



CONFIDENTIAL

Kenya's Geothermal Journey

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OUTLINE:

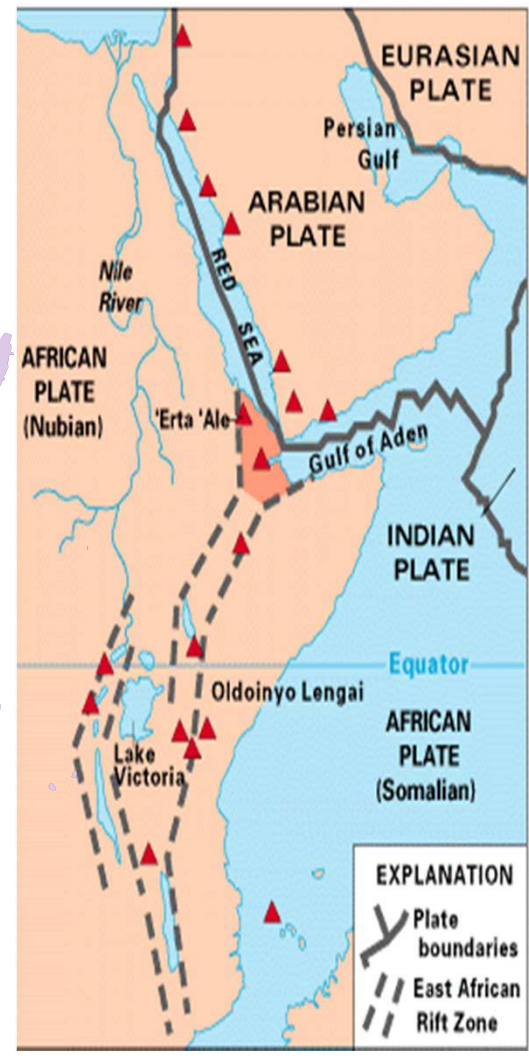
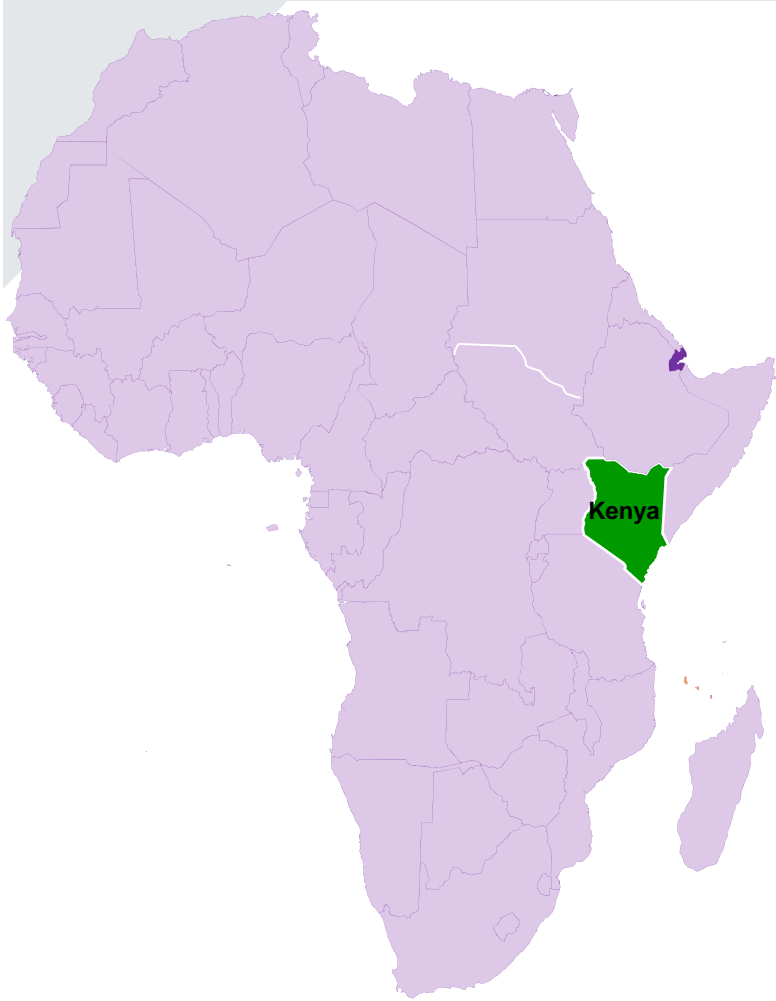
- 1 Preamble – Geothermal Potential in Africa and Kenya**
- 2 Kenya's Geothermal Journey**
- 3 Discussion**





