

AN INDUSTRY PERSPECTIVE ON TRANSPORT AND TRANSIT OF ENERGY

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INTRODUCTION

- The geographic distance between energy resources and demand centers requires the construction of physical infrastructure
- Energy transport is the movement of energy materials from one country, to the destination country, through transit countries.
- This paper will discuss some of the factors which affect the ease of energy transit with particular reference to electricity and natural gas transportation and transit in West Africa.

ENERGY TRANSIT CHALLENGE: INFRASTRUCTURE

- In some regions of the world, adequate infrastructure for power and gas transport remains a challenge.
- Present electricity demand of West African Power Pool is about 15,000 MW, but only about 6,500 MW is being met. The shortfall is due to inadequate generation capacity and transmission infrastructure as well.
- While Nigeria has abundant natural gas resources to meet the demand of the sub-region, limited pipeline infrastructure contributes to the inability to transport natural gas to countries in the region.

CHALLENGES: NON-UNIFORM STANDARDS

- Grid infrastructure planning is not done on a regional basis.
- Past attempts to interconnect countries have sometimes been deadlocked because neighbouring countries could not reach compromises on differing standards.
- The establishment of the West African Power Pool (WAPP) seeks to harmonize many of the differing standards.

CHALLENGES: TECHNICAL AND OPERATIONAL ISSUES

- System stability issues constrain power system operators from increasing transfer capability for economy power transfers.
- There was the need for emergency power transfers from Nigeria in 2007 to mitigate supply shortfall in Togo, Benin and Ghana, however this could not be achieved as a result of system stability issues.

CHALLENGES: ALLOCATION OF CROSS- BORDER TRANSMISSION COSTS AND BENEFITS

- For network infrastructure systems cost allocation and project cost recovery are issues that need to be well defined to encourage investment.
- It is difficult identifying beneficiaries to whom transmission infrastructure project costs must be allocated.
- Utilities in the western regions of PJM Interconnection LLC in the USA have rebuffed attempts by PJM to socialize major large transmission projects

CHALLENGES: ALLOCATION OF CROSS- BORDER TRANSMISSION COSTS AND BENEFITS CONTD.

The industry must address the cost allocation issue and adopt a methodology that is fair and reasonable to allocate project cost especially in networked systems.

The methodology must address difficult issues such as:

- The applicable discount rate
- Assumptions used to determine project benefits
- Time frame to be used for measuring project benefits and costs
- Benefit/Cost ratio needed to justify project construction and cost allocation

CHALLENGES: TARIFF /PRICING

- Tariff setting is critical for attracting investment into the industry and catering for infrastructure development, maintenance and expansion.
- Tariff setting in some of the individual countries/institutions in West Africa has not always reflected the long-run marginal cost of production and transportation.
- Current government policies need to be changed to allow full cost recovery of energy investment and eliminate subsidies.

CHALLENGES: TARIFF /PRICING CONTD

- Transit tariff reflects economic interest of a country, i.e. what is the cost for using the territory of a country for transit;
- Transportation tariff is established considering all expenses, profitability of operations and payment of taxes.
- There are different views on how these tariffs should be considered in determining the cumulative tariff to be paid when energy is transported across borders.
 - Postage Stamp System
 - “Pancake” System
- The latter, obviously, does not promote cross-border trade

CHALLENGES: INVESTMENT CLIMATE

- Investors are very cautious of the business and financing risks.
- Factors that affect the ability to attract investment in support of energy transport and transit include political, economic, social, technological and legal concerns.

CHALLENGES: INVESTMENT CLIMATE CONTD.

- Political stability is necessary for investment in energy transport and transit infrastructure
- Many countries in Africa have enormous energy supply potential but investors have stayed away because of political instability.
- D.R. Congo has enormous hydro resources but investors are wary of political instability and have thus stayed away

CHALLENGES: INVESTMENT CLIMATE CONTD.

- In some cases, challenges with maintaining law and order frustrate investment in energy transport and transit infrastructure.
- For example, one of the challenges facing the operation of the West African Gas Pipeline Project (WAGP) intended to supply gas from Nigeria to Benin, Togo and Ghana is vandalism.

CONCLUSION

- The issues discussed in this presentation namely infrastructure, transport, transit, cross border costing, non-uniform standards, tariffs and investment climate although by no means exhaustive, all have a direct and distinct impact on energy trade.
- They are therefore in my view key issues to be considered and addressed towards achieving an effective and efficient energy transport and transit system globally.



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