The Decarbonised Electricity System Study

1st Stakeholder Forum, 11 November 2025

seai SUSTAINABLE ENERGY AUTHORITY OF IRELAND

AGENDA

Time	Agenda item	Detail
10:30	**Coffee & networking**	
11:00	**Welcome, progress update**	Welcome, agenda, forum & meeting objectives, round table introductions, update on work plan, Q&A
11:40	**Technology assessment Pt.1**	Share screening approach and list of technologies, Q&A, roundtable discussions
12:45	**Group photo, Lunch**	
13:50	**Technology assessment Pt.2**	Share assessment criteria and approach to weighting, Q&A, criteria weighting exercise
15:05	**Next steps, closing**	Steps for Stakeholder Forum input to technology assessment, synthesis of the day's proceedings
15:30	**Coffee & networking**	

FORUM MEMBERSHIP

Individual	Institution	Individual	Institution
Anne-Marie Fuller	Feasta	James O'Donnell	University of Limerick
Bobby Smith	Energy Storage Ireland	Jerry Mac Evilly	Friends of the Earth
Brendan Walsh	Dept. of Climate, Energy & Environment	John O'Shea	Codema
Caitríona Sheridan	FuturEnergy Ireland	Keelan Keogh	Engineers Ireland
Cathal FitzGerald	National Economic and Social Council	Kevin Moloney	Siemens Gamesa Renewable Energy
Conall Bolger	Trifecta Ireland	Kshitiz Agarwal	KA Advisors
Conor Totterdell	VIOTAS	Laura Burke	SSE Renewables
Dave Linehan	Wind Energy Ireland	Mark Willis	Dept. of Enterprise, Tourism & Employment
David Byrne	Ireland Strategic Investment Fund	Peter Harte	Net Zero Energy
Denis Duff	18for0	Philip Blythe	SSE Energy Markets
Desmond Lalor	ESB Generation & Trading	PJ Ryan	Construction Industry Federation
Eamon Haughey	Atlantic Technical University	Ronan Doherty	Verdant Research
Fergal Downes	ESB Generation & Trading	Stephanie Maher	Dept. of Climate, Energy & Environment
Gearóid FitzGerald	Dept. of Climate, Energy & Environment	Stephen Barry	Dept. of Climate, Energy & Environment
Ian Donoghue	Trinity College Dublin	Terence O'Donnell	University College Dublin
Isidore McCormack	Yuno Energy	Teresa O Reilly	Eastern & Midlands Regional Assembly
James Carton	Dublin City University	Thomas O'Sullivan	Aughinish Alumina Ltd.
James Glynn	Energy Systems Modelling Analytics Ltd.	Tina McManus	ESB Generation & Trading

- Call for members may be reopened if we need to supplement expertise or expand interests on forum

FORUM OBJECTIVES

- Working hypothesis: *Power system change becomes more likely if a critical mass of stakeholders co-produce knowledge that they trust and feel compelled to act upon, even if their self-interest might push against it.*

Characteristics of the study context [1]
Uncertain facts: Data and models are incomplete, contested or rapidly evolving
Disputed values: Cultural and political values influence research assumptions and methods
High stakes: Research decisions can have significant consequences
Urgent decisions: Policy makers and stakeholder must act under uncertainty.

Orienting principles [1]
Participatory quality assurance: test robustness of research through deliberation
Extend peer community: include a broad range of stakeholders with diverse interests
Distributed research: conduct trans-disciplinary and application-oriented research
Hybrid solutions: find solutions that accommodate trade-offs and expert judgement

[1] Drawing on research by Funtowicz & Ravetz (1993) on 'Post-Normal Science'

FORUM OBJECTIVES

- Share study information and discuss stakeholder views on power sector decarbonisation after 2030, especially focused on the
  - assessment of technologies,
  - construction of scenarios,
  - techno-economic modelling of scenarios, and
  - assessment of decarbonisation pathways.
- Review and discuss draft research outputs from DESS
- Highlight areas of concern that the Forum and DESS WG can help to address
- [insert note on selection]
- Full TOR and FAQ available here: https://www.seai.ie/renewable-energy/decarbonised-electricity-system-study