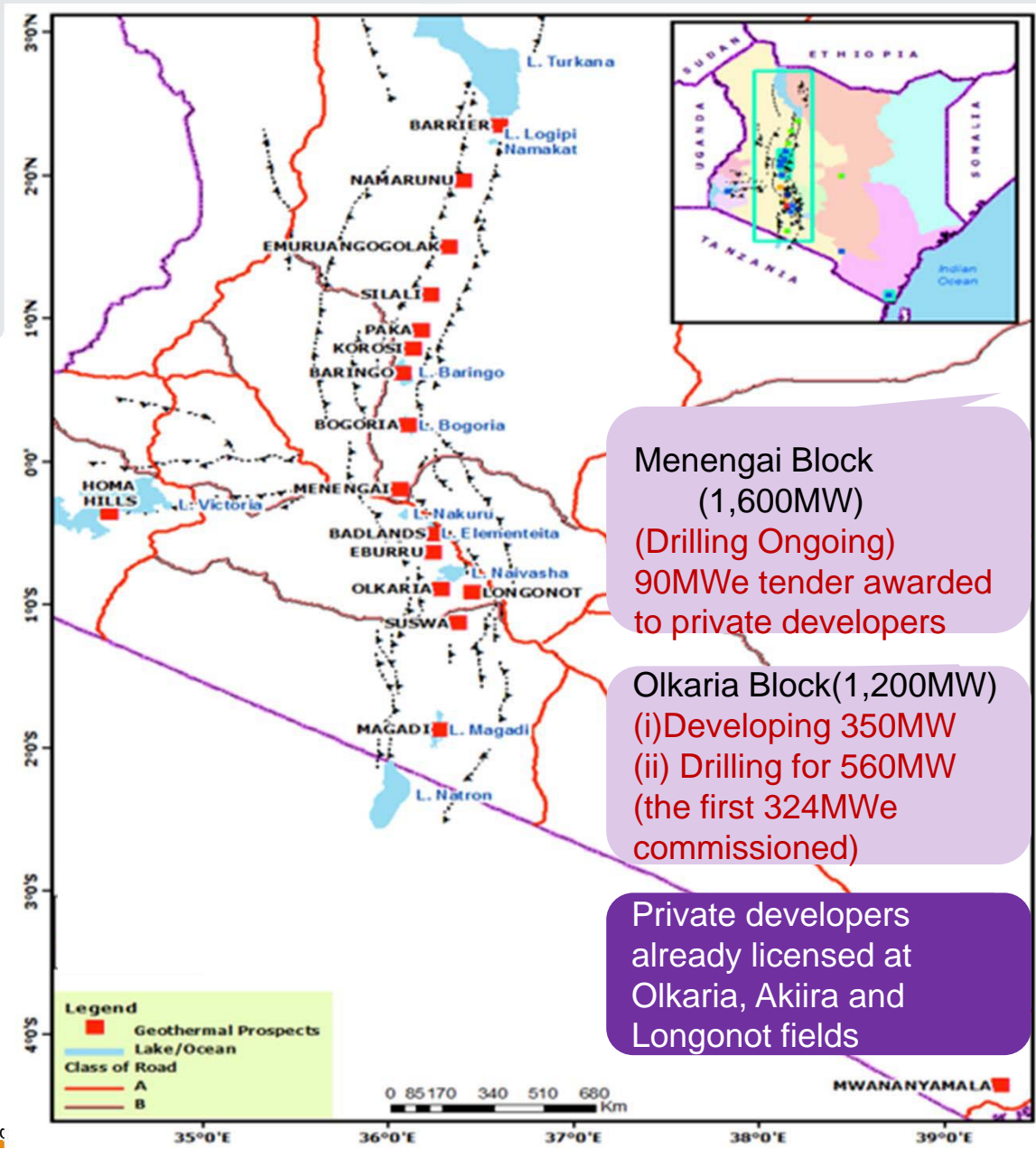
1 Huge Geothermal Potential in Africa but very little has been tapped...

