Energy Entreprenerurs Fund Phase 7: Launch

BEIS Science and Innovation for Climate and Energy

Department for Business, Energy & Industrial Strategy

House Keeping

- Questions
  - Slido #EEFLaunch
  - Q&A Session
- Live streaming
- Evacuation
- Toilets
- Tea & Coffee
- Mobile phones

Agenda

Time	Presenter	Content
13:00	Dr Mark Taylor: BEIS SICE	Introduction to BEIS Energy Innovation Programme
13:15	Nicola Lazenby: BEIS SICE	Introduction to EEF Phase 7: Eligibility, Application Process, Timelines
14:00	Beverley Gower-Jones: Carbon Limiting Technologies	EEF Incubation Support
14:20	Nicola Lazenby: BEIS SICE	EEF Applications Guidance
14:50	-	BREAK
15:00	Sally Phillips: Chimney Sheep Alex Green: Electron Nick Kitchin: Cumulus Energy	EEF Case studies
15:45	Hamish Corner, Penningtons Manches Gemma Davis, Penningtons Manches	Legal considerations for successful applicants
16:15	Nicola Lazenby: BEIS SICE	Next Steps
16:30	All	Questions & Answers
17:00	-	CLOSE

Energy Innovation Portfolio

Dr Mark Taylor

Deputy Director for Energy Innovation

BEIS Science and Innovation for Energy and Climate Directorate

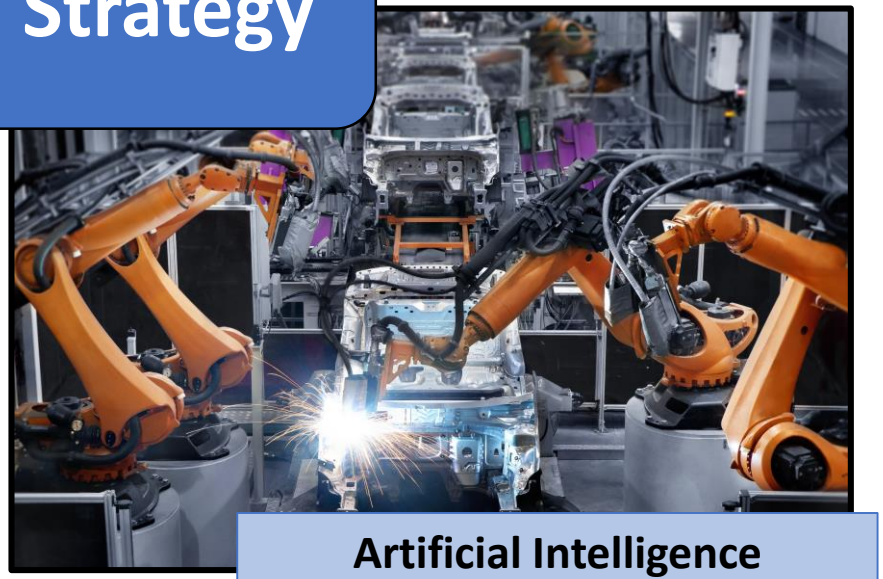
Before I joined the Civil Service …

Mobility

Clean Growth Challenge

Industrial Strategy

Aging Society

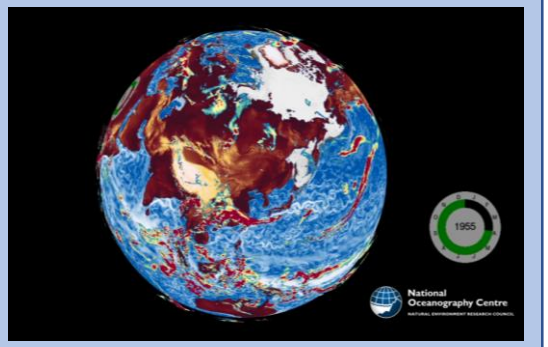


Artificial Intelligence

Science and Innovation for Energy and Climate

SCIENCE

Understand the Science of 80% & 1.5 degrees



ENGINEERING

Provide Engineering insight into the technical solutions

INNOVATION DELIVERY

Improve the evidence base using Innovation

The overall aim of the BEIS Energy Innovation Programme is to accelerate the commercialisation of innovation cheap, clean, and reliable energy technologies by the mid 2020s and 2030s.

Over £300m of the £505m **already committed** so far

£180m Nuclear

Driving down costs and building new UK supply chains and skills

£15m Renewables

Driving down the cost of low carbon electricity at scale

£100m Industry

Low carbon options for industry, lowering energy costs

£90m Built Environment

More cost effective energy efficiency and low carbon heating

£70m Smart Systems

Scaling up flexibility and looking for new storage options

£50m Cross Cutting Supporting disruptive innovations (particularly for SMEs), including using innovative finance.

SICE Competitions Live / Launching

- July 2018 - Hydrogen Competition (£5m)
- Summer 2018 – CCU Demo: FEED
- Summer 2018 – CCUS: Open Call
- Summer 2018 – Using smart meters to measure building performance
- October 2018 (SBRI) – Fuel switching for industry
- Autumn 2018 – UK/Canada collaborative Smart Energy

Energy Entrepreneur Fund (EEF)

£51 million of BEIS Grants in 111 projects across Phases 1 to 5

Identify and fund potentially disruptive technologies

Phases 1-4, for the 46 projects reporting

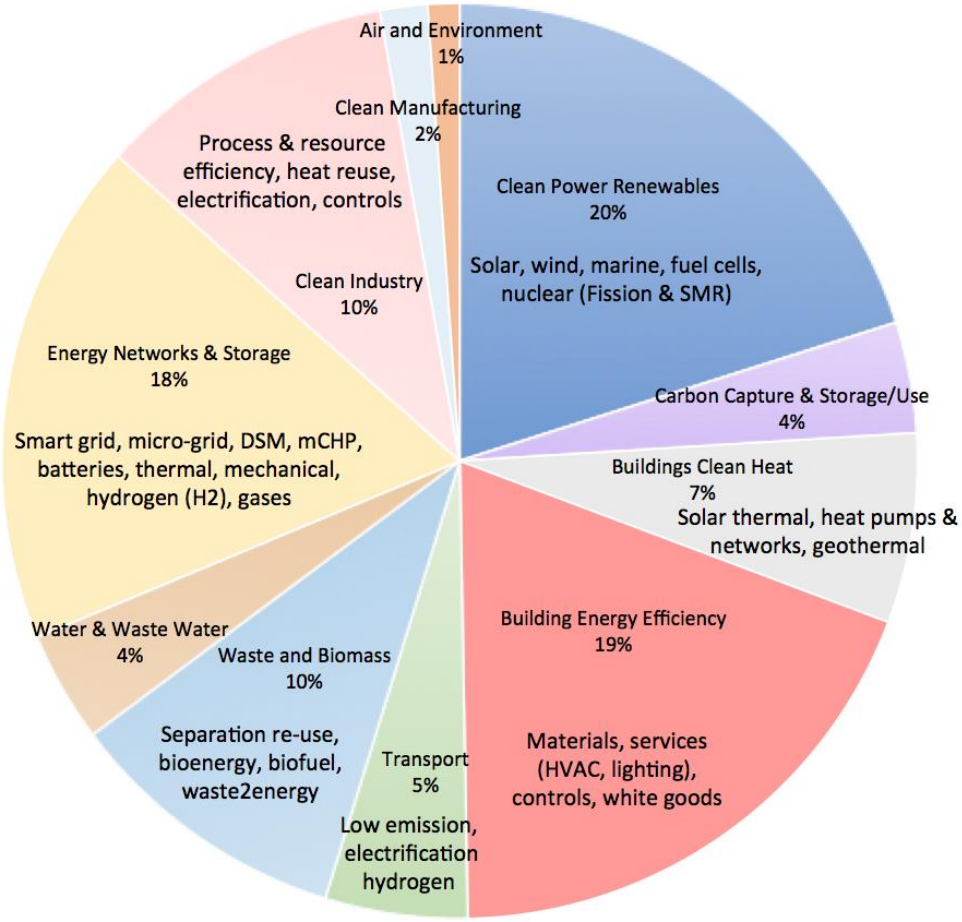
- £62.3 million raise private sector funding
- £4.5 million in sales

Uniquely provides incubation support in addition to grant funding

Breadth of Energy Entrepreneurs Fund

The top 5 theme funded in EEF 1-5 are:

1. Clean Power Renewables (20%)
2. Building Energy Efficiency (19%)
3. Energy Networks & Storage (18%)
4. Waste and Biomass (10%)
5. Clean Industry (10%)



Energy Entrepreneur Fund: Phase 7

Up to £10 million in grant funding

We're looking for projects which evidence:

- the potential impact of the innovation on **2050 low carbon targets** or **security of supply**
- the technical viability of their innovation and coherent development plan that will **commercially progress the innovation**
- **value for money**, including cost reduction potential
- the **size and nature** of the business opportunity

Energy Entrepreneurs Fund Phase 7: Overview

Nicola Lazenby

Cross Cutting Innovation Lead

BEIS Science and Innovation for Energy and Climate Directorate

Timelines

Application	• Expression of Interest Registration (4th July – 3rd August) • Send confirmation email to entrepreneur@beis.gov.uk by no later than **1pm 3rd August 2018** • Submit application on 'Basecamp'(online platform)- by no later than **1pm -14th September 2018**
Assessment	• Eligibility check (14th-21st September 2018) • First Stage assessment (24th September – 12th October 2018) • Commercial Panel (October - November 2018) • Presentation Panel (invited applicants only) (October - November 2018)
Grant Award	• Conditional letters, Incubation meetings (November – December 2018) • Grant awards (Early 2019)

Eligibility Overview

1) Innovation and technology readiness
2) Project status
3) Aid Intensity including cumulation
4) Match Funding
5) Project Location
6) Grant Size
7) Technology Scope
8) Project Duration

Eligibility: Straightforward Areas

2) **Project Status**: BEIS is unable to fund retrospective work on projects. The value of retrospective work may, however, be considered in the assessment process.

