

PARTNERSHIP INITIATIVES INFORMATION SHEET

Name of the Partnership/Initiative

AFRICAN ENERGY LEGACY PROJECTS

Expected date of initiation: 2003

Expected date of completion: 2010

Partners Involved:

Governments:

The 14 Member States of SADC; with immediate linkages to:

The Democratic Republic of Congo and its' national electric utility: SNEL;

Angola and its' national electric utility: ENE;

Namibia and its' national electric utility: NamPower

South Africa and its' national electric utility: Eskom.

Malawi and its' national electric utility: Escom Ltd

Mozambique and its' national electric utility: EdM

Kenya and its' national electric utility: Zesco

Tanzania and its' national electric utility: Tanesco

Zambia and its' national electric utility: Kplc.

The Member States of the African Union; through its' association with NEPAD

Member States that will be participating in the East and West African Power Pools

Intergovernmental organizations:

NEPAD is a comprehensive, integrated development plan that addresses key social, economic and political priorities for the continent. It entails a commitment by African leaders to African people and the international community to place Africa on a path of sustainable growth, accelerating the integration of the continent into the Global economy. It calls on the rest of the world to partner Africa on her own agenda and programme of action.

Energy access has been identified as a national priority of the South African Government, as well as a priority area for NEPAD. NEPAD specifically states with regard to the energy sector that "energy plays a critical role in the development process, first as a domestic necessity but also as a factor of production whose cost directly affects prices of other goods and services, and the competitiveness of enterprises.

The energy projects proposed form part of the overall NEPAD implementation strategy. The Southern African Power pool was created in 1995 at a SADC summit, where member governments of SADC signed an Inter-Governmental Memorandum of Understanding for the formation of an electricity pool in the region. A process is underway to strengthen the Western and Eastern African Power pools. The four regions of Africa are captured in the map below:



On a continental level Africa energy resources are distributed as follows:

Natural gas and oil– mainly in north, west and southern Africa

Coal – mainly in southern Africa

Hydro power – mainly central Africa

It is considered that the continent may maximise the benefit of developing its energy resources for power supply, by developing its hydropotential resources thus optimising the export potential of its natural gas resources (in a NLG or GTL form) in return for hard currencies necessary for the development of infrastructure in general, and developing local gas markets where economy of scale makes it viable (e.g. petrochemical and mineral beneficiation industries).

With a view to ensure a long term reliability of power supply for all its regions, it is necessary for Africa to develop a continental transmission grid, which will enable the transfer of power generated anywhere in the continent, thus diversifying the power sources for any market in the continent.

Major groups:

The national electric utilities in the various member states.

World Bank, in terms of their involvement in the Southern African Power Market initiative , which is supported by the Southern African Power Pool (SAPP).

Other:

Leading Partner:

Name of the contact person/focal point:

Details to be confirmed, please contact submitter in interim.

Address:

Phone:

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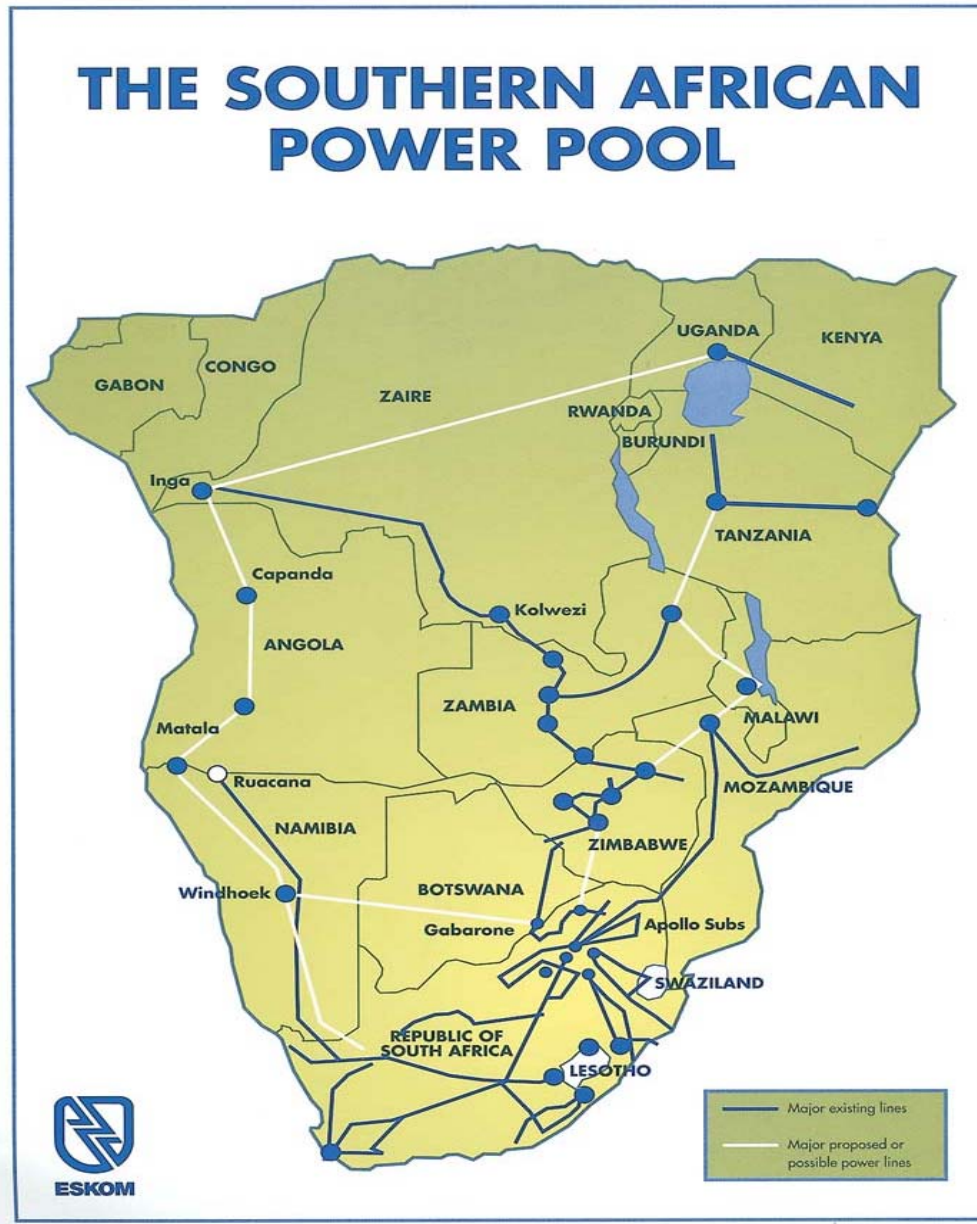
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Main objectives of the Partnership/Initiative

