

FORCES DRIVING PUBLIC FINANCING

- **ISLAND** **☐ Ice ☐ Cold ☐ Warmth**
- **PHILIPPINES** - **Foreign Direct Investment**
- **NEW ZEALAND** - **Locals Empowerment**
- **KENYA** - **Affordability**

- **Competition for Foreign Direct
Investment**

IMPORTANCE OF GEOTHERMAL TO KENYA

ANALYSIS OF 2011/12- GENERATION

Operator	Type	Annual Generation (GWh)	Cost (Kshs)	fuel cost (Kshs)	Unit Cost (US\$/KWh)
Kengen	hyrdo	3450	10,913,478,954		0.03
	Geo	1106	3,498,639,920		0.03
	Therma	839	2,654,031,549	12,478,808,000	0.20
	wind	14.6	46,184,578		0.03
Agreco	Emergency	339	2,211,568,000	9,716,652,000	0.39
Tsavo	Thermal	283	2,029,823,000	4,601,127,000	0.26
Ibera africa	Thermal	705	3,103,530,000	12,474,844,000	0.24
Rabai	Thermal	338	2,567,325,000	5,176,546,000	0.25
Mumias	Co gen	100	412,766,000		0.05
Orpower 4	Geothermal	392	3,269,322,000		0.09
Total		7,567	30,706,669,000	44,447,977,000	
Average weighted price					0.11

Key Statistics -2011-12

- Average tariff ₱ US\$ 11
- Geothermal ₱ US\$ 0.09
- Thermal ₱ US\$ 0.24-0.39
- Thermal Generation- 29%
- Cost of Thermal ₱ 60% (US\$ 495.5 Million)

Projection

- 350 MW geothermal would replace all thermal

PROJECTED PRICE REPLACING THERMAL WITH GEOTHERMAL

Operator	Type	Annual Generation (GWh)	Cost (Kshs)	fuel cost (Kshs)	Unit Cost (US\$/KWh)
KenGen	Hydro	3,450	10,913,478,954	-	0.03
	Geothermal	1,106	3,498,639,920	-	0.03
	Wind	15	46,184,578	-	0.03
Mumias	Co-gen	100	412,766,000	-	0.05
Orpower 4	Geothermal	392	3,269,322,000	-	0.09
Additional Geothermal		2514.12	20,968,030,170		0.09
Total		7,577	39,108,421,621		
Projected average price					0.06

Expected results

- Reduction of average bulk tariff to US\$ 0.06
- Reduction of 48%

PUBLIC FINANCING-HISTORY AND LIKELY FUTURE



	1954-59	1959-69	1969-98	1998-09	2009-PRESENT
ACTIVITIES	DRILLING OF FIRST 2 WELLS	ZERO ACTIVITY	<ul style="list-style-type: none"> • OLKARIA <ul style="list-style-type: none"> - I ☐ 45 MW - II ☐ Production - III- Appraisal - IV ☐ Exploration • EBURRU - Appraisal 	<ul style="list-style-type: none"> • OLKARIA <ul style="list-style-type: none"> • I ☐ EXPANSION • II- 105 MW • III- 110 MW • IV- PRODUCTION • EBURRU- 2.4 MW 	<ul style="list-style-type: none"> • OLKARIA <ul style="list-style-type: none"> - I ☐ 140 MW - III- EXPANSION - IV ☐ 140 MW • MENENGAI <ul style="list-style-type: none"> • 105 ☐ DRILLING • BARINGO- SILALI
INSTITUTIONS	PRIVATE		PUBLIC	<ul style="list-style-type: none"> • PUBLIC • PRIVATE 	PUBLIC/PUBLIC OR PUBLIC/PRIVATE
MOTIVATION			DIMINISHING HYDRO	SCARCE FINANCING TO PUBLIC	COMMERCIAL & ECONOMIC FACTORS
	MYTH?				