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ETI Project Selection Criteria

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What is the ETI?

- The Energy Technologies Institute (ETI) is a public-private partnership between global industries and UK Government

Delivering...

- Targeted development, demonstration and de-risking of new technologies for affordable and secure energy
 - Shared risk
- Established in 2007 with a 10 year 'design life', followed by 'soft stop'
 - CCS Programme will be substantially complete by December 2017

ETI members



CATERPILLAR®



EPSRC
Pioneering research
and skills



Innovate UK
Technology Strategy Board

ETI programme associate

HITACHI
Inspire the Next



Project Selection

- The ETI develops bespoke criteria for each project
- ‘Project Outcome’
 - Ensure focus on key outcome required
- Gateway Criteria
 - The ‘Must Haves’
- Selection Criteria
 - Differentiators between bids
- Example: NGCT2 Request for Proposals, October 2013



Desired Project Outcome (NGCT2)

The overall aim of the Demonstration Project is to develop a technology with the potential to make a substantial reduction in capital and operating costs of gas-fired power with CO₂ capture, which will be ready to catch the wave of CCS implementation expected to occur in the 2020s and early 2030s.

The desired outcome of the Project is:

The Demonstration Project should provide the validation necessary to build confidence in investment, by others, in a substantially full-scale demonstration or first of a kind unit



Gateway Criteria (NGCT2)

- G1 Suitable for capture from gas-fired power stations
- new build and economic retrofit of existing plant, or:
 - potential to provide a practical and economically-competitive alternative to a CCGT retrofit
- G2 < 41 g CO₂/kWh net (90% capture)
> £5/MW-hr reduction in LCOE
- Must be against an objective benchmark
- G3 Meets CO₂ purity spec, no worse than benchmark for flexibility, availability, footprint, environment
- G4 Location of technology development.
- identified test site where unit will be tested
 - robust plans for how the unit will interface with the host site
 - commitment from the host site to provide the required facilities
- G5 Plans sufficiently developed to enable high level of confidence that the Demonstration Project can be successfully delivered within the time and budget proposed.



Selection Criteria (NGCT2)

- Technology Potential – projected performance against benchmark
- Ability to deliver
- Location of technology development
- Attractiveness of commercial offer
- Risks of reaching agreement with the ETI
 - Willingness to materially comply with proposed contract
 - Level of commitment from host site
 - Availability & security of project funding
 - Availability of resources to get to contract
- Value for money with respect to ETI funding
- Technology readiness
- Quality, clarity & credibility of validation & demonstration plan
- Quality, clarity & credibility of exploitation plans
- Ownership, robustness, distinctiveness and completeness of Background IP



Project Costs, not Technology Costs



		RISK	LEVELISED	LCOE at
GAS PLANT	860MWe	ADJUSTED	COST	Adjusted rate
		DISCOUNT	£/MWh	vs 10% rate
		RATE ,%		0
PLANT No1		15.6	116	1.2
Amine Capture, new trunk and store				
PLANT No2		14.4	101	1.13
Scope Reduction, use trunk , extend store				
PLANT No3		9.1	87.3	0.98
As above but with risk premium adjusted				
PLANT No4		11.1	87.1	1.03
As No3, new step out capture - 80% capex, 3% points better				



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