April 2018: Excursion Orkney Islands

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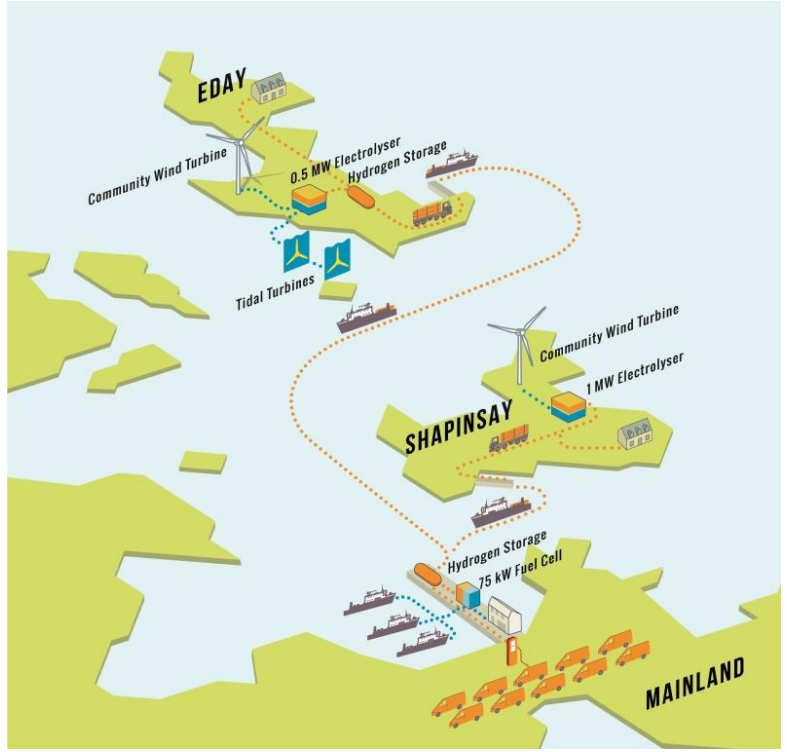
April 2018: Excursion Orkney Islands

- Visit of a functioning independent sustainable energy system based on hydrogen



Energy generation through wind, wave and tidal plants

Conversion of energy to hydrogen through electroliser

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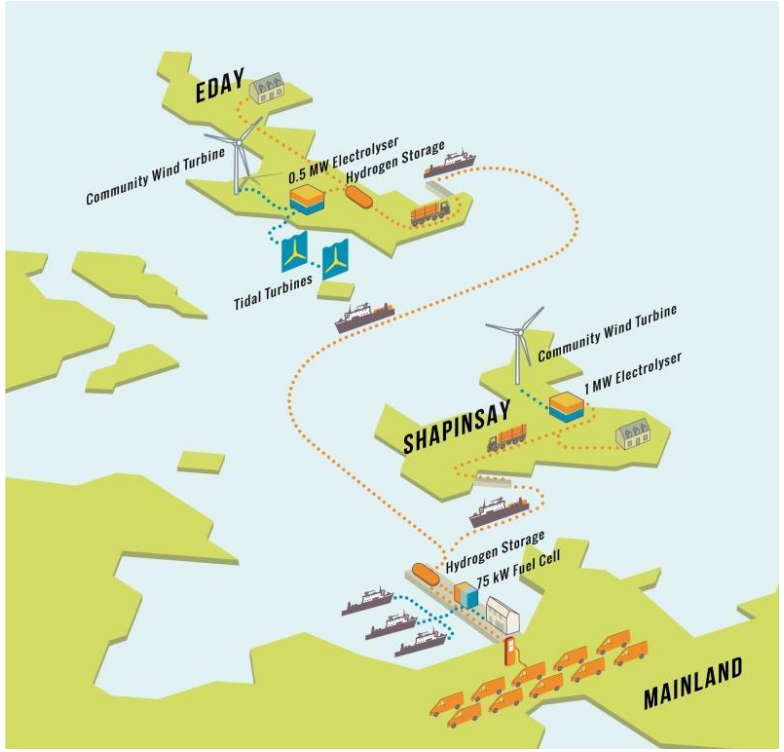
- Commissioned in 2012, the 900kW turbine



