WORKSHOP PLANNING

WORKSHOP	WHEN	WHO
A User Stories	August	Government, consultants, developers
B Database Content	September	Specialists
C Database QA	Late Oct/early Nov	Specialists
D Interface	End Nov/early Dec	End users

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WORKSHOP A

**AIM:** Understand the functionality required from the project outputs.

Objectives:

o Refined user stories

o Improved understanding of functionality requirements

o Improved understanding of outputs required

o Future additions/refinements

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BREAKOUT SESSIONS

14:00- 16:00

Pre-allocated

Breakout session	Chair	Scribe	Co-chair
Birds I	Julie Black	Tom Evans	Adam Butler
Birds II	Aonghais Cook	Katharine Keogan	Francis Daunt
Birds III	Kate Searle	Aly McCluskie	Orea Anderson
Mammals I	Carol Sparling	Carl Donovan	Ross Culloch
Mammals II	Esther Jones	Sarah Canning	John Harwood
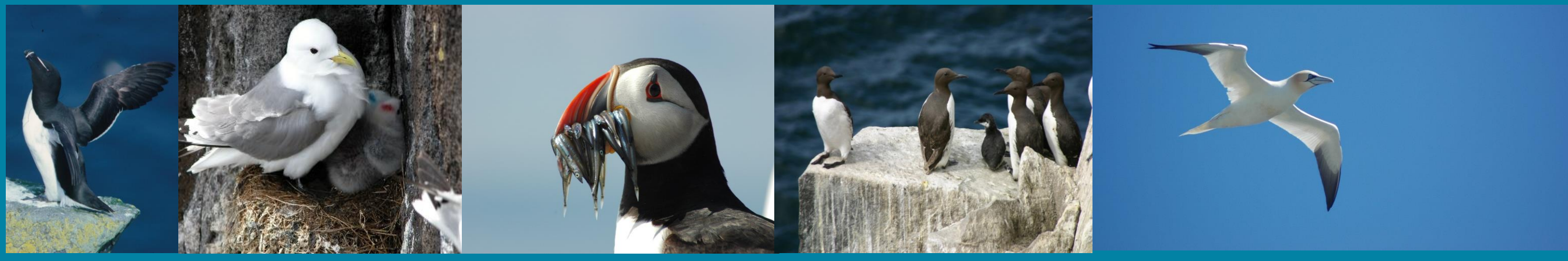
USER STORIES

As a ----------------- (role)

I want to ------------ (action)

So that ------------- (benefit)

USER STORY 1.a   Seabird in-comb HRA

Role:	Consultant (MacArthur Green)
Action:	Undertaking in-combination seabird impact assessment (for HRA)
Benefit:	– Avoid debate about 'correct' values to use for wind farms A, B, etc. – Potential to apply methodological updates retrospectively to older wind farms – Potential to update wind farm parameters to reflect actual design rather than worst-case, assessed (consented) version. – Preserve uncertainties in raw data (where available) through the stages of impact – Combine uncertainties across project's in consistent, robust and transparent manner – Simplify review of HRA by SNCBs etc. – Rapidly update whole impact prediction based on requested changes.

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USER STORY 1.b   Seabird CIA

Role:	Consultant (MacArthur Green)
Action:	Undertaking cumulative seabird impact assessment (for EIA)
Benefit:	– Avoid debate about 'correct' values to use for wind farms A, B, etc. – Potential to apply methodological updates retrospectively to older wind farms – Potential to update wind farm parameters to reflect actual design rather than worst-case, assessed (consented) version. – Preserve uncertainties in raw data (where available) through the stages of impact – Combine uncertainties across project's in consistent, robust and transparent manner – Simplify review of HRA by SNCBs etc. – Rapidly update whole impact prediction based on requested changes.

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USER STORIES 1a and 1b. FUNCTIONALITY

– Central repository for all seabirds - wind farm data - no need to review older project assessments to find values for inclusion (work already done).

