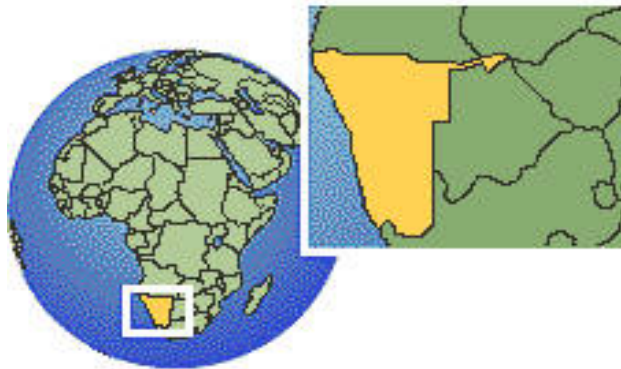




**Namibia IPP and Investment
Market Framework Technical Assistance**
USTDA Grant Number: GH051130313

**Volume II: Annex 6
ECB BARRIERS MITIGATION WORKSHOP**



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Namibia IPP and Investment Market Framework Technical Assistance Under a Grant by the U.S. Trade and Development Agency




ANNEX 6: ECB PRICING BARRIERS WORKSHOP
ELECTRICITY CONTROL BOARD, NAMIBIA

PREPARED BY

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Namibia IPP Project

- Activities this week
 - Meetings with ECB to discuss mitigation of barriers
 - Presentations on legal, pricing, regulatory issues
- Expected outcomes
 - Recommendations for market, regulatory, legal and business models
 - Discussion and presentation of risk mitigation strategies




2






Namibia IPP Project

- This presentation
 - Pricing Barriers and Mitigation
 - Market Model Issues
 - Regulatory Model Issues
 - Government Intervention




3

Namibia Market Outlook

- Local Growth
 - High probability
 - 100MW growth by 2020 – basic GDP & electrification + high probability step loads
 - Medium Probability
 - 200MW growth by 2020 – basic GDP & electrification + high and medium probability step loads
- Kudu JV Potential Partners
 - REDs not likely to be able to take risk
 - Mines have potential – possibly 150 – 200MW including Skorpion Zinc



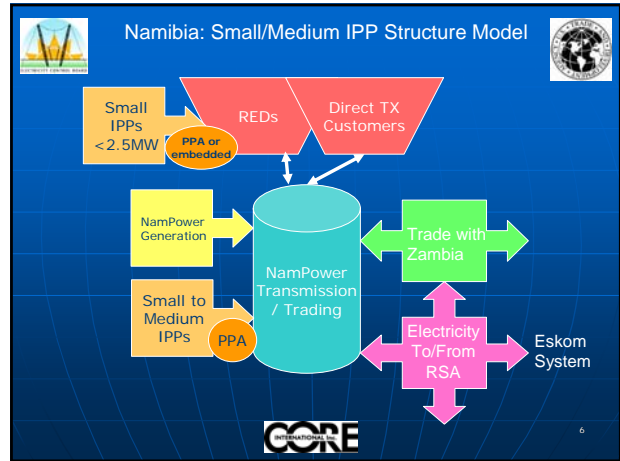
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Namibia Market Outlook

- Regional Growth
 - High probability – Eskom RSA
 - 10 000MW by 2020 (low growth scenario)
 - Medium Probability
 - 20 000MW by 2020 (medium growth scenario)
- Regional Supply
 - Eskom unlikely to be able to supply the demand in time
 - Largest Namibian IPP relatively small in regional picture




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Small IPP Issues


- Can sell to the Trader
 - Direct connection to TX grid
- Can sell directly to RED if very small?
 - embedded in a RED supply area and not resulting in wheeling over transmission grid
- Likely to need Regulator intervention
 - To agree pricing regime – and get PPA signed



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Small IPP Issues

- IPP Company Structure
 - No restrictions in principle – any legal person can apply for license
 - Lenders and equity partners likely to require proper corporate setup for anything but very small IPPs
- Legal and Tax Environment
 - Normal taxation likely to apply as for NamPower
 - Normal natural resource royalties and taxes likely to apply as per Kudu gas
 - i.e. current environment does not provide for “special deals” and there are no known precedents