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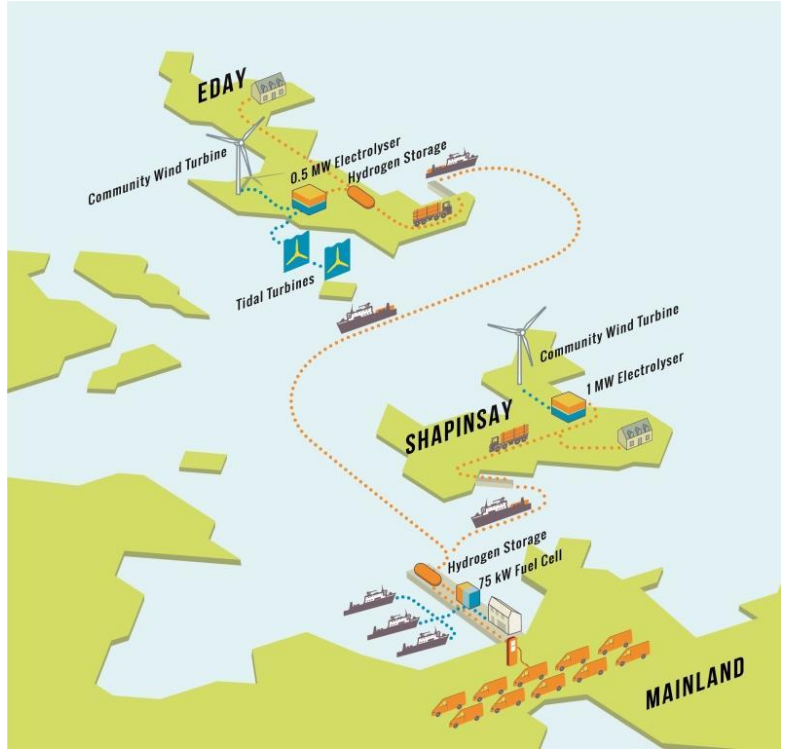
- Orkney introduces tidal and wave power



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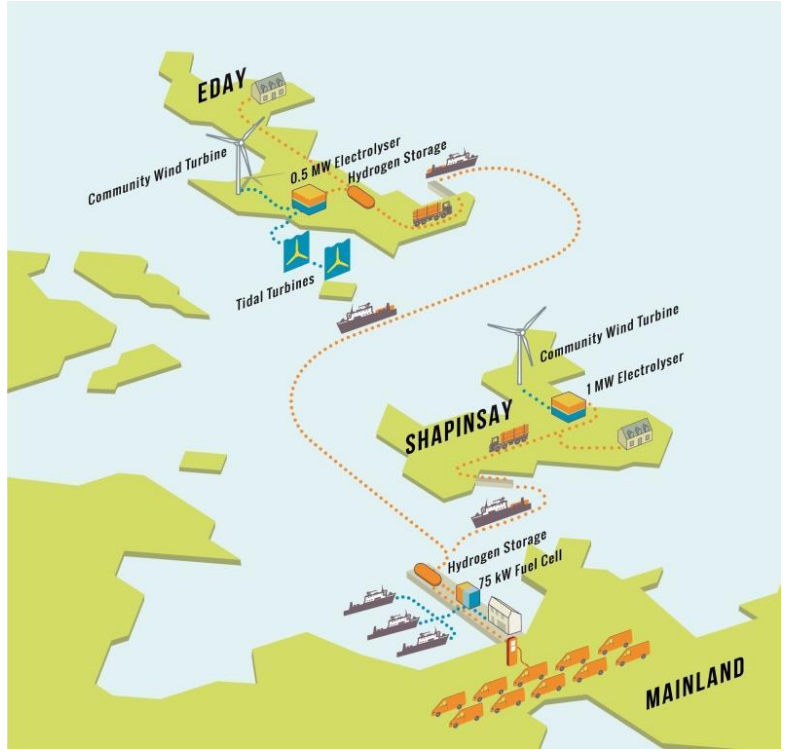
- Tidal energy site



