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Ministério dos Recursos Minerais e Petróleos









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INTRODUCTION





- Most diamond mines are in off-grid locations in the Lunda-Norte and Lunda-Sul provinces
- > These locations face substantial energy shortages, which translate into:
 - ✓ Power generation at high costs through the use of Power Generator Sets
 - ✓ Higher operational costs for mining projects
 - ✓ Larger carbon footprint due to Generator sets burning fossil fuel
 - ✓ Exposure to high volatility in oil prices impacting mine planning and budgeting.
 - ✓ Unplanned downtime and productivity losses due to diesel shortages



- ➤ The Angolan executive is committed to:
 - ✓ Maximizing the country's renewable energy potential
 - ✓ Replacing, to the largest extent possible, fossil fuel power generation for greener, more sustainable sources





MAIN LOCATIONS

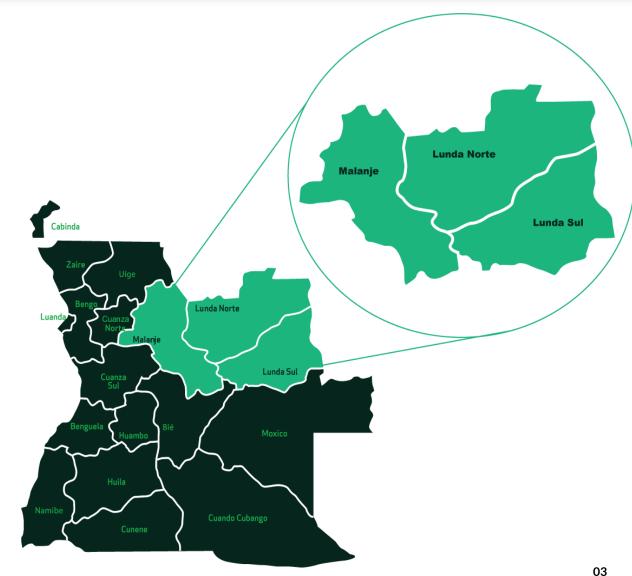
- ❖ Lunda-Norte Province, NE region of Angola
- **❖** Lunda-Sul Province, NE region of Angola

LOCAL CLIMATE & WATER RESOURCES

- ❖ Humid subtropical | Rainy season lasting 7 to 8 mths/yr
- ❖ Average Precipitation Levels (rainy season) 239 mm
- ❖ Extensive hydrographic basin crossed by numerous rivers

EXISTING INFRASTRUCTURES:

- 4 Airports (Saurimo, Catoca, Lucapa & Dundo)
- Modern National Road Network
- Hospitals
- Hotels





PAST OPERATIONAL & ECONOMIC HIGHLIGHTS



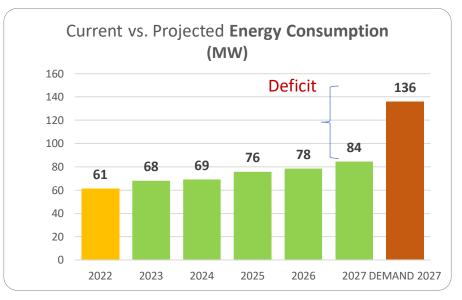


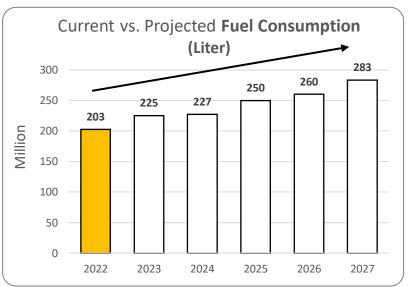


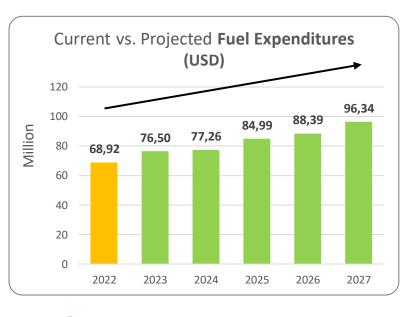












- Increasing yearly production volumes
- Decreasing average ore grades
- Increasing average travel distances

- higher material movement
- **higher ore treatment** requirements
- larger haulage fleet requirements

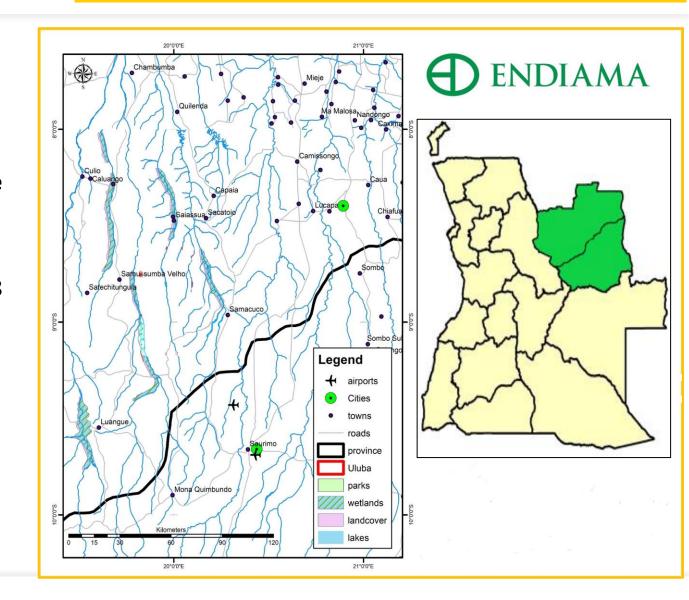


- ☐ Additional demand arising from:
 - > Industrial activity beyond mining...
 - > Increased economic activity in local communities directed at servicing the mines



RENEWABLE ENERGY POTENTIAL

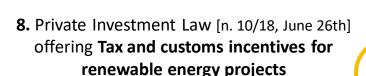
- Good Local hydroelectrical potential
- ➤ Interconnection of the Northern Power System to the Eastern Power System (estimated conclusion: 2024)
- ➤ Good **local solar irradiation potential** [1.4 1.8 MWh/m²/yr] (source: World Bank Global Solar Atlas)



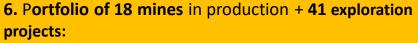


REASONS TO INVEST IN SUPPLYING POWER TO DIAMOND MINES









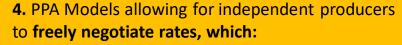
great opportunity for **public-private-partnerships** supplying renewable energy to diamond projects



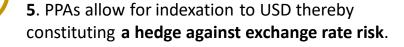
- Customer base with proven purchasing power AND energy intensity of mines estimated to increase substantially
 - 2. Current fuel subsidies likely to be phased out:
 - more attractive economics for renewable energy projects



3. Cash flows from diamond sales realized in US dollars



- Reflect production and transmission costs
- ✓ Ensure attractive ROIs









THANK YOU!

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