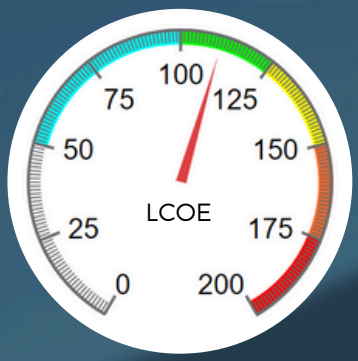
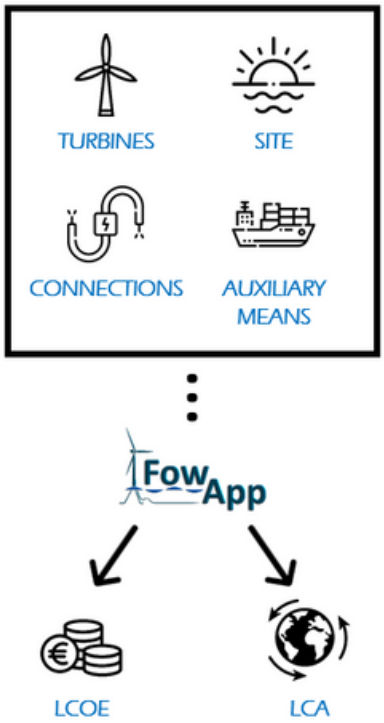


FOWAPP

FLOATING OFFSHORE WIND ASSESSMENT APP

IREC
Shaping Energy for a Sustainable Future

THE CONCEPT



ADDED VALUE

- Transparency of input and output data used for calculations

TRL

5-6

REGISTERED

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PRODUCT DESCRIPTION

- **Desktop application** to compute the **Levelized Cost of Energy** (LCOE) and to perform a detailed **Life Cycle Assessment** (LCA) of **floating offshore wind farms**
- The software calculates all the intermediate results such as wake or grid energy losses
- **Includes a library** for the user inputs, such as site specifications, components or auxiliary means
- Designed to be intuitive and user-friendly

APPLICATIONS

Focus on **floating offshore wind farms**:

- Early project development
- Technology assessment
- Environmental impact evaluation
- Performance analysis

DESIRED PARTNERS

Project developers, specialised engineering companies, consultancies and data aggregators.

EXPECTED BENEFITS

- User-friendly/ Usability
- Quick and reliable results
- Overall scenario overview
- Costumizable by user

technical details

FEATURES

FowApp is:

- built specifically for the floating wind industry
- developed using a well established software
- storing all the information, except the images, in an SQLite database
- capable to import data from MS Excel
- complete, integrating electrical power flow and wake calculations
- detailed from the technical perspective
- offering a full project overview using a relatively easy to use App

INPUT DATA

The app includes a library where generic information is stored, such as site definitions, components (wind turbines, cables, substructures, anchors, etc.) and auxiliary means details (cranes, vessels, helicopters, etc.). On the other hand, any number of projects may be defined, using information of the library plus additional details such as the layout, electrical connections and the life cycle process (design, construction, O&M and decommissioning).

OUTPUT DATA

Three main results are obtained and combined to get the LCOE and LCA:

- the AEP (Annual Energy Production)
- the LCC (Life Cycle Costs)
- the associated environmental impacts of the following categories:
  - Global Warming Potential (GWP)
  - Abiotic Depletion Potential Elements (ADPe)
  - Primary Energy Demand (PED)
  - Acidification Potential (AP)
  - Eutrophication Potential (EP)
  - Aquatic Toxicity Potential (ATP)
  - Human Toxicity Potential (HTP)

LCC = CAPEX + OPEX + DECEX

Some icons used in this catalogue are extracted from https://www.flaticon.com/