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Small - Medium IPP Issues

- Finance Options
 - Local Commercial Banks
 - Limited appetite for risk
 - Max loan term 10 – 12 years
 - Max loan amount per bank around N\$250M
 - Development Banks
 - DBN likely to lend to small IPPs – but very limited in available capital
 - DBN backed by DBSA could look at 15-20 year loan term and large amounts
 - Private Funds
 - Medina Fund – Old Mutual – max N\$20M, 5-10 years – debt finance
 - Other private savings funds – substantial potential subject to acceptable project risk – generally problematic for greenfields projects

CORE 9

Namibia IPP Pricing Barriers

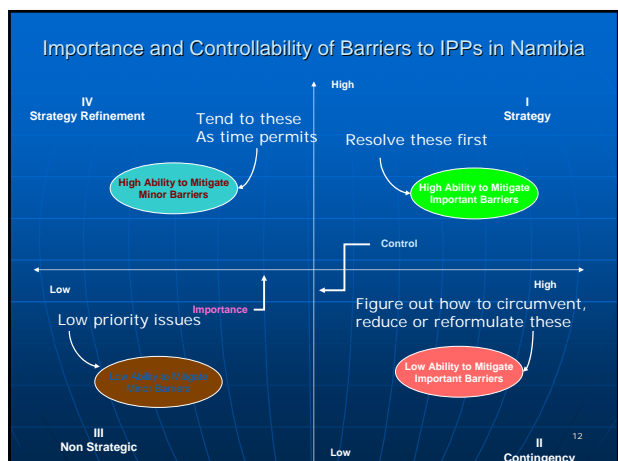
- Domestic Prices
 - Low level in Namibia market
 - Current efforts to adjust price levels
- Lack of PPA with Eskom
 - Ability of large users to sign PPAs with any IPP
 - Incentives for large users to sign PPAs with IPPs

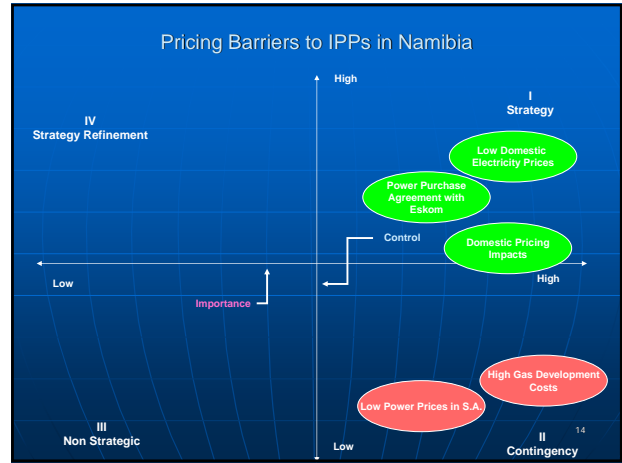
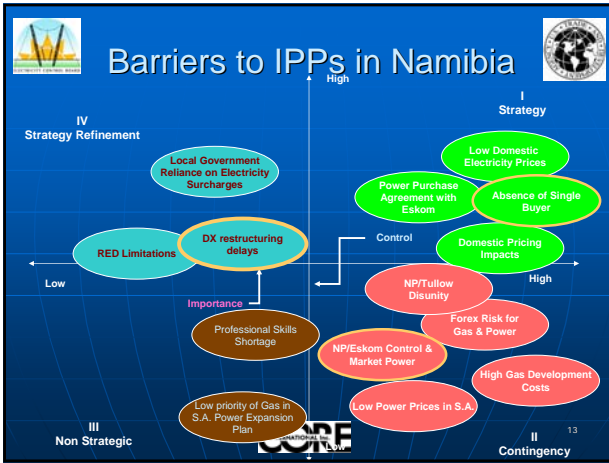
CORE 10

