



**Baltic  
InteGrid**  
Integrated Baltic Offshore  
Wind Electricity Grid Development

## From Cost to Benefit: The Added Value of a Meshed Offshore Grid.

Anna-Kathrin Wallasch

Espoo, 15 March 2018

**DEUTSCHE  
WINDGUARD**



**Interreg**  
Baltic Sea Region



EUROPEAN  
REGIONAL  
DEVELOPMENT  
FUND

## **Project Baltic Integrid**

### **Group of Activity 3.6 Cost Benefit Analysis**

- CBA Introduction
- Benefits (Dr. Clemens Gerbaulet)
  - Overview Model dynELMOD
  - Results for cases studied
- Costs (Anna-Kathrin Wallasch)
  - Model results
  - Results and comparison to benefits

## Cost Benefit Analysis in the Baltic Integrid Context

- Assumption:
  - Investments into Cross-Border Interconnectors
  - Investments into Offshore Wind Capacities
- Method:
  - Development of two pre-feasibility analysis in two Baltic Sea regions (GoA 4)
  - Comparison of six different set-ups for each pre-feasibility studies
- Question:
  - What scenario and combination of interconnectors is most promising?
  - Do benefits outweigh the costs?
- Status of work:
  - Intermediate results related to net present benefit calculation
  - Some assumptions and output details still under development
- Aim:
  - Discussion of intermediate results
  - Consideration of comments for further work

