

## Resource recovery, reuse and remanufacturing

Type of Entry: Innovation Area

O&M and Windfarm Lifecycle > Decommissioning <https://offshorewindinnovationhub.com/category/operations-maintenance/>

### Description

There are a number of options for components when windfarms have been decommissioned. At end-of-use a component would ideally be reused or remanufactured, if this is not possible then materials should be recycled and, as last resort, the energy value could be recovered. This introduces circular economy technologies and business models into the low-carbon sector. However, infrastructures to process turbine components are underdeveloped. Solutions for direct reuse need to be developed from concept stage onwards. Remanufacturing is in early development and challenging due to new and better designs entering the market. Material recycling solutions for composites in blades are technically available but too costly in practice and generally not yet deployed at a large scale. This results in capacity issues and higher transport costs; towers could be melted and recycled; solutions for nacelles have not been commercially deployed in the UK meaning (near) critical materials are lost for direct use domestically and add to dependence on raw material imports. Markets need to be developed for recycled materials.

### Strategic Outcome

- Enabling disruptive innovation
- Commercialising >15MW turbine platforms
- Maximising operational performance of existing wind farms**

