AAU Megaproject – Blue Denmark

Energy and Production

Focus area: Energy Islands

2 project groups from AAU Esbjerg addressed this focus area

- 1 group from AAU ENERGY (2nd semester) and 1 group from Chemistry and Bioscience (6th semester)
- One project focused on the Energy Island in the North Sea, where the possibility of optimizing energy loss between AC to DC conversion and managing energy transport from offshore wind turbines to land was investigated.
    - Some of the major questions addressed were why high voltage direct current (HVDC) is used as one of the transmission technologies for the Energy Island and how energy losses can be reduced when converted.
- Another project concerned storing of energy in large-scale redox flow batteries (RFB), which may very well be needed to mitigate fluctuations in energy production.
    - The project investigated the performance of sustainable organic electrolytes,
    - focusing on electroactive metabolites produced by fungal fermentation.
- Project activities ran in parallel with two general online meetings and an excursion to the wind turbine shipping area at the Port of Esbjerg.