## Two Pre-Feasibility Analyses

### Pre-Feasibility Analysis 1:

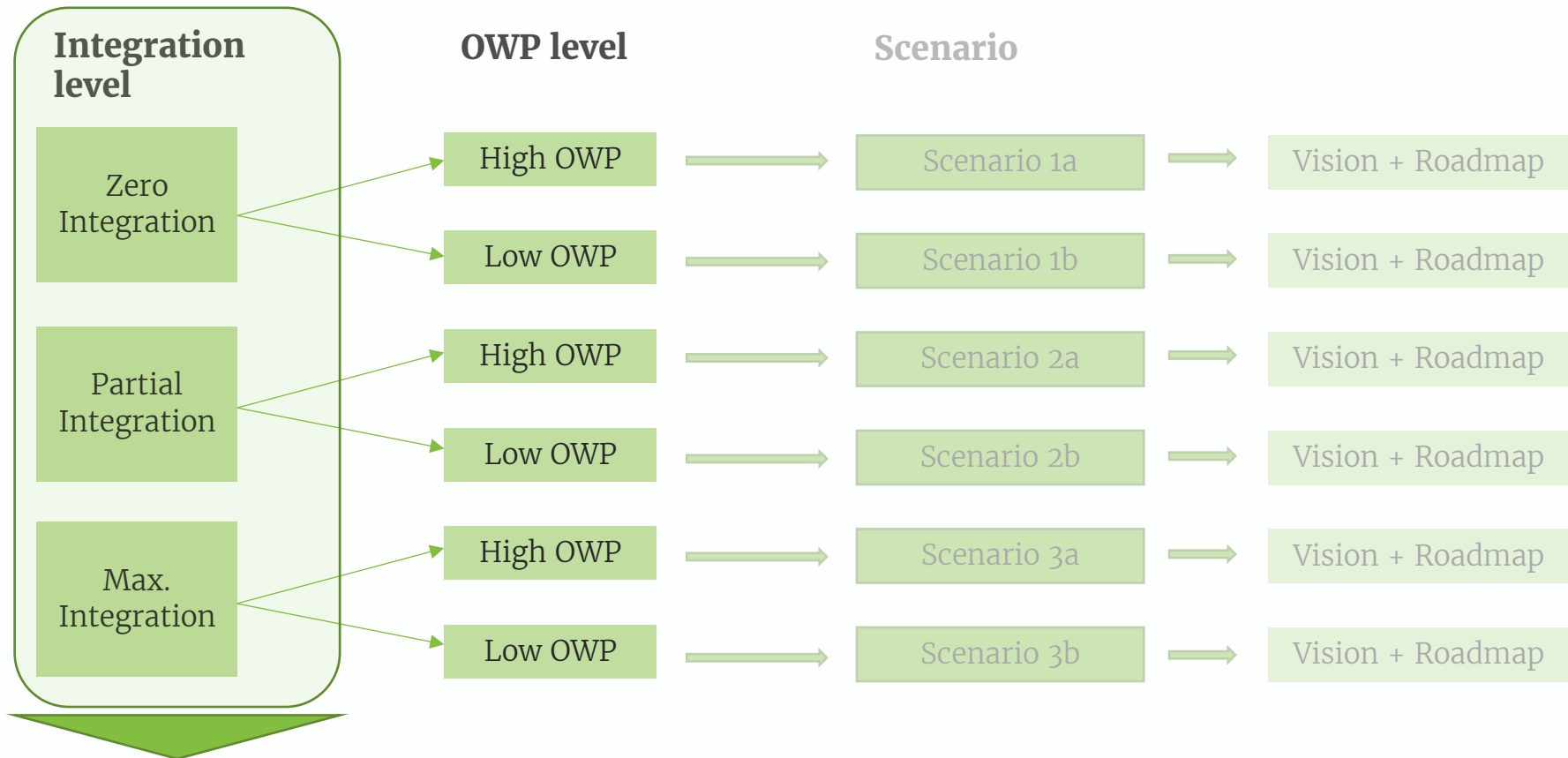
Sweden – Poland – Lithuania

