

AIDE MEMOIRE

Seminar on Electricity Interconnection

Cairo, Egypt, 19-21 June 2005

A. Introduction

The Seminar on Electricity Interconnection, to be held in Cairo, Egypt, from 19-21 June 2005 will address the strategic, technical, financing, and operational aspects of regional electricity interconnection.

As recognized in the Johannesburg Plan of Implementation (JPOI) adopted at the World Summit on Sustainable Development (WSSD) in 2002, access to energy – and electricity in particular – is critical for poverty alleviation and to spur economic growth. At present, per capita energy consumption in Africa remains low, particularly in sub-Saharan Africa. And although Africa has abundant energy resources, these are unevenly distributed. In this context, regional electricity grid interconnection is a topic of particular relevance.

B. Background and justification

The JPOI also underscores the critical linkages between meeting Africa's energy needs and achieving African sustainable development objectives. It calls for supporting Africa's efforts to implement the energy objectives of the New Partnership for Africa's Development (NEPAD), which seek to secure access to commercial energy services for at least 35 % of the African population within 20 years, especially in rural areas. Furthermore, the JPOI calls for action to "[s]trengthen and facilitate, as appropriate, regional cooperation arrangements for promoting cross-border energy trade, including the interconnection of electricity grids..."

The development of Africa's electric power sector is a prerequisite for growth in other sectors and for overall economic and social development. Unfortunately, a combination of factors ranging from small market size, inability to attract investments, poor management and maintenance of existing infrastructure, damage due to war and conflict, and inadequate and inappropriate tariffs and revenue collection have all contributed to irregularities and shortages in electricity supply, particularly in sub-Saharan Africa.

An overview of the electrical power sector in Africa reveals several common trends that are of relevance to an overall examination of trans-border interconnections:

- varying degrees of privatization and restructuring of government-owned power companies have been undertaken by a number of countries;
- shortages and irregularities in supplies have forced many countries to look more closely at supplementing supplies with trans-border networks and power pools; and

- serious policy, investment, capacity and infrastructure challenges (including electricity thefts, aging equipment, and infrastructure damage) associated with improving access to electricity in rural and peri-urban areas.

Issues of sovereignty, resistance to power sector reforms and privatization, as well as, political conflicts and serious capacity constraints have hampered the development and expansion of trans-border grids and power pools in the region. However, growing demand for electricity, the need to reduce energy costs and provide greater energy supply stability, are some of the factors behind the recent interest and growth in using trans-border interconnections in the African energy context.

C. Goals and objectives

The Seminar will be conducted as a follow-up activity to the World Summit on Sustainable Development. The objectives of the Seminar are to:

- impart an understanding of the broader political and legal dimensions of regional electricity grid interconnections;
- provide an understanding of the economic feasibility and market analysis aspects interconnections;
- provide an understanding of the benefit sharing from interconnections, technical aspects of power system interconnections, and the financing of interconnection projects;
- assist countries in enhancing operation of existing interconnected grids, as well as identifying opportunities for potential new interconnections; and
- over the longer term, to further sustainable development by improving access to affordable electricity within the targeted areas.

D. Programme

The Seminar programme will include case studies and opportunity for discussion. It is structured around the following main modules:

- Political and legal dimensions of regional electricity grid interconnection;
- Overview of feasibility assessment for regional grid interconnections;
- Regional market analysis and resource development;
- Optimal sharing of benefits;
- Power systems interconnection;
- Financing interconnection projects;
- Market operational structures; and
- Interconnected systems operating conditions.

E. Organization

The Seminar is being organized by the United Nations Department of Economic and Social Affairs (UNDESA) and hosted by the Ministry of Electricity and Energy of Arab Republic of Egypt. In the framework of a partnership with UNDESA, the e7 is supporting the Seminar, with experts giving presentations on the various aspects of regional electricity interconnection. The e7 is a group of major electricity companies from G7 countries which, through e7 Network of Expertise for the Global Environment, provides, human capacity building to developing and emerging country utilities, government entities, and organizations on electricity related issues.

F. Participants

The Seminar has been specifically designed to be most useful to middle management representatives and technically oriented personnel of electrical utilities involved in power system planning and operation. Other participants in the electrical power industry would also benefit from this seminar, especially representatives of governmental agencies responsible for the power sector, regulators and transmission facility owners or operators. Representatives of international institutions as well as developers and sponsors of transmission projects could also be interested in view of their existing or planned involvement in regional projects for the development of the electrical networks infrastructure.

The total number of participants will be approximately 30-35 persons. Regional participation will consist of 18-25 persons from countries in Africa, in particular those where the potential for electricity grid interconnections has not been fully exploited.

G. Date and Venue

The Forum will be held in Cairo, Egypt, from 19-21 June 2005.

H. Communication

Communications related to the organization of the workshop should be directed to

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