



Novos caminhos legais e regulatórios do Setor de Energia Elétrica e da Mineração

Aumento do Poder Decisório e
Consolidação da Agência de Energia
Elétrica: O caso de Moçambique

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Maio 2011



Status of Power Sector in Mozambique

- Rate of electrification: 15%
- Natural resources: hydropower and coal
- Installed Capacity: Cahora Bassa: 2.075 MW + 233
 - 400 MW: Mozambique
 - Remaining power: South Africa
- Peak Demand:
 - 420 MW (penalties in day-ahead market)
- Need of bilateral and multilateral partners
- Energy Reform and Access Project - ERAP
 - Power Sector Reform
 - Grid Electrification
 - Renewable Energy and Cross Sectoral Activities
 - Institutional Strengthening and Capacity Building

Linkages with Brazil

- Mphanda Nkuwa: 2.400 MW (Camargo Correia)
- Moatize: 1.400 MW (Vale)
- Mozambican Backbone: 50% Eletrobras
- Memorandum of Understanding on Biofuels between the Governments of Brazil and Mozambique

Electricity Law: CNELEC Mandates

- Pronounce upon electrical energy supply policies and objectives;
- Advise on the proposed expropriation and declarations of public utility projects for new construction of electrical installations
- Pronounce upon and propose regulations in respect of electrical supply and other matters relevant to the National Electrical Energy Grid;
- Issue advisory opinions on proposals for new projects and applications for electrical energy supply concessions as the proposals for the setting and revision of tariffs for the sale of electrical energy by the concessionaire.

Electricity Law: CNELEC Mandates

- Prepare proposals on the promotion and adoption of new technologies and programs to expand the geographical coverage of the national electricity network, performing the national evaluations on its implementation;
- Participate in supervision and evaluation of national and international public bidding for electrical energy supply concessions;
- Act as conciliation, mediation and arbitration between dealers and between them and their consumers.

Performance Contract: 2007-2010

- Monitoring and evaluation of EDM's performance under the Performance Contract
- Recommendations on retail tariff and subsidy system that makes use operating and financial benchmarks
- Recommendations for monitoring and revisions of quality of service standards (technical and commercial) along with associated complaint and monitoring systems

CNELEC Action Plan

- Tariff Setting
 - Retail tariff setting
 - Tariffs for unbundled transmission
 - Regulation for grid/off-grid electrification
 - Regulation for grid/off-grid renewables
 - Review of imports and exports
 - Tariffs for mini-grids (connected/isolated)
- Development of model concessions
 - Transmission
 - IPP's

CNELEC Action Plan

- Technical Standards
 - Index of consumer satisfaction
 - Standards for quality of commercial service
 - Consumer codes
 - Customer complaint system
 - Standards for quality of technical service
- CNELEC future structure
- Internal procedures

CNELEC Action Plan

- Review of legal framework
 - Status and responsibilities of the Agency
 - Financial sustainability
- Market study on allocation of power generated by the projects under discussion, either nationally or regionally (SADC)
- Resolution of disputes*
- Evaluation of CNELEC's performance and effectiveness of regulatory process (RERA)
- Representing MZ in associations, etc.*

Role of Resident Advisor: Assist CNELEC to operationalize

- Its role in providing advice to the government
- The implementation of its Action Plan, including scheduling and budgeting, in the following areas:
 - Its structural and organizational development;
 - Development and implementation of its Internal Rules of Procedure;
 - Creation of a proposal for legislative changes/additions of Electricity Regulations for Concession Granting, Licensing and Tariff Setting;
 - A market study to understand the impacts of electricity sector reforms and new regulations;
 - Design of technical and engineering standards for electricity facilities;

