

Energy policy : As part of industrial policy experiment in Ethiopia



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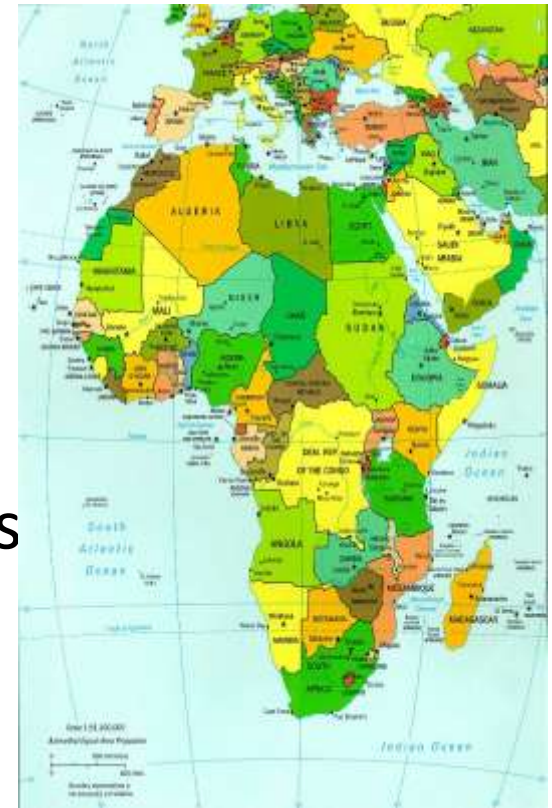
Outline of the presentation

1. Background information
2. Characteristics of the energy investment
3. Internal and external challenges (hydro power case)
4. Role of leadership
5. Intermediate outcomes(project on progress)

1. Background information

1.1 Ethiopia is

- A Country in the horn of Africa
- Total area : 1.13mil km²
- population: approximately 100 million
- Population growth: 2.3%
- Average annual GDP growth rate ~ 10 % (for 12 years)
- GDP per capita ~ \$739 (MoFECO, 2016)
- Currency: Birr (current exchange rate \$1 = EthBr 23)



1. Background information...cont

1. 2. Basic direction of the industrial policy in Ethiopia(EFDR,2002)

- Agricultural devt. led Industrialization, ADLI(there seems some shift currently)
- Labor intensive
- Export oriented
- Sustainable & cheap supply of energy

1. Background information..cont.

1. 3. Energy policy in Ethiopia

- Energy as an engine for economic devt.(providing cheap and sustainable supply)
- Energy as export commodity
- Renewable and environment friendly (take in to consideration the global concern)

1. Background information

1.4. Potential and utilized energy

Type	Potential	Utilized	Remark
Hydro power	45,000 MW	3,810 MW	
Wind	1,000,000 MW (recent study but not endorsed by the gov't)	324 MW	
Geothermal	10,000 MW	7MW	
Solar	5,000 MW	0	
Total	1.6 mil.MW	4,141 MW (0.26%)	

