





108th LLC Meeting Presentation Slides

Thursday 9th November 2023

The AWE Rec Soc, Aldermaston



Agenda

- 10.00 - Introductions / Networking / Refreshments
- 10.30 - Chair's Opening Remarks
- 10.45 - Environment, Safety and Health Update
- 11.15 - Regulators' Update
- 11.45 - Operations Update
- **12.05 - LUNCH / NETWORKING**
- 12.50 - Infrastructure Investment Update
- 13.20 - Development Update
- 13.40 - Emergency Planning / REPPIR
- 14.10 - Community Update
- 14.30 - Solar Farms
- 15.00 - Any Other Business / Q&A / Networking
- 15.10 - Close



Chair's Opening Remarks

Janine Mantle

Corporate Affairs Director



Environment, Safety and Health Update

Nick Bolton

Senior Manager, ESH Service Delivery

Process Safety



Process Safety performance remains at an acceptable risk level. There have been no Process Safety events raised during the period. Process Safety training for supervisors remains an ongoing focus, increasing Process Safety knowledge across the organisation supporting supervisors who supervise in high hazard environments. The Leadership Process Safety training in partnership with Cogent Skills continues to be delivered to leaders at AWE. The intention remains for this course to become a key course for all senior leaders at AWE.

The Process Safety Team are also continuing to develop virtual reality training that can be used to raise hazard awareness amongst staff at all levels of the organisation.

Number of Events Notified to the ONR by Calendar Year

2014	2015	2016	2017	2018	2019	2020	2021	2022	2023 to end of August
28	22	25	38	38	37	64	69	61	30



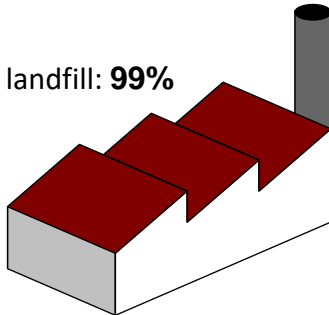
Our Commitment to Protecting the Environment & People



WASTE MANAGEMENT

The Environment Management target for diverted from landfill: **99%**

Total waste diverted from landfill: **99.9%**



NUCLEAR WORKER

Annual UK Occupational Dose Limit: **20,000 μSv**

AWE Individual Radiation Dose: **350 μSv**

RADIATION DOSE PUT INTO CONTEXT:

Annual UK non-occupational radiation dose is 2,700 μSv .
This is the average level of radiation dose that a person resident in the UK will receive each year from background sources of radiation.

DISCHARGE TO AIR

Assessed Dose Aldermaston: **1.78 μSv**

Assessed Dose Burghfield: **< 0.0001 μSv**

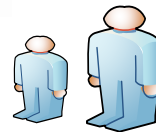
TRADE EFFLUENT

Assessed Dose Aldermaston: **0.0042 μSv**

Assessed Dose Burghfield: **< 0.0001 μSv**

DISCHARGE TO WATER

Assessed Dose Aldermaston Stream: **0.0001 μSv**



PUBLIC DOSE

The calculated doses above represent **minute fractions** of the dose constraint set by the Environment Agency of **500 μSv** per year for a nuclear site.

ASSESSED PUBLIC DOSE PUT INTO CONTEXT:

A dose of 10 μSv (microsieverts) is comparable to that expected to be received from eating a 100g bag of Brazil nuts.