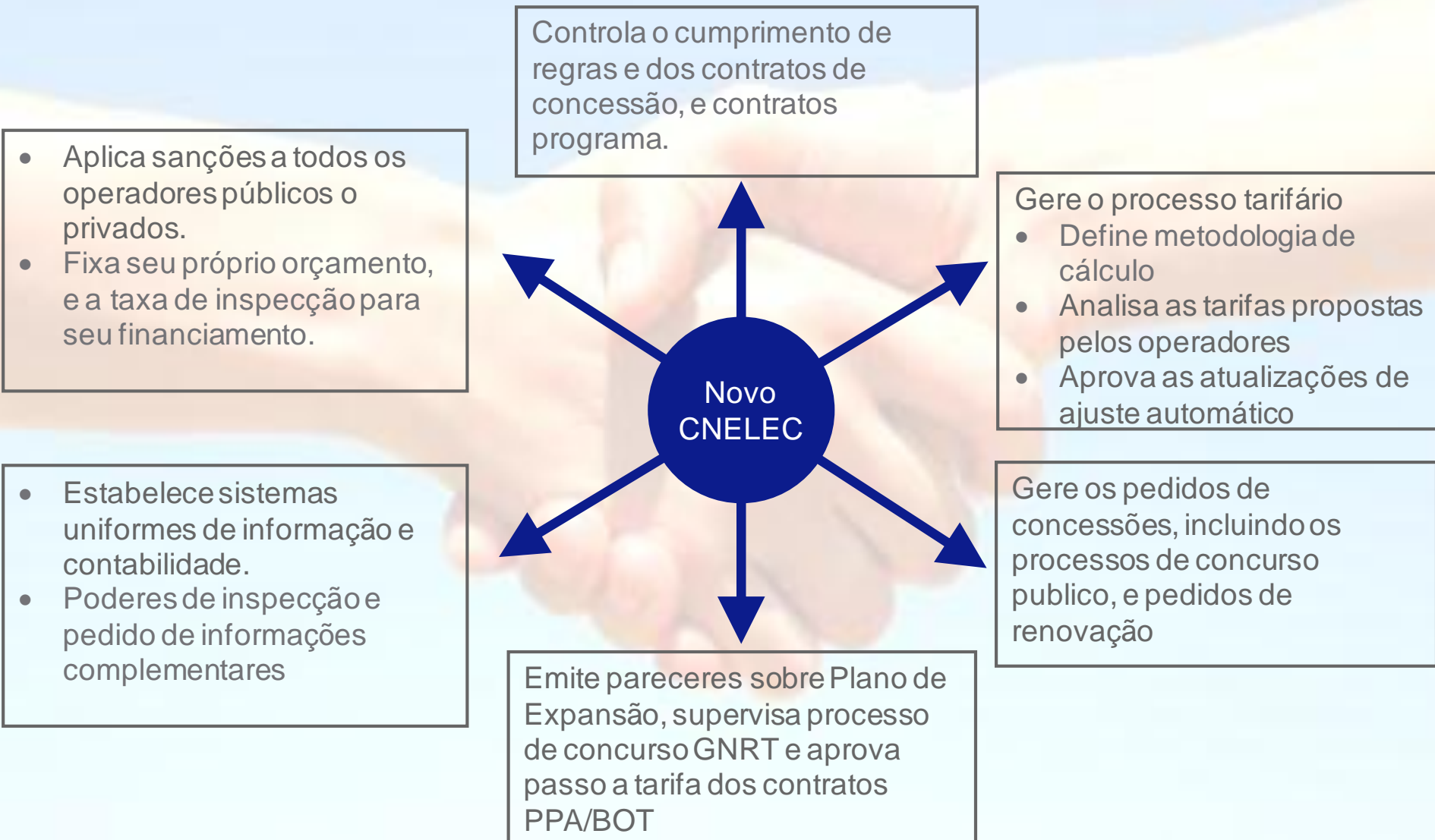
Assistance in the implementation of the Action Plan of CNELEC in:

- Development of rules and procedures to provide information and complaint services to Consumers and the operation of a Public Information Desk
- Development of capacity to allow CNELEC to monitor and audit the performance of electricity to ensure compliance with concessions and other regulatory requirements
- Development of capacity to evaluate proposals for Studies and Projects that relate to the operations and expansion of electricity networks at both the distribution and transmission levels
- Development of Information and Communication Technology
- Proposals for legislative changes/additions to ensure self-financing mechanisms for CNELEC and the procedures and rules that will enhance CNELEC's Authority, Autonomy and Accountability, in the eyes of the sector and government.