– Contain agreed tables of data for each wind farm:

▪ wind farm design parameters (rotor number, dimensions etc) – need to be defined as 'assessed', 'consented', 'as-built', etc.

▪ seabird monthly densities in flight and on the sea

▪ assessment method parameters, e.g. collision model parameters (avoidance rate, etc.)

▪ impact assessment outputs (e.g. monthly collisions)

–

View and extract all levels of data, including,

Wind farm data tables:

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USER STORIES 1a and 1b. FUNCTIONALITY

– View and extract all levels of data, including,

▪ Wind farm data tables;

▪ sCRM results;

▪ Displacement modelling results;

▪ PVA results.

– Use any one part of the CEF tool, e.g. only output data tables, or CRM results, etc. or all parts of the tool.

USER STORIES 1a and 1b. OUTPUTS

Legally robust, agreed, cumulative impact assessment;

Report of all inputs;

Report each output;

- sCRM monthly predictions;

- Seasonal displacement predictions;

- PVA abundance prediction per time step per run AND currently agreed metrics (as a csv file).

USER STORY 2   Mammal CIA and HRA

Role:	Consultant on behalf of developer
Action:	Carry out an assessment of the population consequence of impacts from offshore windfarms on the Scottish east coast bottlenose dolphin population to include in a consent application for a specific proposed offshore wind farm project.
Benefit:	– An understanding of the predicted long-term effects on the population of interest to inform the EIA and HRA – Provide the competent authority with enough information to carry out an Appropriate Assessment on the potential effect on the Moray Firth SAC population

USER STORY 2. Functionality

- Ability to enter predicted project level effects for current and future planned projects within the management unit
  - Ability to include auditory injury
  - Ability to include disturbance
  - Ability to include direct mortality

- Ability to explicitly consider the temporal pattern of the different activities

- Ability to incorporate stochasticity – demographic and environmental

- Ability to incorporate uncertainty – in input parameters and in effects estimation

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USER STORY 2. Functionality

– Ability to consider vulnerable portion of the population (if appropriate based on movement of individuals and spatial scale of impacts)

– Produce outputs that describe the predicted future effects of the combined activities on future population trajectories

– Ability to create generate clear and understandable graphical outputs and summary statistics

– Produce outputs that meet the requirements of statutory advisors and regulators

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USER STORY 2. OUTPUTS

Annual predicted population size for multiple simulations of impacted and unimpacted population, with associated uncertainty

Record of settings selected to allow others to recreate/provide audit trail

Selected graphical outputs

USER STORY 3 Bird planning/leasing round

Role:	Seabed Leasing authority
Action:	Understand *kittiwake* headroom in *southern north sea*
Benefit:	Design plan areas which can foreseeably navigate the consenting process; environmental impacts within acceptable limits and no adverse effect on site integrity (when considered in combination with existing plans and projects).

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USER STORY 3. FUNCTIONALITY

Central repository for all seabirds-windfarm data.

Agreed values for

– Wind farm design parameters

– Seabird monthly densities in flight and at sea

– Default Model parameters

– Default regional population size and SPA citations

– Collision and displacement effects apportioned appropriately to linked SPAs

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USER STORY 3. FUNCTIONALITY

Interface needs

– Select regions, (or SPAs), of concern

– Input plan areas and generic windfarm design parameters

– Choose between 'as built' or 'as consented' windfarm designs for existing projects

– Simple to run and ability to save user inputs/choices

– Run multiple scenarios simultaneously

– Clear and understandable outputs

USER STORY 3. OUTPUTS

– Breakdown of estimated effects; number of kittiwakes colliding, number displaced. Summarised by (month or season). With and without plan area

– For SPAs with functional link to plan area: SPA population impacts and predicted trajectories. With and without plan area

– Quantified uncertainty; collision, displacement, demographic impacts/population trajectory.

