

ENBIO - Energy and the BioEconomy



Route to a local integrated system

1. Build new capacity in remote, vulnerable areas and strengthen the rural economy

3. Make use of locally available resources - e.g. timber, waste, energy, and simultaneously create added value

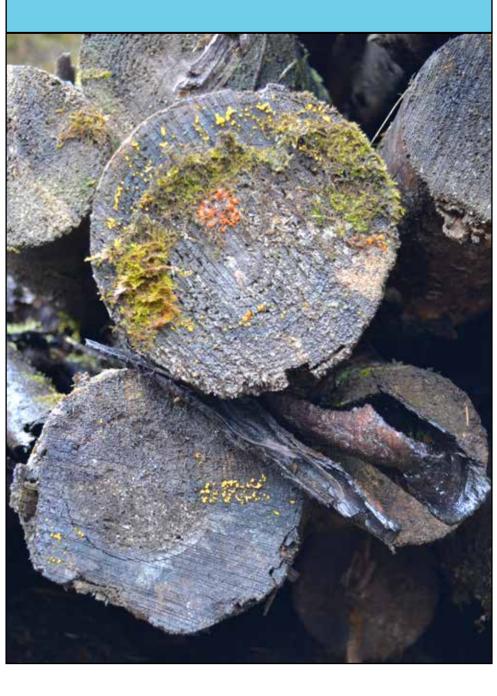
5. Couple surplus renewable energy, at source, with bio -manufacturing, to reduce production costs, increase demand side load and overcome grid constraints

7. Design unique, modular *Pandora PBR™* photobioreactors containing submerged LED lighting and computer controlled sensors, capable of producing algae and

other photobiotic organisms

9. Displace algal imports transported by air freight, give greater quality assurance and deliver provenance into multiple markets - e.g. health foods, cosmetics and aquaculture





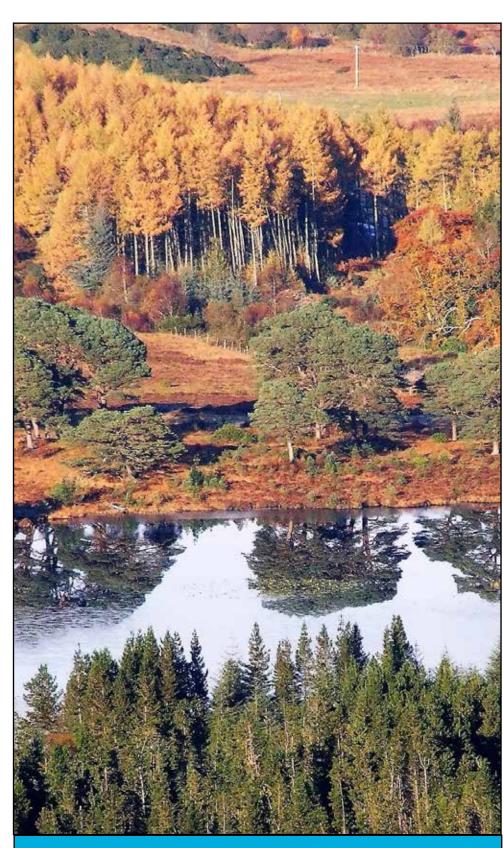
Local Resources

Circular Economy Approach

Renewable Energy

Innovative Algal Bio-production

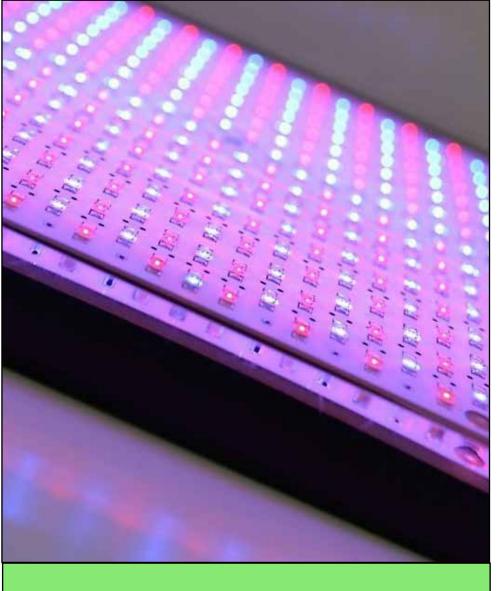
Wider Benefits



2. Provide new industry with multiple income streams that can help effectuate renewable energy projects, often hindered by economics



4. Contribute to the circular bioeconomy using whisky distillery coproducts and direct incorporation of carbon dioxide from fermentation

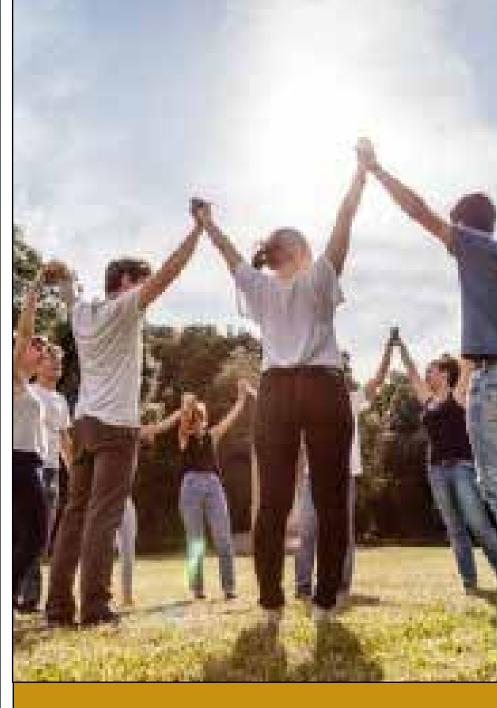


LED lightsheets with a highly sophisticated control system to allow rapid and automatic use of intermittent renewable power

6. Develop bespoke



8. Establish a pioneering 16,000 litres pilot- scale algal production plant on the Ardnamurchan Estate, West Coast of Scotland, to become one of the largest contract manufacturing facilities for microalgae in the UK



10. Determine feasibility of the integrated system approach in further renewable projects using the ENBIO spreadsheet tool and discover how to gain maximum benefits for the community

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