

Encroacher Bush Biomass Power Project



Biomass Fair Presentation
September 2022

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40 MW Otjikoto Biomass Power Project



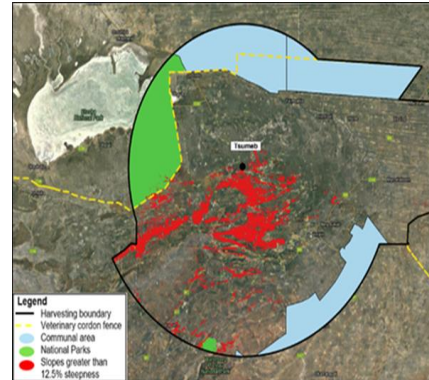
Project Overview:

- ❑ Size: 40 MWe or 2 x 20 Me;
- ❑ Site area: ±44 ha;
- ❑ Grate fired boiler technology;
- ❑ Fuel: Encroacher Bush Wood Chips ;
- ❑ Availability: 85~92%;
- ❑ Capacity factor (CF): 60~85% ;
- ❑ Lifetime: 25 years.



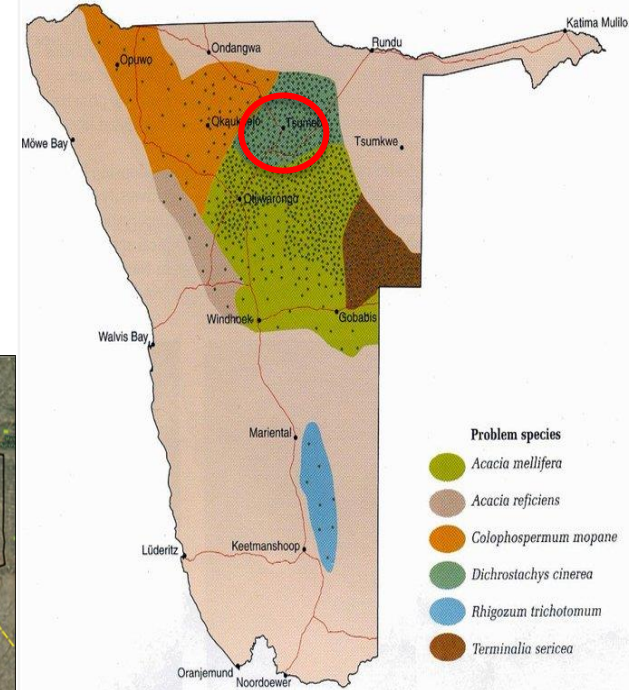
Fuel Supply Strategy

- ❑ ±100 km harvesting radius (± 3.1 mil ha available)
- ❑ Harvesting in accordance with FSC principles
- ❑ Only 12.8% of harvesting area to be used
- ❑ Fuel Requirement: 180 000 – 245 000 t/yr
- ❑ Procured via Open National Bidding