Questions

Regulators' Update

Ian Rogers



Rob Green





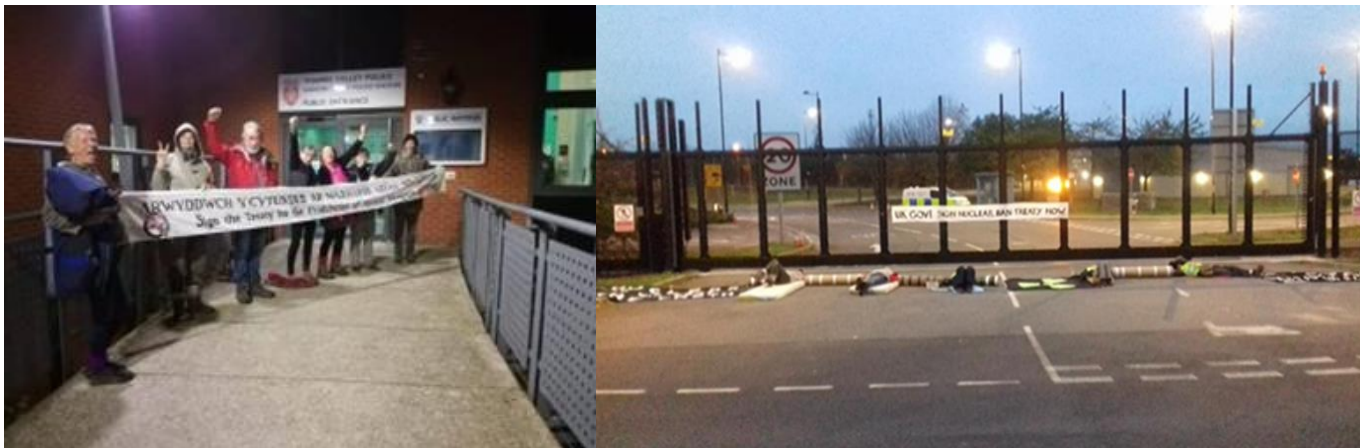
Estate Services Update

Johann Walker
Director- Estate Management

Martin Wells
Group Leader Site Services

Protestor activity

- Regular monthly 'Women's Peace Camp' continues on 2nd weekend of each month.
- No upcoming planned activity



Community concerns*



Date	Category	Summary of concern	Outcome
6 th July 2023	Other	Local resident heard the Site Under Cover alarm and were concerned that they might be at risk.	The resident was assured that it wasn't an incident that could present them with a hazard. They were satisfied with the response.
12 th September 2023	Other	September Local resident said their house was being fired upon	This coincided with an approved/authorised rabbit cull taking place on site in the evening. MDP investigated and found that safety protocols were being followed i.e. all shots were being fired from the direction of our fence line inwards. The resident was satisfied with the action and response



LUNCH / NETWORKING (45 minutes)



Infrastructure Investment Update

Andrew McNaughton and Hannah Marsh

Executive Director Infrastructure, Fissile Programme and Principal Communications Specialist – Central Development Area

Investing in our infrastructure

Andrew McNaughton



An aerial photograph of a large industrial facility. The main building has a light-colored, corrugated metal roof. In the foreground, there is a smaller building with a grey, ribbed roof. The surrounding area includes paved roads, parking lots with several vehicles, and other industrial structures. The scene is brightly lit, suggesting a clear day.

Investing in our infrastructure

Andrew McNaughton



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Investing in our infrastructure

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Investing in our infrastructure

Andrew McNaughton





Estate Development Update

Andy Burnett-Dale
Head of Estate Strategy & Planning

Off-Site Emergency Planning Update 09 November 2023

Carolyn Richardson

Service Manager – Joint Emergency Planning Unit
Jonah Maddocks- Senior Emergency Planning Officer
Bracknell Forest, RBWM and West Berkshire Councils

Key Activities - May to November 2023

- ❑ No incident responses relating to AWE
- ❑ Public Information Booklet and Website updates (May 23)
- ❑ Aldex 23 structured debrief completed
- ❑ Developing and starting to progress the learning from Aldex 23
- ❑ Meetings with Schools within the DEPZ
- ❑ Onsite AWE EP team and WBDC EP team joint meetings
- ❑ The Hollies planning application – Public Inquiry
- ❑ Engagement with other LAs through the National LA Nuclear Working Group

Aldex 23 Headline Learning (1)

1. Developing a wider training and exercise programme on supporting elements (SCG/TCG/Media Advisory Cell/STAC etc - including TV & HIOW Local Resilience Fora)
2. AWE OSEP specific training
3. Review the format of AWE OSEP including the cross referencing to other plans.
4. Review processes for information sharing with each command-and-control locations
5. Review of action logging system
6. Review the provision of early radiation and technical advice provision to the coordination locations

Aldex 23 Headline Learning (2)