– Detailed summary of user choices, inputs and 'behind the scenes' decisions, defaults, assumptions etc.
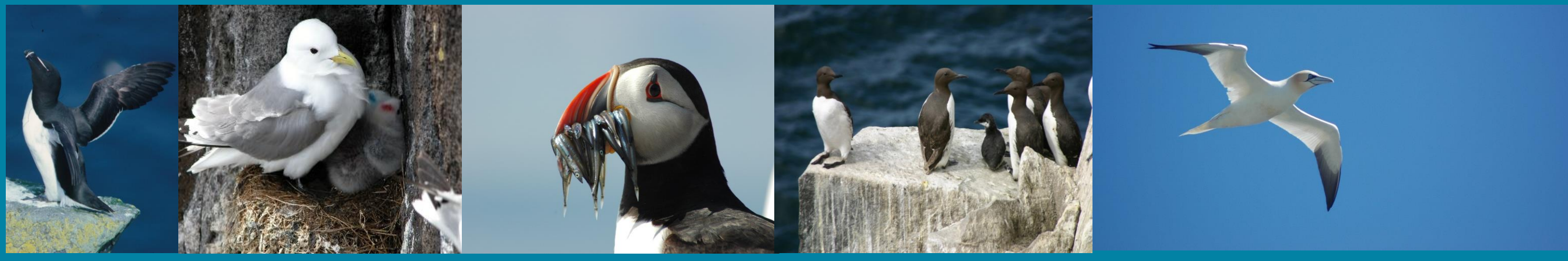
FORMAT

- Species, data modules

- What is missing

- Effects or impacts mechanism

- Priority species

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EMAIL TO US

By 28th August
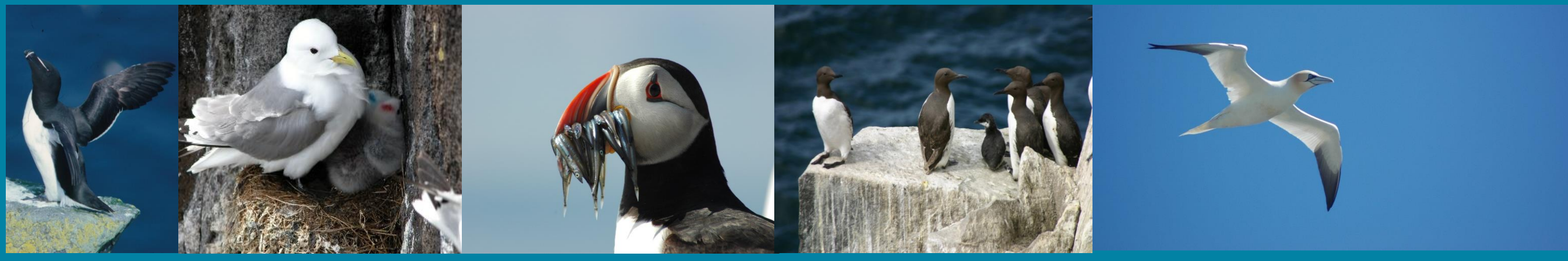
Wind turbine design is evolving……