Project Site & Fuel Harvesting Area

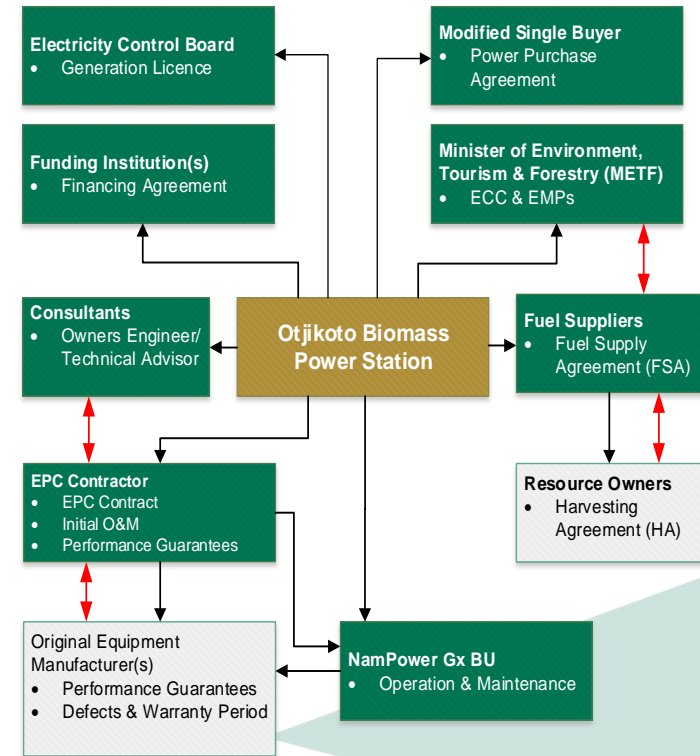
PROBLEM ENCROACHER SPECIES IN NAMIBIA



Otjikoto Biomass Power Station

Approvals and Development Timeline

- ❖ **October 2018** Minister of Mines and Energy 150 MW Determination
- ❖ **April 2021** EIA and EMP approved by MEFT in accordance with FSC, IFC and World Bank guidelines
- ❖ **April 2021** AFD appointed as preferred lenders
- ❖ **July 2021** Owners Engineer Fichtner Appointed
- ❖ **October 2021** EPC contractors are prequalified
- ❖ **December 2021** AFD concludes first round of due diligence
- ❖ **March 2022** EPC Bid is issued to Prequalified Bidders (closing 16 September)
- ❖ **April 2022** NamPower completes grant funding application to NAMA Facility
- ❖ **June 2022** AFD concludes second round of due diligence
- ❖ **July 2022** ECB Approves conditional generation license
- ❖ **8 September 2022** Fuel Supply Bidding Documents Published

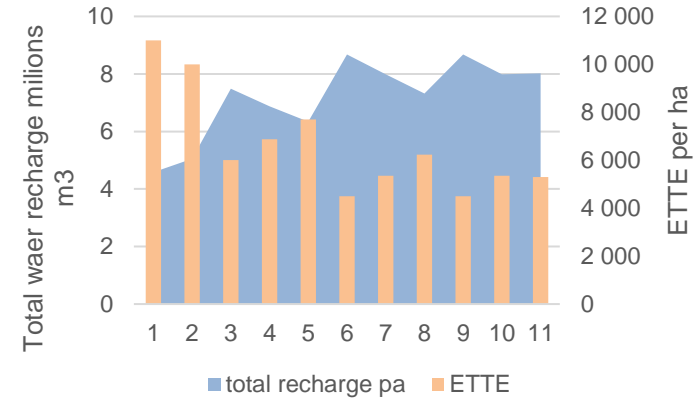


Project Overview: Bush Encroachment

Key EIA Findings and Implementation strategy



- ❖ Bush Encroachment has severe negative impacts
- ❖ Controlled bush thinning (rangeland restoration) will result in significant biodiversity and socio-economic benefits
- ❖ Aftercare is necessary to avoid excessive regrowth and further land degradation
- ❖ Ash produced at the power station has good fertilizer properties
- ❖ FSC certification proposed for environmental and funding credibility



Changes in groundwater recharge at different ETTE per hectares



Overview of Fuel Suppliers

Long Term Fuel Supplier

- Provide the bulk of the Fuel (Minimum fuel requirements)
- Expected to take up performance obligations
- Significant investment requirements
- Bankable Fuel Supply Agreement
- Regulated Harvesting Agreement