MEETING OBJECTIVES

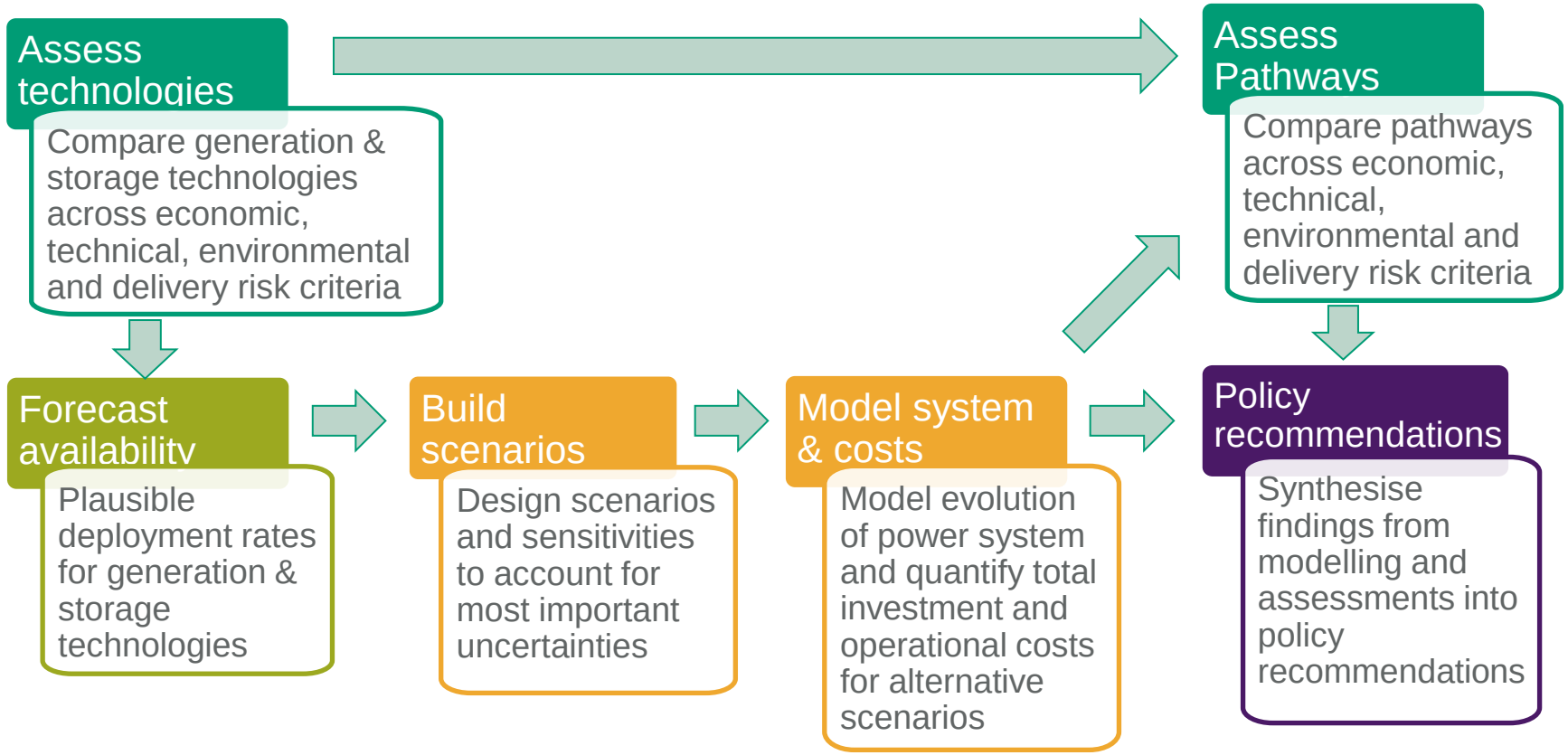
1. Introduce Forum members to each other
2. Update members on DESS progress since launch event (June 2025)
3. Commence discussions of technology assessment
   - Screening and selection of technologies for study
   - Criteria for assessing technologies and relative importance of criteria
4. Confirm next steps for the Forum

MEETING OBJECTIVES

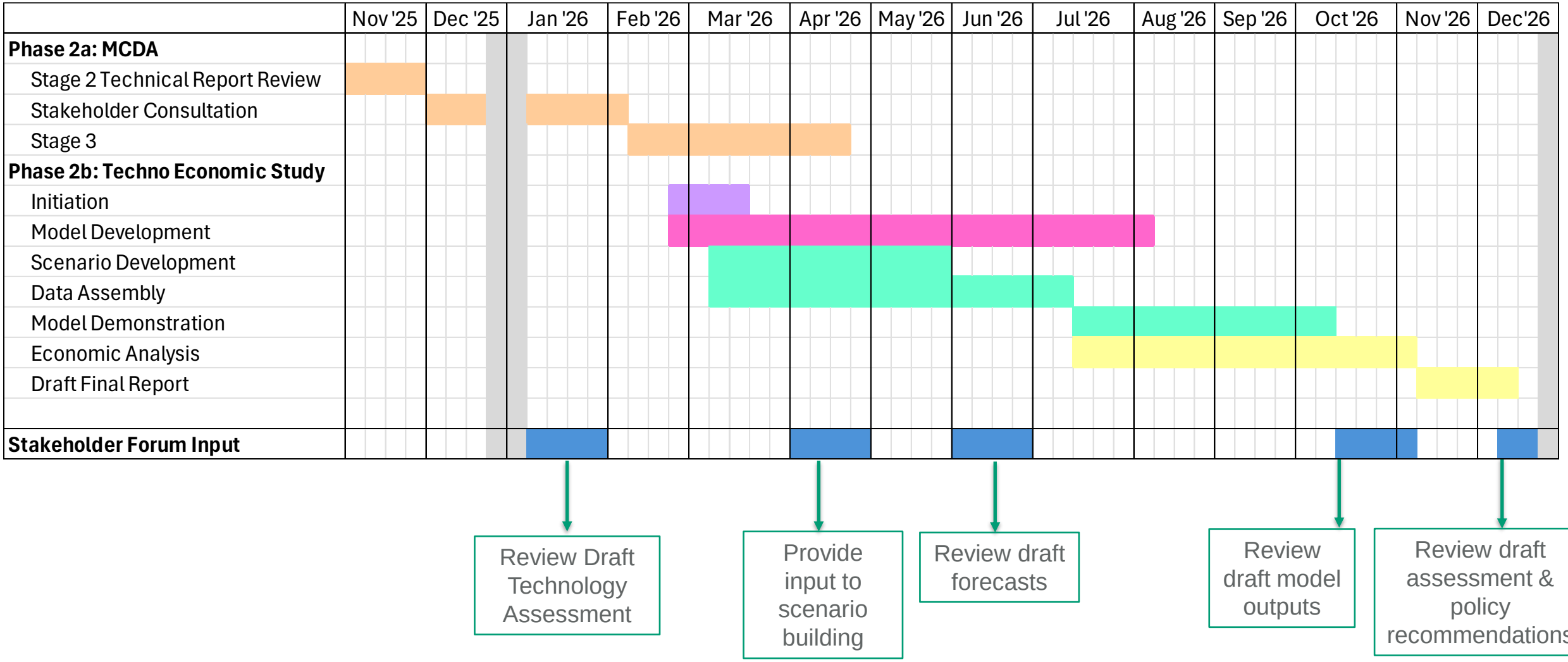
- Chatham House rule
  - Participants are free to use the information received, but neither the identity nor institutional affiliation of the speakers must be attributed in notes or discussions outside the meeting.
- SEAI will note proceedings and publish meeting notes on the DESS project page.
- Photographer present (please inform Chair if you don't want to be included in photos)
  - Group photo at 12:45 – outside, on front steps (if weather is appropriate)
- Round table introductions