Proposals for the New Electricity Law

- Expanding and strengthening CNELEC legal mandate and functions
 - Better defining CNELEC advisory role on the tariff setting and concession and authorizations processes.
 - Transferring compliance, monitoring and enforcement competences from MoE to CNELEC.
 - Oversight of concession contracts and regulatory compliance;
 - Supervision of tariff regime implementation;
 - Sanctions enforcement

Proposals for the New Electricity Law



Controla o cumprimento de regras e dos contratos de concessão, e contratos programa.

Gere o processo tarifário

- Define metodologia de cálculo
- Analisa as tarifas propostas pelos operadores
- Aprova as atualizações de ajuste automático

Gere os pedidos de concessões, incluindo os processos de concurso publico, e pedidos de renovação

Emite pareceres sobre Plano de Expansão, supervisa processo de concurso GNRT e aprova passo a tarifa dos contratos PPA/BOT

Novo
CNELEC

- Aplica sanções a todos os operadores públicos o privados.
- Fixa seu próprio orçamento, e a taxa de inspeção para seu financiamento.

- Estabelece sistemas uniformes de informação e contabilidade.
- Poderes de inspeção e pedido de informações complementares

Proposals for the New Electricity Law

- Straightening the line between policy and regulatory functions, suppressing some policy functions, from CNELEC to MoE
 - advisory role on energy policy issues
 - proposing role on new technologies promotion programs or coverage expansion initiatives
- Adjusting the board composition and internal structure of CNELEC
- Assuring the Regulator's financial sustainability:
 - regulatory fee or levy to be imposed on electricity sales

Proposals for the Tariff System

- Determining allowed revenues which relies on EdM's "real" costs (set at agreed efficient levels) combined where appropriate with cost levels based on selected KPI indicators embedded in EdM's performance contract (e.g., loss levels, staffing rates).
- Tariffs set in a manner to be as cost-reflective as possible
- Introduction of time-of-use tariffs for customers with appropriate metering

Introduction of Public Hearings

- Establishment of norms of public hearings, based on ANEEL's experience;
- 3 public hearings took place in the most important cities, to collect perceptions on EDM's quality of service;
- New model defined for future surveys to be developed by EDM.

Other relevant issues

- Technology choice and feasibility studies
- Grid analysis and integration issues
- Regional transmission systems, cross-border power trading and grid operator
- Clean energy across the borders (MZ-SA) and improve security of supply
- Rural Electrification models
 - Kenya, Argentine, Brazil, Tanzania/Zambia
- PPP and role of local banks
- African Electricity Regulator Peer Review and Learning Network

Regional transmission systems, cross-border power trading

- 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.