5) **Project Location**: The project's activities must largely be conducted in the UK.

8) **Project Duration**: Projects can last up to three years; however financial completion must by no later than **31st March 2021**.

Eligibility: 7 – Technology Scope

These areas will be considered in their broadest context and support could be given to proposals that whilst helping achieve the 2050 targets might demonstrate any of the following:

- Improved performance characteristics over existing technologies or products
- Novel component technologies that can be implemented in existing systems to deliver improved performance or reduced costs of the system
- Products, processes or technologies that can reduce the cost of installation or maintenance of existing systems

Insulation, ventilation & glazing technologies	Fuel cell technologies
Building control systems	Wind technologies
Energy demand reduction technologies	New marine devices
Advanced lighting technologies	Energy or fuel from waste or waste heat
Novel or improved building fabric	Wind technologies

Eligibility: 1 – Innovation and TRL's

i. The project is at TRL 3 or above (Critical Function or Proof of Concept Established).

ii. Projects must fall within the EU General Block Exemption Regulation Article 2 definitions of industrial research (85) or experimental development (86) and be eligible under Section 3 Article 22 (Aid for start-ups) or Section 4 Article 25 (Aid for research and development projects

Further details are provided in Section 2 of the Guidance Document.

What are TRL's?

TRL	Description
1	Scientific research begins to be translated into applied research and development.
3	Experimental proof of critical technical functions and validation of feasibility for application. Active research and development is initiated. This includes analytical studies and laboratory studies to physically validate analytical predictions of separate elements of the technology. Examples include showing the performance of critical technical features or components are feasible (even if not yet integrated or representative of real-life environment).
9	Marketable Product: proven in repeated use - Product being sold in market, scaling up sales volumes. Actual application of technology is in its final form - Technology proven through successful operations.

Further details are provided in EEF 7 Guidance Document Appendix 2

Eligibility: 1 – Innovation and TRL's

State Aid Articles

You must apply under one of the General Block Exemption State Aid articles. The options are:

- Article 22 – Small Innovation Start Up
- Article 25 – Industrial Research
- Article 25 – Experimental Development

Full details are provided in Section 5 of the Guidance Document

Eligibility: Article 22

Small Innovative Start Up

- If you are applying under Article 22, of the GBER block exemption, then you must have spent more than 10% of operating expenses on R&D in one of the last 3 years.

N.B. If you have selected Article 22 and cannot demonstrate the 10% R&D expenditure in one of the last three years, you will not pass the Eligibility Check, and should consider applying under Article 25.

Eligibility: Article 25

Industrial Research and Experimental Development

Definition of Industrial Research:

'the planned research or critical investigation aimed at the acquisition of new knowledge and skills for developing new products, processes or services or for bringing about a significant improvement in existing products, processes or services.'

Activities may include:

- the creation of component parts of complex systems;
- the construction of prototypes in a laboratory environment or in an environment with simulated interfaces to existing systems;
- pilot lines, when necessary for the industrial research and notably for generic technology validation.

Eligibility: Article 25

Industrial Research and Experimental Development

Definition of Experimental Development:

'acquiring, combining, shaping and using existing scientific, technological, business and other relevant knowledge and skills with the aim of developing new or improved products, processes or services. This may also include, for example, activities aiming at the conceptual definition, planning and documentation of new products, processes or services'.

Activities undertaken may include prototyping, demonstrating, piloting, testing and validation of new or improved products, processes or services in environments representative of real life operating conditions where the primary objective is to make further technical improvements on products, processes or services that are not substantially set.

Eligibility: 3 – Aid Intensity including cumulation

- Funding levels applied must be consistent with the appropriate Block Exemption aid intensity levels
  - This includes a consideration for the cumulative effect of other forms of state aid
- Costs must be consistent with the eligible cost criteria, such as:
  - Personnel costs: researchers, technicians, other supporting staff
  - Cost of instruments and equipment
  - Costs of buildings and land
  - Costs of contractual research, knowledge and patents bought/licensed

….. to the extent employed on the project, for the period used.

A list of example ineligible costs has also been provided.

Further details are provided in EEF 7 Guidance Document Appendix 1

Eligibility: 4 – Match Funding

- Given the aid intensity rules, applicants are required to have private funding in place to cover the balance of eligible costs.
- This funding may come from:
  - Company's own resource
  - External private sector
- May not come from:
  - Funding attributed to any public authority or EU institution

The match funding for any project must be at least 10% of the total project costs.

Eligibility: 6 – Grant Size

- The total requested grant does not exceed £1m, or £750,000 if applying for a small innovation start-up under Article 22.
- The maximum total project value must not exceed £.25m.

BEIS is seeking to maximise the impact of government funding, projects looking for public funding intensities that are lower than the applicable maximum are likely to score higher in the appraisal process.

Up to £1m of the total £10m of grant funding available will be allocated to projects with a value up to £250,000.

Assessment Process

Following pre-assessment checks, there are 2 stages in the assessment process:

- Pre-Assessment check: Eligibility Criteria
- Stage 1: Assessment against specific criteria, considering:
  - Level and nature of the innovation
  - Impact on energy and climate targets
  - Value for money, including and cost reduction potential
  - Mark viability and potential for commercialisation
- Stage 2: Review by external commercial panel, considering:
  - Market viability and potential for commercialisation
  - Impact on energy and climate targets
  - Value for money
  - Attractiveness of target market and business proposition for investment

It’s not all about the money…

BEIS Energy Entrepreneurs Fund Programme

Grant Funding

Incubation Support

EEF: Incubation Support

Beverley Gower-Jones

Carbon Limiting Technologies

The UK's longest established Cleantech Incubator

Business Focus: 10 years focusing solely on sustainable technology businesses
Proprietary structured approach and toolset for technology commercialisation

2006
Established

350
SMEs supported across buildings, power, industry, transport, waste

1,300
Grant applications screened

£65m grants
Energy Entrepreneurs Fund

- 130 companies
- 400 support tasks
- 126 patent applications

Corporate Venturing
Support FTSE 100 companies

Investors
Evaluate potential investments
Provide interim management

ENERGY ENTREPRENEUR FUND

RESULTS AND SOME HIGHLIGHTS

105.5M

PRIVATE MONEY RAISED

126

PATENTS APPLIED FOR

42

PRODUCTS LAUNCHED

49

CUSTOMER TRIALS

41

INDUSTRY PARTNERSHIPS

KITE
Raised £ 5 million from Shell, Eon and Schlumberger

OPV
Raised £ 8 million from L&G and Statoil

CARBON CLEAN
Trial Industrial Carbon Capture in India

NAKED ENERGY
Signed agreement & trialing Sainsburys

OPEN UTILITY
Selling "Selectricity" Product via Good Energy

UPSIDE
Trial with National Grid

C-CAPTURE
Won Shell Springboard

TEVVA
Truck on trial with UPS

VANTAGE
Listed as exemplar in The Manufacturer Top 100

Aims of Incubation Support

The aim of incubation support is to identify and provide commercial support in areas where a company may need assistance to bring the innovation successfully to market a deliver a substantive commercial milestone…

The focus is on help to deliver commercialisation of the innovation being developed with the Grant but can also cover wider company needs (eg, Team, Funding).