7. Revise the AWE Communications Plan
8. Review the AWE OSEP agenda to include specific prompts in relation to DEPZ and vulnerable people
9. Review the command-and-control locations facilities
10. Undertake a recovery focused workshop
11. Review the relationship between the STAC, Monitoring, RMU and Shelter and Evacuation Cells
12. Review STAC plan to include more info for radiation events
13. Review the wider mapping information and sharing of the data
14. All agencies to review the need for Radiation Protection Advisors

Look forward

- ❑ Progress the actions from Aldex 23
- ❑ Multi-Agency Training on any new plan
- ❑ Developing a new Training and Exercise schedule
- ❑ Development Control - Local plan and applications
- ❑ Off-Site Emergency Planning Group Meetings
- ❑ Engagement with other LAs through the National LA Nuclear Working Group
- ❑ Supporting the development of new National best practice.

Any Questions



AWE Emergency Planning and Preparedness Update

Scott Davies-Hearn

Manager Emergency Response

AC-LC11 Technical Lead

TA – Emergency Arrangements & Response



Community Update

Kavita Thandi and Katie Davidson

Responsible Business Manager and Responsible Business Specialist
Corporate Affairs

Community Engagement



Local Liaison Committee



**Time to Give
Volunteering**



Environmental
Orchards, flood protection,
wild meadows



Sponsorship
QMC and sponsored
Masters, PhDs, Post-docs



Schools' engagement

Community Magazine
Connect and Focus

**National Days linked to
STEM**

**Increased apprentice
intake**

**Employee ambassador
network**

**Annual Give a Gift
collections**



STEM Educational Engagement



Primary STEM Fair at QMC 13th July 2023

The Primary STEM Fair is an annual interactive STEM event held at QMC. Over 170 Primary School students took part in EBP South's new Basingstoke Primary Schools' STEM Fair, in partnership with AWE. The event saw young people take part in hands on activities which captured their imagination and educated them about STEM Careers. We took our Glovebox challenge!



Primary Science Challenge 19th September 2023

As deserved winners of the AWE Primary Science Challenge, students from South View Junior School and Brimpton Primary School won their schools interactive Science shows from the Royal Institution. The children were inspired by watching captivating and live action Science demonstrations. Later in the day, the children's parents came to join in a community show! I am not sure who was more excited!



Destinations Expo 12th October 2023

Destinations Expo is an annual interactive Careers event we sponsor through our Educational Business Partners (EBP). This event is held at Newbury College. Again, this year we had 2 major stands for the event which meant meeting even more students. For the first time we took our Glovebox Challenge and VR headsets. They were a huge hit! On the day, there were an incredible 1600 students in attendance!



Education Business Partnership

STEM Educational Engagement



NuFor

10th to 12th October

Nuclear Forensics is an exciting and growing field of STEM research, reliant upon access to expertise from across the nuclear industry, wider academia and beyond to meet the challenges posed by current and future nuclear security issues. The event held in London and organised by AWE employees, allowed GCSE and A-Level students access to talks from leaders and specialists from a wide array of institutions from across the globe. The event showcased the latest developments in techniques and real-life applications of science.



Physics Team

Our 2023 Physics@Work team presented a demonstration of Physics in the workplace to school aged children over a three-day period. Our team was voted the best exhibit by both the students and the teachers, winning a double award for being a vital part in encouraging the next generation of scientists.



Team Challenge 2023

The collective efforts of all involved culminated in a staggering fundraising total of £14,463, donated to Motor Neuron Disease. 25 teams took part with 60 dedicated marshals volunteering their time to ensure the event at Wellington Country Park was a success.