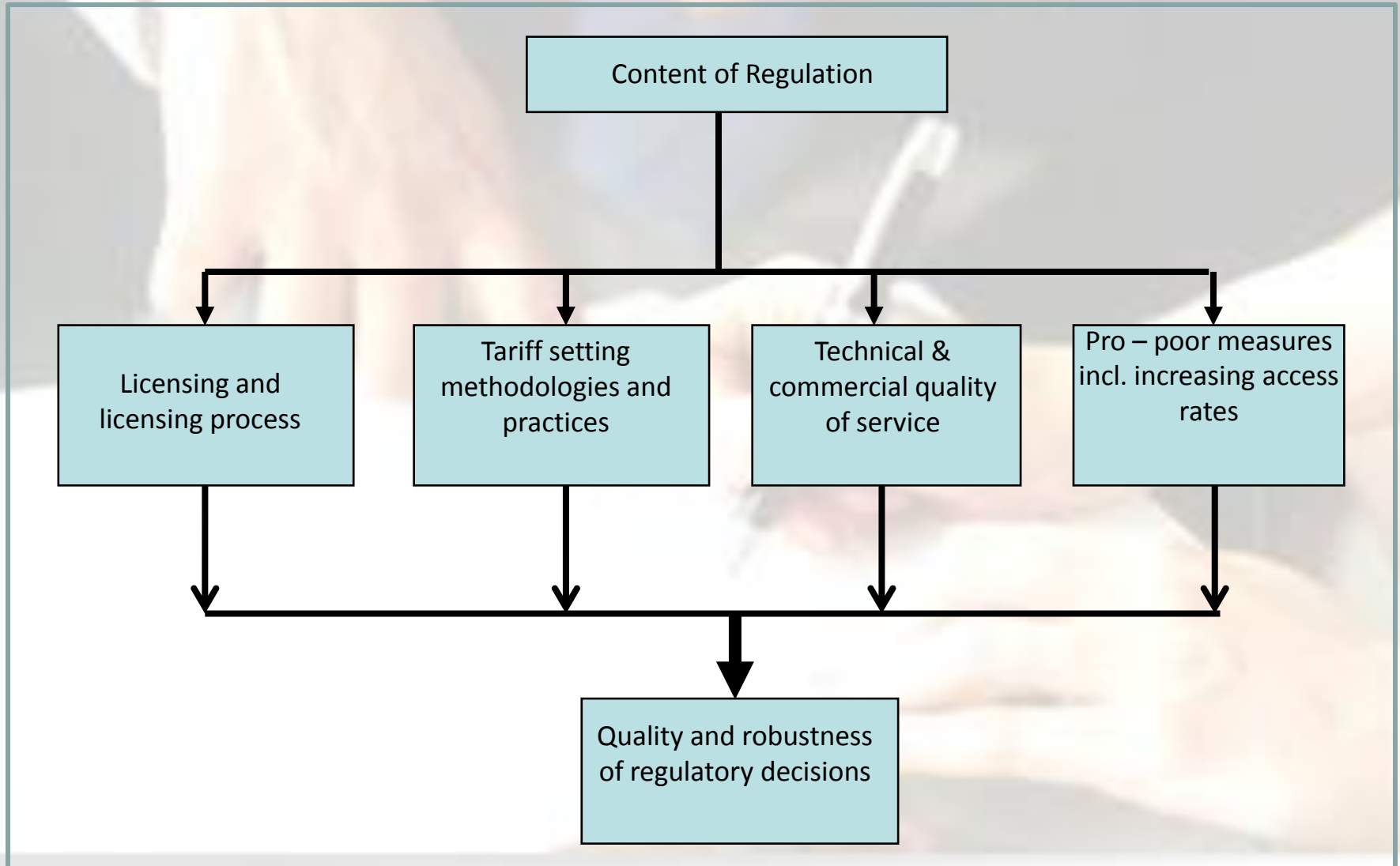
Regulator's Powers and Duties in Cross-border Trading

- Issuing licences to entities that will be engaged in cross-border electricity trading, such as electricity generators and transmission companies, traders, importers and exporters;
- Approving the terms of power purchase agreements (PPAs) and transmission wheeling agreements in cross-border electricity imports and exports;
- Approving the recovery of the costs of electricity imports through the tariffs charged to captive customers;
- Approving agreements to export electricity by parties that supply captive customers;

