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REVIEW OF NEPAD STAP STATUS OF ENERGY DEVELOPMENT IN AFRICA

Background to NEPAD STAP Report

- Presents an overview of the energy sector in Africa
- Challenges to energy development
- Findings of the review in regard to the progress being made on the implementation of the NEPAD Short Term Action Plan energy infrastructure projects

Background to NEPAD STAP

- NEPAD – Short Term Action Plan is major Continental initiative to develop infrastructure under the auspices of NEPAD
- Several infrastructure development projects identified and ear marked for fast tracking under the NEPAD STAP

What is NEPAD?

- NEPAD is an AU Programme intended to develop Africa and eradicate poverty and place African countries on a path to sustainable development

Main Objectives of NEPAD in Energy Sector

- To increase Africans' access to reliable and affordable commercial energy supply from 10 to 35 per cent or more within 20 years
- To improve the reliability and lower the cost of energy supply to productive activities in order to enable economic growth of 6 per cent per annum
- To rationalize the territorial distribution of existing and unevenly allocated energy resources

Main Objectives of NEPAD in Energy Sector

- To strive to develop Africa's abundantly available solar energy resources
- To reverse environmental degradation that is associated with the use of traditional biomass fuels
- To exploit and develop the hydropower potential of the river basins of Africa



Main Objectives of NEPAD in Energy Sector

- To integrate transmission grids and gas pipelines so as to facilitate cross-border energy flows
 - To reform and harmonize petroleum regulations and legislation in the continent
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Role of NEPAD in STAP Energy Projects

- Facilitating mobilization of resources
- Facilitating conclusion of agreements
- Monitoring implementation of projects
- Facilitating liberalization of energy markets
- Assist in resolving conflict and loan arrears issues
- Help create conducive environment for attracting investment
- Help finalize shareholding agreements



Role of NEPAD in STAP Energy Projects

- Facilitate adjustment of regulatory frameworks
 - Assist in developing a coordinated approach to environmental negotiations
 - Catalyst for unified action in regional cooperation in oil/gas trade
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Role of NEPAD in STAP Energy Projects

- Assisting in ratification of Convention and appointing Supervisory Bodies
- Facilitating adoption and/or implementation of conventions
- Disseminating lessons learnt

Criteria for Selection of NEPAD STAP Projects

- Projects that were at an advanced stage of preparation
- Projects that supported both a regional approach to infrastructure provision and regional integration
- Projects that had stalled for political reasons and where NEPAD's intervention could be expected to make a difference



Criteria for Selection of NEPAD STAP Projects

- Initiatives that offered solutions to regional policy, regulatory or institutional blockages to regional infrastructure activities
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Types of Infrastructure Projects

- Physical infrastructural projects
- Studies for infrastructure projects
- Capacity building projects
- Facilitation projects
- Projects taken from various Regional Economic Communities (RECs)

Framework at Continental Level

- The AU through its organs formulates policy and decisions; rules, guidelines and mechanisms to oversee the development of the energy sector
- AfDB – key financial partner
- African Energy Commission (AFREC)

Framework at Regional Level: RECs

- The Arab Maghreb Union (UMA)
- Community of Sahelo-Saharan Countries (CEN-SAD)
- The Common Market for Eastern and Southern Africa (COMESA)
- The East African Community (EAC)
- Economic Community of Central African States (ECCAS)

Framework at Regional Level: RECs

- Economic Community of West African States (ECOWAS)
- The Inter-Governmental Authority on Development (IGAD)
- The Southern Africa Development Community (SADC)
 - SADC Energy Protocol
 - ECOWAS Energy Protocol
 - ECCAS Energy Protocol

Framework at Regional Level: The Power Pools

- Central African Power Pool (CAPP)
- East African Power Pool (EAPP)
- Maghreb Electricity Committee (COMELEC)
- Southern Africa Power Pool (SAPP)
- West African Power Pool (WAPP)

Key Financial Institutions

- Development Bank of Southern Africa (DBSA)
- West African Development Bank (BOAD)
- ECOWAS Bank for Investment and Development (EBID)