>20,000MW potential



- 1 Kenya > 10,000MW
- 2 Ethiopia > 5,000MW
- 3 Rwanda > 700MW
- 4 Tanzania > 650MW
- 5 Uganda > 450MW
- 6 DRC - ?
- 7 Comoros - ?
- 8 Zambia - ?
- 9 Malawi - ?
- 10 Mozambique - ?
- 11 Djibouti - ?
- 12 Eritrea - ?
- 13 Burundi - ?
- 14 Sudan - ?

1 Kenya's Geothermal Potential 10 GW in over 23 sites...



Menengai Block (1,600MW)
(Drilling Ongoing)
90MWe tender awarded to private developers

Olkaria Block (1,200MW)
(i) Developing 350MW
(ii) Drilling for 560MW
(the first 324MWe commissioned)

Private developers already licensed at Olkaria, Akiira and Longonot fields

> 10,000MW in over 23 sites

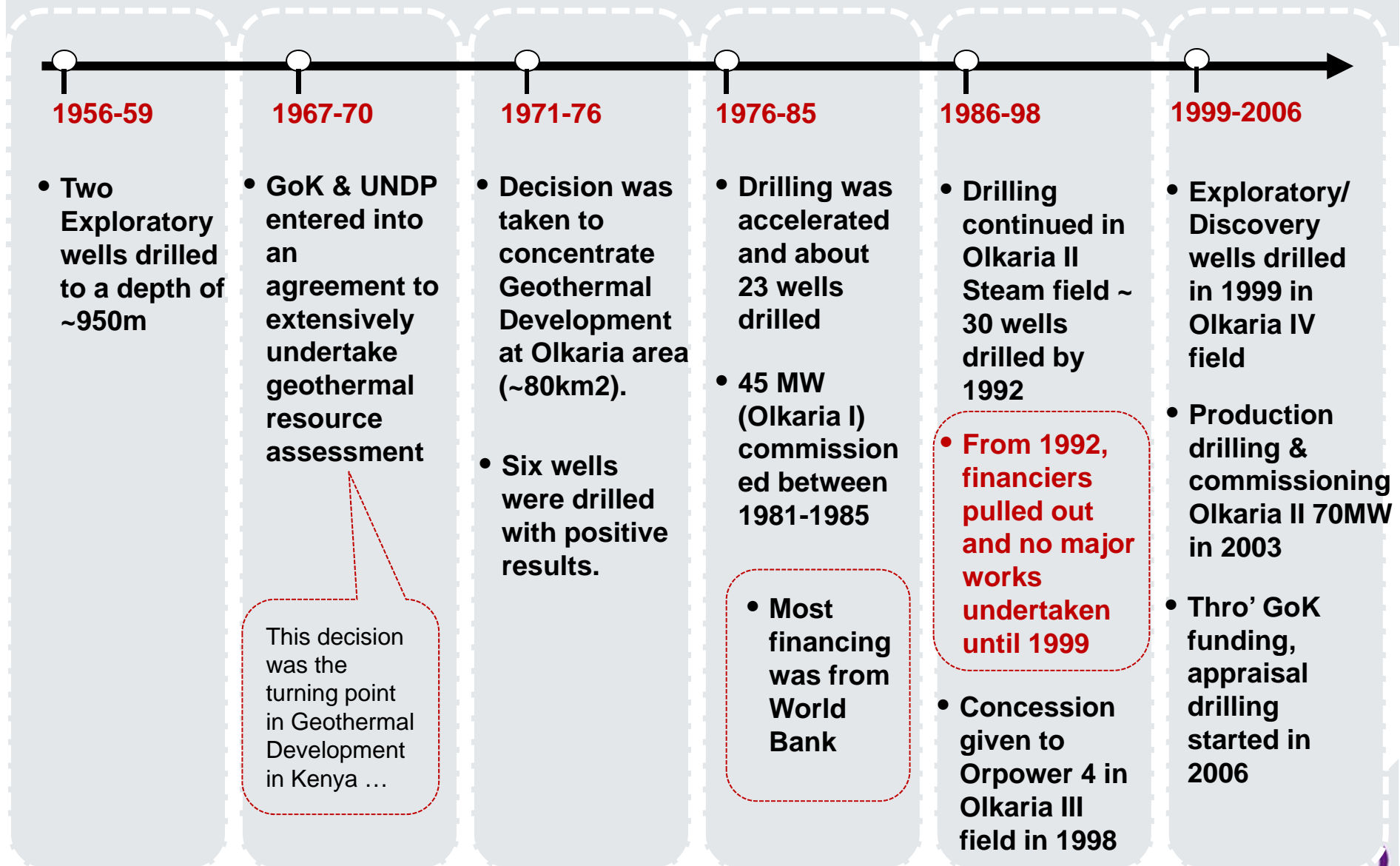
- Suswa,
- Longonot,
- **Olkaria,**
- Eburru,
- Menengai,
- Arus-Bogoria,
- Lake Baringo,
- Korosi,
- Paka,
- Lake Magadi,
- Badlands,
- Silali,
- Emuruangogolak,
- Namarunu
- Barrier
- Mwananyamala
- Homa Hills
- Nyambene Ridges
- Chyulu Hills