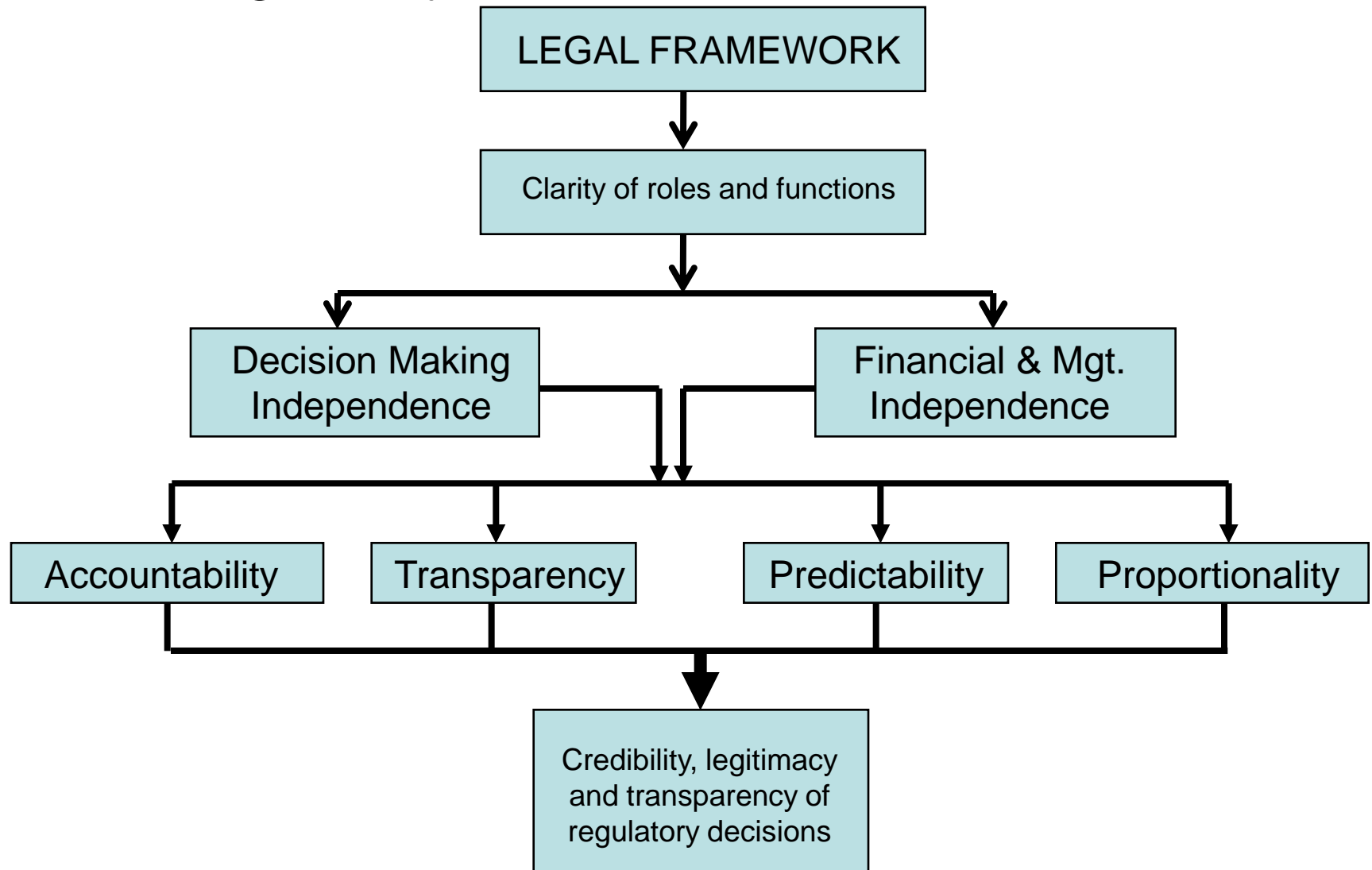
Regulator's Powers and Duties in Cross-border Trading

- Approving transmission wheeling agreements in transit countries where the transmission provider supplies captive customers;
- Mandating access to transmission and distribution facilities for cross-border electricity trading in accordance with national legislation and transmission licence conditions;
- Approving domestic and cross-border transmission charges.