DESS PROGRESS UPDATE

- High-level overview of project stages



DESS PROGRESS UPDATE



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Q&A

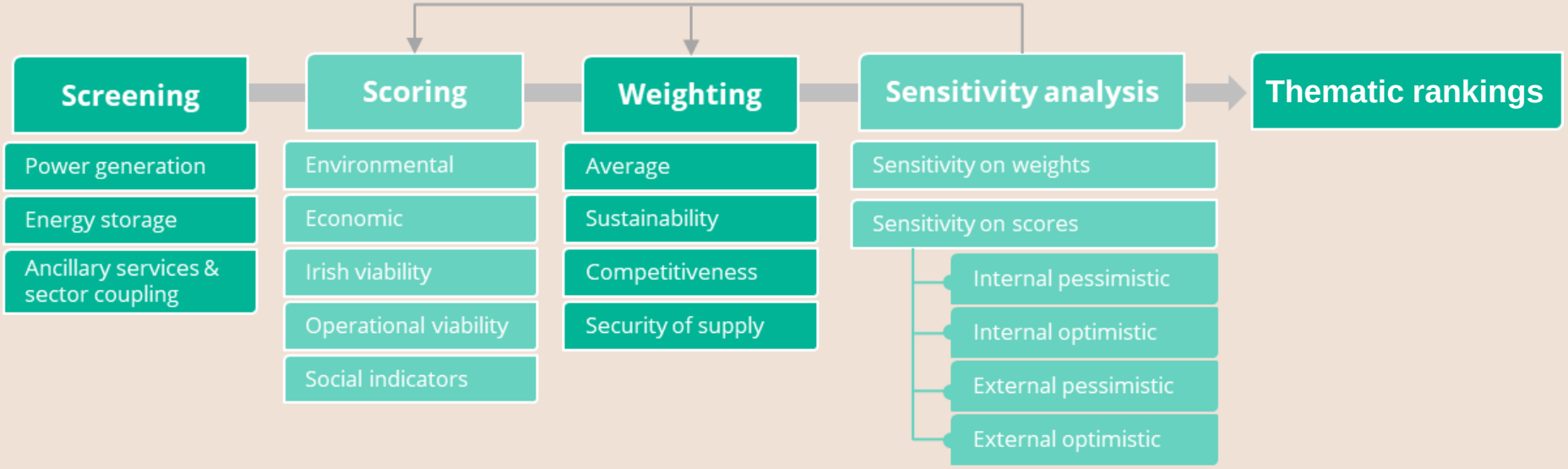
- Roaming MICs – Questions to SEAI Technical Lead on progress and overall work plan

Technology assessment:

presentation of shortlist
technologies for study

Tuesday November 11, 2025

Study flow



- A gross list of technologies are screened and narrowed down to 30 technologies covering range of sub-topics within the batches of power generation, energy storage, and sector coupling .
- The technologies are then assessed on criteria covering five subject areas.
- Sets of weights are developed to reflect national priorities, and these are in turn used to derive a weighted aggregate score for each technology.
- Based on the aggregate score the technologies are ranked within the batches.

- Sensitivity analyses are conducted on weights and scores.

  A sensitivity analysis on the weights highlights how the ranking in the batches change with increases or decreases to the weights.

  A sensitivity analysis on the scores investigates the effect of changes based on expectations to developments in cost, priorities and regulation in both Ireland and Europe.
- Thematic rankings are constructed and validated based on weighted aggregate scoring of the technologies across all criteria. Thematic rankings represent four different approaches to weighting of the criteria in the MCDA.

Technology selection

Technology categorization

The technologies are processed in 3 batches:

- Power generation
- Storage
- Sector coupling

Each batch contains a series of sub-categories which ensures that the set of technologies cover a range of system functions.

Batched and sub-categories

- **Generation technologies**
  - Firm Generation
  - Variable/Weather-Dependent Generation
  - Negative Emissions
  - Enabling Infrastructure
- **Storage technologies**
  - Short-Duration Flexibility (1-8h)
  - Medium-Duration Flexibility (9-23h)
  - Long-Duration Flexibility (24-168h)
  - Seasonal Flexibility
- **System services**
  - Short-Duration Flexibility (1-8h)
  - Medium-Duration Flexibility (9-23h)
  - Long-Duration Flexibility (24-168h)
  - Non-Energy System Services (Grid Enhancing)
  - Energy Product Production

Screening logic 1

The scope of this study included the assessment of 30 technologies. To narrow down a long-list of technologies, a set of guiding principles for the screening was applied.

Broad coverage of system functions

- The screening of sought to cover all sub-categories with preferably at least two technologies (see previous slide for sub-categories)
- Closely related but functionally different technologies:
  - Example: An Open Cycle Gas Turbine (OCGT) fueled by biomethane is a **firm capacity generation asset** for balancing renewables, offering greater flexibility than a Combined Cycle Gas Turbine (CCGT) but at lower efficiency.
  - Example: A biomethane-fueled CCGT with Carbon Capture (CC) is a potential **negative emissions technology**, with its higher efficiency supporting increased uptime to justify the added capital expenditure.
- Selecting between functionally identical technologies - hydrogen
  - Example: Proton Exchange Membrane (PEM) is considered the best-in-class electrolyser in the short to medium term.

Screening logic 2

The scope of this study included the assessment of 30 technologies. In order to narrow down a long-list of technologies, a set of guiding principles for the screening was applied.