Situational Status of Energy Sector in Africa

- Over 80% of the population uses unprocessed forms of biomass for their energy needs
- As of 2005 only 37.8% of the African population had access to electricity
- Access in rural areas stood at only 19%
- In Sub-Saharan Africa 26% of the population had access to electricity
- In Sub-Saharan Africa 92% of those living in rural areas had no access to electricity

Situational Status of Energy Sector in Africa

- 3% of the world's electricity is produced in Africa and the installed capacity per capita consumption is the lowest in the world
- Demand for commercial and domestic energy consumption has grown significantly due to growth in economic activity

Situational Status of Energy Sector in Africa

- Energy resources in Africa constitute a significant percentage of the world resources.
 - Coal reserves – 5.9%
 - Crude oil – 10.6%
 - Natural gas – 8.0%
 - Uranium – 20.4%
 - Hydropower – 11.2%



Situational Status of Energy Sector in Africa

- Additional energy resources include;
 - Biomass
 - Geothermal
 - Solar
 - Wind

Situational Status of Energy Sector in Africa

- Rate of exploitation of resources is low
- Most of the production is exported outside the Continent and not enough is available for use by Africans
 - 25% of coal produced in Africa is exported
 - Crude oil - 74.4%
 - Natural gas - 51.9%
 - Uranium – over 90%

Status of energy production in Africa

- Refining capacity is inadequate in Africa
- Most refineries using obsolete technologies with the exception of South Africa
- A number of African countries have ALSO expressed interest in building capacity for nuclear power generation

Status of Energy Production in Africa

- South Africa is the only African country with two small nuclear energy plants and is planning to build 24 more plants as a way of increasing its energy supplies and mitigating green house gas emissions from its coal fired power plants.

Status of G8 Capacity Building Initiative

- Capacity Building Initiative for RECs in Africa with a specific focus on infrastructure development to help expedite NEPAD STAP implementation.

Status of G8 Capacity Building Initiative

- Initiative is primarily targeted at building capacity within the AU Commission and the RECs with other institutions such as River Basin Organizations (RBOs) and Power Pools accessing the facility with the RECs acting as intermediaries.

Status of G8 Capacity Building Initiative

- Support for the faster implementation of regional infrastructure priorities as identified in the NEPAD STAP; and
- Enable RECs to facilitate processes for the development of regional strategies going beyond infrastructure.

Status of G8 Capacity Building Initiative

- It was decided that the G8 Capacity Building Initiative be integrated into the existing NEPAD Infrastructure Project Preparation Facility (NEPAD-IPPF) to avoid creation of new bodies.

Status of G8 Capacity Building Initiative

- The NEPAD IPPF was established with the purpose of contributing to mobilization of technical and financial resources to strengthen the capacity of African institutions and governments to formulate viable infrastructure development projects and programmes that can attract public and private investments.

Status of G8 Capacity Building Initiative

- With the support of various donors such as Canada, Norway, Denmark, DFID and AfDB, the facility finances activities of an advisory and operational nature related to preparation of infrastructure projects and programmes within the framework of NEPAD.

General Implementation Status of Projects

- Few completed
- Of those completed, none were completed on time
- Notable achievements include the completion of the WAPP Master Plan, completion of the West Africa Gas pipeline, Nigeria-Benin Interconnector
- In terms of capacity building AFREC has been launched, but has not become fully operational itself



Key Constraints in energy infrastructure implementation

- Prioritization of perceived national interests by focusing on country as opposed to regional projects which provide better economies of scale and security of energy supply
 - Limited access to information about regional projects by financiers and potential project developers thereby hindering effective evaluation of the projects
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Key constraints

- Limited financial resources due to the high number of projects requiring investments and in some cases due to the large investment requirements for a single project;
- Poor creditworthiness of utility companies whereby the companies have no capacity to obtain financing without government guarantees or partnership with other more creditworthy companies;

Key constraints

- Inadequate capacity to prepare and implement energy infrastructure projects at both human resource and institutional level and the lack of manufacturing facilities for materials and equipment required for energy infrastructure development



Key constraints

- Poor business environment manifesting through lengthy facilitation processes required in terms of political, regulatory requirements, intergovernmental accords for cross border projects
- Market factors including size and structure of power markets, prevailing prices/tariffs and poor regulation

Key constraints

- Procurement and Financial Management Issues - Currently financial governance is still perceived as an area of weakness
- Monitoring and Evaluation Systems - RECs need to develop more robust monitoring and evaluation systems to ensure that they are able to check progress on the infrastructure projects.