### Pre-Feasibility Analysis 2:

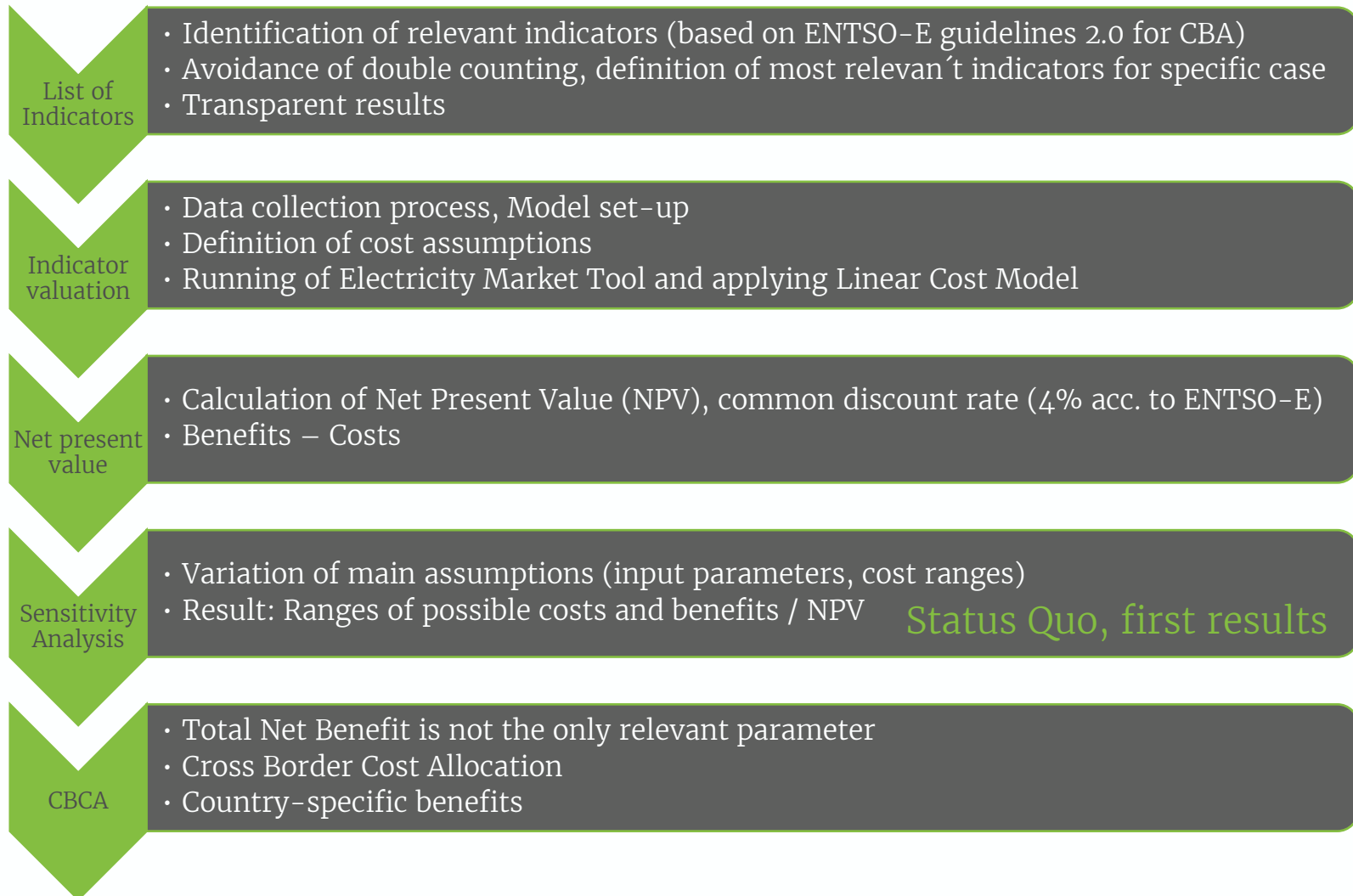
Germany – Sweden – Denmark

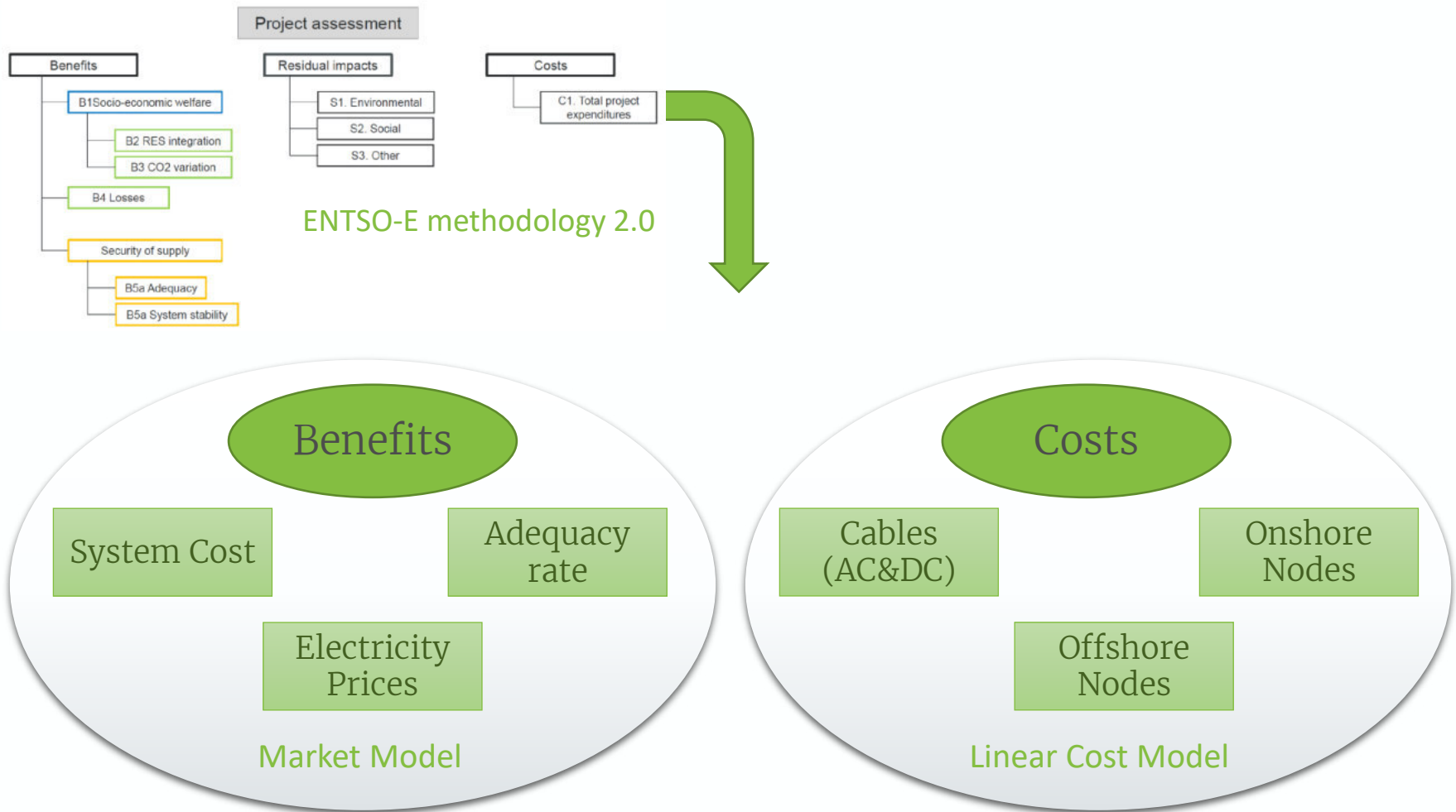


## Scenario tree applied in both