Other priorities when selecting technologies

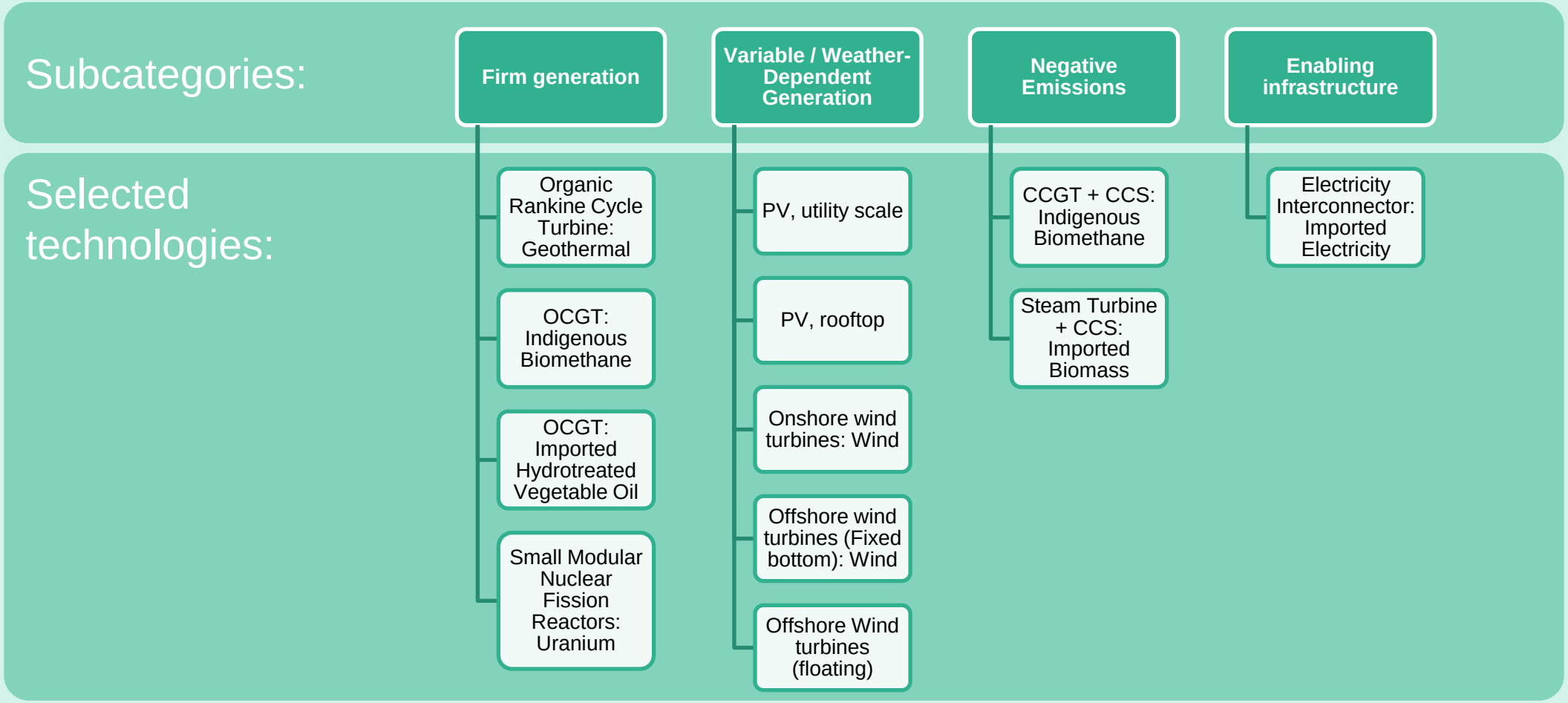
- Technologies that are **important to reach carbon neutrality** as well as enable decarbonisation outside the electricity sector. The technologies should also provide flexibility in the electricity demand.
- Technologies that **work in an island system** with limited interconnections and limited access to certain natural resources and manufacturing capabilities.
  - This priority in combination with considerations on scalability and modularity has driven the selection of a range of storage technologies.
- Technologies with **sufficient TRL** to ensure credible pathways for Ireland (2030–2050). Some low TRL technologies expected to mature by 2040 and impact the green transition are included.
- Technologies which currently contribute to **public debate;** e.g. nuclear power and hydrogen to power generation solutions

