



MitigationMomentum

Phase 1: Background study results
Presentation at Stakeholder Workshop
PanAfric hotel, Nairobi, Kenya

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Outline

- Objectives and methodology of the study
- Approach
- Key messages
- Key barriers & possible interventions
- Where to focus the NAMA?



Objectives and methodology of the background study

Objectives:

- Create basis for narrowing focus on NAMA proposal work
- Brief analysis
 - policy and regulatory framework
 - current status of the sector
 - key barriers and risks
 - initial ideas for further interventions to address key barriers and speed up the development

Methodology:

- Desktop literature review and expert consultation/interviews
- Two missions (Sept and Nov 2012) to Nairobi and Kenya's geothermal region in order to interview key stakeholders in the sector.

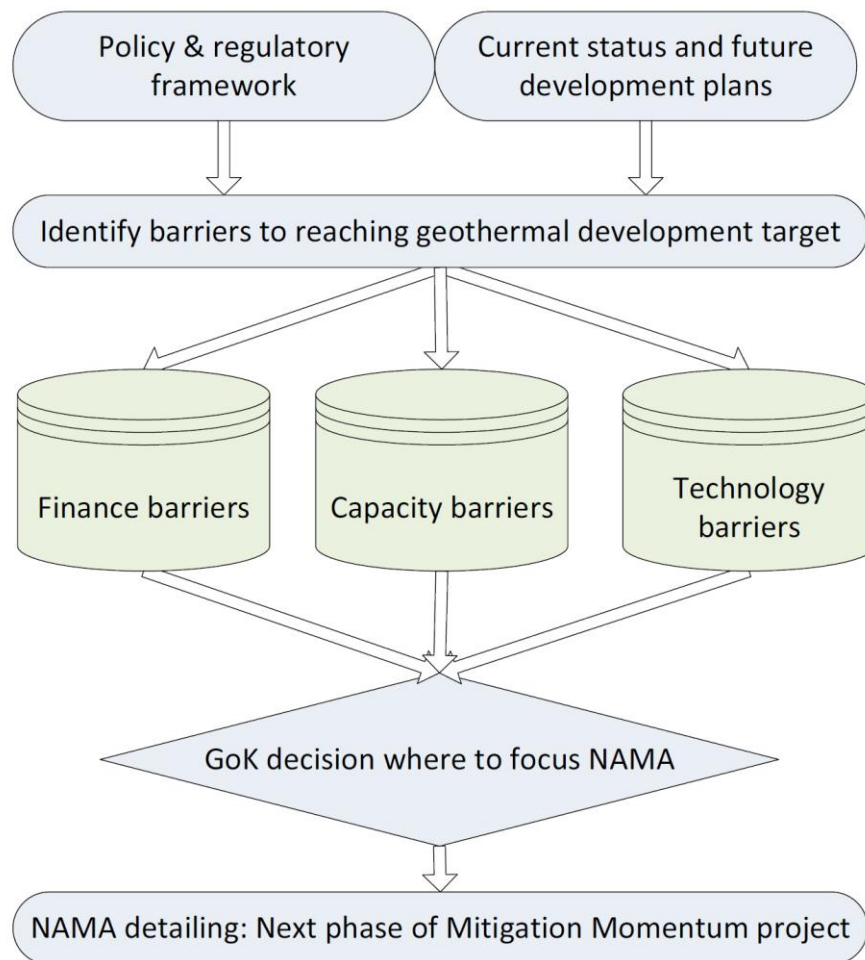


Stakeholders consulted

- Ministry of Energy (MoE)
- Ministry of Environment (MEMR)
- Geothermal Development Company (GDC)
- KenGen
- Energy Regulatory Commission (ERC)
- Several private developers and Independent Power Producers (IPPs)
- The World Bank (WB)
- French Development Agency (AFD)
- Japan International Cooperation Agency (JICA)
- Africa Trade Insurance Agency (ATI)
- German Development Bank (KfW)
- World Economic Forum (WEF)
- Others



Approach





Policy and regulatory framework for geothermal expansion: Key messages

- Kenya has a clear goal with regard to the development of geothermal power generation, and key policy documents are well aligned in that respect.
- Establishment of GDC has been an important measure to address the challenges of exploration risk and up-front capital requirements.
- Major reforms have helped to establish a more efficient and transparent electricity sector.
- The electricity sector is still under the influence of on-going transitions, which creates some uncertainties for geothermal power developers with respect to aspects such as the tariff and PPA negotiations.