AWE Solar Farm Project

Andrew Lowe

Principal Energy Specialist

AWE Energy Management

AWE Solar Farm – Summary of Opportunity



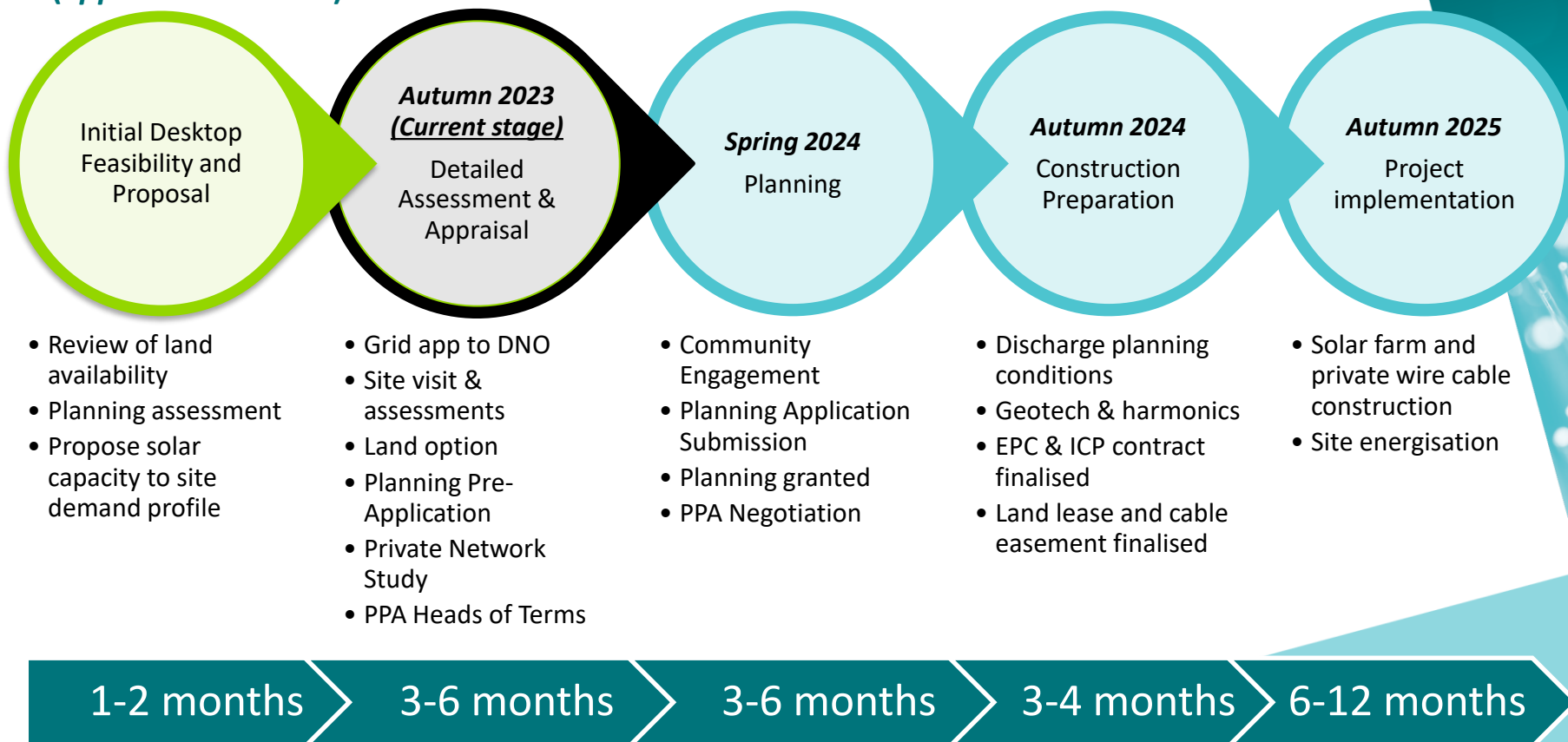
- Market engagement commenced Spring 2023 for development opportunities:
 - Within 5 miles of AWE site(s);
 - 20MW+ (Aldermaston).
 - 10MW+ (Burghfield).
- Multiple land owners and developers in vicinity of both Aldermaston & Burghfield sites have formally registered interest, with a range of land types including legacy industrial and landfill land sites (brownfield).
- Subject to negotiations, benefits are:
 - Approx. 8,000 Tonnes CO₂e / year carbon emissions reduction
 - Approx. £100m cost saving over 25-year life (energy cost reduction)
 - Accelerates decarbonisation of AWE electricity supply to achieve 2040 target
 - Supports local electrical grid stability.

We are unable to share potential locations at this stage, as we have NDA's in place with land owners, and location is subject to a public tender exercise.