Notable technologies left out

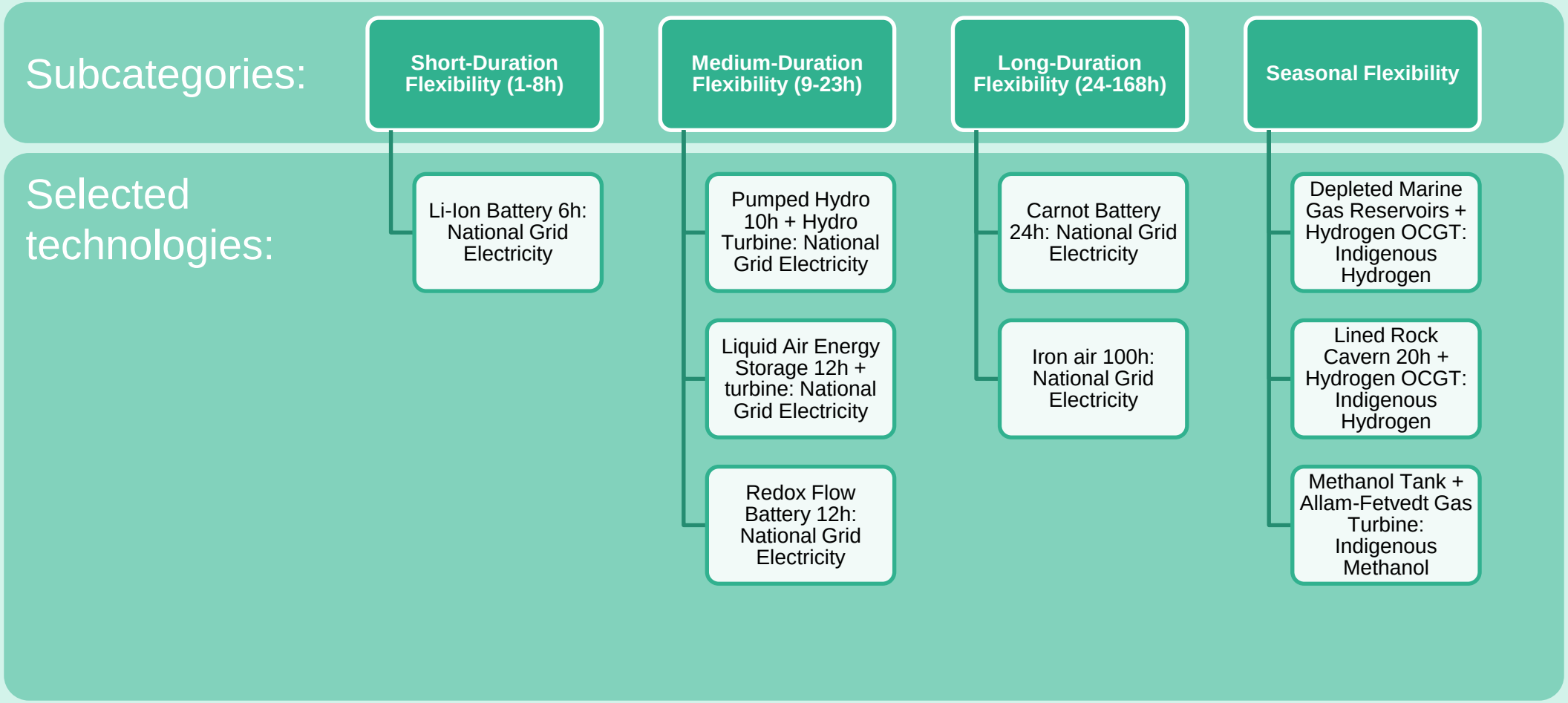
Low TRL or case-specific planning

- A few low TLR technologies were left out as they represent generation patterns and capabilities similar to higher TRL alternatives.
  - Example: wave energy has yet to reach commercial maturity and lags behind solar photovoltaic (PV) and wind in both cost, performance and risk.
- We have chosen to assess technologies in terms of their ability to deliver a wide range of system services rather than technologies that require detailed, case-specific grid planning.
  - Example of excluded technologies: synchronous condensers, flywheels, STATCOM (Static Synchronous Compensator)