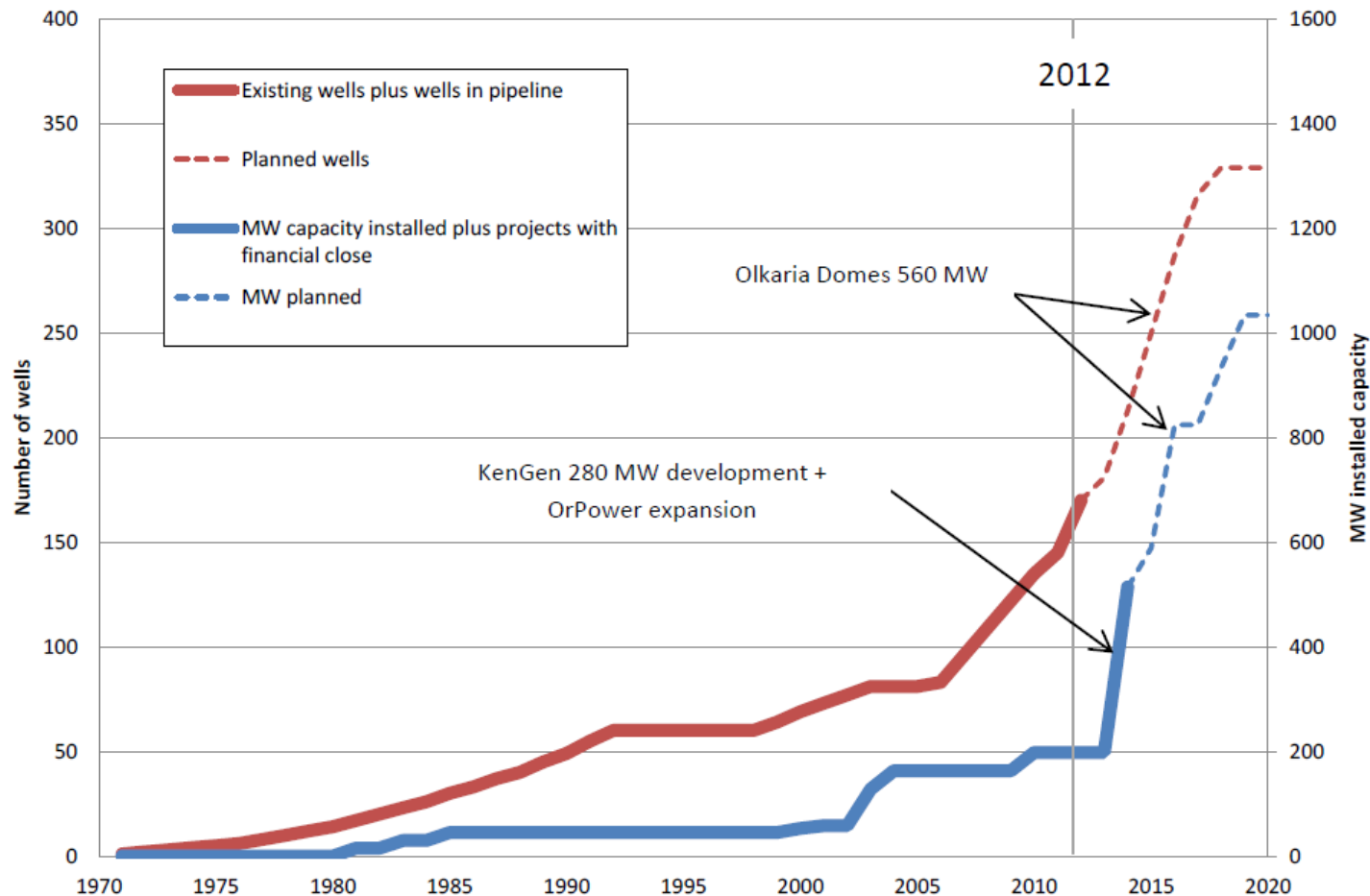
Current status of the geothermal sector in Kenya:

Key messages

- Kenya's geothermal fields are allocated to different entities for development.
 - KenGen is the major concessionaire at Olkaria field
 - GDC is the concessionaire for most other fields
 - Others
- Fields are at different stages of development and have different resource potentials.
- Fields are being developed using different approaches (three predominant development models).
- A large amount of resources (financial and human) has been mobilized in order to reach current capacity.
- A further significant resource mobilization effort will be required to achieve planned growth.