pre-feasibility studies

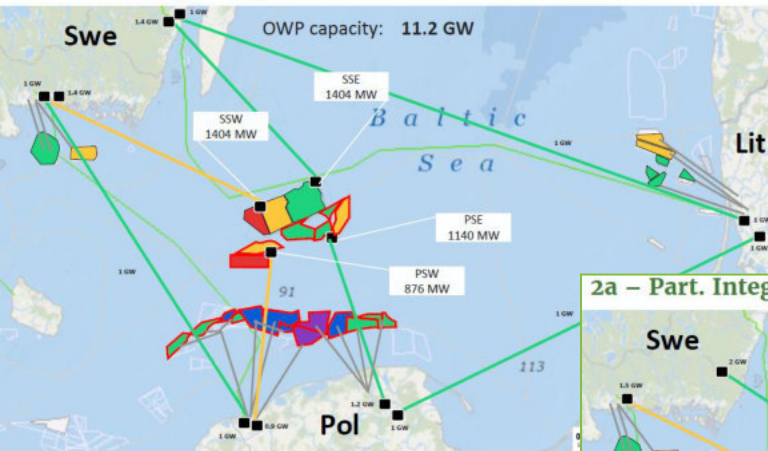


→ Evaluating the difference between levels of integration within Low/High Wind scenarios