There has been extensive work in assessing the energy needs of the African continent. We have now reached the point where the key energy projects critical for the strategy envisioned by NEPAD have been identified.

A primary requirement to assist in the electrification of Africa is to complete the interconnectors between the various countries and their respective utilities, so that Africa has one interconnected transmission grid. The transmission interconnectors are predicated on the basis that, while some countries and/or regions have excess generation capacity, others are experiencing shortages, with serious consequences for their economic and social development. While it is technically possible for each country to develop sufficient energy resources to meet their needs in the medium to longer term, this approach ignores the economic and environmental efficiencies possible through regional co-operation. This is viewed as an important first step, as it allows undersupplied countries, or countries supplied primarily by hydro-electricity, who are subject to fluctuations in supply during drought cycles, to have immediate access to a pool of electricity when required, and to contribute to such a pool when water levels are high. This facilitates uninterrupted power supply throughout Africa.

The map below is an illustration of the energisation vision of Africa and demonstrates how the proposed projects contribute towards this vision.



From NEPAD perspective therefore, regionally viable projects are proposed in the following context of developing a pan African Transmission Grid and the hydro resources of the Inga river as follows:

- Eastern transmission corridor development through the completion of the SAPP interconnection network to Tanzania and Malawi, and further extension of the SAPP grid to eastern Africa through an HV Tx line from Arusha in Tanzania to Nairobi in Kenya.
- The above Tx projects will, in the short term, enable the wheeling of power from existing excess capacity markets (RSA, Zambia, Mozambique and DRC), to existing capacity-short markets (Tanzania, Malawi, Kenya).

- In the medium to long term horizon these lines will enable the delivery of power from future rehabilitated and newly developed hydro resources in the DRC, Zambia and Mozambique to Eastern Africa including Kenya, Sudan, Ethiopia and Arithrea.
- As a second development phase it is proposed to further develop the enormous and stable hydro power resources of central Africa through the rehabilitation of existing plants like the Inga 1 and 2, which will add about a 1000 MWe, and the development of new greenfield plants like the Inga 3 (1500-3500 MWe). In the medium to long term horison it is proposed to develop the 40 000-50 000 MWe hydro-power potential of the Grand Inga.
- However major transmission lines will be required to wheel the Inga power to the Southern, eastern and South African markets. It is therefore proposed to reinforce and upgrade the eastern corridor HV Tx line from DRC to Zambia and to develop the DRC-Angola-Namibia-South Africa Tx line (the “Western Corridor”).
- In conjunction with the large scale development of the hydro resources of central and southern Africa, it will be necessary to upgrade the Transmission line from DRC (Inga) to Zambia and to develop the Western transmission corridor from Inga in the DRC through Angola, Namibia, Botswana to South Africa.
- In terms of the development of a continental grid it is important to create a link between the Southern African Power Pool (SAPP) and the West Africa Power Pool (WAPP). This will require the developing of a DRC-Congo Brazzaville- Gabon-Equatorial Guinea- Cameroon-Nigeria HV Tx line.
- Another (direct) connection to Eastern Africa market is proposed to be developed by a HV Tx line from the Inga to Uganda.
- In the medium to long term horison it is proposed to link the Inga to Cairo by an HV Tx line from Nigeria, or Cameroon via Chad, Libya and Egypt.
- However, with a view to build-up investor confidence in this part of the continent, it is proposed to embark on a smaller size rehabilitation project of an existing 95 MWe hydro plant at Zongo and Sanga site which, in the short term, will provide a reliable power supply to Kinshasa and Brazzaville.

