

This is not an ADB material. The views expressed in this document are the views of the author/s and/or their organizations and do not necessarily reflect the views or policies of the Asian Development Bank, or its Board of Governors, or the governments they represent. ADB does not guarantee the accuracy and/or completeness of the material's contents, and accepts no responsibility for any direct or indirect consequence of their use or reliance, whether wholly or partially. Please feel free to contact the authors directly should you have queries.

# SABELLA : Pioneering Tidal Stream Energy 30 March 2020

Presented by Jérôme LE MOIGNE, Sales Leader, Sabella









# Our company



SABELLA's mission is to design and implement systems to power coastal areas and produce green hydrogen – using tidal energy

### **Key Figures**

- Created in 2008
- Based in Quimper, Britany, France
- 28 employees
- EPCI (Engineering, Procurement, Construction & Installation)
- ISO9001 certification
- Shareholding structure: 48% Industrials,
  50% Financials, 2% Management







# **New generation of Tidal Turbine**



## A new energy model tailored for remote grids on island or shore communities

A suitable solution for electricity production of remote grids and islands relying on costly fuel generators

- Reduction of CO2 emissions
- Energy independence and security
- Lower cost of electricity

Ocean currents as

baseload

BUSINESS OPPORTUNITIES



HYBRID



Smart Grid and other renewable energies









## Canada

Bay of Fundy & Great North Local company HYDRO-SAB (100% owned)

#### rance

Ushant ProjectMorlais ProjectTIGER ProjectYell Sound ProjectMember of OceanEnergy Europe

UK

#### Philippines

Capul Project MoA with H&WB and MoU with PNOC-RC

#### Chile

Magellan strait

Marine Energy Research and Innovation Centre (MERIC)

#### Indonesia

**Rural development** 

Consortium MPS (Meindo - Prima Langkah Pratama - Sabella)

#### Australia

Member of Australian Ocean Energy Group Project CRC Blue Economy









# Case study: Capul Ocean Power Project Sabella

## **Purpose**

Innovative and transformative initiative aiming to develop the **Philippines' and the ASEAN region's first commercial ocean power plant** deploying **tidal in-stream turbines** in San Bernardino Strait, separating the islands of Luzon and Samar.

## First step :

- Development of the first ASEAN tidal stream power plant off Capul island, on one of the 3 concession areas granted by the Philippine Department of Energy to SBOPC in 2013
- 1 x tidal turbine connected to the grid
- Variability in power production handled by an **energy storage system** (onshore batteries)
- Solar production coupled with baseload provided by the tidal turbines (predictable)









- Decarbonisation of Capul, 14,000 islanders powered by a thermal power plant equipped with 4 diesel generators to high percentage of green electricity production, saving of over <u>850 tCO<sub>2</sub> per year</u>
- Energy security and cost competitiveness, <u>24-hour reliable</u> <u>electricity supply</u> (against 16h/day today, not considering the regular prolonged blackouts), competitive electricity cost independent from fuel price volatility



• Economic development, 100% electrification rate (against 60% today), key driving force for economic growth (refrigeration of fishing products, tourism) and social welfare (domestic use, grid-connection of the schools and the medical facilities)







# **THANK YOU!**

Jérôme LE MOIGNE Sales Leader, Sabella j.lemoigne@sabella.bzh



