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# 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

Thanks! - Asante sana! - Tack så mycket! [www.sei-international.org](http://www.sei-international.org)

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