

The background of the slide is a photograph of an outdoor paved area, possibly a parking lot or a walkway, with several trees and parked cars. The image is partially obscured by a dark grey horizontal band at the top and a white vertical band on the right side.

# Governance and Energy Development in Africa

**Common challenges and keys to success**

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# Barriers to Renewable Energy Technology – Union of Concerned Scientists

- ✓ Commercialization barriers faced by new technologies competing with mature technologies
- ✓ Price distortions from existing subsidies and unequal tax burdens between renewables and other energy sources
- ✓ Failure of the market to value the public benefits of renewables
- ✓ Market barriers such as inadequate information, lack of access to capital, "split incentives" between building owners and tenants, and high transaction costs for making small purchases

# Commercialization Barriers to Renewable Energy Technology – Union of Concerned Scientists

- ✓ Infrastructure – prospecting, permitting, marketing, installation, operation and maintenance
- ✓ Economies of scale
- ✓ Uneven government subsidies or taxes
- ✓ Market failure to value public benefits of renewables
- ✓ Institutional barriers
- ✓ High financing costs
- ✓ Split incentives

Governance is part of the solution or  
a barrier



*Zambia*

# Governance defined

- ✓ The exercise of authority or control
  - ✓ Signed treaties
  - ✓ Laws
  - ✓ Regulations
  - ✓ Taxes
  - ✓ Subsidies

*Johannesburg South Africa*



# Goals of Governance



*Niamey Niger*

1. Promote the development of energy for the citizenry
2. Regulate the development of energy to ensure safety, reliability and consistency with Government objectives

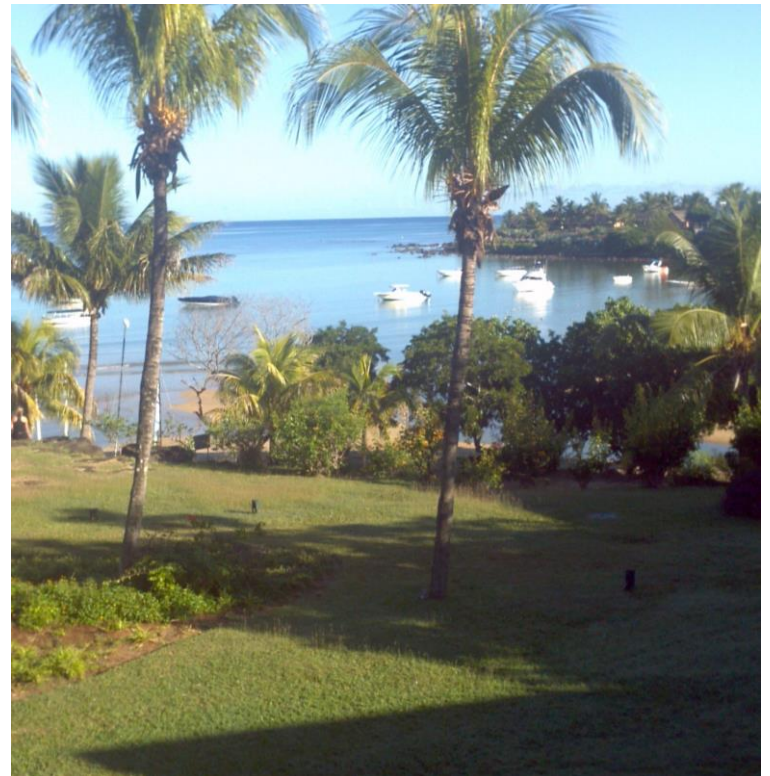
# Energy development involves many areas of governance

- ✓ Energy resource identification and development
- ✓ Energy generation
- ✓ Energy distribution
- ✓ Rights of way
- ✓ Surface water
- ✓ Mining
- ✓ Waste management
- ✓ Air emissions
- ✓ Tax
- ✓ Planning
- ✓ Environmental protection

*Southern Tanzania, near the Selous Game Reserve*

# Essential characteristics of governance

- ✓ Non-partisan
- ✓ Coordinated
- ✓ Scalable
- ✓ Technically accurate
- ✓ Implementable



*Port Louis Mauritius*



# Non-partisan

- ✓ **Consistent vision across parties over time**
- ✓ **Potential challenges**
  - ✓ **Uneven subsidies**
  - ✓ **Differing views on various sources**
  - ✓ **Differing views on the environment**

*Johannesburg South Africa*

# Coordinated

- ✓ **Governance of energy should be part of a broader framework**
  - ✓ **Sustainable cities**
  - ✓ **Ecovillages**
- ✓ **Potential challenges**
  - ✓ **Silos**
  - ✓ **Lack of harmonization**
  - ✓ **Conflicting requirements**

# Scalable

- ✓ Proactive and designed to accommodate the future state
  - ✓ Microgrids
  - ✓ Regional production and distribution
  - ✓ Expanding renewables
  - ✓ Developing environmental requirements
- ✓ Potential challenges
  - ✓ Reactive – Love Canal, Bhopal



*University of Witwatersrand, South Africa*

# Technically accurate

- ✓ All requisite expertise should be involved in governance decisions
- ✓ Technical details should be confirmed
- ✓ Potential challenges
  - ✓ Unintended loopholes or impediments due to:
    - ✓ Lack of specificity
    - ✓ Lack of clarity
    - ✓ Errors

# Implementable



- ✓ Design to enable proof of compliance
- ✓ Design to promote desired objectives
- ✓ Potential challenges
  - ✓ Government cannot prove compliance
  - ✓ Governed cannot prove or accomplish compliance

# Specifics depend on the country

- ✓ There should be a framework strategy to put energy into the larger context of development
- ✓ Energy resources should be coordinated regionally
- ✓ Microgrids should be part of the strategy
- ✓ Faulty grids should not be a limiting factor
- ✓ Energy should be renewable ultimately



*Mauritius*

# Thank you very much

## K2J

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*Southern Tanzania*

# The Presenter

- ✓ Africa scholar for 30 years
- ✓ Deep experience in environmental governance from government (USEPA) and industry (Energy and ICT) perspectives
- ✓ Frequent speaker on environmental and energy developments in Africa
- ✓ Over 20 years experience as an environmental consultant in developing economies – Caribbean, Africa, Latin America
- ✓ BS Geology & Geophysics, Yale; MA Geology, UC Santa Barbara; Doctorate Environmental Science & Engineering, UCLA