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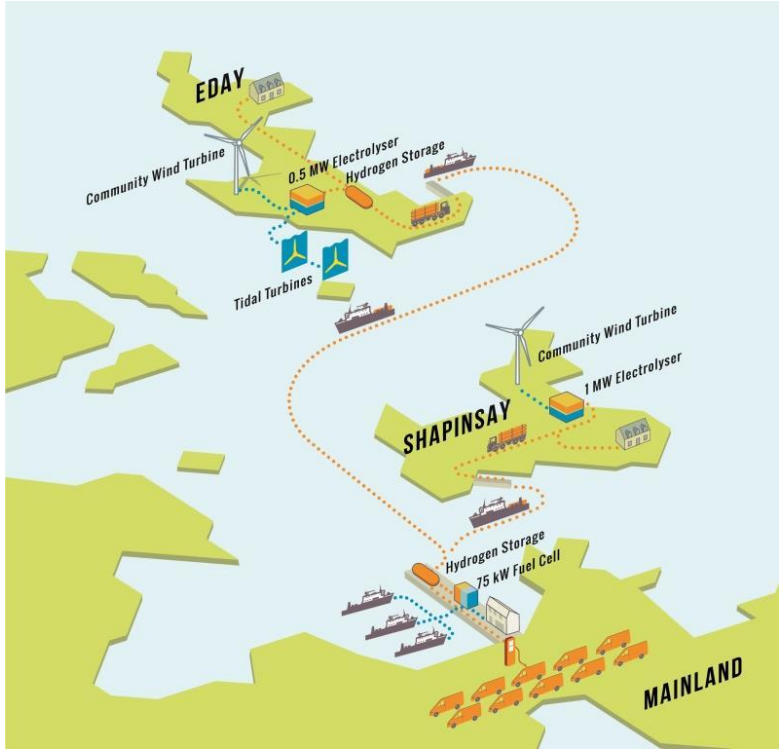
- The EMEC electrolyser is rated at 500kW



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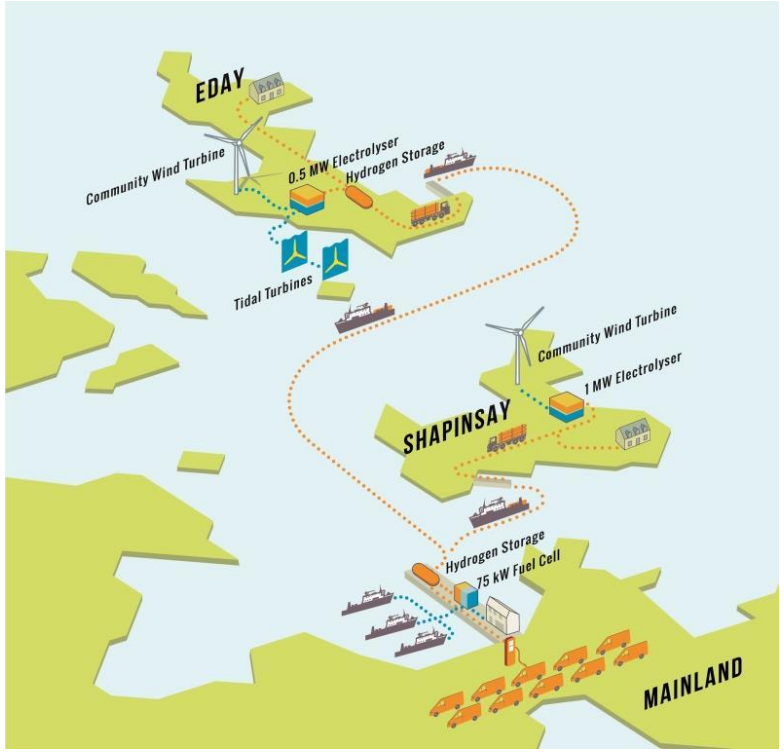
- Tube trailers have been used extensively for moving high pressure hydrogen



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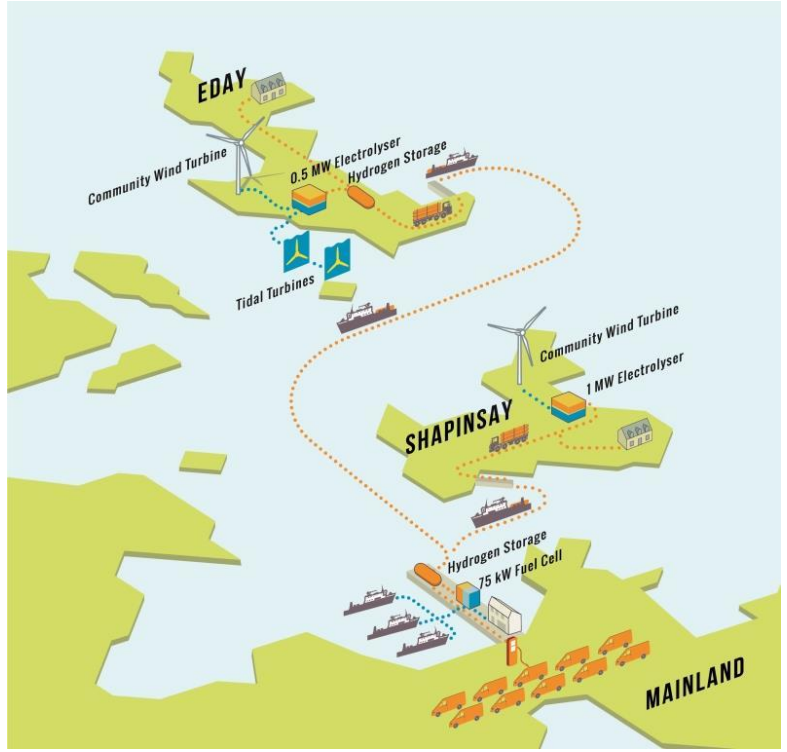
- Transporting hydrogen to Kirkwall



