

Olkaria III Geothermal power plant, Kenya

Second Geothermal Dialogue

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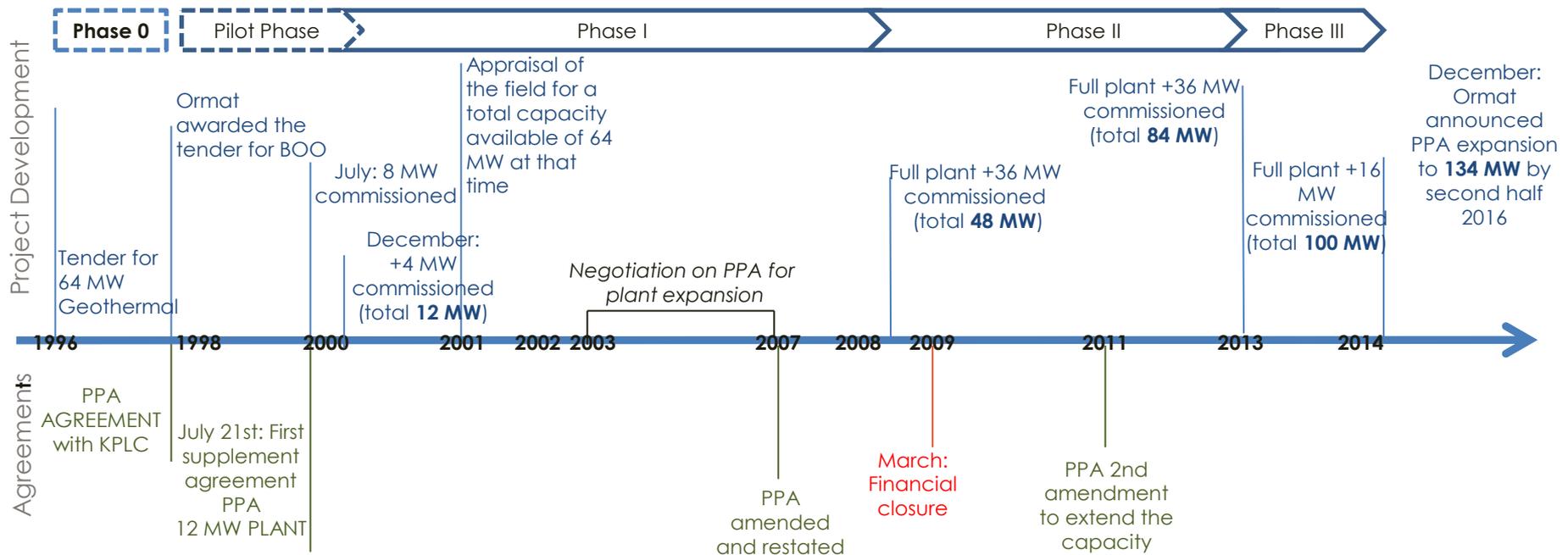
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Why Olkaria III?

- First and only privately funded and developed geothermal project
- Staged development expansion of the plant power capacity
- Private financing with long-term support from Development Finance Institutions provided once proven the commercial operation