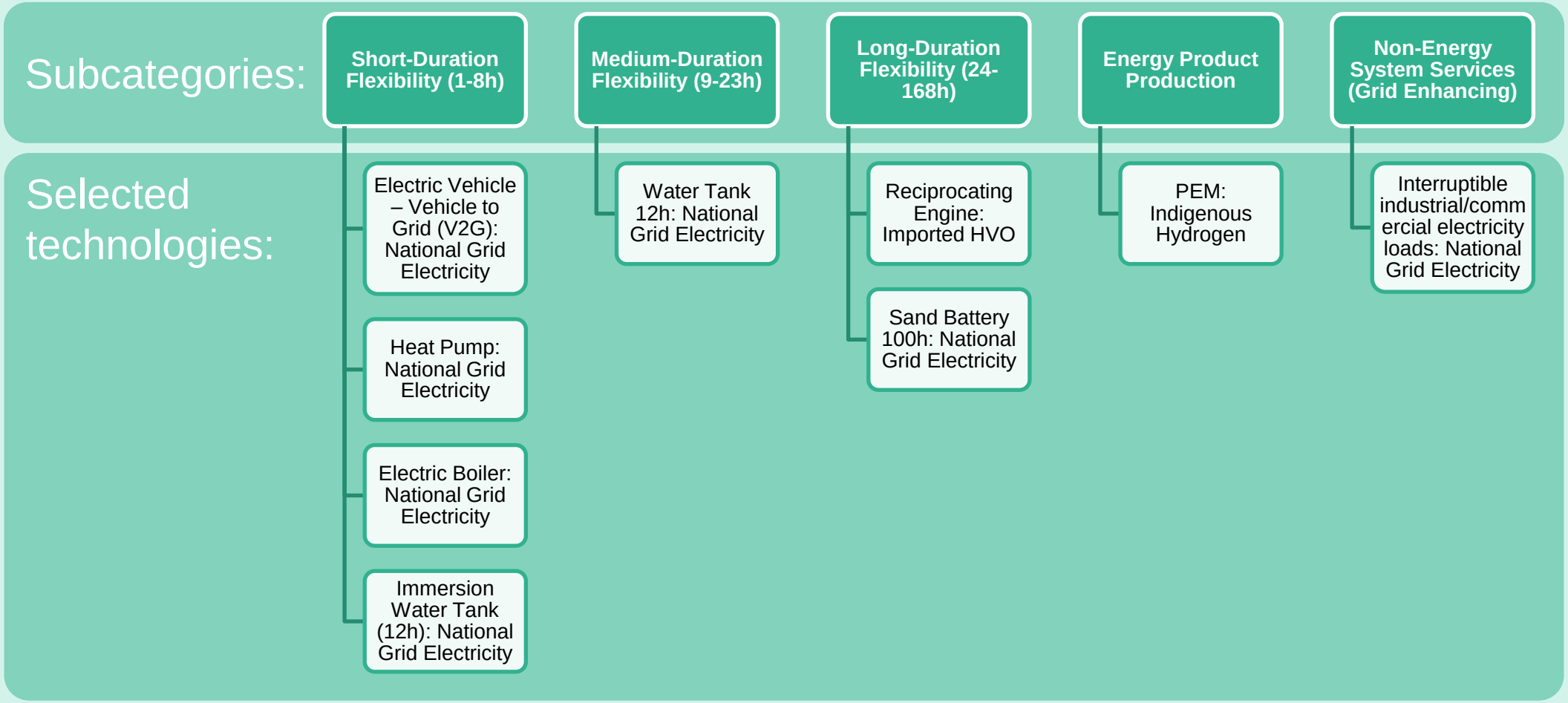
Generation


Subcategories:
Firm generation
Variable / Weather-Dependent Generation
Negative Emissions
Enabling infrastructure
Selected technologies:
Organic Rankine Cycle Turbine: Geothermal
OCGT: Indigenous Biomethane
OCGT: Imported Hydrotreated Vegetable Oil
Small Modular Nuclear Fission Reactors: Uranium
PV, utility scale
PV, rooftop
Onshore wind turbines: Wind
Offshore wind turbines (Fixed bottom): Wind
Offshore Wind turbines (floating)
CCGT + CCS: Indigenous Biomethane
Steam Turbine + CCS: Imported Biomass
Electricity Interconnector: Imported Electricity

Storage


Subcategories:
Short-Duration Flexibility (1-8h)
Medium-Duration Flexibility (9-23h)
Long-Duration Flexibility (24-168h)
Seasonal Flexibility
Selected technologies:
Li-Ion Battery 6h: National Grid Electricity
Pumped Hydro 10h + Hydro Turbine: National Grid Electricity
Liquid Air Energy Storage 12h + turbine: National Grid Electricity
Redox Flow Battery 12h: National Grid Electricity
Carnot Battery 24h: National Grid Electricity
Iron air 100h: National Grid Electricity
Depleted Marine Gas Reservoirs + Hydrogen OCGT: Indigenous Hydrogen
Lined Rock Cavern 20h + Hydrogen OCGT: Indigenous Hydrogen
Methanol Tank + Allam-Fetvedt Gas Turbine: Indigenous Methanol

Sector coupling



Q&A

- Roaming MICs – Questions to COWI and SEAI Technical Lead on technology screening and selection

ROUNDTABLE DISCUSSION: TECHNOLOGY SELECTION

- Discussion prompts:
  - Are there any technologies *on the list* for which the general screening criteria does not provide justification?
    - i.e. are there any technologies included that require further justification… or exclusion?
  - Are there any technologies *not on the list* that should be considered or that requires explicit justification for exclusion?
    - i.e. in addition to wave and certain system service technologies

GROUP PHOTO & LUNCH

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Technology assessment:

presentation of
assessment criteria

Subject areas

Reasoning for the criteria

- The technologies are scored based on 12 criteria across 5 subject areas:
  - Environmental
  - Economic
  - Irish viability
  - Operational reliability
  - Socio-political
- These areas are chosen to cover the most substantial topics. Within the areas, the criteria are chosen based on whether they:

1. can reasonably be assessed
2. have minimal correlation with other criteria and
3. underpin the four strategic national priorities of sustainability, competitiveness security of supply and speed,

Scoring of the technologies

Quantitative scoring

- **Data:** Numerical values (e.g. spatial footprint, annualized fixed costs).
- **Methodology:** Normalization between 0 and 1 based on the maximum and minimum value of the dataset:

$$Score_x = \frac{x - min_\Omega}{max_\Omega - min_\Omega},$$

with x being the datapoint, and Ω the dataset.

Qualitative scoring

- **Data:** Qualitative data where no numerical values can be extracted (e.g. social acceptance).
- **Methodology:**
  - **Pair-wise comparison:** Each technology is compared with every other technology in the dataset, one pair at a time. Binary comparison.
  - **Ranking:** For each technology, the total number of pairwise wins is used to rank the technologies.
  - **Normalization:** Normalization between 0 and 1 based on the maximum and minimum value of the dataset.

Score from 0 to 1 to be used in the MDCA model

COWI

Pairwise comparison

Purpose: Systematic method to compare alternatives using qualitative criteria

Examples of Criteria: Biodiversity impact, Social acceptance

Process:

1. Compare each technology/option directly against others (pair by pair)
2. Judgments based on thorough review of documentation and evidence and completed by relevant experts.
3. Outcome: Expert-driven prioritization of alternatives for each criterion

Pairwise comparison input

	Technology 1	Technology 2	Technology 3	Technology 4	Technology 5
Technology 1		0	0	1	1
Technology 2	1		0	1	1
Technology 3	1	1		1	1
Technology 4	0	0	0		0
Technology 5	0	0	0	1	

One comparison per expert

Summary of comparisons

Technology	Wins
Technology 1	15
Technology 2	8
Technology 3	1
Technology 4	19
Technology 5	5

Normalization

Score from 0 to 1

COWI

Environmental criteria

Emission intensity

Estimation method: Literature review for each technology and experience/data collected from past projects,
Including material extraction, transport, installation/construction, operation, maintenance and decommissioning, based on life-cycle analyses (LCAs) in peer-reviewed scientific papers and LCAs in reports from the industry and are less than 10 years old.

Source:
1. LCA papers
2. LCA databases
3. EPDs

Output: Direct and indirect emissions in tonnes CO2e per MW (MWh for storage) installed.

Spatial footprint

Estimation method: Literature review of open access resources available for the environment and energy sector in EU and further afield if necessary.

Source hierarchy:
1. Danish Technology Catalogue
2. Desktop research e.g. LCA of Electricity Energy (UNECE); Land-use intensity of electricity production (PLOS ONE)
3. Project examples – national, UK, Europe
4. Expert advices (COWI and RPS)

Output: Land-used in m2 per MW (MWh for storage) installed or similar defined unit

Biodiversity impact

Estimation method: Literature review of open access resources to determine impact pathways and sensitivities. Literature review for best pratice examples of biodiversity positive design (BPD) at national, EU and if necessary international level.