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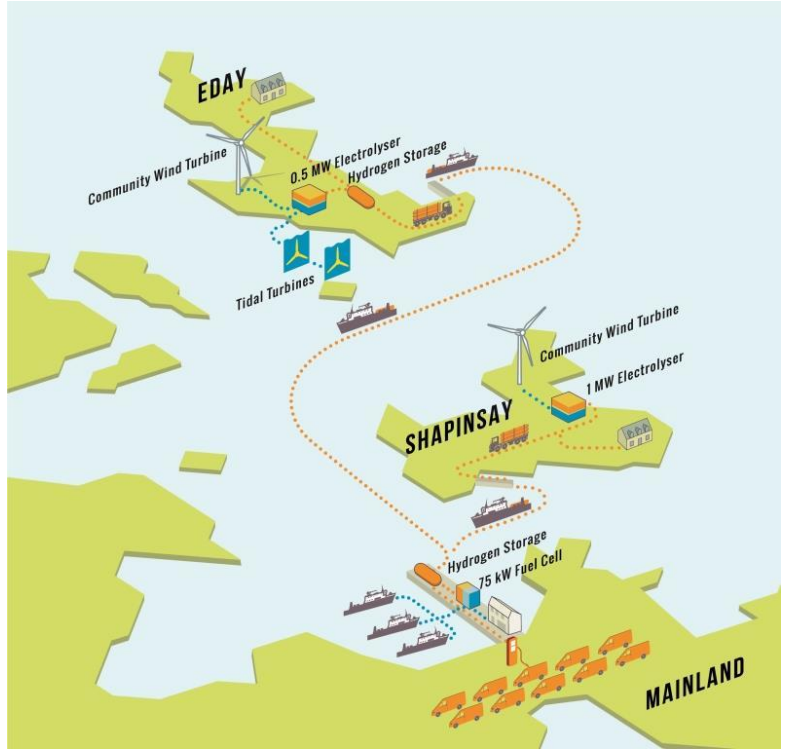
- 75 kW fuelcell, used for cold ironing, and heating local buildings



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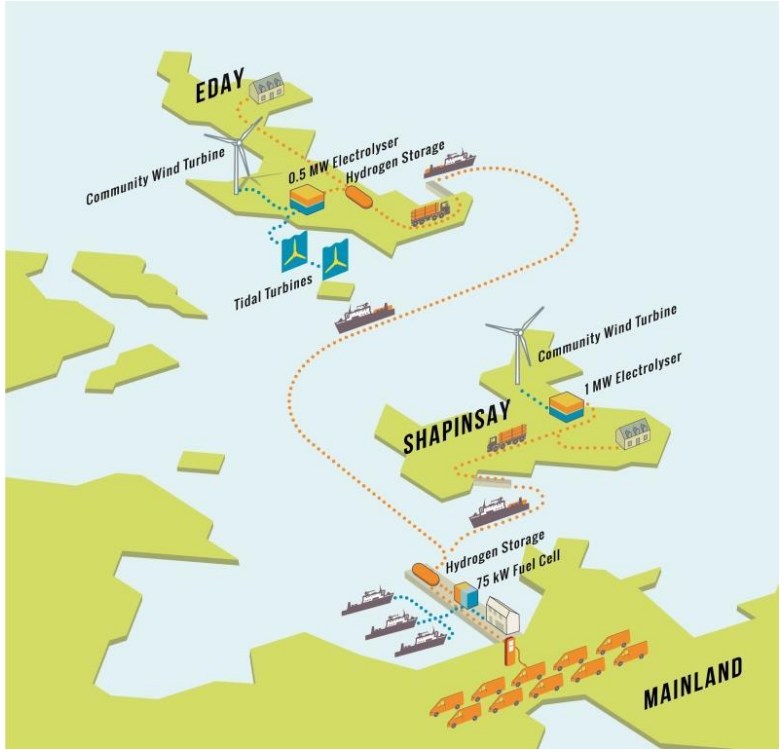
Hydrogen refueling station for cars



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- **Challenges for new initiatives:**
- Transport and logistics
- Hydrogen storage
- Hydrogen carriers
- Safety issues/ training
- Costs
- Legal aspects

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