Building Blocks for Understanding Regulatory Performance - Substance



Building Blocks for Understanding Regulatory Performance - Governance



Hence - a framework for evaluating regulatory systems

Regulatory governance

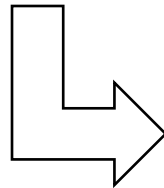
Legal design and institutional arrangements of regulatory system and processes of regulatory decision-making

Credibility, legitimacy, and transparency of regulatory decisions

Regulatory substance

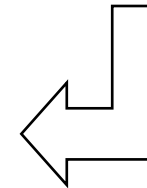
Content of regulation
licences, tariffs
supply & service standards

Quality & robustness of regulatory decisions



Impact on sector

Competitively priced, reliable infrastructure services
Financial viability, new investment



Adapted from Brown, Stern, Tenenbaum & Gencer, 2006

Source: Eberhard & Kapika: The Regulatory Challenge in Africa

Concluding Remarks

- **Cost effective pricing and financial viability of utilities**
 - Difficulties in effective regulation of state-owned utilities. Regulation needs to be complemented by appropriate SOE governance reforms
 - More effective targeting of the poor could potentially reduce the potential backlash of steep tariff decisions
 - Could be scope for aligning regulatory incentives with governance performance measures (KPIs) particularly in the case of state-owned utilities
- **Reliable infrastructure service**
 - More work required on developing appropriate standards that adequately and progressively incentivise performance improvements and which are easily monitored and reported on without a requirement for expensive retrofits
 - Also, given low levels of access, regulators could do more in incentivising utilities to make more new connections
- **Attraction of new investment**
 - Need for greater clarity on responsibility for new build allocation (Ministry, department, regulator etc)
 - Regulators unsure of their role in IPP negotiations. Appears that there should be some “guarded” involvement that does not imply consent even before the licensing decision process to ensure no surprises
 - Mechanisms need to be put in place for the treatment of unsolicited bids in order that outcomes remain competitive

Renewables in Mozambique

- National Renewable Energy Plan to improve the access to modern fuels, develop and use of RET and promote private investment
 - Resource assessment: wind, small hydro, geothermal and ocean energy
 - Local manufacture of solar heaters, low-price PV panels, wind pumping systems and equipment for biodigesters
 - Regulation: licensing, FiT , Grid code and off-grid tariffs

Key actions: renewables

- Installation of PV systems for lighting (50,000), fridges (5,000), TVs (2,000), water pumping (5,000) and community services (20,000); biodigesters (1,000); wind pumping systems (3,000), RET productive systems (5,000) and solar heaters (100,000)
- 100 MW of wind power
- 125 MW of small hydro
- 3 bagasse power plants
- Road-show and workshops
- MDL Agence

Regional Electricity Regulators Association of Southern Africa (RERA)

- Harmonisation of regulatory policies, legislation, standards and practices
- Platform for effective cooperation among energy regulators within the SADC region
- Key areas:
 - Capacity Building & Information Sharing
 - Facilitate harmonised Electricity Supply Industry policy, legislation and regulations for cross-border trading: access to transmission capacity and cross-border tariffs.
 - Regional Regulatory Cooperation: economic efficiency of interconnections and electricity trade

Achievements

- Plan of Implementation of the Action Plan;
- Proposals on new legal framework for the sector;
- Public Hearings;
- Definition of Key Performance Indicators;
- Proposal of New Performance Contract for period 2011-2013;
- Report from CNELEC to Government with results of first Performance Contract (EDM Performance and New Tariff Model);
- Consumers' Code (General Conditions of Supply);
- Series of workshops on regulation;

Final Recommendations

- Analysis of EDM Performance in 2010 using in-house capability;
- Public Hearing on New Consumers' Code;
- Establishment of close relationship with local academia and assignment of sub-agreement contracts;
- Raise the regulation issue to decision makers, politicians and national media;
- Public presentation of first assessment report on EDM's performance;
- Quarterly publication of KPI;
- Annual survey and public hearings on key decisions;
- Development of a system to manage consumers' complaints;
- Friendly web page and manuals and booklets on key issues
- Internal workshops parallel to external training.