Primary objective: Accelerate decarbonisation of AWE electricity supply

AWE Solar Farm – Planned Development Timeline

(approx. 24 Months)

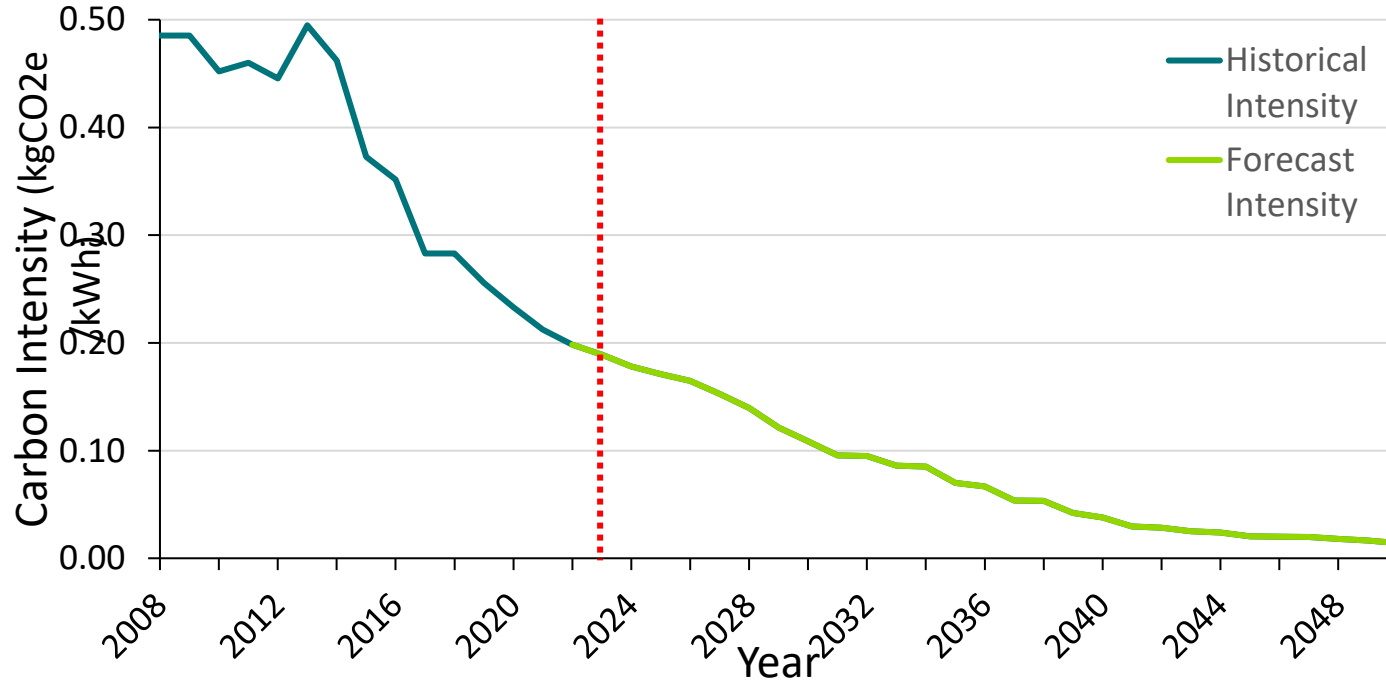




Why Solar? Why now?

Why Now: Grid Sourced Electricity – Carbon Intensity Forecast

Source: National Grid (2021)



AWE Energy Strategy – Principal Objectives



Cost & Efficiency

Reduce risk of energy price volatility.

Minimise energy use.

Resilience

Energy supplies are resilient to external economic, political and physical risks.

Carbon

Meets short & long term carbon emissions reduction targets.

ESG

Supports AWEs Environmental, Social and Governance objectives.

Programme

Supports capital projects' environmental performance, and planning activities.

Low Carbon Electricity: Initial Options Study



Technologies Assessed:

- UK Grid (baseline / no change);
- Roof Top Solar (PV) Generation;
- Ground Based Solar (PV) Generation;
- On-shore Wind Generation;
- Off-shore Wind Generation;
- Combined Heat and Power plant (Gas);
- Combined Heat and Power (Biomass);
- Energy from Waste with CHP;
- Advanced Energy from Waste;
- Anaerobic Digestion;
- Geothermal;
- Small Modular Nuclear Reactor.