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3 GEOTHERMAL: DEVELOPMENT IN KENYA TO-DATE



23 GEOTHERMAL: DEVELOPMENT IN KENYA TO-DATE (Cont.)



2007 - date

- Production drilling started in Olkaria I&IV (about 57 wells drilled with over ~ 370MW capped)
- Olkaria II 3rd Unit 35MW commissioned
- Olkaria I & IV 280MW - 2014

Current total Geothermal Capacity for Kenya is ~ 579MW

About US\$ 1,065 million have been committed by DFIs in Olkaria Field

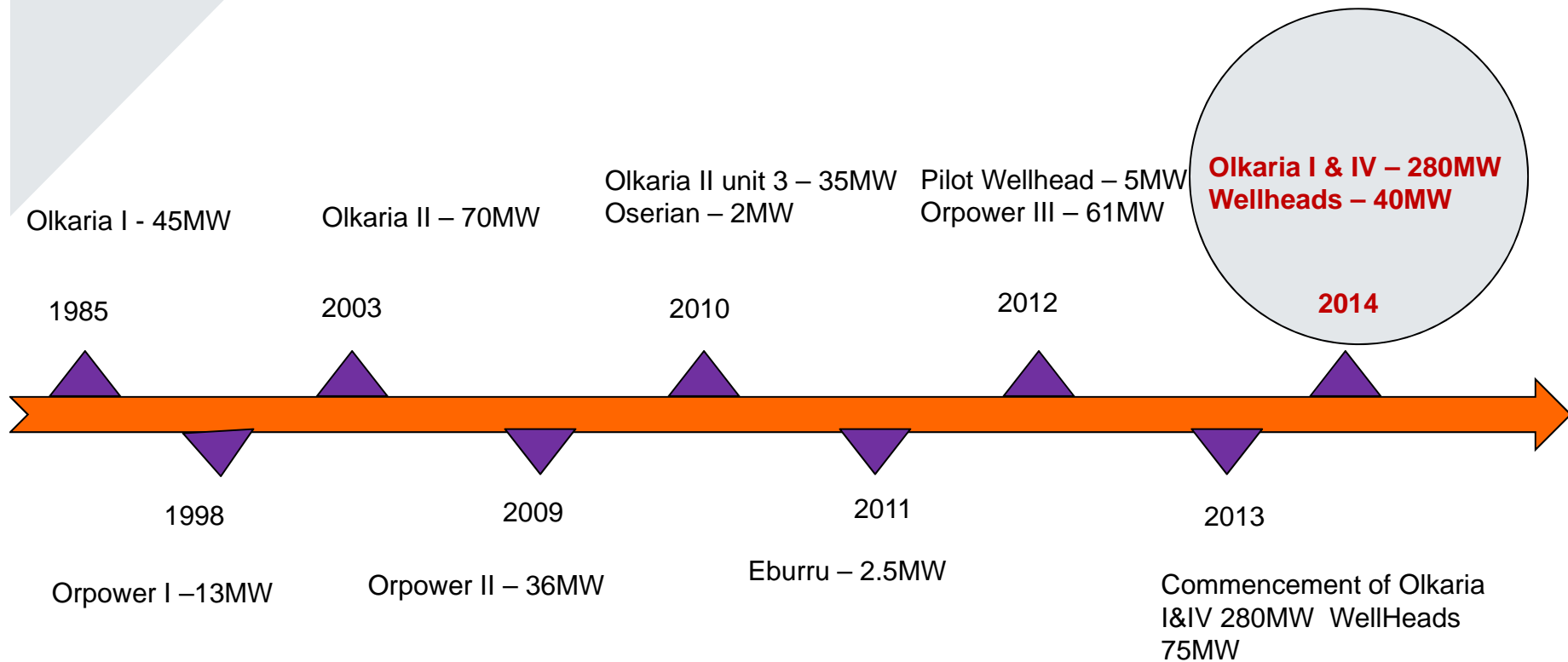
	Olk. I 45MW [1981-85]	Olk. II 70MW [2003]	Olk. I 3rd Unit (35MW) [2010]	Olk. I&IV (280MW) [2014]	Total
IDA (US\$ 'm)	118	108	29	120	375
EIB (US\$ 'm)	8.8	39	50	108	205.8
KfW (US\$ 'm)	11	12	-	99	122
CDC (£ 'm)	15.5	-	-	-	15.5
AfD (US\$ 'm)	-	-	28	118	146
JICA (US\$ 'm)	-	-	-	201	201

