Case Study:18MW Hydro Power Development

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Presentation outline

- Introduction
- Our journey- 18MW hydro
- Conclusion
- Questions

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Introduction

- Global Sustainable Ltd founded 2010
- All directors Kenyan
- Offers project development services and as Renewable energy IPP
- The Kenyan economy currently at 1.5GW, needs an extra 4GW by 2018, and 15Gw by 2030
- Kengen project to provide up to 4GW by 2018, and 10Gw by 2030. 1GW and 5GW “out for grabs for IPP” by 2018, and 2030, respectively
- Global Sustainable looks to tap at least 200MW and 1GW (20% of the market) as an IPP
- Hydro power to be half, the other half assorted technologies

Feed in Tariff- Kenya

- The start of the process is by EOI to be approved by MOE
- The project developer will then need to develop, feasibility, acquire land rights, EIA permits
- Thereafter receive PPA
- Currently PPA values for hydro 0.5-10MW (10.5-8.25 cents), 10-20(fixed at 8.25 cents)

Small hydro portfolio

- Stands at 105MW, where 38MW have EOI approved
- Kaimosi 18MW being first one
- Kaimosi is a run-off, head of 107M, design flow 21M3
- Capitalized at $34M, with equity stake 30% (USD 10M) and debt USD 24

Kaimosi small Hydro

- Site identification and analysis done March 2011
- Pre-feasibility developed by June 2011
- EOI submitted in July 2011, and approved by MOE by 2011
- Sept 2011 entered an MOU with a German based Hydro power developer to work on site
- Dec 2011 the German engineers visited the site
- Hydrology analysis done January 2012
- German conceptual design and drawings ready Feb 2012

Kaimosi small Hydro

- Conceptual design gave two options: develop 6MW first and others in phase 2 and 3
- Or develop the whole 18MW at once
- We still needed to finish the feasibility, EIA, land acquisition
- By April 2012 had spent close to $47,500, needed extra $120,000

Our Journey

- Our biggest challenge was to raised the extra equity stake
- Global Sustainable Ltd being young raising $10M was an uphill task
- We split the project into three phases (6MW each)
- Capitalized at $15 (equity at $4.5M), $12 (equity at $3.6M) and $10 (equity at $3M) respectively

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Our Journey

- We started discussions with KAM under AFD facility offer development loan
- The facility is for project of up to 5MW
- We had to decide restrict to 5MW or seek equity partner to develop entire site
- Joined CTI PFAN October 2011
- Through CTI PFAN, member, got introduced to two potential equity partner

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Our Journey

- The discussion with the two equity investors
- We were to give up majority equity stake into the project
- It took two month (July-Sept 2012) to agree on this
- With the equity stake secured, senior debt is not a big challenge
- The Kenya FiT was revised where FiT figures were improved and we expect to sign a PPA of 8.25 cents

Conclusion

- In summary sometimes it will be important to agree to be diluted incase of equity raising
- In some cases project developers are unrealistic on the equity stake they “demand” they must retain
- Equity partners will be comfortable with projects that have move just from an idea to at least at pre-feasibility stage
- CTI PFAN network is quite beneficial to project developers

THE END

THANK YOU

Questions?

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