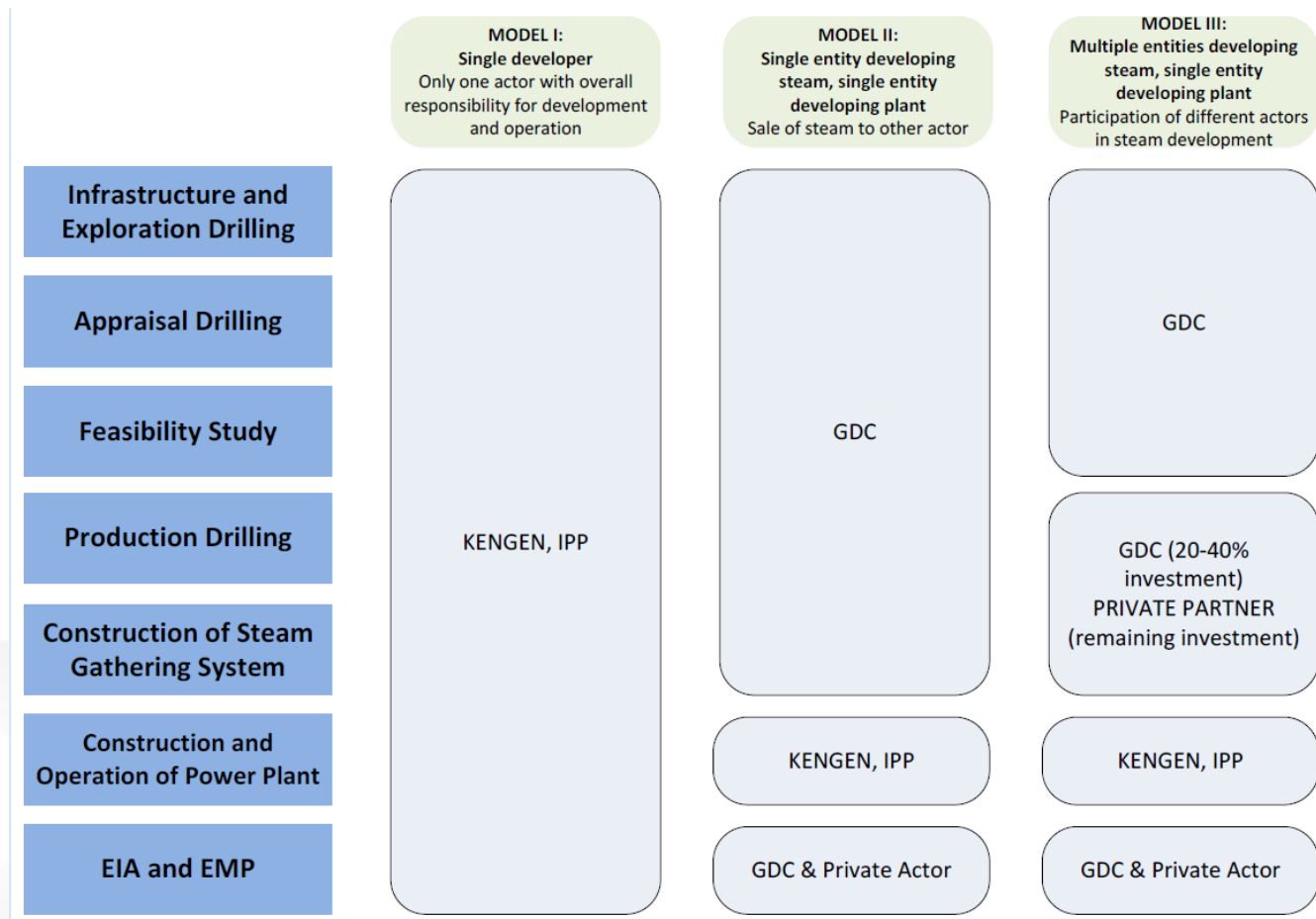


Current status of the geothermal sector in Kenya: Historical and future growth in Olkaria field





Current status of the geothermal sector in Kenya: Development models





Key barriers

NAMA support grouping	Barrier	Relevance (with respect to geothermal field[s])
Finance	Off-take risk	All
	Political risk	All
	Policy risk	All
	Release of funds too slow	All
	Access to capital	All
	Tariff negotiations	All
Capacity building	Long lead time	All
	Limited human capacity	All
	Steam Sale Agreement undefined	All except Olkaria
	Limited geothermal development experience	All except Olkaria
	Lack of experience with development model	All except Olkaria
Technology	Exploration drilling risk	All except Olkaria
	Production drilling risk	All
	Risk of failed well	All
	Steam field uncertainty	All except Olkaria
	Resource risk	All



Overcoming barriers – possible interventions

Finance

- Bonus tariff for early movers
- Subsidising the risk premium for drilling insurance products
- Replication of SREP to another field (this would not be a sectoral NAMA)
- Additional credit enhancement, risk guarantee products

Technology

- (Cooperative) R&D program
- Role for the Climate Innovation Centre?
- Earmarked support for technology transfer (e.g. drilling rigs and well-head generators)

Capacity building

- Set up specialised training institute
- Targeted technical assistance to accelerate development process
- Support knowledge management system development



A Kenyan geothermal NAMA proposal: Where to focus?

Several considerations need to be taken into account when deciding what to focus the NAMA on, these include (but not limited to):

- Alignment with existing plans and strategies
- Effectiveness at addressing existing barriers
- Suitability for a pilot NAMA
- Added value
- Funding opportunities
- Multiplier effects
- Ease of MRV and implementation



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Questions?

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