

Operationalizing Net Positive Impact (NPI) on an Offshore Wind Project

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Equinor - A Global Leader in the Energy Transition

US EAST COAST (JV with BP)

Empire Wind I 816 MW	Beacon Wind I 1230 MW
Empire Wind II 1260 MW	Beacon Wind rem. ~1200 MW

US West coast:
Future growth
Floating wind opportunities

Brazil: Future growth
Onshore solar opportunities

- Offshore wind clusters based on existing assets
- Pipelin
- In construction
- Production

BALTIC SEA

Baltyk I,II,III, Poland (with Polenergia) ~2.5 GW	Arkona, Germany (with RWE) 385 MW
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South Korea

Donghae – Floating (with KNOC, EWP) ~200 MW	Firefly ~800 MW
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Asia: Future growth
China, Japan, South Korea, Vietnam

NORTH SEA

Logger Bank (with SSE, Eni) 3.6 GW	Sheringham Shoal (with UKGI, Equitix) 317 MW
Hywind Tampen – Floating (with OMV, Idemitsu, etc.) 88 MW	Dudgeon (with Masdar, CR Power) 402 MW
UK Extensions 720 MW	Hywind Scotland – Floating (with Masdar) 30 MW

Corporate Biodiversity Position

Equinor Biodiversity Position (summarized)

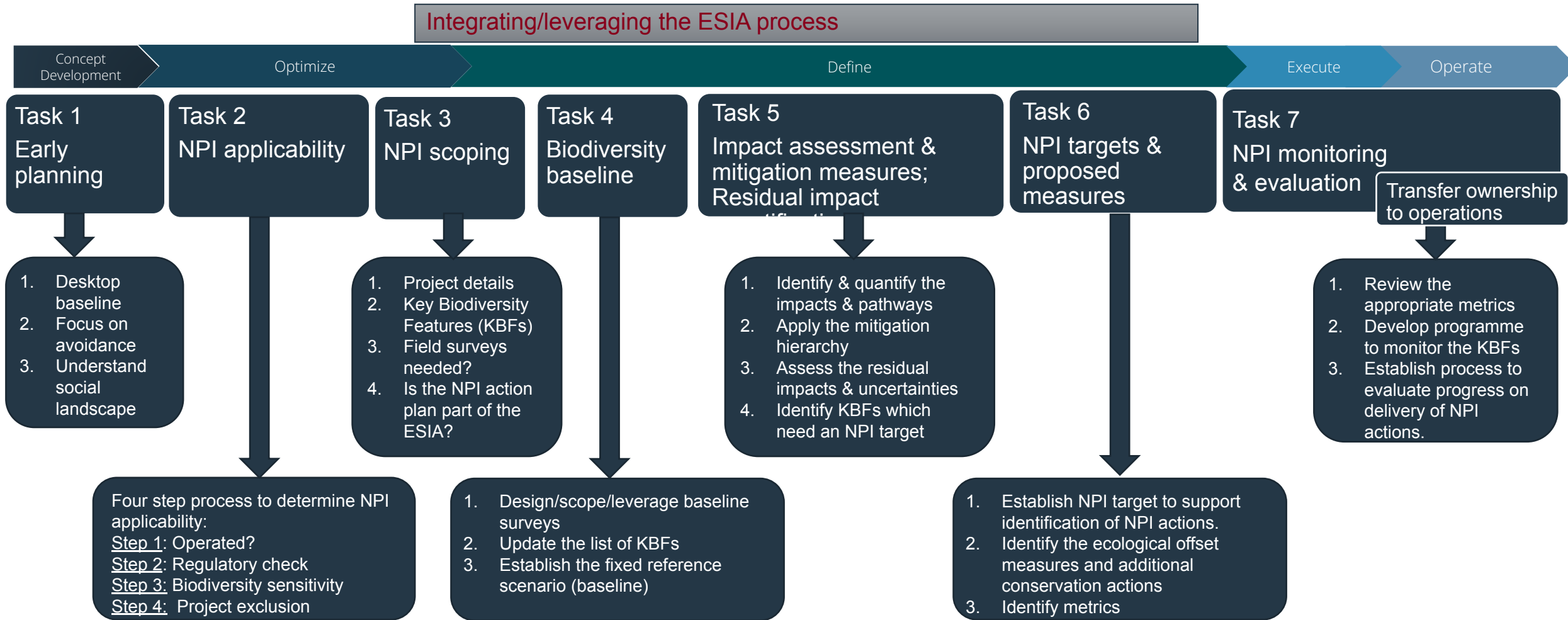
1. Establish voluntary exclusion zones
 - UNESCO World Heritage
 - IUCN Ia and Ib
2. **Develop a net-positive approach**
 - **Develop project action plans that include measures aiming to demonstrate net positive impact (NPI) on new projects in protected areas/KBAs**
3. Increase knowledge and access to biodiversity data
4. Invest in nature-based solutions
5. Advocate for ambitious biodiversity policy

<https://www.equinor.com/content/dam/statoil/documents/sustainability/equinor-biodiversity-position.pdf>



Empire Wind NPI Pilot methodology

The seven tasks of the NPI roadmap – summary of the key action for the NPI determination, assessment and implementation of NPI.