Source hierarchy:
1. Papers, projects and plan assessments for impact pathways
2. Article 17 reporting for designated habitats and species status, threats/pressures
3. Project examples / papers for BPD opportunities
4. Ecological expertise

Output: Expert assessment of the ecological sensitivity and opportunity for BPD.

Biodiversity criterion

Literature review

Ecological sensitivity
- Consideration of data from NPWS regarding Special Area of Conservation (SAC) and Special Protection Area (SPA)
- Use of Article 17 listing status/trends/threats for protected habitats and species.

Biodiversity positive design:
Assessment for potential for a biodiversity positive design for each technologies based on the following parameters:
- Ease of implimentation
- Low-cost design
- Regulation requirement.
- Level of experience

Documentation

Pair-wise comparison

Example for onshore wind

	Description
Impact pathway	Collision risk Mortality Habitat loss and disturbance
Habitats	Dry heath Wet heath Blanket bog
Species	Leisler's bat Hen harrier
Wider ecological issues	Interconnectivity of sites Wake effect
Biodiversity Positive Design	Habitat restoration e.g peatlands, community funding

Economic criteria

Annualised fixed cost

Estimation method: Calculation of the annual cost of ownership based on CAPEX and fixed OPEX.

$$Annualized\ fixed\ cost = CAPEX \cdot \frac{(1+i)^n \cdot i}{(1+i)^n - 1} + Fixed\ OPEX$$

With n technical lifetime and i discount rate of the project.

Source hierarchy:
1. Danish Technology Catalogue
2. Desk research
3. Contact with manufacturers.

Output: Average lifetime cost per installed MW capacity (MWh for storage).

Variable cost

Estimation method: Variable OPEX covers all costs which depend on operation.

Source hierarchy:
1. Danish Technology Catalogue
2. Desk research
3. Contact with manufacturers.

Output : Cost per MWh generated/stored

Irish Viability Criteria

Deliverability

Estimation method: Assessment of TRL (1-9) and Irish industry involvement through review of existing projects with interviews to fill gaps. Consideration of the supply chain maturity in Ireland and EU (1-5).

Source hierarchy:

1. Review of existing projects in Ireland and EU
2. To fill any gaps, interviews with industry manufacturers and
3. Assessments from the COWI RPS pool of experts will be utilised.

Output: Scoring based on pairwise comparison of technologies to provide prioritisation of alternatives.

Physical constraints

Estimation method: Available area divided by spatial footprint based on consultation with GIS databases. Analagous to work done by RPS on the implementation of Climate Action Plan Action 102 (Spatial Policy Framework).

Potential parameters to consider: CSO Settlements Geodirectory, MyPlan Zoning, Connection Turbines, Overhead Power Cables, Gas Networks, Water Mains, Roads, Railways, Main Rivers, SAC/SPA/Ramsar Sites, Lakes, Transitional Waterbodies, UNESCO World Heritage Sites, Salmonid Rivers, CFRAMS Flood Mapping, Soil Category, Landslide Susceptibility, Groundwater Vulnerability, and Geological Heritage Sites.

Source hierarchy:

1. Exisitng data
2. GIS database analysis

Output : Total MW installable wrt. Land availability.

Deliverability criteria: TRL and supply chain maturity

Progressive TRL assessment

			TRL
Multiple commercial-scale projects in operation in Ireland/EU Validated real-world operational data Certification and compliance with Irish/EU regulations	Yes		9
No			
Full system prototype demonstrated Trial/pilot project results showing technology integration Manufacturing and supply chain processes established and scalable Provisional regulatory approvals or certifications	Yes		8 7
No			
Subsystems or integrated protypes validated in small scale Documented pilot studies underway or complete Technical documentation verifying design specifications and performance metrics	Yes		6 5
No			
Experimental proof of concept from lab tests or simulation Technology concept formulated and feasibility studies completed	Yes		4 3 2
No			
Basic scientific principles and theoretical foundations documented			1
Recommended alternative technology for research			

Supply chain maturity

Existing industrial interest	
Clear evidence of involvement in local Irish industry	Ideal
Availability of manufacturers within EU	Good
Reliance on manufacturers outside EU	High risk

Modularity

Technologies which can be deployed in small increments (modular) are expected to be easier to develop. Modularity can be assessed based on the typical capacity of standardized technology offerings.

Source: Technology Readiness Level: Guidance Principles for Renewable Energy technologies, European Commission, 2017.

COWI

Operational reliability criteria

System services

Estimation method: Yes/No evaluation on each item on a list of system services classified by technology. Considered as individual service and not as a combination of them at first stage.

Source hierarchy:

1. Combination of information from the technology catalogues, EU Regulations and Grid Code requirements (generation, demand, etc.).
2. Desk research on technical documentation of the technologies (literature, manufacturer's catalogues) and
3. Expert inputs based on international experiences.

Output: Count of system services provided.

Availability

Estimation method: Available full-load hours (FLH) based on existing projects and literature.

Sources hierarchy:

1. The availability will be assessed based on existing project description in Ireland (especially important for wind and solar) and open-source statistics as well as through
2. relevant literature, international reports, TSOs studies and statistics and
3. Expert inputs based on international experiences.

Output: % availability over the year, not including curtailment for non-synchronous generation (wind and solar PV) or demand response (bulk consumers).

Security of supply

Estimation method: Evaluate based on the 3 criteria – fuel supply chain issues, failure/maintenance risks, sabotage/cyber risk

Source hierarchy:

1. COWI RPS pool of experts
2. Relevant Literature and EU cybersecurity regulations.
3. International geo-political reports for main equipment/spares supply chain, fuel extraction and refine and transportation.

Output: Reseach input to pairwise comparisons.

Security of supply criterion

Evaluation based on three considerations:

- **Fuel supply chain issues**
- **Failure and maintenance risks**
- **Sabotage/Cyber risk**

Scoring based on pairwise comparisons.

