Catalysing investment in sustainable energy infrastructure in Africa: Lessons from Zambia and Tanzania

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Sustainable infrastructure for Africa

- Africa’s infrastructure needs are considerable:
  - $90 trillion investment needed over next 15yrs
    - Cities
    - Transport systems
    - Energy systems
    - Water and sanitation
    - Telecommunications

- How to meet these needs in a sustainable way?
  - Achieve development aspirations of African countries
  - Resilient in the face of climate change
  - Does not adversely impact environment and ecosystems
  - Green infrastructure has become a topic of global interest
Understanding the challenge of infrastructure development in Africa

• Need to balance
  – Liberalization vs. the right to regulate
  – Attractive risk-return rates vs. accessible and affordable services
  – Private investment vs. public investment
  – Global scope of SDGs vs. special effort in LDCs
Methods

• Case study approach
  – Historical analysis of infrastructure development
    • Case study 1: Electricity infrastructure in Zambia
    • Case study 2: Natural gas infrastructure in Tanzania
    • By understanding the past, we gain insights on barriers and opportunities for sustainable infrastructure development in the future
  – Data gathering and analysis
    • Semi-structured interviews with stakeholders
    • Desk-based review of reports, grey/academic literature
Key Findings from Zambia

- Country currently faces severe energy crisis:
  - Lack of diversity in electricity supply;
  - Widening gap between supply and demand;
  - Delayed implementation of pipeline projects;
  - Limited political will to address ‘structural’ issues in energy sector

- But energy crisis offers ‘window of opportunity’:
  - Clear problem affecting the economy
  - Policy options available, such as tariff reform and feed-in tariff
  - Political will to show problem has been solved before elections in 2017

- It is not clear that implementation will solve crisis:
  - Benefit of tariff increase may be negated by lifting life-line tariff threshold
  - Short term fix does not address need for long-term planning
  - Structural change not proposed
Key Findings from Tanzania

• Promise of indigenous natural gas to diversify energy mix still to happen
  – Large-scale investments take time
  – Chequered history of private participation in energy sector
  – Tricky to balance export and local use:
    • riots in Mtwara over lack of local benefits from local gas exploitation

• But investments are happening:
  – Upstream exploration continues
  – In 2015, new pipeline opened and downstream generation plants commissioned
  – Capacity starting to build in the sector, with training facilities opening

• Still lots to be done:
  – Need anchor projects to attract private sector investments in infrastructure
  – Need to further develop capacity
  – Need to encourage more CSR in natural gas sector
Lessons learned

• Africa’s infrastructure development needs are great and immediate
• Infrastructure development in general in Africa is difficult enough – doing it sustainably is an added challenge
• History shows that infrastructure development is complex and often unique

Recommendations

– Better governance mechanisms to ensure transparency of state-business relations
– Specific support from development partners to target sustainability of infrastructure investments
– Development of local capabilities to plan and implement long-term infrastructure development
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