Key Lessons and Observations

- There is a growing demand for commercial energy in Africa
 - Regional integration essential
 - Prioritization of capacity building
 - Establishment of effective and efficient institutional operational frameworks prior to or early in the implementation process
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Key Lessons and Observations

- Lack of access to energy is a significant impediment to Africa's development
- Economic development can only be achieved if other infrastructure such as ICTs, transport and water are available alongside energy infrastructure
- Individual African economies are too small to be able to bear the costs of power infrastructure as individual countries

Possible Areas of Intervention

- The promotion of energy conservation and efficiency so as to maximize available resources are being taken in some parts of the continent and need to be promoted on a wider scale.
- The promotion of energy efficiency and conservation measures at regional level in the SADC region could reduce power requirements there by mitigating the effects of current power deficits on the continent.

Possible Areas of Intervention

- **Harmonization** of regional policies and regulations so as to facilitate expedience in the implementation of regional energy projects
- **Optimizing institutional frameworks** at continental, regional and country levels so as to ensure effectiveness by increasing capacity, reducing bureaucracy and duplication of responsibilities in the formulation and implementation of policies and regulations

Possible Areas of Intervention

- **Prioritizing regional energy projects** at country level by involving national institutions in short listing priority regional projects thereby eliminating perceived competition between regional projects and country projects.
- **Encouraging greater commitment to regional projects at country level** by getting countries to commit to the promotion of shortlisted regional projects and integrating the projects in national master plans

Possible Areas of Intervention

- **Undertaking adequate power market reforms** at country and regional level in order to attract private sector investments in the power sector and to improve efficiencies in operations of the regional power pools

Possible Areas of Intervention

- **Improve project planning and preparation** by necessary capacity building measures thereby facilitating effectiveness in energy infrastructure development.

Conclusions

- It is evident that Africa is endowed with adequate natural resources to produce sufficient quantities of efficient commercial energy to supply the entire continent.
- access to commercial forms of energy in Africa is the lowest in the world and the majority of the people particularly in sub-Saharan Africa cook using biomass energy sources.



Conclusions

- The challenge is to harness the vast natural resources to facilitate increased access to commercial forms of energy particularly electricity.
 - Low levels of access are mainly due to the lack of relevant capacity for energy production.
 - Poor access to energy contributes to the limited economic activity.
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Conclusions

- The demand for energy is increasing mainly due to the increase in investment activities on the continent.
- Subsequent to the above, the need to increase investment in the energy sector is critical

Conclusions

- A major challenge facing the NEPAD STAP Energy Projects is financing. Traditionally, public funds have been the main source of financing for the energy projects in most countries on the continent. But a key lesson in terms of financing of energy projects is that the huge costs of building cross border power projects means that public funds alone are not adequate. The thrust now has been more towards increasing private investment in power projects.



Conclusions

- Prioritizing capacity development paves the way for more efficient project development. Further, capacity building should be mainly directed to regional and country institutions that facilitate projects. Key capacity building needs include; skills development in project preparation and developing, monitoring and evaluation as well as procurement procedures and financial management;
- A key lesson that could be drawn is that focusing on a limited number of priority projects increases the chances for successful implementation;

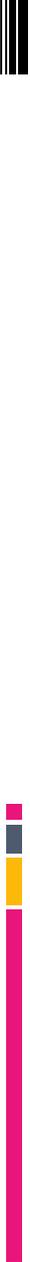
Conclusions

- There is need for risk sharing between the public sector and private sector in the development of priority regional energy projects; and
- There is need for further market reforms in the African power sector



Conclusions

- The need to promote energy efficiency was recognized in the NEPAD STAP programme, however so far the implementation measures have not been adequate.
- It is therefore recommended that the RECs spearhead more rigorous and coordinated energy conservation and efficiency programmes in each of the member countries. These energy conservation and efficiency measures should be adopted and implemented as NEPAD priority projects.



Thank you