Feasibility Study on Anaerobic Digestion for the Dingle Peninsula

Description of the Study

The Dingle Sustainable Energy Community, led by the Dingle Creativity and Innovation Hub / Mol Teic, commissioned a feasibility study on the Development of Anaerobic Digestion on the Dingle Peninsula with the aim to become one of the leaders in the development of the rural bio-economy in Ireland.

The study applies circular economy thinking, considering organic wastes as a valuable resource which, when combined with agricultural by-products and feedstocks, can be turned into a high-quality fuel – enabling new economic opportunities locally.

Aims

The objective is to evaluate the potential for Dingle to become one of the leaders in the development of the rural bio-economy in Ireland, with biogas and a circular economy helping to create new job opportunities and securing the future of farming, while contributing to meeting the community's energy needs in an affordable, equitable and sustainable manner.

Results

The practical AD feedstock potential on the Dingle Peninsula has an energy content of 305GWh, compared to 310GWh of final energy usage in the study area according to Dingle's Energy Master Plan.

The capital investment required varies from €2.3million to €4.9 million.

Financial analysis of the different technical pathways indicates clearly that pathways based on the combined production of heat and power are not financially viable.

Compressed biomethane pathways treating animal by-products (ABP) generate the highest profits.

Next Steps

- Ongoing community engagement
- Site selection and master plan
- Establish project organisation eg Community Energy Co-op
- Obtain permissions
- Secure long-term energy purchase agreements
- Financing and Funding



Highlights

- Feedstock energy potential 305GWh
- **Capital investment up to €4.9 million** required
- Compressed bio-methane with ABP is most financially viable option



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Community Based Energy Solutions for Remote Areas















