accepted and signed by all Parties of this Treaty.
31. Inclusion of new State partners shall be subject to the approval of the Parties and shall require the signature of a Protocol to this Treaty in the terms of the above article 30.