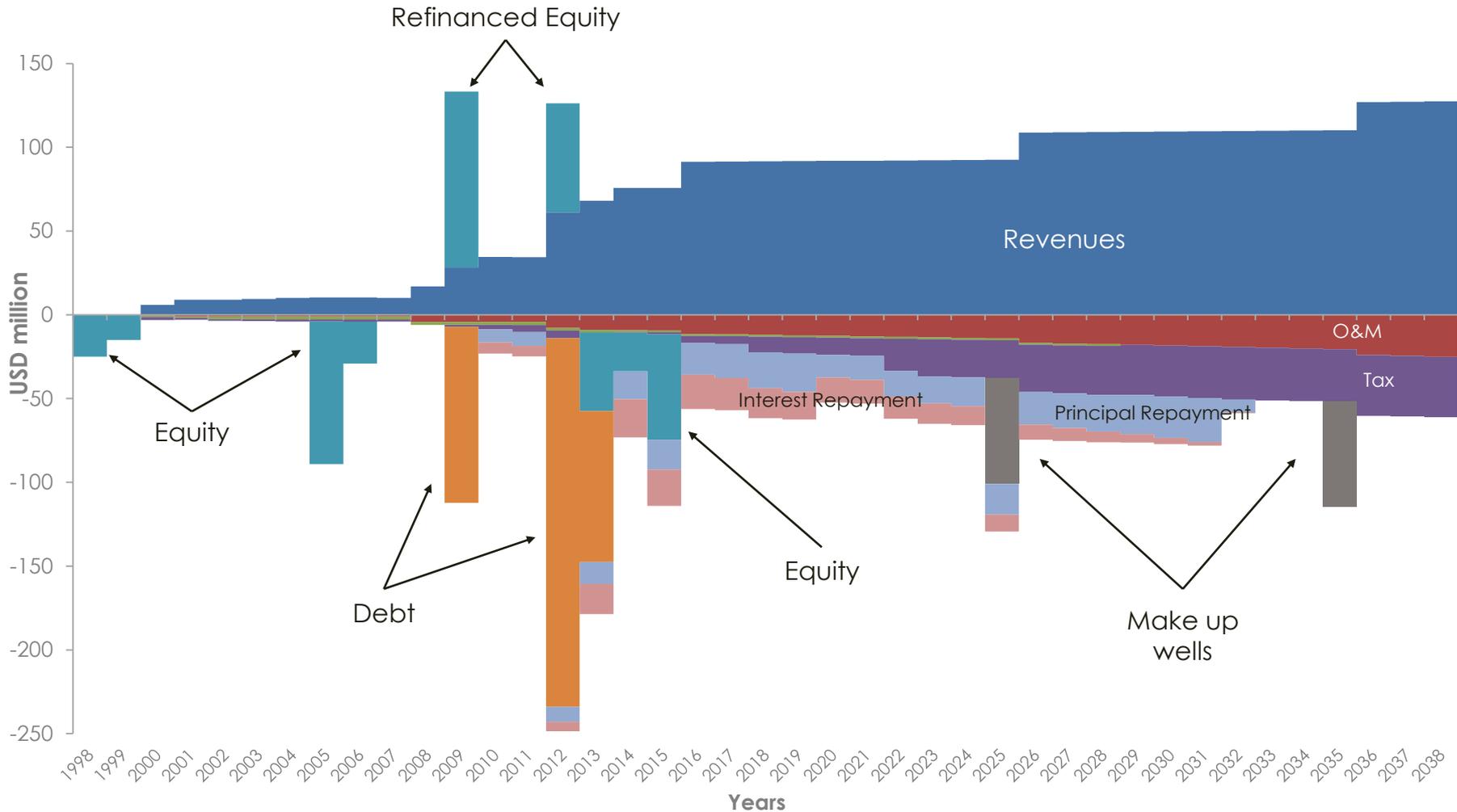
Financing of the project

- Phase I entirely financed with Equity by Ormat Technologies
- International development actors supporting refinancing of equity and financing of subsequent project development

Financial structure Olkaria III			Detail per Phase, USDm				Total contribution, USDm
			Phase I		Phase II	Phase III	
			12 MW	36 MW expansion	36 MW expansion	16 MW expansion	
Kengen	In Kind donation	Public	24				24
Ormat Technologies	Equity	Private	40	110	43	27	220
DEG and KfW	Syndicated Loan - Refinancing	Public	105				105
OPIC	Senior Loan - Refinancing	Public	85				85
OPIC	Senior Loan	Public			180	45	225
Total Finance mobilized, USDm							635
Total Project Costs (excluding refinancing), USDm							445

