



# EASE – Battery Storage on Islands

06 November 2020  
GTI TF Meeting

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## Introduction

- Many islands have been early adopters of renewables and have seen some of the world's first deployment of energy storage projects.



# Introduction

- Islands have seen rapid increases in variable renewable generation but have no or fewer interconnections to help cope with the associated challenges. Useful ‘test bed’ for possible solutions, which can be highly instructive for interconnected energy systems preparing to integrate very high shares of variable renewables in the coming decades.



# Introduction

- The cost to operate the system has increased over the last years and this trend is unlikely to change unless technologies such as energy storage are used to their maximum potential. Energy storage can provide a solution to the main challenges posed by the integration of variable renewable energy. It is crucial that the products designed to address these needs can be stacked and that regional needs are properly assessed and communicated to the market.



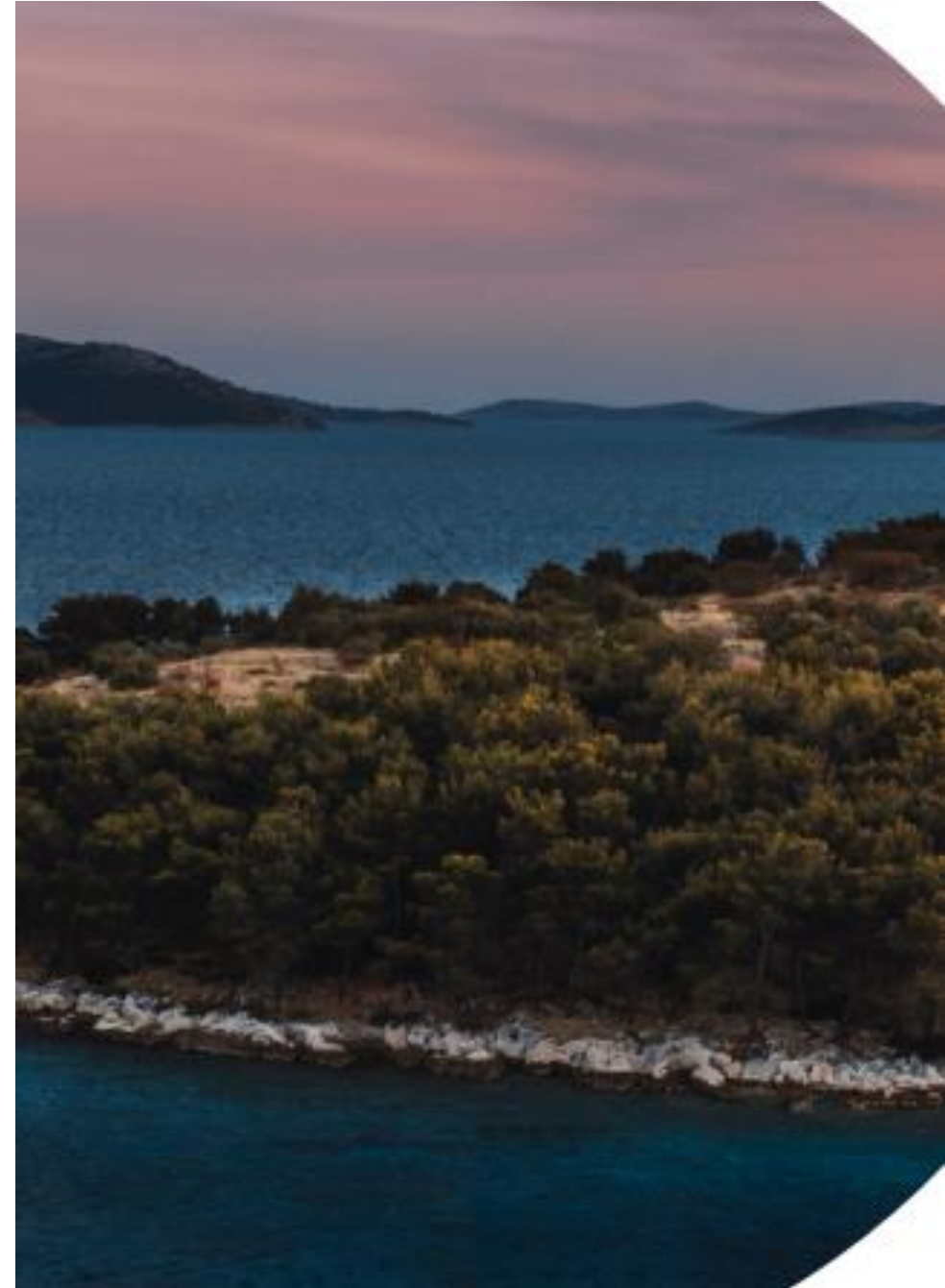
# Introduction

- As the EU strives to achieve a net-zero power emissions system by 2050, it is incredibly important to begin developing the market services and grid planning methodologies to prepare the ground for integrating very high shares of renewables in a cost-effective way.



# Battery storage and islands

- Energy storage systems are uniquely suited to supporting decarbonisation of islands, whatever their characteristics.
- Battery storage solutions have proven their ability to cost-effectively provide a variety of services, for instance helping reduce fossil fuel use when coupled with diesel generators or drastically cutting renewables curtailment. Storage can also provide key grid services such as spinning reserve to prevent load shedding and blackouts.



# Challenges

They relate to...

- **Policy and Long-Term Decarbonisation Strategy**
- Technologies & Applications
- Financing and Business Cases



# Pushing for change – Policies

## Battery Regulation

1. Support for the production of all battery technologies in Europe
  - Different battery technologies are currently available.
  - – Batteries serve different market segments and applications: there is no “one-size-fits-all” technology.
2. Ensure a coherent legislative framework on batteries.
  - Coherence is needed between the Batteries Regulation, Ecodesign Directive, End of Life Vehicles Directive, Waste Shipment Regulation, REACH and Occupational Health and Safety (OSH).
3. Introduce a carbon footprint declaration, keeping into account that the footprint is closely linked to the use of the battery over its lifetime. EV and Stationary batteries are different lifetimes. Consequently, for stationary storage, a different use case would have to be determined.



# Pushing for change – Policies

## Battery Regulation

4. Introduce a notification, verification and validation system of batteries that become waste.
5. Revise and update the recycling efficiency targets included in the Batteries Directive.
6. Refrain from introducing minimum levels of recycled content in new batteries.
7. Ensure a level-playing field between first and second life batteries.
8. Ensure that the battery safety considerations are properly addressed.
9. It is important to also look at how the hybrid technologies, such as battery-supercapacitor as an example, can contribute to decarbonisation and how they will be impacted by the legislation.