This partnership/initiative will support the objectives of Agenda 21 as well as relevant goals and objectives of the United Nation Millennium Declaration, in that:

- Integrated planning is required to optimise energy resources and minimise environmental impacts.
- Identification and quantification of the environmental and social aspects must be explicitly considered in the scope of work.
- Ultimately, a western corridor will be required to access the substantial hydropotential in central Africa, which is seen as a possibility for mitigating against projected increases in fossil fuel-fired plant greenhouse gas emissions in southern Africa.

- It will ensure a stable and cost-competitive electricity supply to existing capacity-short countries, which is a necessary and facilitating factor for economic and social development (specifically health and education).
- It will reduce energy security risks for all the partners in the respective power pools, by providing access to a larger number/variety of generating resources, which have complementary risk profiles.
- It will expand participation and experience in a regional electricity market, which could build capacity/ lay foundations for further partnerships/initiatives.
- It will reduce energy supply risks for strategic facilities in Kinshasa (including hospitals).
- Successful completion of this relatively small project may provide a suitable demonstration to encourage investor confidence in central Africa, which will in turn be required to rebuild the country when peace agreements have been concluded.
- Investor confidence will also be required for implementation of Grand Inga, a key link in the vision of a Pan-African electricity grid.

Expected results:

- Improved capacity for regional and sub-continental electricity trading.

Specific targets of the Partnership/Initiative and timeframe for their achievement:

To complete the Western Corridor scoping study by December 2002, with full implementation by 2010.

To construct 200km of 220kV transmission line between Matambo Substation (Tete, Mozambique) and a substation north of Blantyre, Malawi by 2005.

To construct 370km of 330kV transmission line between Nairobi (Kenya) and Arusha (Tanzania) as well as 670km of 330kV transmission line between Mbeya (Tanzania) and Pensulo (Serenje, Zambia) by 2005.

To refurbish the Zongo and Sanga hydroelectric facilities in order to restore their generation capacity from 17MWe to 87MWe. To interconnect the two facilities (12km), refurbish the transmission system for power delivery to Kinshasa and repair the access roads.

Coordination and Implementation mechanism

Progress on the initiative is being tracked by the Coordinating Centre for the Southern African Power Pool

The Western Corridor is the subject of an inter-utility MoU that provides for the establishment of a joint venture company for implementation. Current activities are coordinated through a Steering Committee consisting of the Chief Executive Officers of the four utilities involved.

The implementation and operation of the remaining interconnectors could be funded by the World Bank, the individual utilities or through a special purpose company, in which several stakeholders may choose to participate.

Arrangements for funding

Total investment for the four components outlined above are estimated at US\$ 800 million. World Bank has committed to undertaking some aspects of this (Mozambique-Malawi interconnection and the feasibility study for the Tanzania-Zambia interconnection). In the case of the Western Corridor, it is expected that all four utilities would contribute equity and take shareholding in the joint venture company. It is envisaged that the Zongo-Sanga refurbishment could be funded through a joint venture between Eskom Enterprises and Nampower International. Further partners are invited to express their interest.

Arrangements for capacity building and technology transfer

The Partnership/Initiative will specify the use of credible local implementation partners. Local and existing staff will be used on all the projects for the implementation, operation and maintenance, which will build local capacity. Although no formal arrangements for technology transfer have been envisaged, the project is likely to use the best internationally available technology and so will include the introduction of new technologies in the region. Discussions concerning transmission line structures, configurations and supporting telecommunication systems are also likely to result in informal transfers.

Links of Partnership/Initiative with on-going sustainable development activities at the international and/or regional level (if any)

The initiative supports the diversification of electricity sources and socio-economic development. Apart from supporting NEPAD and adhering to best environmental practice, detailed design of the project will take into account synergies with existing sustainable development initiatives, such as the Peace Parks initiative, eradication of land mines and improvement of local infrastructure.

Monitoring Arrangements

Progress on the initiative is being tracked by the Coordinating Centre for the Southern African Power Pool and regular updates can be made available.

Other relevant information:

For further information about SADC, SAPP and NEPAD, please investigate the following web-sites:

www.sadc.int (this site also has links to the member governments)

www.sapp.co.zw (this site also has links to the member utilities)

www.nepad.org

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