Source: CPI elaborations

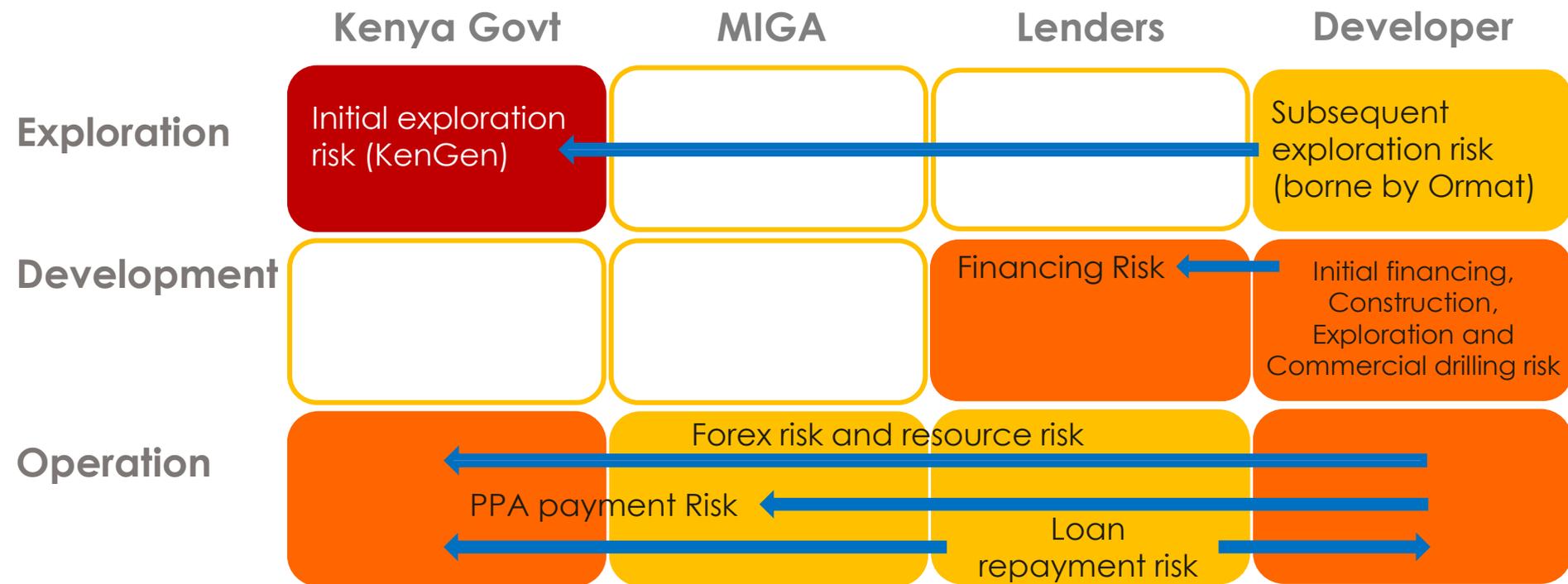
Project Cash Flow



Source: CPI elaborations

Risk Allocation and Mitigation

- What was the role of the public sector in risk allocation?
- How did the private developer manage the risks?



Olkaria III: Early Takeaways

Challenges

- Improve overall risk management
- Exploratory and early stage risks
- Financing for plant expansion



Responses

- Modular approach for plant development
- Drilling data by local public actor and + 8 MW wells to initiate the plant
- GoK security package enabled refinancing of Phase I & debt financing to build Phase II & III

Thank you!



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Questions for discussion

- What are the **lessons learned** from this project that the Kenyan Government could consider for its geothermal development strategy going forward?
- How has the local **regulatory framework** influenced the development and financing of Olkaria III?
- What has been the **role of international public financial institution** to ensure feasibility? What has influenced their engagement and how could they get engaged differently?
- Were all **risks allocated** to those best suited to manage them?
- What are the elements of the plant development approach that could be **replicated** in other context?
- What strategies to **increase private sector's participation** in geothermal development in Kenya to achieve its 5000 MW goal by 2030?