Installed Power
Rotor Diameter

0.5 MW
40 m

1.3 MW
70 m

2 MW
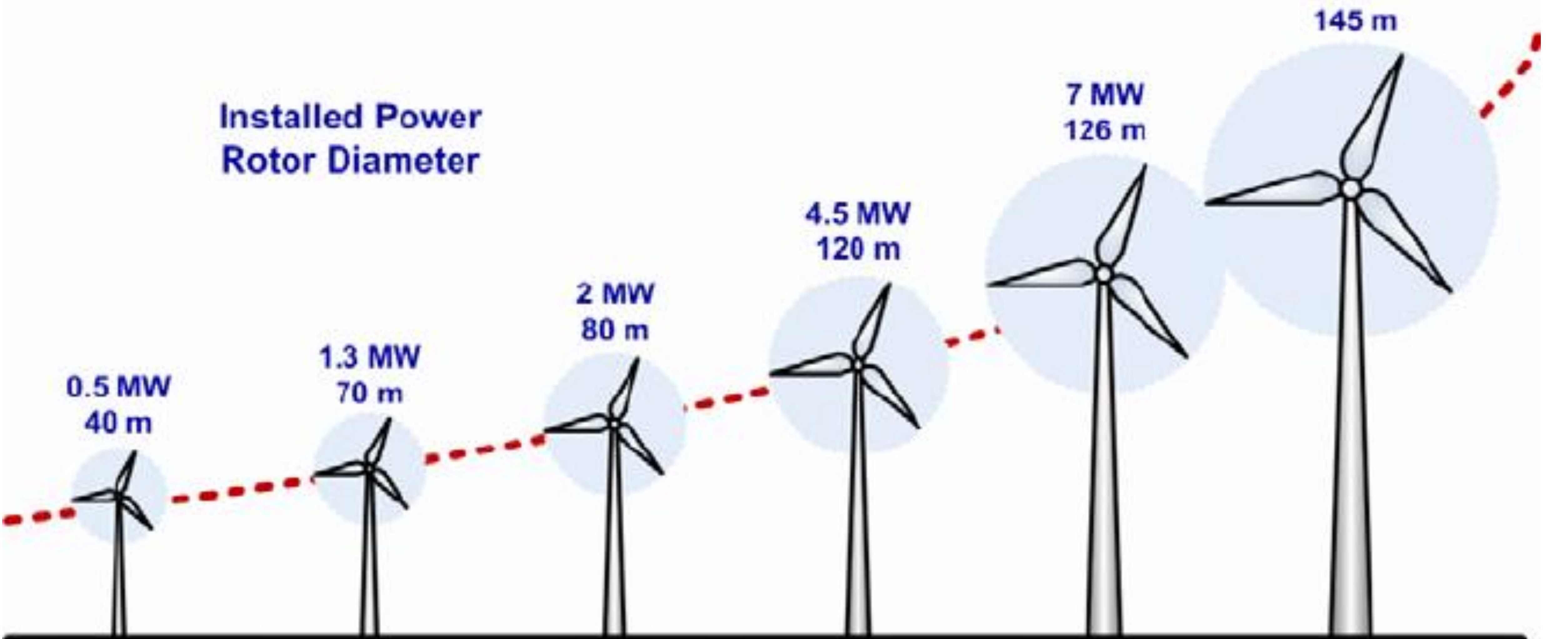80 m

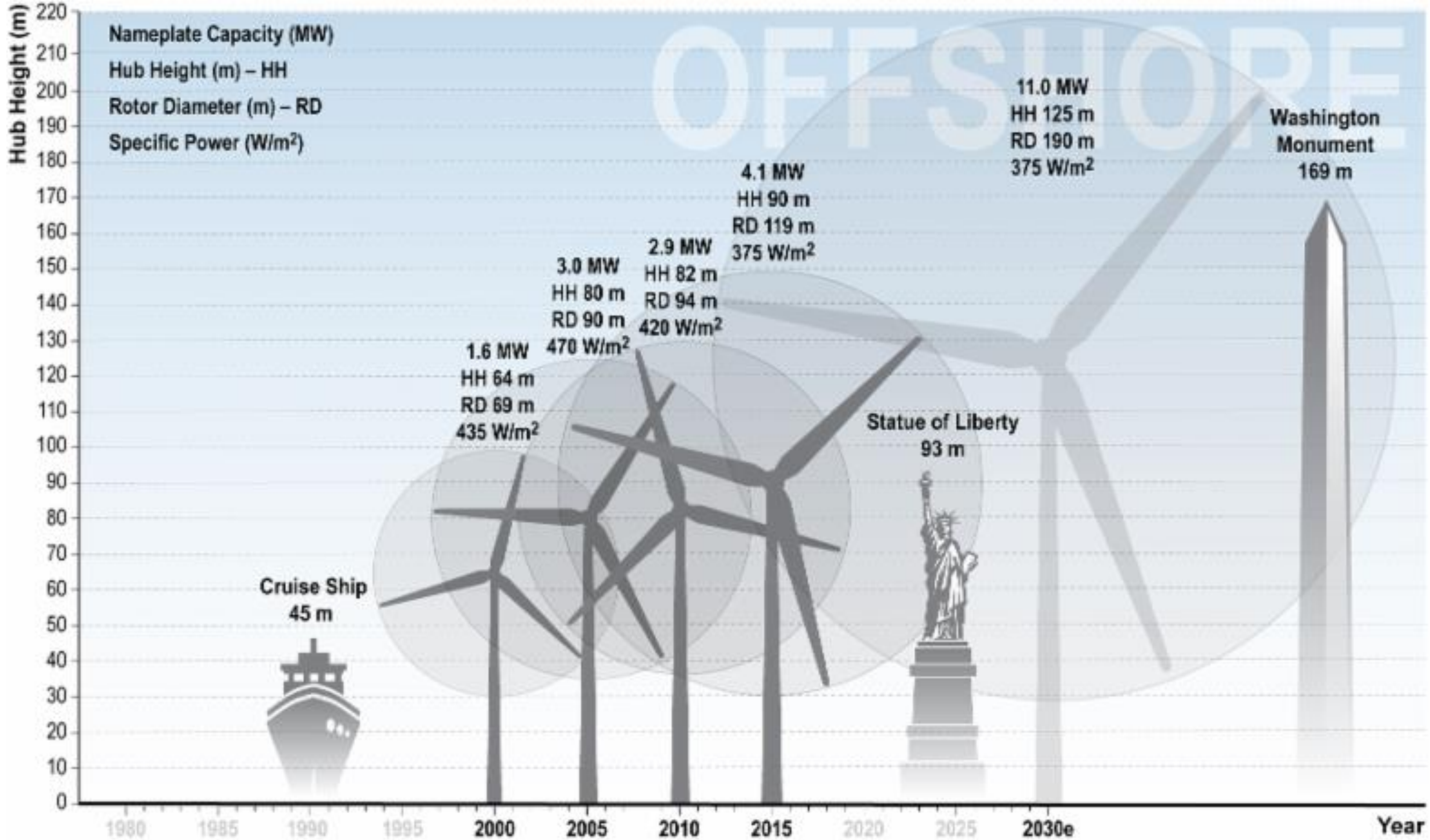4.5 MW
120 m

7 MW
126 m

10 MW
145 m

1990   1995   2000   2005   2010   2015

Year of Operation

Hub Height (m)

Nameplate Capacity (MW)
Hub Height (m) – HH
Rotor Diameter (m) – RD
Specific Power (W/m²)

OFFSHORE

11.0 MW
HH 125 m
RD 190 m
375 W/m²

Washington
Monument
169 m

4.1 MW
HH 90 m
RD 119 m
375 W/m²

2.9 MW
HH 82 m
RD 94 m
420 W/m²

3.0 MW
HH 80 m
RD 90 m
470 W/m²

1.6 MW
HH 64 m
RD 69 m
435 W/m²

Statue of Liberty
93 m

Cruise Ship
45 m

1980 1985 1990 1995 2000 2005 2010 2015 2020 2025 2030e   Year

CONSENTED VS AS-BUILT

- Larger turbines so…..
- Need fewer of them so……
- Lower impacts
- Leads to spare 'capacity' within consent
- Legal position of this capacity?
- How likely is this capacity to be used?

CONSENTED VS AS-BUILT

– CEF can't solve this question

– CEF wind specifications module

– Further discussion in Workshop B and/or TWG

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