- Over ~US\$1,065m committed by development partners over the years in Olkaria

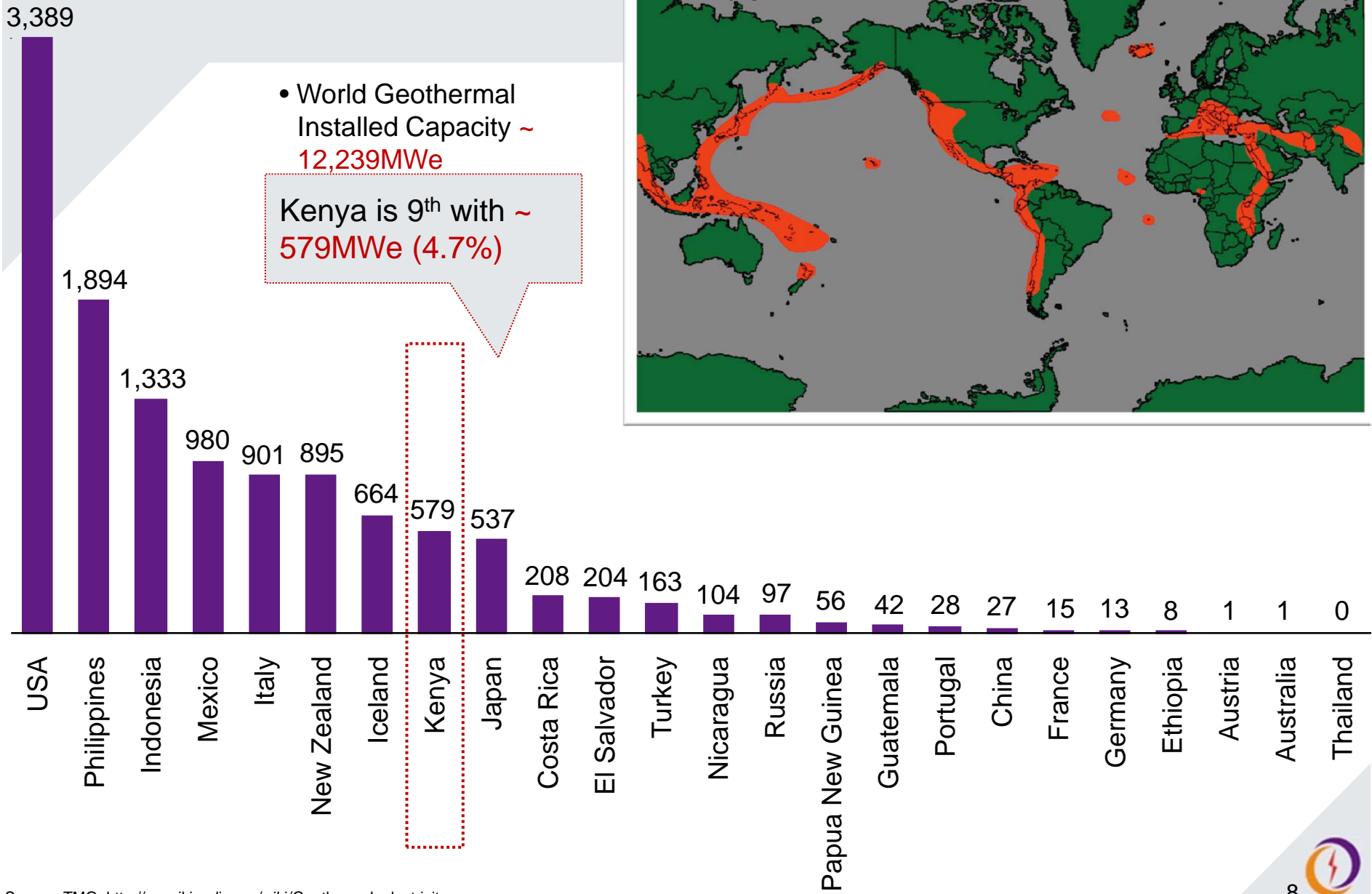


2 KENYA GEOTHERMAL: MILESTONES OVER THE YEARS

Milestones