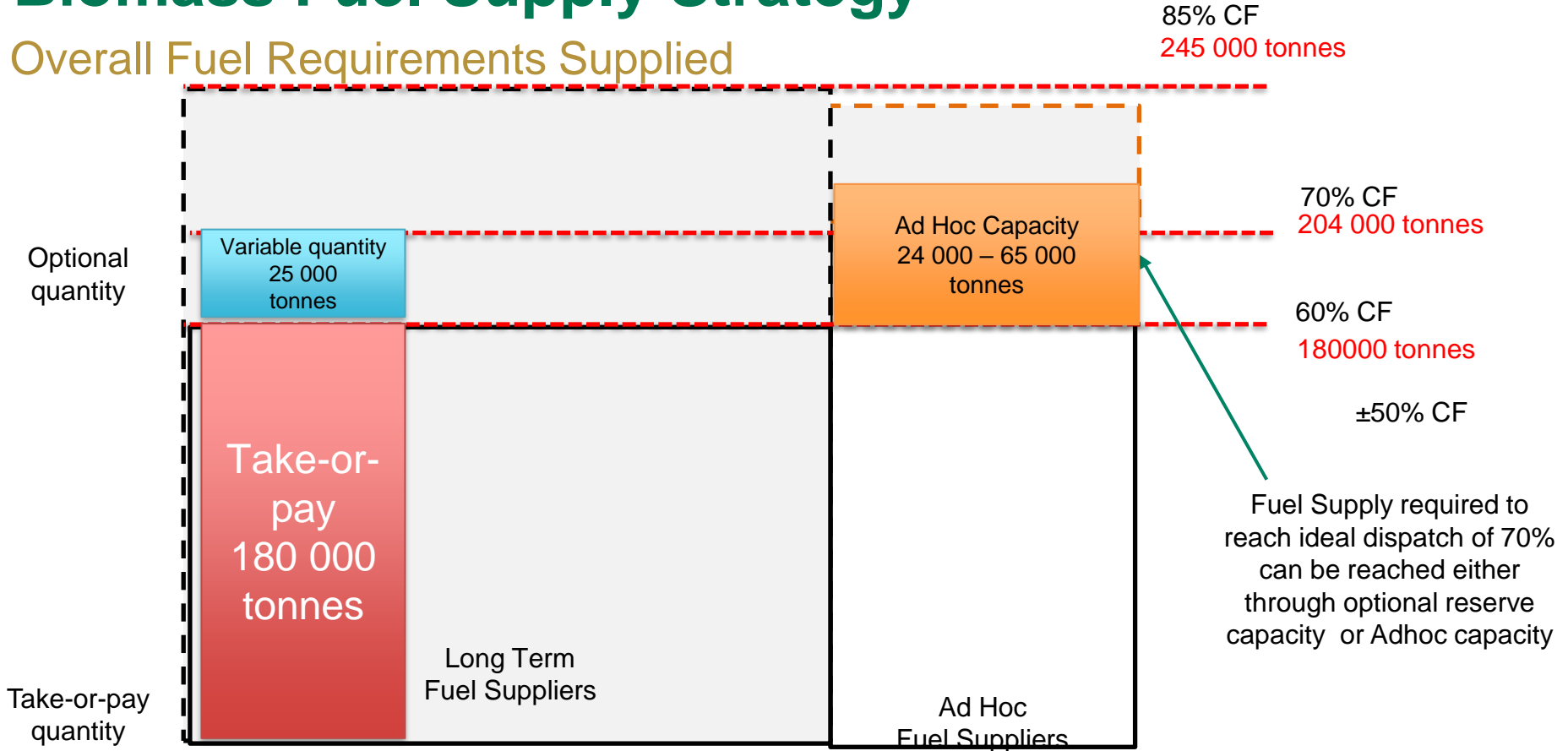
Emerging & Adhoc Fuel Supplier

- Opportunity for farmers and SME's to participate in the Fuel Supply Chain
- Minimum truck load/size
- Regulated volume thresholds
- Simplified yet Bankable Fuel Supply Agreement
- Adherence to the EIA & EMP
- Capacity Building Required
- Chipping may be done by NamPower



Biomass Fuel Supply Strategy

Overall Fuel Requirements Supplied



Project Overview: Project Benefits



Direct and Indirect Employment



Local Commodity with limited Forex exposure



Grid Stability and Security of Supply



Stimulate local biomass industry

The End