A. MARKET UNDERSTANDING

B. BUSINESS DEVELOPMENT & SALES

C. STRATEGY & BUSINESS PLANNING

D. TECHNOLOGY

E. PRODUCT

F. SUPPLY CHAIN & OPERATIONS

G. TEAM

H. FUND RAISING

…to accelerate commercial exploitation of the RD&D project and **leverage return on BEIS grant funding for UK Plc**

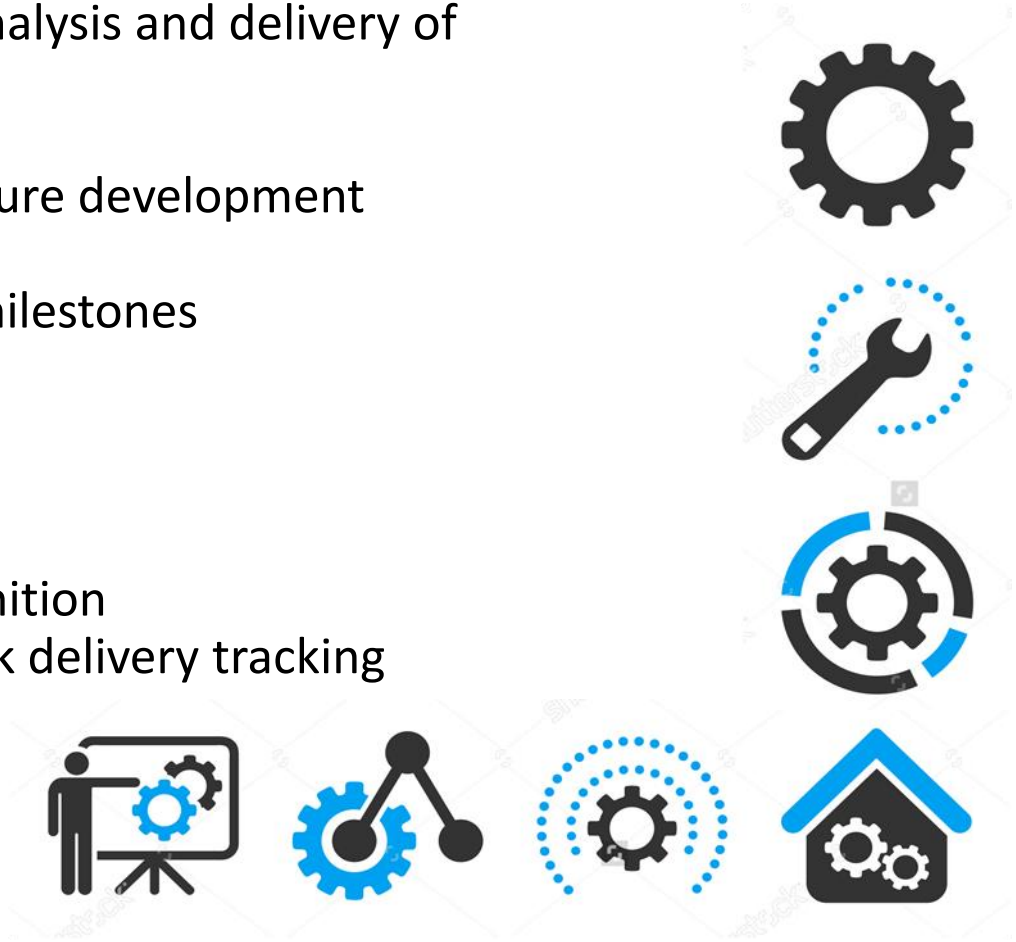
Incubation Support Principles

- Ventures can de-risk and improve their chances of success by being well planned and prepared
- A scalable business has to have repeatable products **and processes**
- Expected progress in commercial readiness should correspond to technology and product readiness
    - The correspondence is not exact but for success technology and commercial readiness should not be too far out of alignment
- Completing the current stage, critically, includes raising investment funds for the next stage

The incubation planning process identifies which tasks are outstanding to complete the current commercial stage successfully.

Toolkit for incubation support

- CLT tools for venture needs analysis and delivery of commercialisation support:
  - Stages of technology venture development
  - Diagnostic tool kit
  - Commercial & technical milestones
  - Menu of Services
  - Incubation plan
  - Task scope template
- Incubation manager role definition
- Programme reporting and task delivery tracking

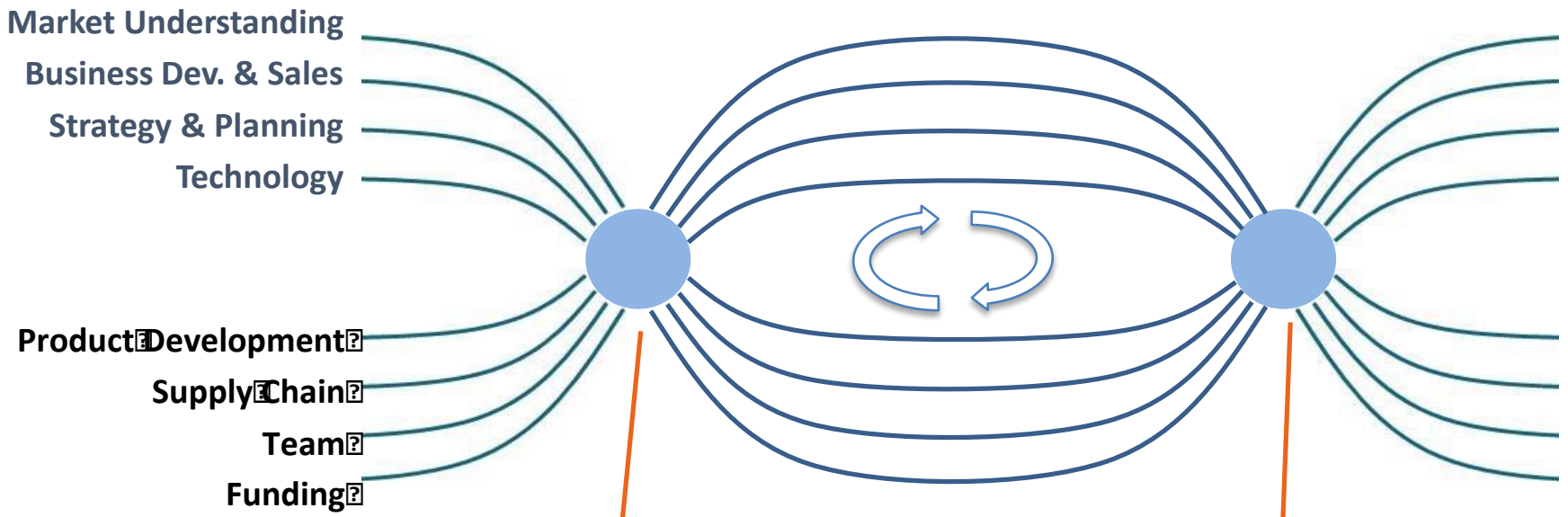


Commercial Stages & Technology Readiness

Commercial	Description	TRL	Description
1. Concept	Idea to exploit new technology or product- service concept. Explore market interest, commercial potential.	¾	(3) Experimental proof of critical technical functions and validation of feasibility for application.
2. Seed stage	Market research. Product or service R&D, component tests. Business planning. Product requirements (market tested). Initial product spec	4/5	(4) Lab and Bench Test Demos of sub-systems & key components. Modelling & experimentation with parameters representing future conditions. Application proof-of-concept.
3. Product development stage			
3a. Resource & Plan	**Resource**. CVP and route to market plan. Refine product spec in line with market/client requirements. "Complete" development team.	5	**Development** Prototypes: system, sub-system, components, or sub-scale units validated in representative environment
3b. Validate market & build venture	**Build**. Re-validate requirements & refine specs. Start llead generation for trial clients. Approach suppliers viable for volumes. Investigate partners.	6	**Engineering** or Demonstration Prototype : full-scale real-life partially integrated system at user site. Proof-of-Application.
3c.Prep.route to market, supply chain	**Test.** Refine market positioning/price. Approach selected channel partners, outline terms for initial volumes, plan to involve in beta.	7	**Operational** Prototype for prolonged use at "tame" client site(s). All planned functions, interfaces integrated for monitored trials under developers control (alpha product)
3d Client trials & first sale	**Execute**. Trial all delivery, installation, commissioning & support functions. Achieve first sales (from betas). Complete marketing & sales hires / agreements for market entry/sales.	8	**Production** Prototype (for saleable product). Devt. complete, final design & feature set, limited release to appropriate number of clients, all fulfilment procedures trialled and documentation complete. (beta product)
4a – Mkt Ent	First customer shipment (of repeat product)	8/9	Repeat production of specified product ; not bespoke project
4b – Proven	First profitable quarter	9	Market Proven Product: in repeated use
4c - Growth	Minimum 18 months profitability	9	Market Accepted Product: sales growth; product variants

TRL/CRL Framework Overview

TRL	3/4	4/5	5-7	8-9
CRL	*1. Concept*	*2. Seed*	*3a-3d. Product Development*	*4a-c Market Launch / Growth*