DRAFT – Still To Be Discussed/Refined



Species/KBFs	Residual impact prior to mitigation	Avoidance , reduce, restore measures	Residual impact after mitigation	Contract language	Potential NPI measures (ecological offsets, additional transformative actions)	Stakeholders/Partnerships	Progress towards NPI
Piping Plover		<ol style="list-style-type: none"> 1. Time of year restrictions 2. Cable corridor sizing 3. Micro-siting 4. HDD 5. Restoration 6. Post-construction monitoring 		<p>Civil scope and contracts</p> <p>Onshore cable installation contracts</p>	<ol style="list-style-type: none"> 1. Habitat restoration 2. Protected nesting sites – caging nests 3. Abandoned egg rescue programs 4. Breeding ground augmentation 	<ol style="list-style-type: none"> 1. TBD 2. Long Island communities 	
North Atlantic Right Whale		<ol style="list-style-type: none"> 1. Time of year restrictions 2. Exclusion zones 3. Pre-clearance zone 4. PSOs 5. Vessel speed restrictions 		Marine ops and installation contracts, PSO contracts	<ol style="list-style-type: none"> 1. WCS-WHOI PAM buoy monitoring 2. Marine Mammal Expert Panel 3. Enhanced marine mammal detection technologies 	<ol style="list-style-type: none"> 1. WCS and WHOI 2. UNH, WCS, WHOI, NEAq, URI, Alfred Wegner Institute 	
Fin whale		<ol style="list-style-type: none"> 1. Exclusion zones 2. Pre-clearance zone 3. PSOs 4. Vessel speed restrictions 		Marine ops and installation contracts, PSO contracts	<ol style="list-style-type: none"> 1. WCS-WHOI PAM buoy monitoring 2. Marine Mammal Expert Panel 3. Infrared camera trials 	<ol style="list-style-type: none"> 1. WCS and WHOI 2. UNH, WCS, WHOI, NEAq, URI, Alfred Wegner 3. WHOI 	
Loggerhead turtle		<ol style="list-style-type: none"> 1. Exclusion zones 2. Pre-clearance zone 3. PSOs 		Marine ops and piling contracts, PSO contracts	<ol style="list-style-type: none"> 1. Turtle rehab and cold stunning support 2. Nesting habitat protection 	1. TBD	
Atlantic sturgeon		<ol style="list-style-type: none"> 1. Time of year restrictions 2. Monitoring 		Marine ops and cable installation contracts	<ol style="list-style-type: none"> 1. TBD 	1. TBD	
Ecosystem/habitat-level					<ol style="list-style-type: none"> 1. Scour protection 2. Comprehensive habitat restoration 3. Offsite mitigation measures 	1. TBD	

Lessons Learned and Challenges

In the process of developing an NPI action plan for Empire Wind

- No obvious US regulatory drivers at this time; corporate ambition is the main driver and alignment/lessons learned from UK projects is underway (SEP & DEP)
 - We are setting local plans that link biodiversity to other strategic objectives; pragmatic balancing of project design strategies and business case with nature/biodiversity ambitions
 - Contributing to regional efforts (e.g., RWSC and ROSA) as appropriate
- Ensure avoidance, reduction, and restoration actions are actively investigated and selected early on in project concept selection/design to minimize residual impact and integrated into contracts – ecological offsets and additional conservation actions should really focus on net positive ambitions.
- How do developers “get credit” for existing early investments “above and beyond” project impacts/requirements (e.g., ecological offsets and additional transformative actions such as WCS/WHOI PAM buoy deployment for Empire Wind, HMS studies for Beacon, potential consideration of NYSERDA monitoring fund) and continually assess investments and “credit” towards NPI ambition.
- Quantification is an issue – residual impact and net positive measurements can both be difficult depending on focal taxa
 - How much effort should be put on the strict quantification? Are there qualitative criteria to be incorporated as well? Do qualitative criteria dilute the substance of what we are trying to achieve? Ecosystem/habitat approaches versus “like-for-like” approach?
- Stakeholder engagement and values – how do we integrate effectively community and individual needs/values (ecosystem services)
- External validation of methodology, approaches and adaptive management work – strategic partnerships needed

A photograph of two dolphins leaping from the water in the foreground. The dolphins are dark grey with lighter underbellies. The dolphin on the right is higher and more upright, while the one on the left is lower and more horizontal. The water is a deep blue with some white splashes around the dolphins. In the background, a city skyline is visible across a body of water, featuring several tall buildings and a prominent suspension bridge with a tall central pylon. The sky is a clear, light blue.

Thank you!

WCS/Ocean Giants/Image taken under NMFS MMPA/ESA Permit no. 18786-04

The mitigation hierarchy: a fundamental principle

NPI is when the negative impacts on biodiversity caused by a project are outweighed by **measurable outcomes** from actions taken in accordance with the **mitigation hierarchy** to achieve **socially sustainable** biodiversity gains (UN CBD)