Example for Solar PV

Criteria	Description
Fuel supply chain issue	No fuel is required for Solar PV
Maintenance /Failure	Low maintenance High predictability Low operational costs Rarely occasion cascading grid issues.
Sabotage/Cyber	Low sabotage risk for distributed rooftop PV Utility-scale solar relies on centralized inverter and SCADA systems, susceptible to cyberattacks or software vulnerabilities. Modularity and decentralization limit the risk of disruption on the entire grid.

Socio-political criteria

Social Acceptance

Estimation method:
- Research available information on public attitudes and acceptance, applying a hierarchy of sources.
- Review of 6 case studies on projects in Ireland and internationally with a cross section of technologies.
- Apply a pairwise scoring method to allocate a score on a scale of 1 to 5.

Source hierarchy:
- See following slide.
- Irish and international project case studies.

Output : Comparative scoring of the social attitudes towards and acceptance of technologies.

Regulatory pathway

Estimation method: Review of
- 'system readiness' (i.e. is the regulatory framework in place for this technology?)
- Categorisation of the necessary regulatory work in terms of the expected duration.

Source hierarchy:
- Irish legal/ regulatory framework (and regard to EU / International where necessary)
- SEAI energy consenting guidance.
- Past project experience (duration of consenting).

Output : Expected duration of necessary regulatory work.

Social acceptance criterion

✓ Information available

✓ Information possibly available

Research data considered:

Most Reliable

Less reliable

Source of information/ data	Established Technology Familiar in Ireland	Established Technology Not present in Ireland	Emerging Technology Limited Track Record
Lived practice (opposition/support for projects)	✓		
Attitude Surveys (Ireland)	✓	✓	✓
International surveys/data	✓	✓	✓
Analogous Technology*		✓	✓
Perceived Risk			✓

Purpose

Explore how social acceptance, including perception of risk, **can influence outcomes for energy technology solutions**. E.g influence on timeline, regulatory or other aspects.
Based on research data and case studies.

Preliminary case studies proposed

- North South Interconnector line
- Dublin Array Project - Offshore wind farm proposal
- Greenlink Interconnector
- Olkiluoto Unit 3 Nuclear Plant, Finland (2024)
- Coire Glas - Pumped Hydro Storage- Scotland
- Hydrogen Core Network, Germany

Scoring

Pair-wise methodology to answer the followng question:

To what extent is public opposition anticipated to create a likelihood of delay to a particular project when it comes to application for development consent?

Weighting of criteria

Interpretation of weights

Weights are subjective and a reflection of the preferences and beliefs of the individual or group who defines them.

Criteria weights

- The MCDA includes evaluating criteria across multiple diverse criteria.
- In this analysis, weights serve as a mechanism to prioritise criteria based on strategic national priorities.
  - Example: for sustainability as a strategic national priority the most relevant criteria are assigned a weight while less relevant criteria are assigned a weight of 0.
  - For the baseline, equal weights are assigned to all criteria.
- Within a strategic national priority the weights sum to one which ensures that the aggregate score can be evaluated on the same scale as the individual score on each criteria.

National priorities

The ranking of the technologies is investigated with different strategic national priorities in mind. Based on the scores, the technologies are ranked in each of the batches. The average scenario is the baseline where each criteria has the same weight.

For each of the national priorities, relevant criteria are chosen to be part of the theme.

Grouping of criteria deployed in the MCDA into the four strategic national priorities for electricity system decarbonisation

	Competitiveness	Sustainability	Security of supply	Speed
Emission intensity		√		
Spatial Footprint		√		
Biodiversity impact		√		
Annualised fixed cost	√			
Variable cost	√			
Deliverability	√		√	√
Physical constraints				√
System services			√	
Availability			√	
Security of supply		√	√	
Social acceptance		√		√
Regulatory pathway	√			√

COWI

Q&A

- Roaming MICs – questions to COWI & SEAI Technical Lead on assessment criteria

STAKEHOLDER-LED CRITERIA WEIGHTING

- Objective: determine the pooled preferences of Stakeholder Forum members on cost, environmental impact and delivery risk of power sector scenarios
- Results may be used as an alternative weighting of criteria to COWI's approach
- Please follow the link provided in the email
- Explanation of the exercise is provided at the link

NEXT STEPS: REVIEW OF TECHNOLOGY ASSESSMENT

- Subsequent Stakeholder Forum Meetings:
  - Open invitation for presentations from members
  - Please email electricity@seai.ie with proposals
- Technology assessment
  - Draft analysis published for consultation: w/c 1 December 2025
  - Consultation closes: w/c 9 February 2026
- Stakeholder input
  - 30 technologies x 12 criteria = 360 datapoints (first order) to review; substantial effort
    - An optional webinar to present draft results and orient stakeholders on review, guiding questions
  - How to best allocate expertise and available time?
    - Written responses
    - Thematic workshops w/ subset of forum specialists
  - Expertise and interest on forum cluster around specific technologies OR specific criteria

NEXT STEPS: REVIEW OF TECHNOLOGY ASSESSMENT

- Proposal for thematic workshops (end January 2026)
  - Biodiversity impact and social acceptance
    - Engagement with rationalisations – written submissions.
    - Expanding pool of experts for pairwise comparisons – workshop
  - Economic input data
    - May also serve as archetype data for techno-economic modelling (CAPEX, Fixed O&M, Variable O&M)
    - Written submissions followed by group discussion
  - Spatial constraints and footprints
    - Review of constraints mapping method and assumptions
  - Deliverability and regulatory pathways of new technologies (hydrogen, nuclear, CCS)
    - Technology-specific interests may cluster for discussion – written submission, workshop

REFLECTION, CLOSING REMARKS

Thank you for your time and expertise

SUSTAINABLE ENERGY AUTHORITY OF IRELAND