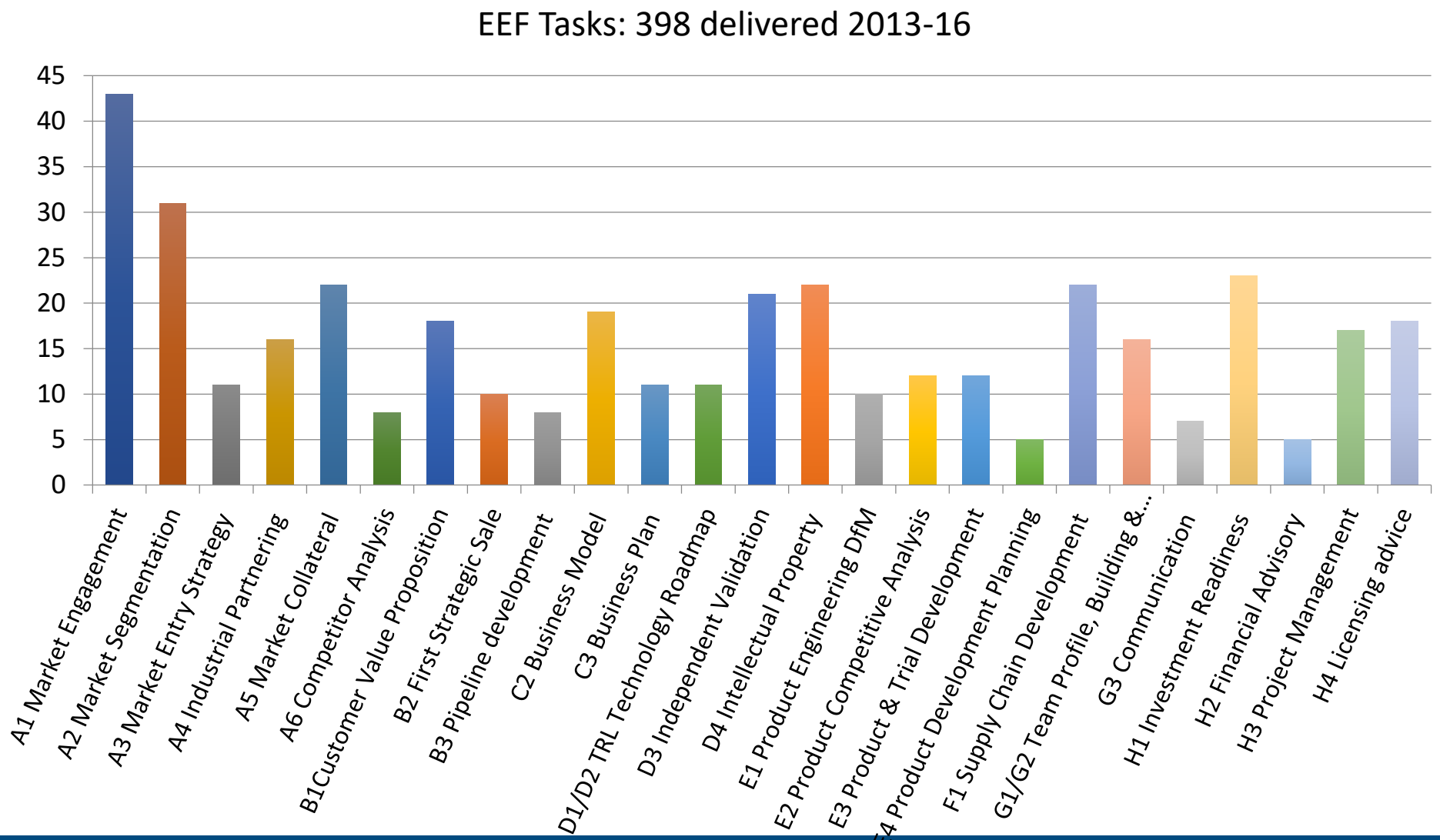
Incubation Plan – Gaps analysis

Commercial Progress Summary Table									
Commercial Stage	**Concept**	**Seed**	**Product Development**				**Market Entry & Growth**		
Prototype Stage			**Develop**	**Eng**	**Op**	**Prod**			
TRL	**3/4**	**4/5**	**5**	**6**	**7**	**8**	**8/9**	**9**	**9**
Commercial readiness level (CRL)	**1**	**2**	**3a**	**3b**	**3c**	**3d**	**4a**	**4b**	**4c**
Market									
Biz Dev & Sales									
Business Planning									
Technology									
Product									
Supply Chain									
Team									
Fund Raising									

Extract of Menu of Services

Capability	Ref	EEF Incubation Services	Short Task Descriptions & Examples
A MARKET	A1.0	Market Research, Segmentation & Size	Assess key characteristics of agreed market(s). Segment market in a way relevant for the business and quantify agreed segment(s) (volume, value, growth). Make recommendations on segment attractiveness for business.
	A2.0	Market Entry Strategy & Engagement	Identifying the best route-to-market including own manufacture, licensing, joint venture, partnering with industrial, selling direct or via distributor.
	A3.0	Industrial Partnering	Identification of possible partners, assisting introductions, meetings, presentations, engagement and selection. Guidance with negotiations.
	A4.0	Market Collateral	Creation of publicity materials including websites and flyers.
	A5.0	Competitor Analysis	Understanding the alternatives to the company's innovative solution and comparing the benefits each offers.
B BUSINESS DEVELOPMENT & SALES	B1.0	Customer Value Proposition	What are the benefits to customers and how do these translate to value.
	B2.0	Pipeline development & First Sale	Help develop prospects and leads list. Qualify and engage sales prospects (or trial sites etc). Help source and close first significant sale/reference site.
	B3.0	Sales Analysis	Interviewing customers to understand what went right and wrong in the sales process.
C STRATEGY & BUSINESS PLANNING	C1.0	Strategic Implementation Support	Strategic sounding board and mentor to CEO/Team. Synthesise and integrate results of work packages into the business. Strategy reviews.
	C2.0	Business Model	Develop a range of different business model options to compare impacts on different elements of the value chain, review pros and cons.
	C3.0	Business Plan	Assist company to develop a business plan appropriate to stage.
D TECHNOLOGY	D1.0	Technology Roadmap	Identify key technologies relevant to product. Determine likely development path for key technologies relative to internal development.
	D2.0	Independent Validation & UK knowledge base input	Expert third party assessment and verification of results to provide increased confidence for potential customers, investors etc. Arranging input of UK knowledge base expertise into innovation.
	D3.0	Intellectual Property	IP patent filing and management activity. Review of validity of existing patents. Freedom to operate searches. Development of IP strategy.
	D4.0	Technology Status & Planning	Review of internal technology status (TRL) and underlying competences. Assessment of gaps and recommendations (e.g. make-versus-buy).