2. Characteristics

2.1. Expensive investment

- Eg. Ethiopian renaissance dam (6,450MW) costs \$ 5 billion

2.2. Extend over long period of time

- Eg. Gibe III(1870 MW) took 10 years (two gov't terms) to complete

2.3. Required advanced technical expertise

- Eg. Geology survey, Design, construction and monitoring



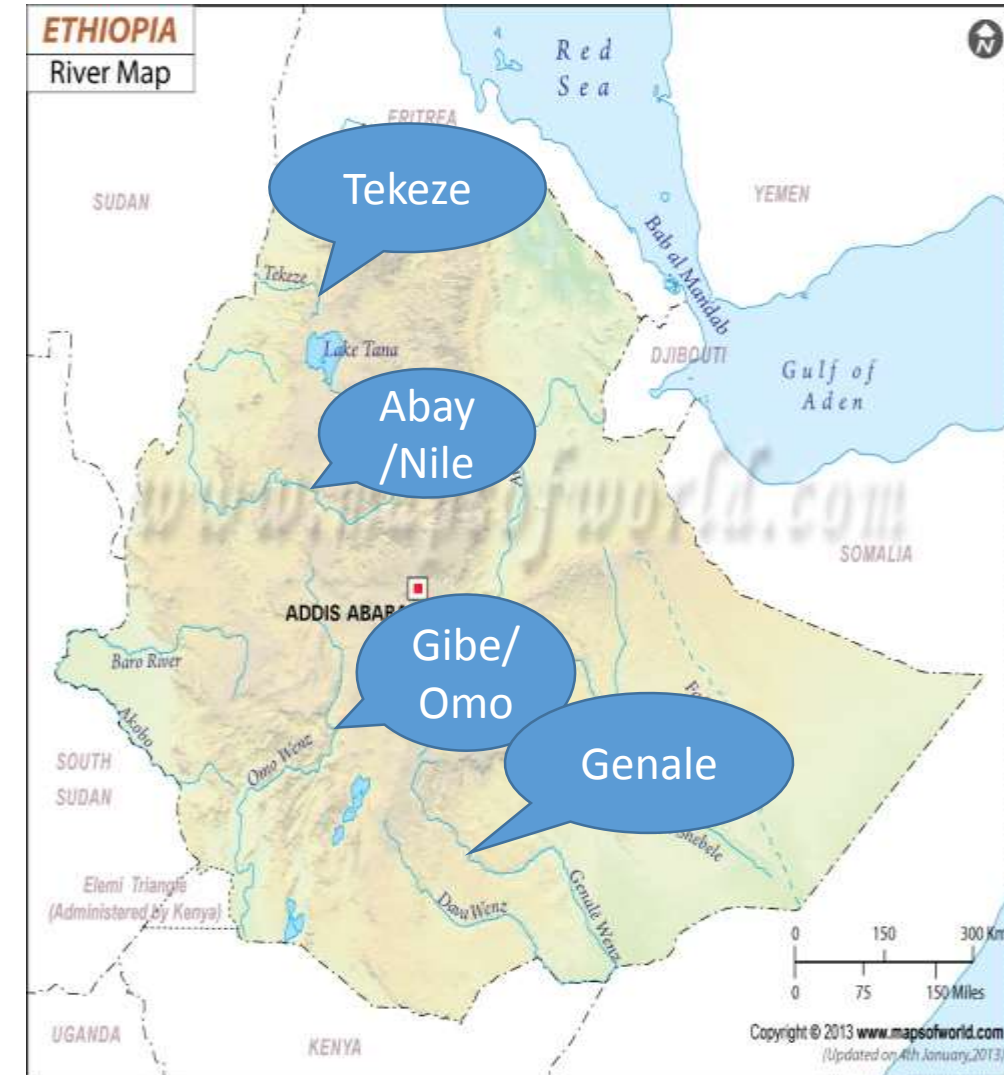
3. Internal and external challenges

3.1. Internal(dam politics and resource)

- With in the coalition parties (equity issues)
- Eg. Dam location
- Resource allocation decision(priority)
- Eg. Roads, railway etc

3.2. External(water politics and resource)

- cross country rivers (diplomatic challenge)
- Lack of loan and aid
- Environmental activists



4. Role of leadership

4.1. leadership consistency :

- clear priority, resource allocation commitment

4. 2. Flexibility:

- Accommodative but principled

4.3. Intensive diplomatic works

- Eg. Nile basin initiative(support from upstream Ctrs
- Establishment of tripartite forum
- Establishment of panel of international experts etc



4.Role of leadership...cont

4.4 . Resource mobilization

- Design other projects which supports the dam project but different naming. Eg. **National Grid Upgrading**
- Mobilization of local and diaspora Ethiopian to finance the project.
- Bond selling, donation etc.
- Foreign currency priority etc.