Namibia IPP Pricing Barriers

- Low average power prices in SA
 - Large ballast of existing coal-fired plants built during 1970s
 - Rising average prices due to
 - New plant construction
 - New transmission interconnection investments
 - New CT peaking plants in Cape Province
- High gas costs for Kudu

CORE 11






Namibia IPP Pricing Barriers


- Risk Mitigation v. Risk Aggravation Activities
 - Domestic prices
 - Current effort to bring domestic prices to full cost recovery by 2010
 - Creation of transmission tariffs for REDs and large users
 - Absence of PPA with Eskom
 - Eskom claims to not need output of Kudu
 - Political directives to Eskom belie that claim
 - Average and time-insensitive pricing in SA continues to provide a barrier to IPPs

Namibia IPP Pricing Barriers

- Risk Mitigation v. Risk Aggravation Activities
 - High gas development costs
 - Current state of negotiations of Kudu -
 - Arms length negotiations between Energy Africa and NamPower and between NamPower and Eskom
 - Absence of upside for Energy Africa
 - All gas pricing risk now borne by NamPower
 - Potential mitigation effort - joint negotiations with Energy Africa and NamPower with Eskom




Namibia IPP Pricing Barriers




- Risk Mitigation v. Risk Aggravation Activities
 - Correlated Risk in Eskom expansion program
 - Eskom claims to be able to resolve all the current shortages and constraints within 4-5 years
 - Plans to construct
 - New transmission to relieve constraints
 - 3.5 GW of FBC
 - 7-8 GW of PC with FGD
 - 2.4 GW of CTs
 - 4 GW of Pumped Storage
 - X GW of nuclear

CORE 17




Namibia IPP Pricing Barriers




- Correlated Risk in Eskom expansion program - caveats
 - There is worldwide excess demand for heavy industry engineering & construction services
 - Driven by oil and gas industry
 - Prices have risen 30-40% over past 4-5 years
 - Delays in construction and implementation

Correlated risk increases likelihood of significant delays along with cost increases in Eskom program

CORE 18




Namibia IPP Pricing Barriers




- To believe that Eskom can implement this program on time and on budget, one must believe the following:
 - All mothballed plants can be rehabilitated as projected
 - FBC can be implemented as first in world large scale plants
 - Mines can be developed and opened on time
 - Projects can be managed with reduced experienced staff

CORE 19




Namibia IPP Pricing Barriers




- Risk mitigation v. risk aggravation strategies:
 - Change the nature of the barrier
 - Split it into smaller pieces, some of which can be more easily managed
 - Spread the risk over new players
 - Bring in higher authority - shift barrier to policy or governmental level


CORE 20




Namibia IPP Pricing Barriers




- Risk mitigation v. risk aggravation strategies:
 - Change the nature of the barrier
 - New domestic pricing formulation
 - Creation of upside potential for one or more parties - e.g., Energy Africa
 - Reduce impacts of LA taxation on domestic electricity prices




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Namibia IPP Pricing Barriers




- Risk mitigation v. risk aggravation strategies:
 - Split the barrier into smaller pieces
 - Make distinction between supply to Eskom as a whole and supply to W. Cape Province
 - Reduce importance of transmission constraints
 - Reduce cost impact of CT generation
 - Establish formal taxation and financing provisions for local government




22




Namibia IPP Pricing Barriers




- Risk mitigation v. risk aggravation strategies:
 - Spread the risk over new players
 - Large users in Cape Province
 - Large users in Namibia - mostly mining
 - Sign PPAs with additional offtake requirements
 - Each customer, effectively a partner in project, now has incentive to sell excess capacity
 - Reduce NamPower's share of total project output and ∴ project risk
 - For each offtaker, higher price from Kudu is insurance v. possibility of far higher prices and/or interruptible supplies from Eskom



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Namibia IPP Pricing Barriers