Incubation services delivered to EEF companies

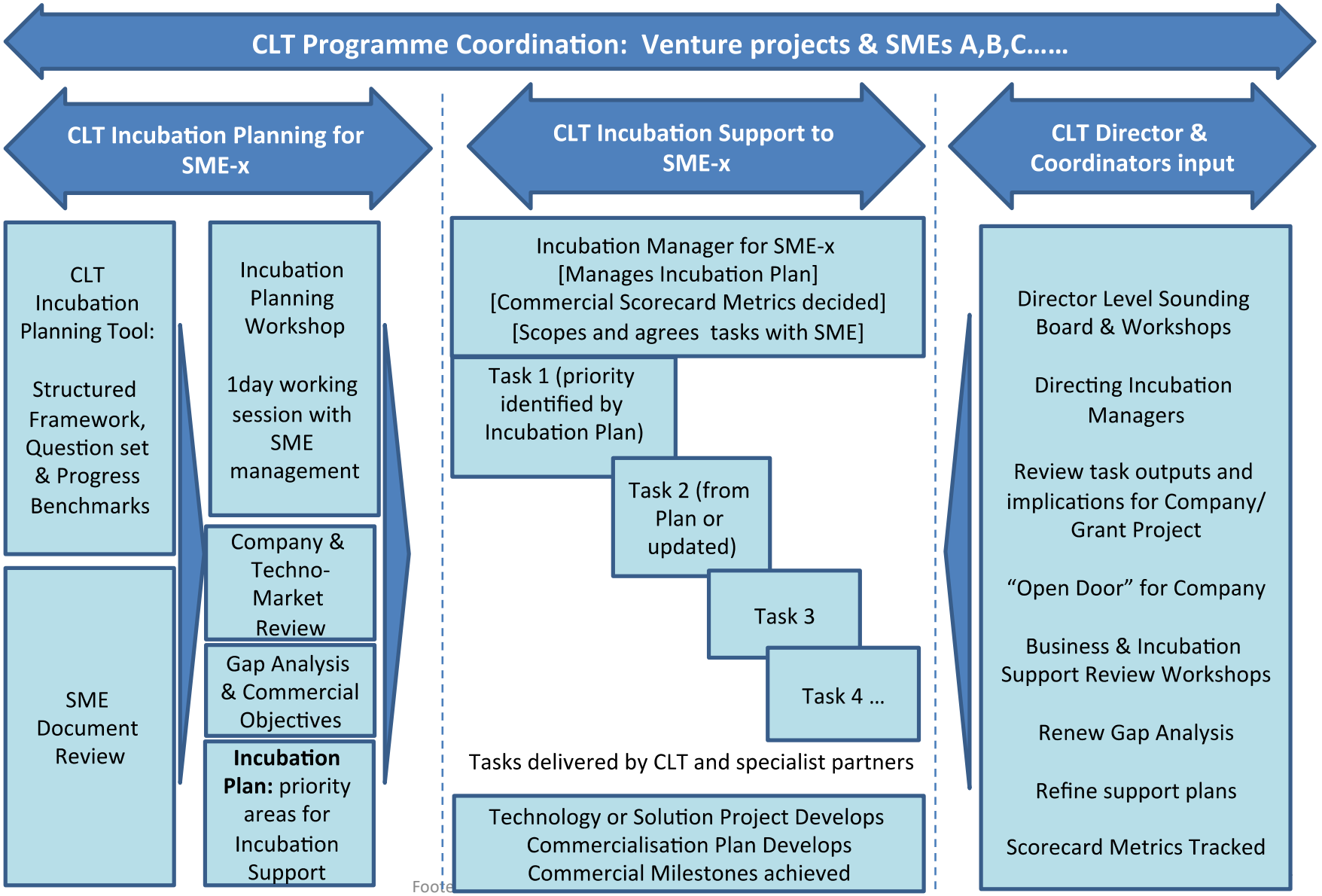


Delivery Partners

ARUP

WSP

CARBON TRUST


CLT Programme Coordination: Venture projects & SMEs A,B,C……
CLT Incubation Planning for SME-x
CLT Incubation Support to SME-x
CLT Director & Coordinators input
CLT Incubation Planning Tool:
Structured Framework, Question set & Progress Benchmarks
SME Document Review
Incubation Planning Workshop
1day working session with SME management
Company & Techno-Market Review
Gap Analysis & Commercial Objectives
Incubation Plan: priority areas for Incubation Support
Incubation Manager for SME-x
[Manages Incubation Plan]
[Commercial Scorecard Metrics decided]
[Scopes and agrees tasks with SME]
Task 1 (priority identified by Incubation Plan)
Task 2 (from Plan or updated)
Task 3
Task 4 …
Tasks delivered by CLT and specialist partners
Technology or Solution Project Develops
Commercialisation Plan Develops
Commercial Milestones achieved
Director Level Sounding Board & Workshops
Directing Incubation Managers
Review task outputs and implications for Company/ Grant Project
"Open Door" for Company
Business & Incubation Support Review Workshops
Renew Gap Analysis
Refine support plans
Scorecard Metrics Tracked

Incubation Planning Session - Detailed Agenda

1. Introductions & overview of incubation support (CLT)

Part One

2. Incubation review: this will cover all areas but most time on areas where gaps may be evident from the application or panel feedback or company comments. We will cover:

A short overview of your company, then:

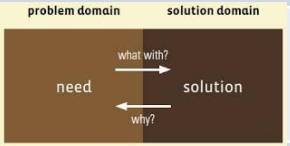
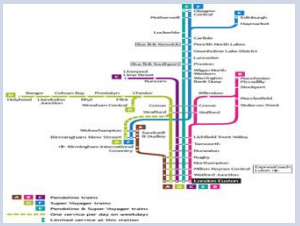
i. Market – target customers and segmentation inc. route to market.
ii. Technology status and development milestones - (demo/tour if practical)
iii. Business Development and Sales
iv. Strategy and Business model (prototype to market entry to distribution or licensing etc.)
v. Product plans
vi. Supply chain and manufacturing
vii. Team and team plans
viii. Fund Raising
ix. Key risks

3. Potential areas for incubation support

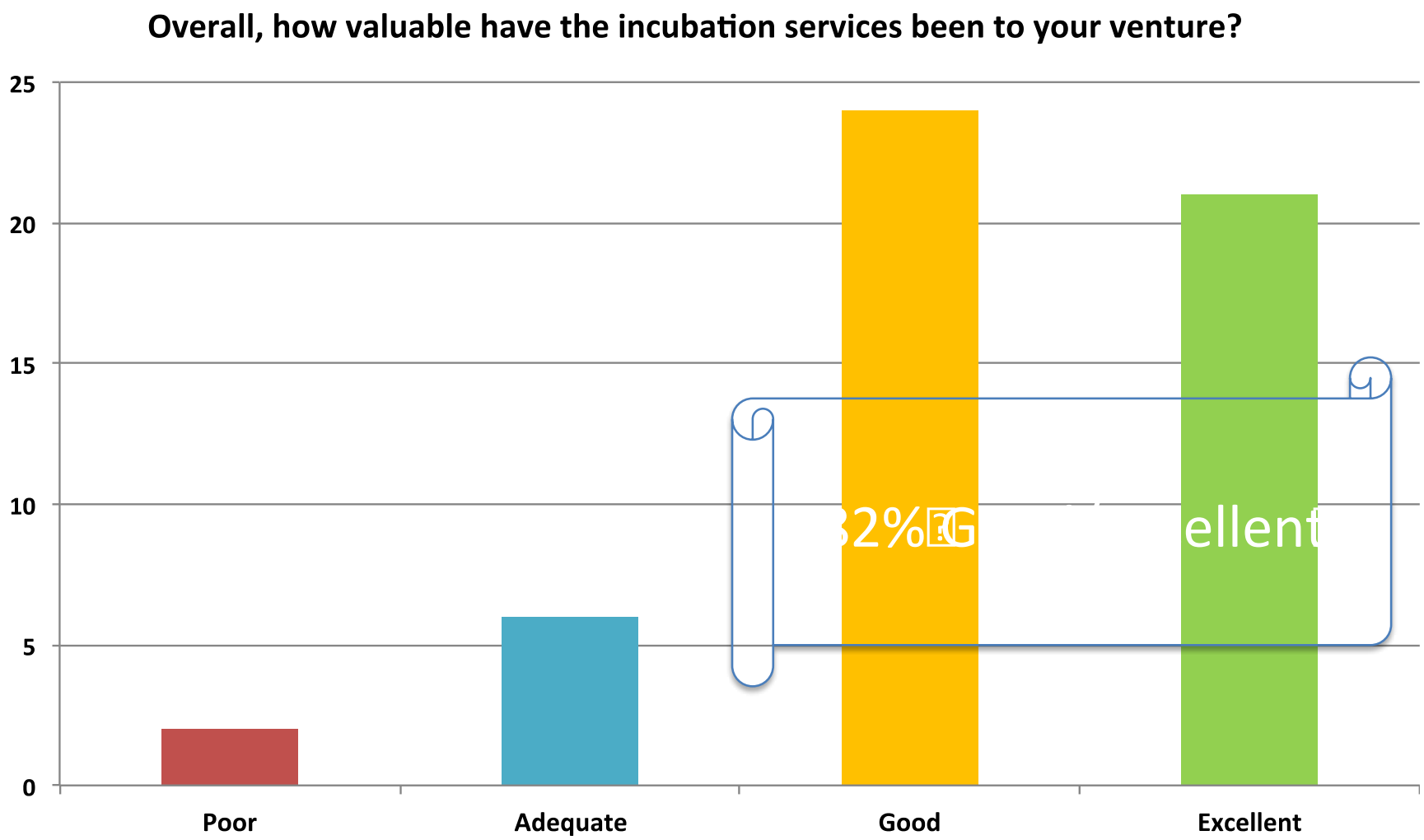
Part 2

1. BEIS Project Plan review & proposed milestones (Annex 2) (Led by MO, IP & IM)
2. Any pre-conditions or issues raised in the provisional award letter not yet covered (including budget questions and availability of match funds)
3. Grant Offer Letter – key conditions, future audit, progress evidence and claims (MO)

Critical Activities to Unlocking Commercial Progress

	Critical Activity	
FOCUS	Developing a solution for ONE application and user group FIRST.	
MARKET LED	Building solutions to solve someone's specific problem. Understanding all user requirements	
TEST, TEST, TEST	Test plan with clear objectives of what needs to be demonstrated at each stage. As many hours on the clock as early as possible.	
EFFICIENT MONEY	Careful selection and targeting investors. Seeking alternatives to equity funding.	
ROUTE TO MARKET	Accept partners who can scale are part of the solution & know very clearly what they will provide; then choose proactively not because they were there!	
PEOPLE	Identify and draw in all the skills & expertise early enough.	

Feedback Results from the Support Beneficiaries



Summary

- Incubation support aims to accelerate innovation to market
- We measure the commercial outcomes of our support
- CLT have developed a set of tools and processes to deliver the support
- Delivery partners, Arup, Carbon Trust, WSP
- The SME journey, incubation planning and task delivery
- Many years of experience has led to a number of insights which we hope you will benefit from