Role of leadership....cont

4.5. Determination to make the projects center of technology transfer (skill internalization)

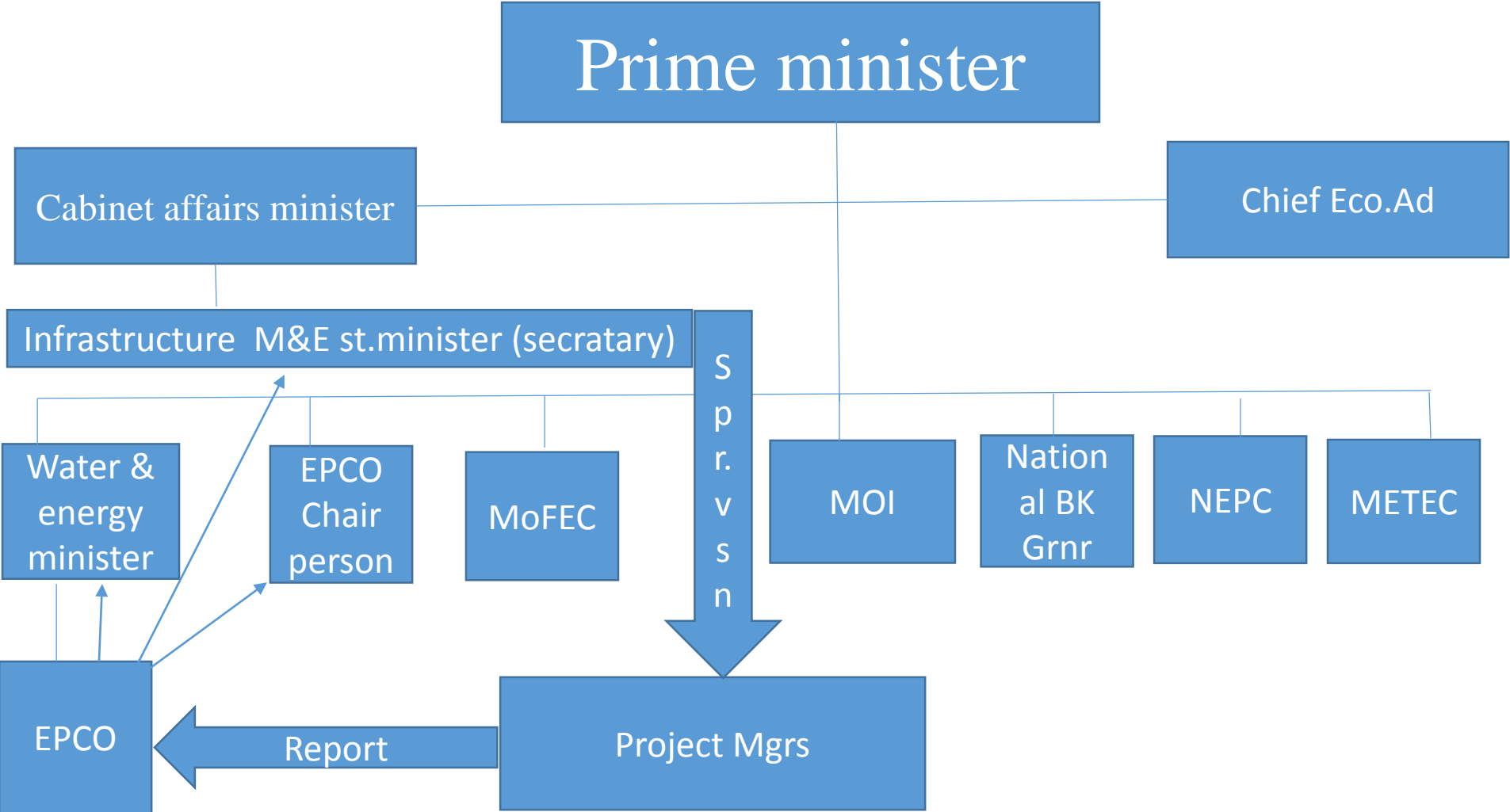
- More than 300 local engineers are working in the Renaissance dam under special assignment.
- Three selected Universities with engineering faculties are closely working as sub-consultants.
- MeTECo. a national metal and engineering corporation is responsible for the hydro mechanical engineering and subcontracted a French company and GE from US.

Role of leadership...cont

4.6. Strong Coordination :

- National energy committee led by the prime minister meet monthly
- Centralized
- Policy issues top down
- Technical issues bottom up

4.Role of leadership...cont



5. Intermediate outcomes

5.1. connectivity

5.1.1. Local connectivity

- Geographic access to electricity grid ~ 56%
- Household connectivity ~ 25%

5. Intermediate outcomes...cont

5.1. 2. Regional & international connectivity

A) connected

- Ethio-sudan.....250 MW.
- Will followed by 3000 MW connection
- Ethio-Djibebauti...90MW.
- Second phase under feasibility study
- Ethio-Kenya.....50MW.
- 2000 MW connection is under construction

B) On negotiation process

- Ethio-Rwanda, Ethio-Tanzania

C) Potential connections: Northern & southern Africa



5. Intermediate outcomes...cont.

5.2. Income generation from export

- About \$200 million annually, about double of the textile and garment export value.

5. Intermediate outcomes...cont.

5.3. Source of national pride and consensus building .

- As national pride to work with the projects
- Strong ownership existed
- Internal river politics almost dead



THANK YOU