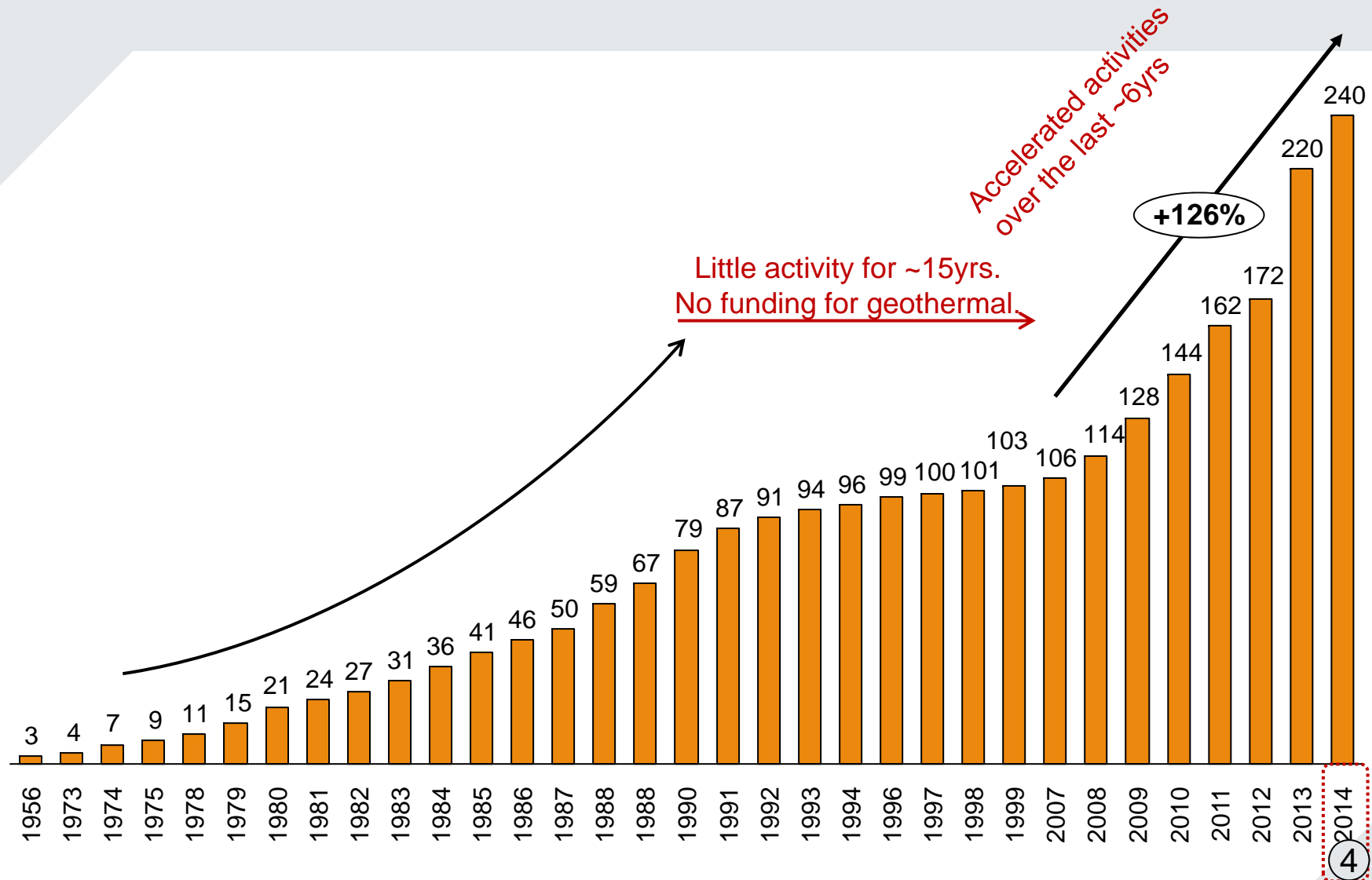


3 KENYA'S POSITION IN THE GEOTHERMAL DEVELOPMENT GLOBALLY

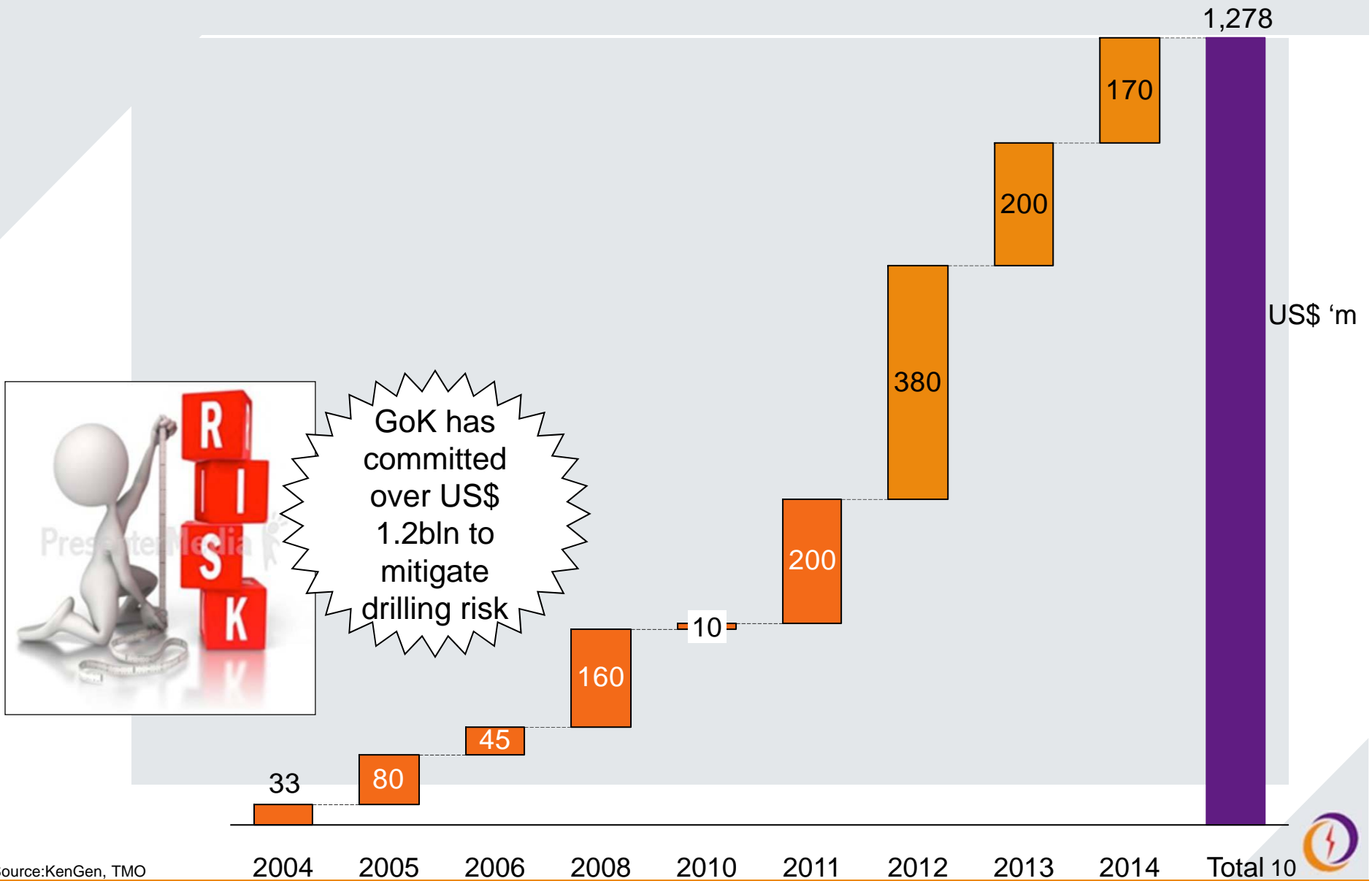


Source: TMO; http://en.wikipedia.org/wiki/Geothermal_electricity

3 KENYA'S GEOTHERMAL JOURNEY FROM 1956 to DATE



3 GOVERNMENT DRILLING COMMITMENTS OVER THE YEARS



ESTIMATED INVESTMENT IN GEOTHERMAL BY 2030



US\$ million

