







Tidal Power Plants





European Regional Development Fund EUROPEAN UNION



Project profile



	Name Project	Tidal Power Plant Larantuka
	Location	Larantuka & Adonara, Nusa Tenggara Timur, Indonesia.
	Installed Capacity	40 MW
	Connection Grid	In 2021 on East Flores Larantuka, Adonara
	Power Generation	100 GWh (Annually)
	Project Benefits	 Secured, attractive Export Finance supported by Dutch Government Increasement of local employment by growth of Fishery, Agriculture, Tourism, Industries Large iconic development of renewable energy based on tides integrated in infrastructure



PROVINSI NUSA TENGGARA TIMUR, LARANTUKA







Tidal currents Larantuka strait & Tidal Bridge





Tidal power plant and Bridge







Project overview: Tidal power plant with extension





Gradually build up production capacity



The build up of the capacity

- Anticipates on the development of the demand as noted in Connectivity Study
- Creates timing for the investors of harbour, tourism, fishery to prepare
- Gaining experience with gas turbines load followers



COD 2021

Implementation phase...



TIDAL POWER DAM MASIRAH ISLAND, OMAN





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DTP PRINCIPLE

DTP is a dam concept composed of several standard caissons, for turbines and as substations, supplemented by a normal dam. The dam creates a blockage of the currents to realise impoundment (Δ h). This effect together with the FTP turbines, generates extra energy yields.



Basis concept DTP China study project

Basis concept DTP Oman

20.0

5.0

+3.000

TIDAL ENERGY PROJECT OMAN

Ideal location at Masirah Island



Ideal location at Masirah Island

IMPRESSION TIDAL POWER DAM



Ideal location at Masirah Island

IMPRESSION TIDAL POWER DAM



Ideal location at Masirah Island

IMPRESSION TIDAL POWER DAM



VALUES TIDAL POWER DAM

Achievements of the project

have direct impact

Worldwide iconic prestige project

This project has a direct positive impact worldwide, with a major development on technology, innovation, entrepreneurship and

prestige defining the progressive role of OMAN

Politics

"Right timing for cost neutral solution with International allure"

Renewable energy

"Higher production than demand creating export possibility"

Unlocking Masirah island

"Access to strategic position with development of tourism and creations of jobs"

NEXT STEPS

1. Activities

Data gathering

Tidal Current, Water heights & waves, Hydrography, Geological conditions, Weather, Infrastructure, energy demand

Numeric analysis

Waterworks to influence the flow profile, Length of solution, impact on surroundings

Development

Engaging operating and financial parties

2. Output

Design

Position dam, Basis of design waterworks and dam, Configuration of the turbines

Energy

Yield of the turbines, output and conversion base load

Financial

Estimation investment and opex, Cost of energy, Returns

Funding institutions



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TIDAL BRIDGE

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