ESMAP
Hydropower Development Facility Event July 9, 2023

Mpatamanga Hydropower Project

Rikard Liden, Lead Energy Specialist, World Bank
Basic features

• Located in Malawi
• 361 MW
• Hydropower storage project
• Baseload and Peaking Plant
• Public-Private-Partnership (PPP)
• Developed by Mpatamanga Hydro Power Limited (MHPL)*, Government of Malawi, and IFC

*Owned by EDF and SCATEC
Video presentation

Mpatamanga Video
Credit and copyright: MHPL
Technical features

• **Main dam**: 275 meter wide Roller Compacted Concrete (RCC) gravity dam, 45 meter high, with a gated spillway. Two headrace tunnels with 9-meter diameter. Surface powerhouse with four units (Francis turbines) with a total capacity of 309 MW. A 400 kV line will evacuate the power to Phombeya Substation.

• **Downstream regulating dam**: 330 meter wide RCC gravity dam, 30 meter high, with gated spillway. Integrated powerhouse with two units (Bulb turbines) with a total capacity of 52 MW. A 132 kV line will evacuate the power to the east to join the existing Tedzani-Kapichira transmission line.
World Bank Group (WBG) cooperation with Govt of Malawi

- Energy sector support – beyond GWh production
- Regional perspectives – energy trade and security
- E&S safeguarding, including Dam Safety
- Concessional financing and leveraging of private investments
<table>
<thead>
<tr>
<th>Year(s)</th>
<th>Milestone/Activity</th>
<th>Details</th>
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<tbody>
<tr>
<td>2014-15</td>
<td>Pre-Feasibility Feasibility Study</td>
<td>Funded by WB Energy Support Project)</td>
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<td>2015-18</td>
<td>Feasibility Study</td>
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<td>2018</td>
<td>Integrated Resource Plan (IRP)</td>
<td>Mpatamanga confirmed as a development priority</td>
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<td>April 2019</td>
<td>Joint Development Agreement</td>
<td>Between IFC (Infraventure) and Govt of Malawi to develop Mpatamanga as PPP</td>
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<td>Jun 2019</td>
<td>IDA Board approval for Malawi Electricity Access Project</td>
<td>Including support for Sector Financial Sustainability</td>
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<td>Sep 2019</td>
<td>IDA Board approval for Mozambique - Malawi Interconnector Project</td>
<td>Connection to SAPP</td>
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<td>Feb 2020</td>
<td>RFP for Private Strategic Sponsor</td>
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<td>2020</td>
<td>Malawi Market Study: Mpatamanga</td>
<td>Funded by IFC</td>
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<td>Sep 2022</td>
<td>Commercial Close</td>
<td>EDF, SCATEC, and IFC signed Relationship Agreement with Govt of Malawi</td>
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<td>Oct 2022</td>
<td>The project company MHPL is operational</td>
<td>Jointly owned by EDF and SCATEC</td>
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<td>Jan 2023</td>
<td>4 comprehensive safeguards studies initiated</td>
<td>ESIA, RAP, CIA, BAP</td>
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<td><strong>End 2024</strong></td>
<td>Expected IDA Board Approval</td>
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<td><strong>End 2025</strong></td>
<td>Expected Financial Close and Start of Construction</td>
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Beyond the GWh

Mpatamanga reduces output during day-time to allow Solar PV production and to ensure enough energy for peak demand.

Source: MHPL (2023)

Max 550 m³/s

Main dam
Reservoir capacity
260 hm³

Regulating dam
Reservoir capacity
11 hm³

Source: Market Study (2020)

Mpatamanga Hydropower
Sector sustainability

- Malawi Electricity Access Project is expected to increase the access rate from 18% to 30%

- Technical Assistance to review and design options for restoring financial sustainability of the power sector

- Energy sector reforms through performance-based lending tied to reform outcomes
E&S, Dam safety

Cascade management and dam safety are essential for the project.

Regulating Dam will remove potential negative impacts on downstream Majete Wildlife Reserve, and avoid spilling at Kapichira when peaking.

Source: MHPL (2023)
Regional trade

The interconnector to Mozambique enables export of excess energy from Mpatamanga to SAPP

Source: Market Study (2020)
Potential funding:
- IDA for equity and lending
- IDA for Guarantees
- IFC equity
- IFC lending
- DFI lending
- Commercial lending
THE END

with Thanks to MHPL, IFC and WB colleagues for contribution to this presentation