Aran Islands
Ireland

Aran Islands in a nutshell

Three islands on the west coast of Ireland
Árainn, Inis Meáin and Inis Oírr
Located at the mouth of Galway Bay
Special Area of Conservation, Natura 2000

Population increases by 200% during the summer
Permanent population: 1,300
Peak during the summer months: 3,900

Well connected to mainland
Thanks to ferries and an airstrip
- ~17 km to Rossaveel
- 1.5 h by ferry, 10 min by flight

Tourism is the main economic activity
Namely hospitality, transport, and retail

Energy System Description

Final Energy Consumption in 2017

<table>
<thead>
<tr>
<th></th>
<th>Electricity</th>
<th>Heating</th>
<th>Transport to &amp; from</th>
<th>Transport on Island</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2,257</td>
<td>6,800</td>
<td>17,702</td>
<td>2,427</td>
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<td></td>
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<td>1,056</td>
<td>4,667</td>
<td>641</td>
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<tr>
<td>TOTAL:</td>
<td>29,186</td>
<td>8,241</td>
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</tbody>
</table>

*Data only for Árainn and Inis Meáin

Electricity
Interconnected with mainland
In recent years, blackouts have occurred on the islands due to problems with the undersea cable
The measured losses of the undersea cable are around 50%

Heating
Primary energy sources for heating of households and hotels are:
- árainn
  - kerosene: 32%
  - gasoil: 26%
  - coal: 25%
  - diesel: 10%
  - other: 7%

- Inis Meáin
  - kerosene: 26%
  - coal: 58%
  - diesel: 8%
  - other: 8%

Transport on the island
Public transportation with diesel mini buses
Main transport mode is private diesel vehicles
Some electric vehicles as part of pilot projects and promotional activity of the energy co-op

Transport to and from the island
Multiple ferries (depending on the season) connect the islands to Rossaveel and Doolin
The airstrip enables minor flights to mainland

Stakeholder mapping

Civil society
- Aran Islands energy co-operative
- Árainn development co-operative
- Inis Oírr development co-operative
- Inis Meáin development company

Business sector
- The Aran Islands Business Network
- Ferry companies

Public sector
- Galway County Council
- Gaeltacht Authority
- Sustainable Energy Authority Ireland

Academia
- National University of Ireland
- Galway Mayo Technical Institute
- Primary schools
- Secondary schools
Vision

The Aran Islands are self-sufficient in clean, locally owned energy. The economy of the islands is built on the related benefits that accrue from this.

Transition pathways

Wave/tidal
Wind
Solar photovoltaic
Interconnection with mainland

Solar Thermal
Heat pumps

Households and consumers
- Renovating and retrofitting buildings
- Demand response

Road transport
- Electric vehicles
- Hydrogen vehicles
- Bicycles for tourists and residents

Maritime transport
- Hydrogen (hybrid) ferry

Community engagement, acceptance and funding

Clean Energy Transition

Energy
- Sustainable Energy Authority Ireland
- Aran Islands energy co-operative
- Inis Oírr development co-operative
- Inis Meáin development company

Fleet decarbonisation
- Ferry companies
- Dept. of Culture & heritage

Buildings retrofitting
- Business Network Citizens
- Árainn development co-operative

Support
- Economic social & cultural
  - Gaeltacht Authority

Leader & coordinator

Education
- Primary & secondary schools
- National University of Ireland
  - Galway Mayo technical institute

R&D
- H₂ electrolysis

Road transport
- Electric vehicles
- Hydrogen vehicles
- Bicycles for tourists and residents

Community engagement, acceptance and funding

Households and consumers
- Heat
- Electricity
- Fuel

Solar photovoltaic

Interconnection with mainland