Pitfalls of EEF Applications

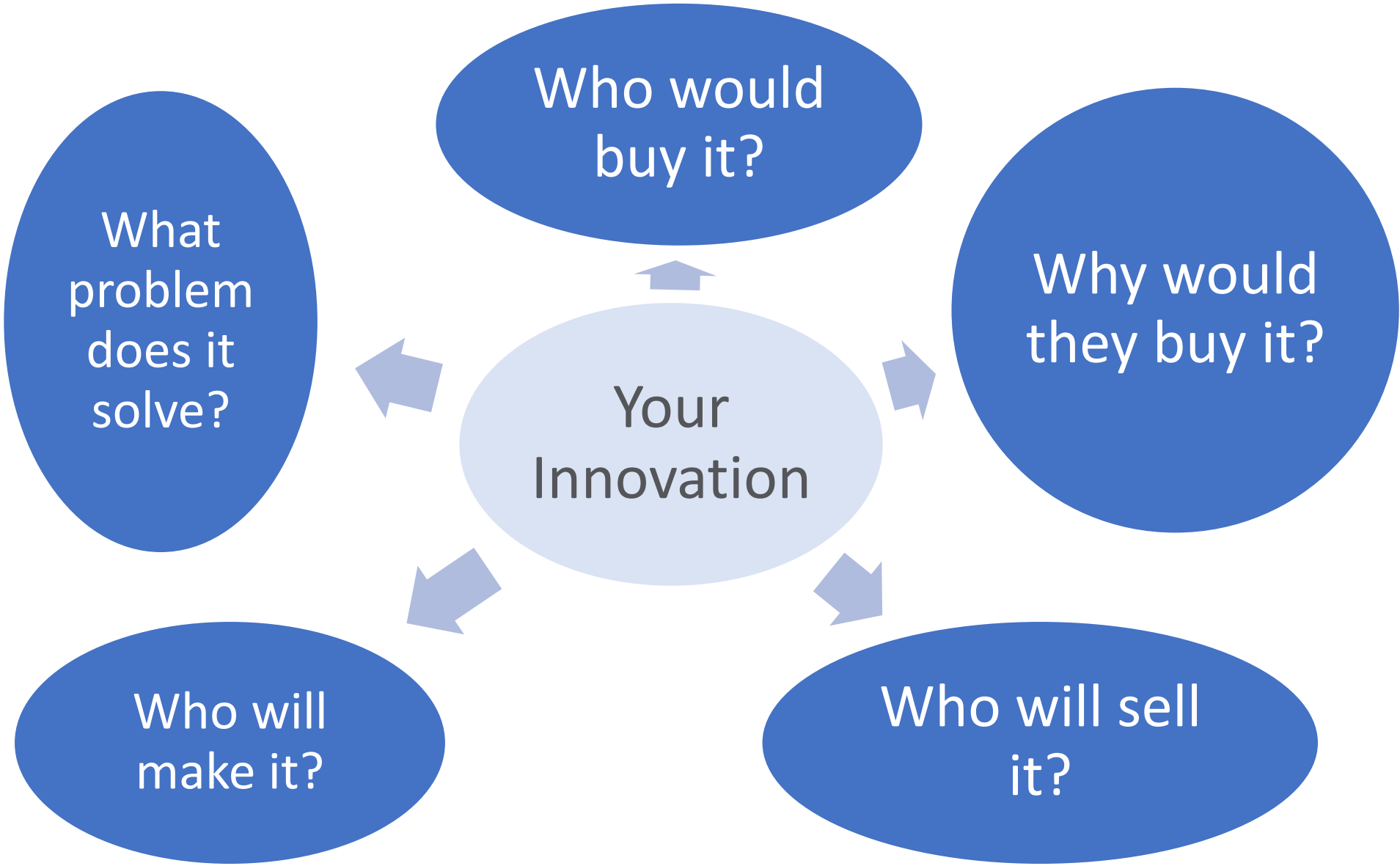
Nicola Lazenby

Cross Cutting Innovation Lead

BEIS Science and Innovation for Energy and Climate Directorate

What does success look like?

- Moves the whole company forward:
  - Demonstrate a value inflection point
  - Secures follow on investment
  - Receives a recognised award
  - Generates revenues
  - Obtains independent validation of technology
  - Builds supply chain or manufacturing capacity
  - Creates jobs


Who would buy it?
What problem does it solve?
Why would they buy it?
Your Innovation
Who will make it?
Who will sell it?

Before you begin…

1) Read the Guidance Document
2) Decide which State Aid article you are applying under
3) Understand how your technology can be exploited

When writing your application…

Clarity

- Be very clear
- Stick to one consistent story
- Ensure you are answering the question which it asks

Detail

- Don’t assume prior knowledge
- Don’t rely on excessive appendices
- Ensure your Gantt Chart and Risk Assessment are sufficiently detailed

Before you submit…

- **Register your Expression of Interest**
- **Familiarise yourself with BaseCamp**
- **Double check your documents:**
  - Application form
  - Finance Form (ONE per project)
  - Partner details form
- **Upload supporting documents:**
  - Project Gantt Chart
  - Risk Register
  - Letters of support

Break

Time	Presenter	Content
14:50	-	BREAK
15:00	Sally Phillips: Chimney Sheep Alex Green: Electron Nick Kitchin: Cumulus Energy	EEF Case studies
15:45	Hamish Corner, Penningtons Manches Gemma Davis, Penningtons Manches	Legal considerations for successful applicants
16:15	Nicola Lazenby: BEIS SICE	Next Steps
16:30	All	Questions & Answers
17:00	-	CLOSE

EEF Case Studies

Sally Phillips: Chimney Sheep

Alex Green: Electron

Nick Kitchin: Cumulus Energy

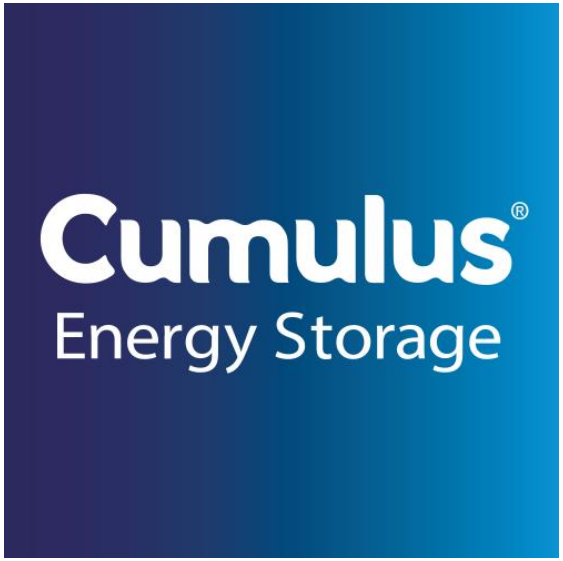
Question and Answers


Chimney Sheep®
Chimney Draught Excluder


ELECTRON


ELECTRON
www.electron.org.uk
info@electron.org.uk
@ElectronDLT

Cumulus Energy Storage



EEF3 case study


Cumulus is about to make energy super-storage commercially available;
disrupting existing electricity networks and creating new ones…
by providing the lowest-cost way of enabling renewable electricity
to get to where it is needed at the right time.
Cumulus®
Energy Storage
Enabling Renewable Electricity…
with lowest cost, rechargeable Copper/Zinc battery energy super-storage
www.cumulusenergystorage.com Nick Kitchin CEO nick.kitchin@cumulusenergystorage.com

Where Cumulus Energy Storage was when we applied to EEF 3 in 2014

- Sheffield and San Francisco garage start-up
- Hand built proof of concept
- Founders cash only
- Patent applied for - UK
- 3 Founders – no employees
- No UK/US infrastructure

Where we've got to now

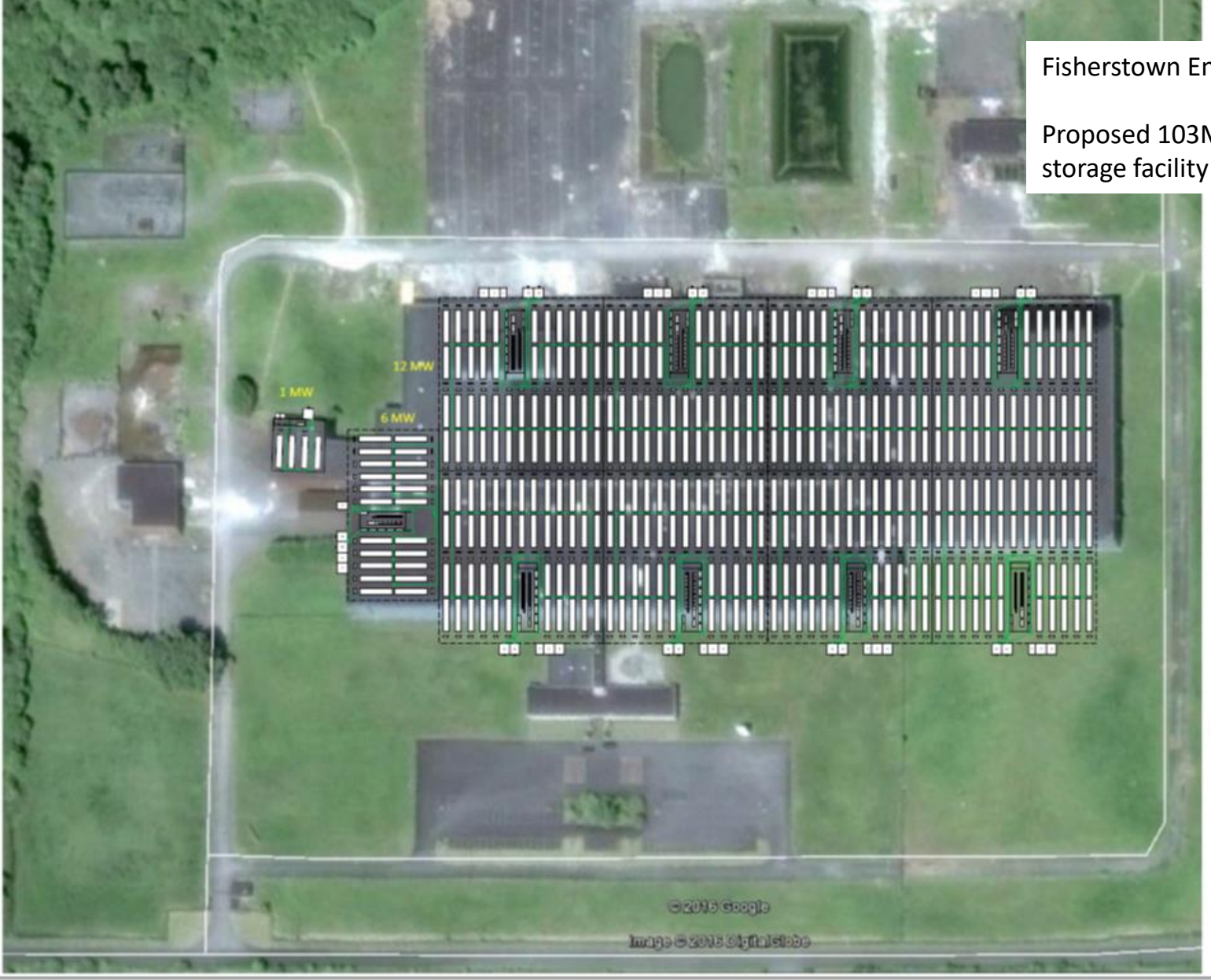
- Raised £4m to date, including £1.55m grants
- Current: 4th round of equity finance, raising £4.6m for pilot line
- Current: £1m Innovation Loan conditional offer
- Clear vision and business plan in place
- Patent granted in UK, US, Australia and patent pending in 8 other countries
- US laboratory and pilot area for R&D, plus UK manufacturing intent