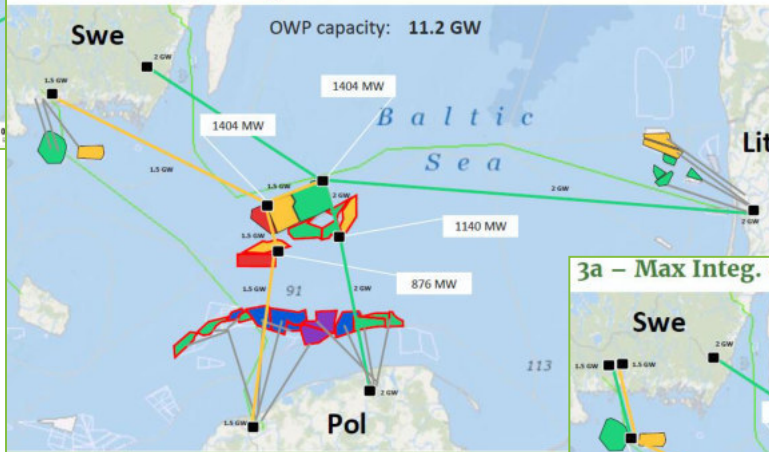


1a – Zero Integ. & High OWP



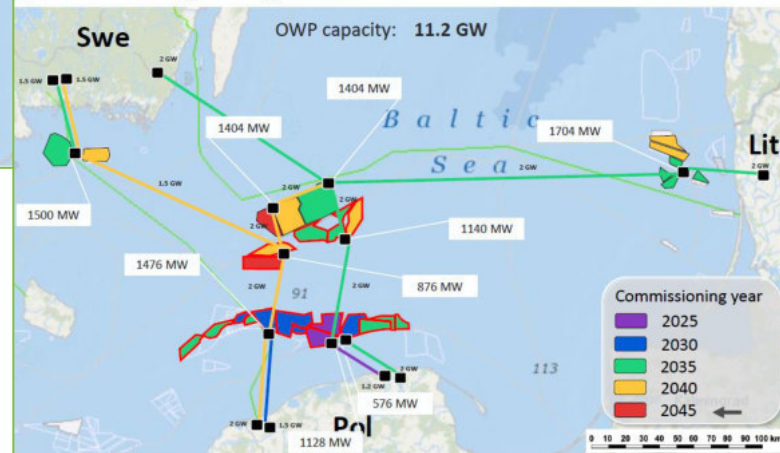
Cost and Benefit Differences

2a – Part. Integ. & High OWP

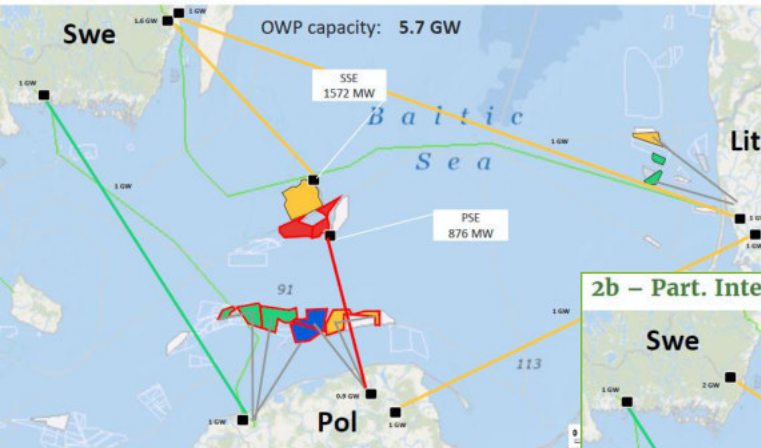


Baseline Scenario

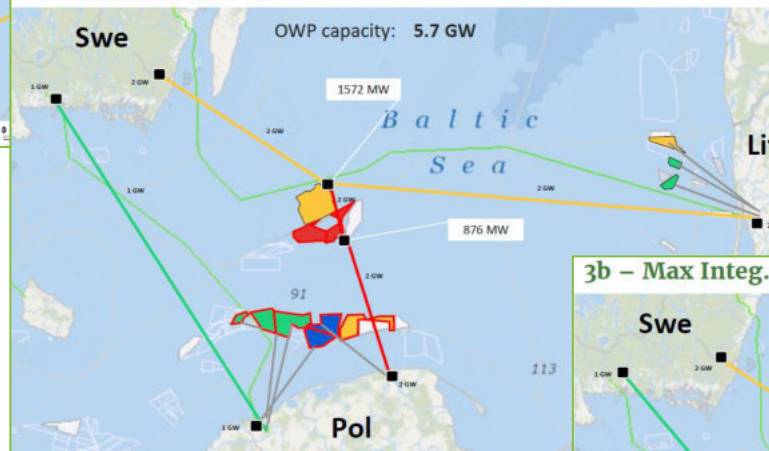
3a – Max Integ. & High OWP