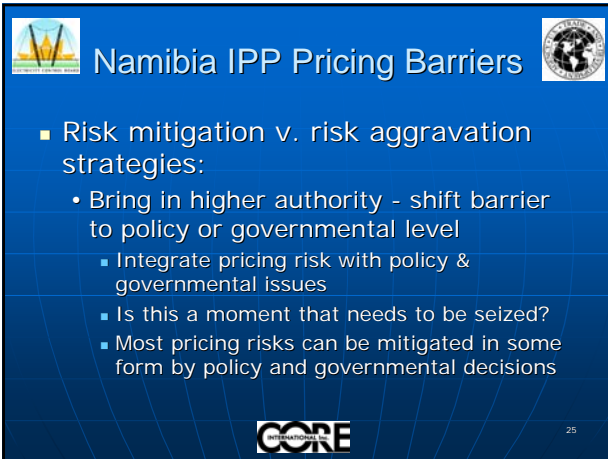


- Risk mitigation v. risk aggravation strategies:
 - Pricing pass-through provisions
 - What is indexable?
 - Amortization - generally no
 - Fixed O&M - generally a fraction, subject to negotiation
 - Variable O&M - generally all, assuming there is no alternative benchmark for costs

Restructuring of domestic tariffs should reflect pass-through provisions



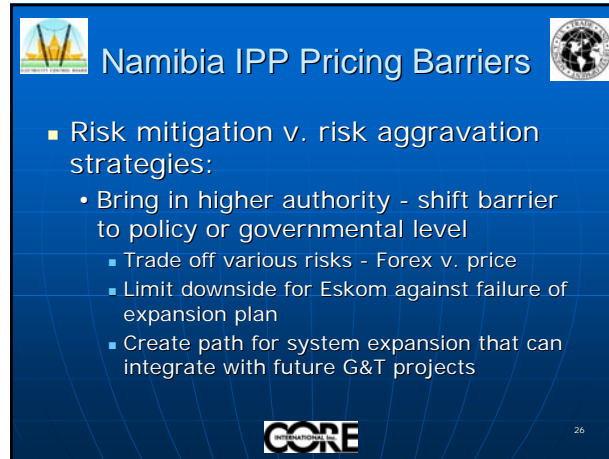
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Namibia IPP Pricing Barriers

- Risk mitigation v. risk aggravation strategies:
 - Bring in higher authority - shift barrier to policy or governmental level
 - Integrate pricing risk with policy & governmental issues
 - Is this a moment that needs to be seized?
 - Most pricing risks can be mitigated in some form by policy and governmental decisions

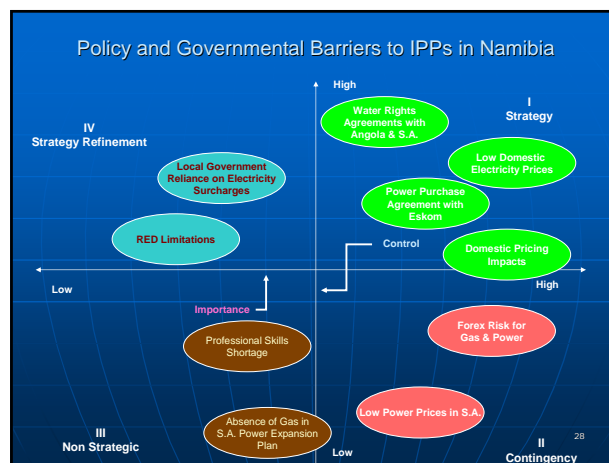
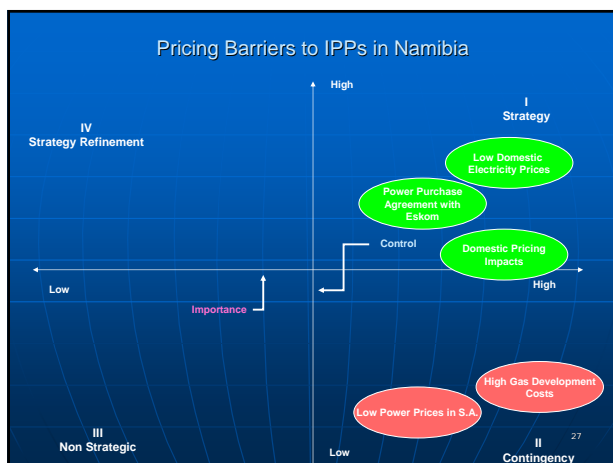
CORE 25