Where we've got to now

- Full scale production-intent pans being tested
- Several DIT missions to India, Germany, China
- Bluetech Future Star award received from Clean Air Association of China.
- Licencing distribution deal signed for Australia
- £160m pre-order for Ireland – feasibility study complete and FOAK demonstrator anticipated

Fisherstown Energy Park, Ireland

Proposed 103MW/412MWh energy storage facility ($216m value)



103 MW (412 MWh over 4 hours)

8 x 12 MW systems
1 x 6 MW system
1 x 1 MW System
A Total Of 2,135,808 Cells

1 MW = 20 m x 20 m (400 m^2)
6 MW = 35 m x 65.5 m (2292.5 m^2)
12 MW = 63 m x 71 m (4473 m^2)
Total = 40657 m^2

Floor Loading underneath Each Battery Stand
Approximately 2900 kg/m^2

1:500

0 25 50 75 100

Metres

Fisherstown103 MW (412 MWh) Battery Energy Storage System Conceptual Layout

Cumulus Energy Storage

What the benefits of EEF are/how EEF enabled us to develop our business

- Grant support for product development to take us through several TRLs
- Full-scale grid-connected cells achieved
- Accelerated seed-round finance raise – due diligence by BEIS
- Simple grant administration and positive support from BEIS/CLT
- Access to finance support – proactive introductions to investors

What the benefits of EEF are/how EEF enabled us to develop our business

- Finance readiness evaluation and feedback
- Enovation (Lazards LCOS3 authors) – current LCOS assessment
- Video to support equity finance raise
- Ongoing mentoring support

Other positive aspects about being part of EEF

- Annual EEF day – great programme, excellent speakers and networking
- Access to Clean and Cool missions – Colorado and California

Question & Answer for Case Studies

Legal considerations for successful applicants

Hamish Corner, Penningtons Manches

Gemma Davis, Penningtons Manches

About Penningtons Manches

- A full service commercial law firm
- 400 lawyers including 110 partners
- 70 lawyers directory-listed as “leaders in their field”
- 7 offices (including London, Oxford, Cambridge and San Francisco)
- founder member of Multilaw international law network (70 countries and 8,500 lawyers +)
- specific focus in certain technology sectors:
  - IT & data
  - life sciences
  - renewables & cleantech

Our cleantech sector focus

Significant experience in:

- Renewable Energy (solar, wind, tidal)
- Natural Resource Management
- Energy Efficiency
- Intelligent Buildings & Systems
- Low Carbon Transport

Sample clients:

- EDF
- Greensphere Capital
- Manx Tidal Energy
- Carbon Limiting Technologies
- Appointed sole legal provider to BEIS EEF incubation services consortium

Legal considerations for successful applicants

CORPORATE

- Structure and shareholders
- Management
- Investor requirements and business plan

COMMERCIAL & IP

- Collaboration Heads of Terms
- IP and know-how
- Contract documentation

Structure and Shareholders

Getting corporate structure right at the outset is paramount

- Who are your shareholders and what rights do they have?
  - Founders
  - Investors (friends and family or institutional investors)
  - Educational Institutions
  - Key employees
  - Others
- Do the company documents (Articles of Association and Shareholders' Agreement) that reflect the agreed rights of shareholders?
- Do you have investors wishing to qualify for SEIS or EIS investment relief – if so make sure you have a checklist of all the qualifying conditions for companies.

  One of these conditions relates to total "relevant investments", for SEIS this is £150,000 and £5million for EIS in the year before investment or £12m in total (more if a knowledge-intensive company). BUT beware, this includes state aid allocations.

Management

- Who are the key employees/management of the Company and do they have clearly defined roles and separation of powers?

- Incentivise management through tax efficient share schemes.

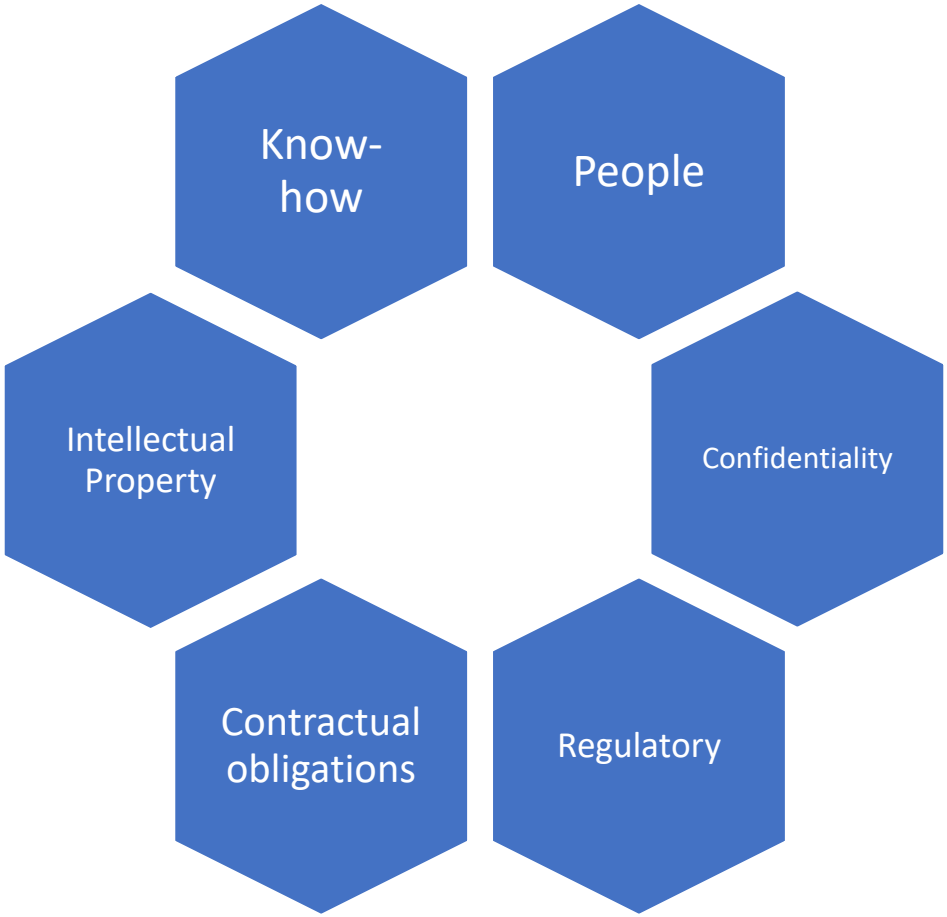
- Directors duties – are the board (including non-execs) aware of statutory duties to the Company and in certain circumstances to creditors.

Directors Duties

Investor Requirements and Business Plan

- Achieving grant funding and being part of the incubator programme at EEF will give you a platform to talk to investors.
- Make sure you have a coherent business plan with realistic cash flow forecasts. Investors like to look at a short to medium term exit strategy (e.g. 5 years).
- What equity are you prepared to ultimately give away?
- Likely investor requirements:
  - Comprehensive due diligence
  - Management warranties and undertakings
  - Regular information reporting
  - A seat on the board

COMMERCIAL & IP



Collaboration Heads of Terms (1)

- What are you, and the counterparty, each bringing to the project? What are you expecting to take away from it?
  - Resources & facilities
  - People & Know-How
  - Intellectual Property
  - Financial support
  - Market validation
  - Exclusivity / market control?
- Expectations and Outcomes. Is it clear what the deliverables are, and what constitutes a successful outcome? What are best and worst outcomes?
- What assumptions are you making in delivery of the project? What are the third party dependencies for the project to be a success?
- Are the necessary resources in place?
- What constraints does the collaboration place you under?
- What are next steps following the project?