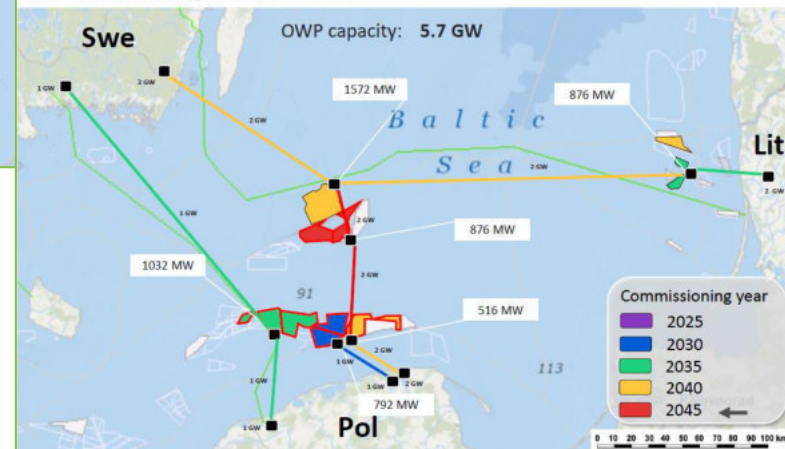
1b – Zero Integ. & Low OWP



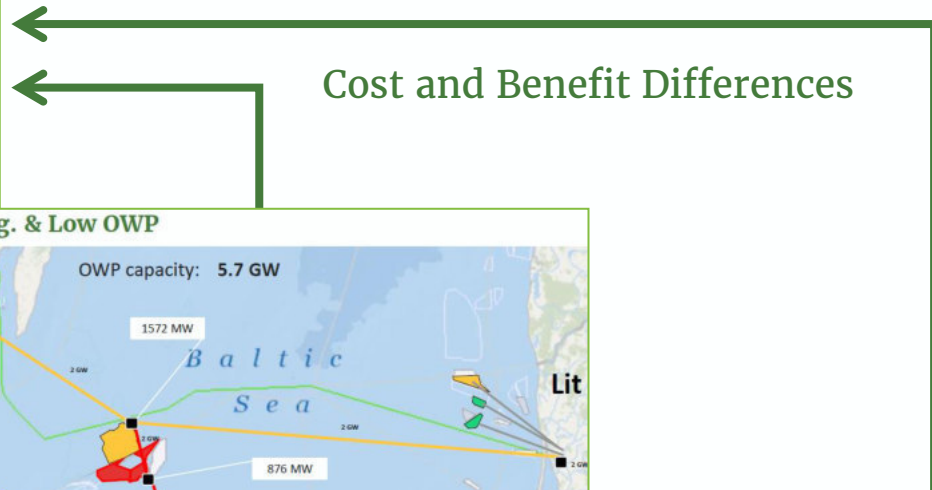
2b – Part. Integ. & Low OWP



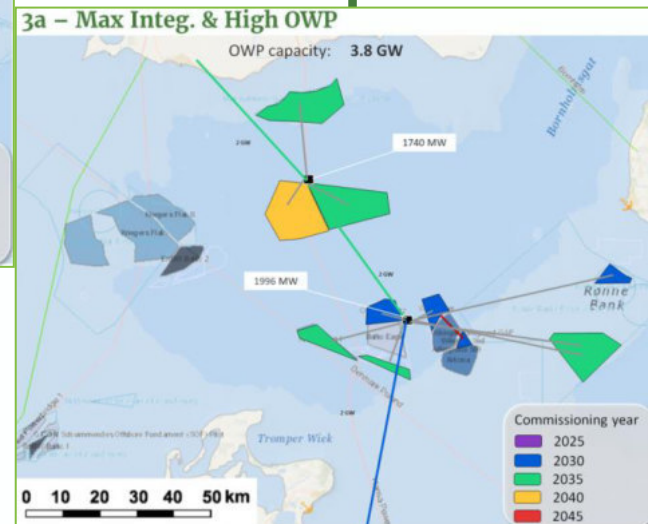
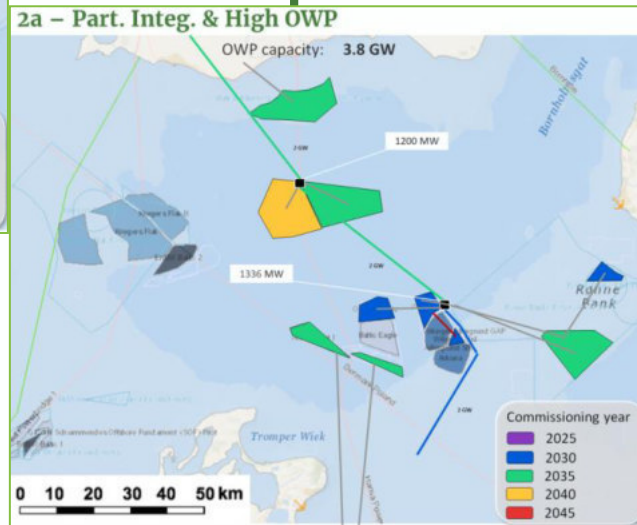
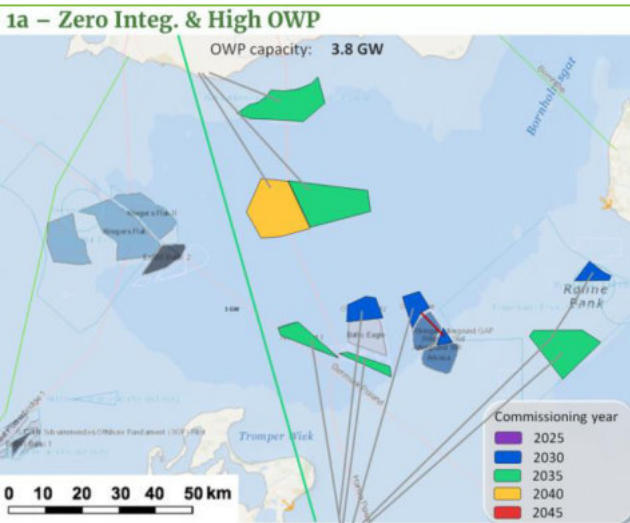
3b – Max Integ. & Low OWP