Namibia IPP Pricing Barriers

- Risk mitigation v. risk aggravation strategies:
 - Bring in higher authority - shift barrier to policy or governmental level
 - Trade off various risks - Forex v. price
 - Limit downside for Eskom against failure of expansion plan
 - Create path for system expansion that can integrate with future G&T projects

CORE 26



Namibia IPP Regulatory Barriers

- Domestic Market restructuring delays
 - Not a strategic issue
 - Needs to be resolved but not at cost of inordinate delays in Kudu
- Impacts on domestic power pricing
 - Mitigation through rebasing of domestic electricity prices
 - Ongoing
- LA financing
 - in progress to solution
 - New budgeting procedures

CORE 29

Namibia IPP Regulatory Barriers

- Due diligence by ECB on PPA with Eskom
- Regulatory problems of having NP as single buyer
 - Bias in power development plan
 - Bias in plant specification
 - Bias in bid evaluation
 - Bias in dispatch
 - Bias in availability calculations

CORE 30

Namibia IPP Regulatory Barriers

Problem/source of bias	Mitigation Measure	Benefits	Problems
Investment Planning & Plant Specification	ECB active oversight & joint due diligence with NP	Reduces bias, Increases investor confidence	Taxing on ECB, no way to enforce compliance on NP
Bid Evaluation	ECB/NP due diligence exercise	Same as above	Increased chance of commercial information leakage
Plant Dispatch/availability	Publish ex ante results of dispatch	Increased transparency & confidence	none

CORE 31

Namibia IPP Market Model

- No complete single buyer model now in force
 - NP is both market operator and single buyer
 - Leads to bias that must be mitigated by regulation
 - Choice is heavier regulation or more complex market structure

CORE recommends a regulatory solution for now

CORE 32

Namibia IPP Market Model

- NP is default single buyer and supplier of last resort
 - NP is financially responsible party
 - Only other recourse is to Government
 - NP is the firewall between suppliers and direct government guarantee

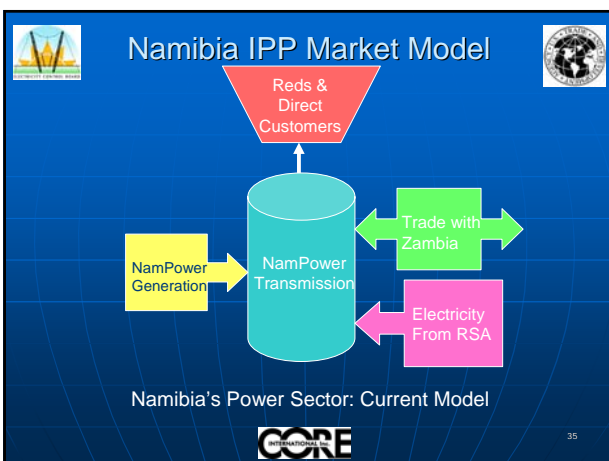
CORE 33

Namibia IPP Market Model

- Financial risks of single buyer with IPPs
 - Who is responsible counterparty
 - What is recourse to GON?
 - Now, NP balance sheet is firewall between GON liability and market problems
 - W/ independent single buyer entity GON will have to be financially responsible party

CORE recommends that NP remain single buyer, but that other parties be brought in to mitigate some risk

CORE 34



Namibia IPP Market Model

- Mitigate Market Risk of IPP by Spreading it to New Players
 - Major electricity customers in Namibia highly exposed to supply/price instability
 - Costs of a few days on backup power outweigh higher costs for reliable generation
 - Risks to major users are increasing, participation in IPP offtake reduces that risk - at a price

CORE 36

Namibia IPP Market Model

- Form *virtual JV* power plant with mining companies
 - Each company purchases output on Take or Pay basis with offtake responsibility for > company needs
 - Offtaker is free to sell excess to SA with NP as sales agent
 - ∴ NP lays off some of the risk for offtake

CORE 37

