

new renewable generation
vladimir mistrik
nioire Energy s.r.o.

Horizon Europe Matchmaking Event
Energy Research

19 October, 2021.

Short introduction of the institution

- ▶ niore is developing 4 renewable technologies for mass energy **production & storage**
- ▶ Development of all our technologies is focused to support the transition towards a sustainable, stable, flexible and manageable energy system.
- ▶ 1. Energy Storage (niore ES)
- ▶ 2. Wave Energy Converter (niore WEC),
- ▶ 3. Wind turbine (niore WT),
- ▶ 4. Tidal & Stream Energy Converter (niore TEC).

niore renewable technologies

niore Technologies

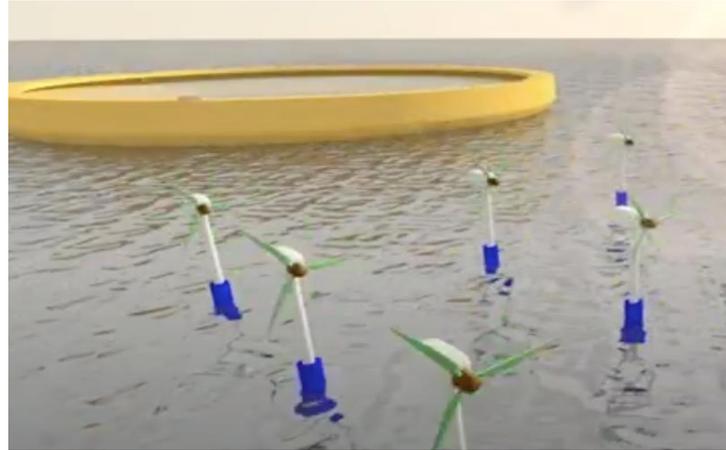
Due to the axles principle our technologies are scalable and we can produce or store energy in many MWh's. We are using only affordable water as a bearing for rotor rotation and in the storage, we are using water also as a heavy mass for kinetic rotation instead of expensive carbon cylinder being used in conventional flywheels.

Patented

All our technologies are proposed and designed in alignment with global strategies and plans in the terms of climate change. We are CO2 free & using no chemistry & reducing GHG & increasing energy efficiency. We are already patented in several relevant EU countries and USA, Canada, Australia, China, Japan, Indonesia, South Korea and patent is pending in more than 30 countries.

more energy storage & WEC

- ▶ **1. Energy Storage**
 - ▶ Capacity of many MWh
 - ▶ Scalable (diameter of tens of meters)
 - ▶ Ideal for grid balancing
 - ▶ Clean storage, no chemistry
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- ▶ **2. Wave Energy Converter (WEC),**
 - ▶ Harvesting energy from bigger area
 - ▶ Scalable (diameter of tens of meters)
 - ▶ Using Lift no Drag
 - ▶ Self adjustable blades
 - ▶ Capturing all wave height energy potential



niore Wind turbine & TEC

- ▶ **3. Wind turbine (WT),**
 - ▶ Bigger swept area - vertical turbine
 - ▶ Scalable (diameter of tens of meters)
 - ▶ Using Lift no Drag
 - ▶ Self adjustable blades above sea level
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- ▶ **4. Tidal & Stream Energy Converter (TEC).**
 - ▶ Bigger swept area - vertical turbine
 - ▶ Scalable (diameter of tens of meters)
 - ▶ Using Lift no Drag
 - ▶ Self adjustable blades - submerged
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- ▶ <https://www.youtube.com/watch?v=RXdCG4LXbnM&t=23>



Contact details

- ▶ niore Energy s.r.o.
- ▶ Oponice 111, Oponice
- ▶ Slovakia, EU
- ▶ info@niore.eu
- ▶ +421 905 064 883

Vladimir Mistrik, vladimir.mistrik@niore.eu

Miroslav Novak, miro.novak@niore.eu

Join our partners:

Slovakia:

- ▶ Slovak Academy of Science, University of Zilina, Slovak University of technology in Bratislava, EVPU

Europe:

- ▶ Aalborg University (Denmark), University of Plymouth (UK), Maynooth University
- ▶ Innosea (France)
- ▶ INEGI (Portugal)
- ▶ Nablawave (Italy)
- ▶ Integrate Renewables (Norway)

Looking primary for funding opportunities.