Cost and Benefit Differences

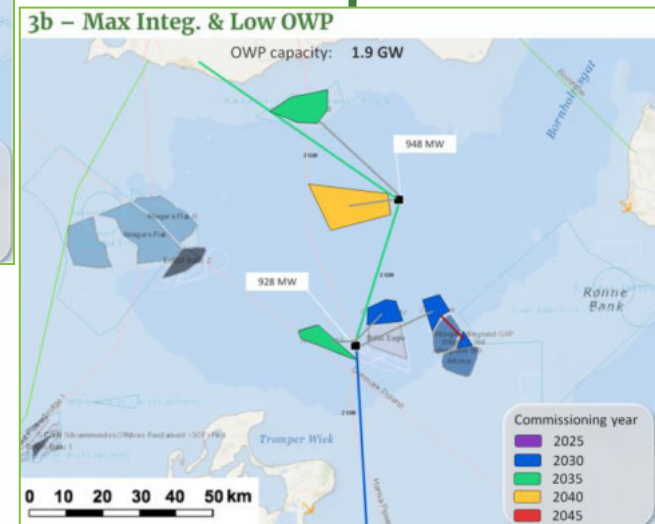
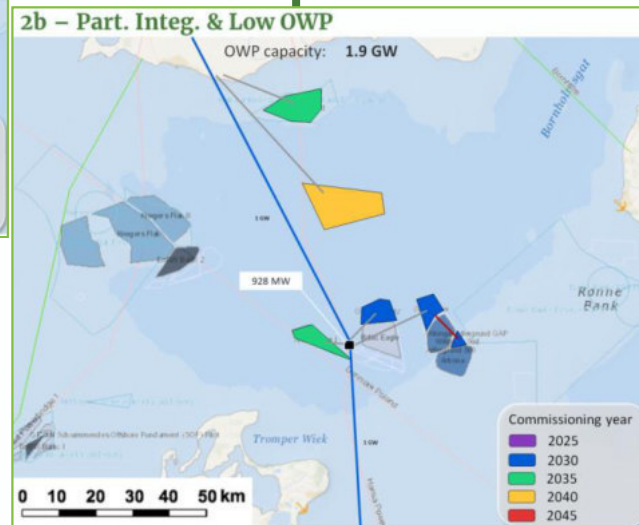
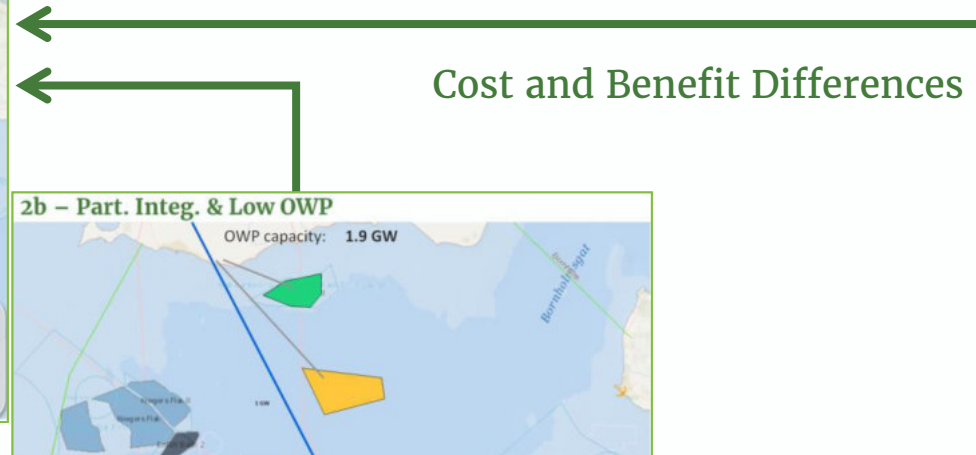
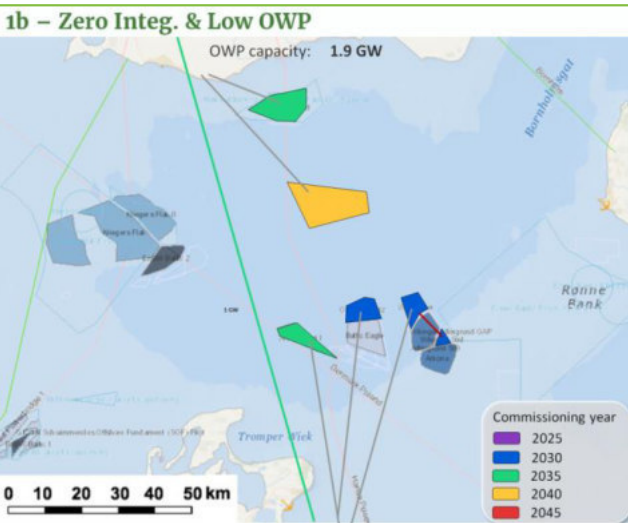


Baseline Scenario



Cost and Benefit Differences

Baseline Scenario



Baseline Scenario