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Affordable  
High-performance  
Green REdox floW batteries



Acronym: HIGREEW



Start date: 1 November 2019



Duration: 43 months



EC Funding: 3.78M€



Total Budget: 3.78M€

### Coordinator

Dr. Eduardo Sanchez | CICE  
esanchez@cicenergigune.com  
Ms. Estibaliz Crespo | CICE  
ecrespo@cicenergigune.com

### Management

Dr. Anna Molinari | UNR  
a.molinari@uniresearch.com  
Ms. Irene Lamme | UNR  
i.lamme@uniresearch.com

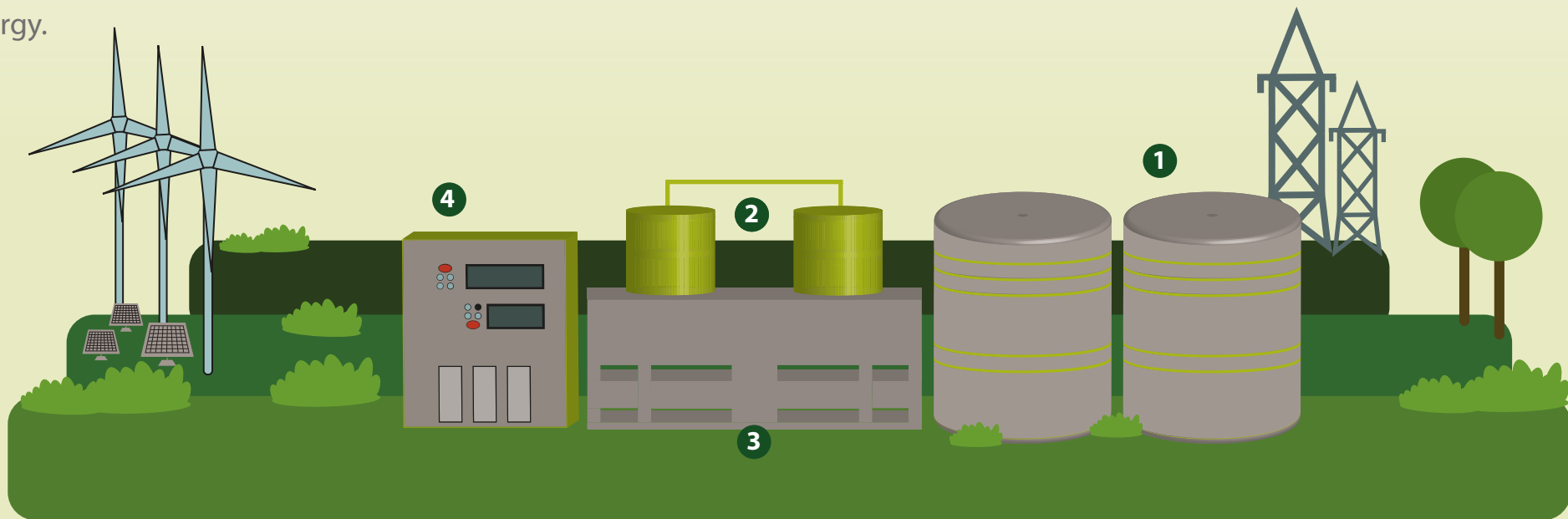
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**Redox flow batteries** when, in the transition towards decarbonization of our society, more and more renewable energy sources are used, batteries become very important. Because of the intermittent nature of renewables like wind and solar energy, matching consumption and generation this can only be done using batteries to store energy.



Redox flow batteries use two tanks with electrolyte fluid which are run through a battery cell to charge and discharge. They can store large amount of energy for a long time, at low cost.



- HIGREEW** will develop a low cost Aqueous Organic Redox Flow Battery, which will focus on:
- Environmental sustainability
  - High energy and power density
  - Maximise lifetime and efficiency
  - Minimising costs

- 1. Electrolyte tanks
- 2. Stacks
- 3. Pumps and other balance of plant equipment
- 4. Conversion systems (control, communication, inverter, etc)

**Targets for 2025**

- < 150€/kWh
- < 2% degradation/year
- < 168 kg CO2/kWh
- Abundant materials use
- Safe & Sustainable