Collaboration Heads of Terms (2)

- Contracting parties. (Affiliates?)
- Binding nature of Heads (non-binding save for confidentiality)
- Law and jurisdiction (English?)
- Exclusivity (if any) (within territory or field?)

- Project definition & scope
- Project timetable
- Project deliverables
- Determining successful outcomes
- Project termination / expiry

Collaboration Heads of Terms (3)

- Roles and responsibilities.
- Follow on rights (preferred supplier; licence option etc.?)
- Financial obligations
- Allocation of risk / liability limits

- Confidentiality (Are samples provided? Non-analysis)
- Ownership and licensing of IP (Background IP / Results)
- Data protection

- Dispute Resolution
- Change of control
- Non-assignment

IP and Know-How

- What IP is relevant to your business?
  - Patents
  - Copyright and database rights
  - Trade Marks
- How is your IP originated and protected?
  - Using third party consultants / contractors
  - Considerations for registering IP (subject matter, territory, timing)
- What third party IP exists in your target territories? Have you considered your freedom to operate?
- How important is (unpatented) know-how to your business? How can this be protected in practice? (Consider employee non-poaching clauses)

Contract Documentation

- Consider your key documents required to commercialise / deploy your business model. They might include:

- Non-Disclosure Agreement
- Project / Collaboration Agreement
- Customer Terms & Conditions / Licence
- Manufacturing Agreement
- Supplier Agreement
- Distribution Agreement / Agency Agreement
- Website T&Cs / Privacy Policy

Next Steps

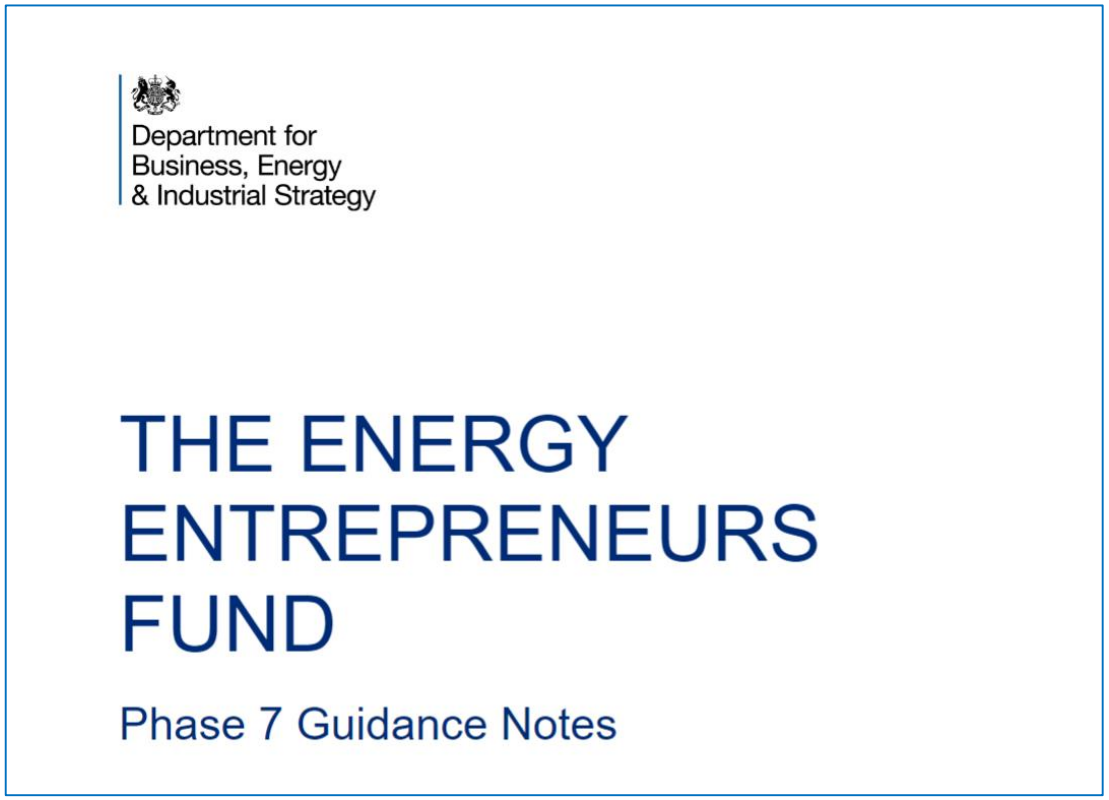
Nicola Lazenby

Cross Cutting Innovation Lead

BEIS Science and Innovation for Energy and Climate Directorate

Step 1 – EEF 7 Guidance Document

Energy Entrepreneur Fun Website



Available here

Step 2 – Expression of Interest

Energy Entrepreneur Fund Phase 7: Expression of Interest

To register your interest in submitting an application for BEIS's Energy Entrepreneur Fund Phase 7, please complete the form below in addition to emailing entrepreneur@beis.gov.uk with the subject "EOI: EEF7"

*Required

Confirmation: *

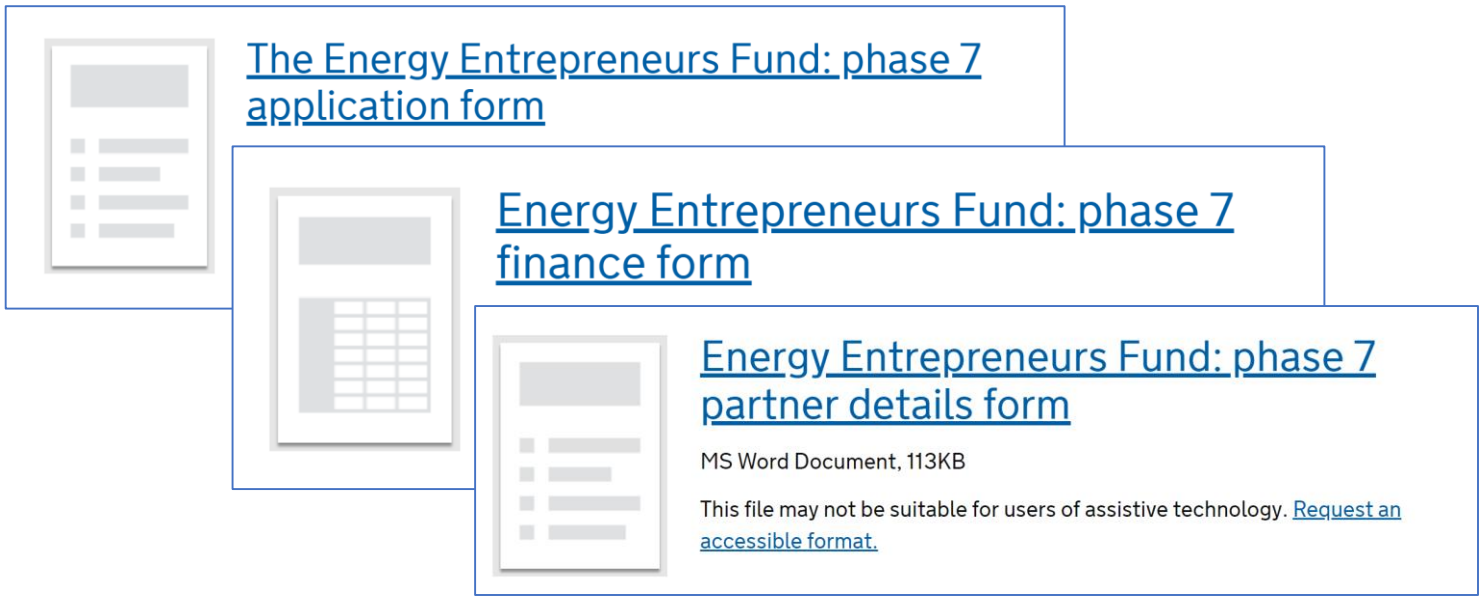
[Register Expression of Interest here]

AND Email: entrepreneur@beis.gov.uk

Step 3 – Submit Application

…..and supporting documentation!

Basecamp



Application Check List

- **Read through:**
  - Guidance Notes
  - Question and Answers
- **Templates to complete:**
  - Application form
  - Finance Form (ONE per project)
  - Partner details form
- **Supporting Documents:**
  - Project Gantt Chart
  - Risk Register
  - Letters of support

Questions & Answers

Energy Catalyst – Round 6

- 20th August to 21st November; grant funding up to £8m from DFID + £2m from EPSRC
- Scope: game-changing, disruptive innovative technologies or business models impacting and addressing the global need for clean, affordable *and* secure energy:
  - any technology or market (£3m reserved for bio-energy in Africa)
  - DFID (ODA): directly address/impact the energy access needs of poor households, communities or enterprises in Sub-Saharan Africa or South Asia; international partners very strongly encouraged

Early-stage (tbc)

- UK SME or RTO-led
- at least one SME
- 6-12months
- up to £300k total costs
- min. 50% of costs must be business partners

Mid-stage (tbc)

- UK business-led
- Collaborative
- 6-24 months
- up to £2m (tbc) costs
- min. 70% business costs

Late-stage (tbc)

- UK business-led
- Collaborative
- 6-30 months
- up to £10m (tbc) costs
- min. 70% business costs