Considerations:

- Energy cost vs. grid;
- Land valuation (by DIO);
- Capital costs;
- Operating (Maintenance) costs;
- Carbon emissions;
- 'Resource' availability;
- Planning success;
- Locations (onsite/offsite/roof/ground);
- Technology Maturity (e.g. small nuclear);
- Sensitivity analysis of all of the above.

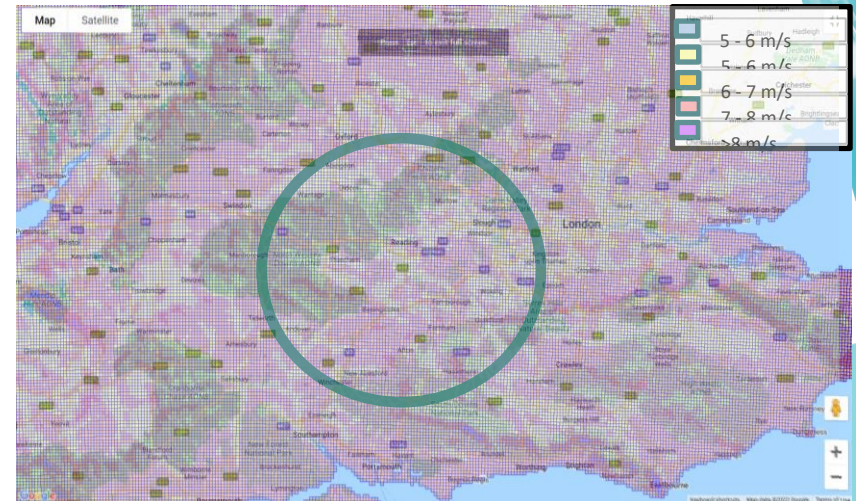
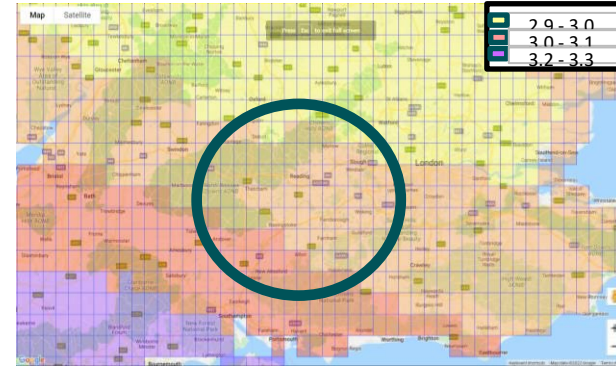
Outcome:

- Initial down-selection based on cost vs. grid electricity;
- **Detailed assessment of remaining options – Solar & Wind**

Low Carbon Electricity: Detailed Options - Solar vs. Wind



- Resource availability:
 - Solar: Good resource availability throughout whole area
 - Wind: nearest good resource ~10 miles away (Hannington) – too far
- Planning History (50 mile radius):
 - Solar: 65% success rate
 - Wind: 18% success rate
- Project development costs:
 - Both are circa £500k per asset deployed (requirements capture, contract development, commercial negotiation, internal costs (time)).
- Carbon emissions reduction
 - Both approx. 8,000 Tonnes CO₂/year reduction at current rates.
- Operating Costs:
 - Both cheaper than grid.
- Resilience:
 - Both options are intermittent.



Low Carbon Electricity: Detailed Options



Conclusion:

- Prioritise Ground Mounted Solar deployment:
 - Offsite with direct connection to AWE sites;
 - To run in parallel with grid supplies (resilient);
 - Via long term commercial supply contract – a Power Purchase Agreement [PPA];
- Supplement with on-site solar on new conventional facilities (e.g. Hub), and car parks (future).
- Following solar deployment, explore options for wind & battery storage.

Next steps:

- **Complete:** Engage with Cabinet Office via AWE Supply Chain Management on compliant commercial approach;
- **Complete:** Approach market for opportunities in vicinity of AWE;
- **Complete:** Submit business case for internal AWE approvals
- **Complete:** On-board technical & commercial development support;
- Autumn 2023: Commence local area and external engagement;
- Summer 2024: Negotiate T&Cs and technical contract requirement, award implementation contract;
- TBC 2025: Energise solar asset(s).



Any other business / QA's



**Next meeting date:
29th April 2024**