

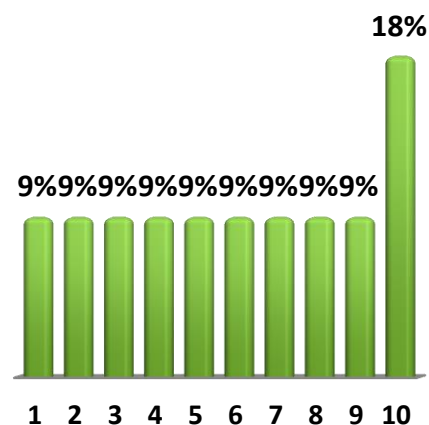
# Question Report



9/4/2019 10:19 AM

Where are the near-term opportunities for storage to improve system resilience?  
(please answer in 10 words or less)

1	BACK UP SUPPLIES (AT DOMESTIC LEVEL)	1	9%
2	EXTRA STANDBY CAPACITY	1	9%
3	FAST FREQUENCY RESPONSE/ SYNTHETIC INERTIA	1	9%
4	IN FREQUENCY RESPONSE SERVICES	1	9%
5	ISLANDING FACILITATION	1	9%
6	LOCAL COMMUNITY BACK UP POWER	1	9%
7	PARTICIPATION IN SYSTEM BALANCE (BALANCING MARKET) BLACKOUT EVENTS	1	9%
8	PROVIDING FLEXIBILITY	1	9%
9	SEASONAL ENERGY STORAGE	1	9%
10	Others	2	18%
		<b>11</b>	<b>100%</b>



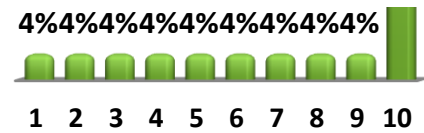
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How may storage be used to maximise sustainability in the energy system? (please

1	ALLOW LOCAL OPTIMISATION VS ESO	1	4%
2	BACK UP, ENERGY SAVING, INTELLIGENT ENERGY MANAGEMENT SYSTEMS	1	4%
3	BRING FLEXIBILITY TO NUCLEAR POWER	1	4%
4	BY HYBRIDISATION WITH OTHER SOURCES OF FLEXIBILITY THROUGH OPPORTUNISTIC NEAR REAL TIME FLEXIBILITY MARKETS.	1	4%



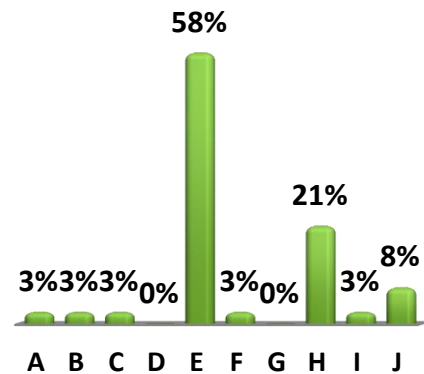
5	BY INTEGRATING IT WITH THE CURRENT TECHNOLOGIES	1	4%
6	CAPTURE OVER GENERATION OF RENEWABLES	1	4%
7	CARBON PRICE ENERGY ARBITRAGE	1	4%
8	DG INTEGRATION	1	4%
9	ES BEHIND THE METER	1	4%
10	Others	14	61%
		<b>23</b>	<b>100%</b>



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Which of these applications are best suited for batteries in the short term?

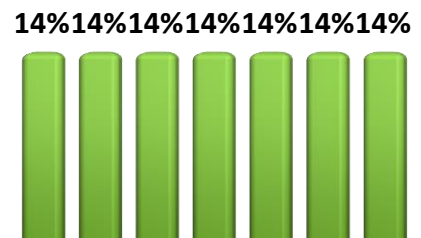
A	Rail	1	3%
B	Marine	1	3%
C	Aerospace	1	3%
D	Defence	0	0%
E	Buses	22	58%
F	Trucks	1	3%
G	Off-highway	0	0%
H	Stationary	8	21%
I	Medical	1	3%
J	Industrial	3	8%
		<b>38</b>	<b>100%</b>



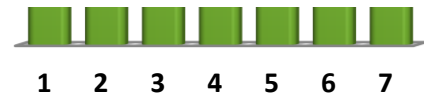
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How can the CSBS group help?

1	ACCESS TO FUNDING	1	14%
2	NETWORKING	1	14%
3	NETWORKING EVENTS	1	14%
4	NETWORKING EVENTS, TRAININGS	1	14%
5	ONLINE	1	14%



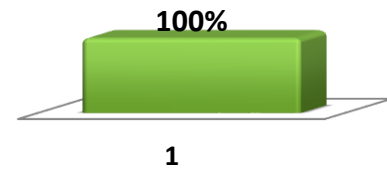
6	RESIDENTIAL RENEWABLES ENERGY STORAGE	1	14%
7	WORKSHOPS	1	14%
		<b>7</b>	<b>100%</b>



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Within the R&D community, do you think there is enough emphasis is placed on embedded energy cost and environmental impact? How is this/or could this be fed back from the consumer?

1	NO	1	100%
		<b>1</b>	<b>100%</b>

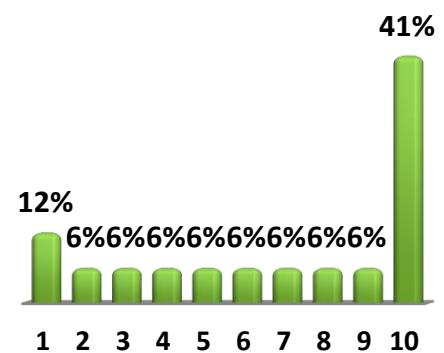


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Energy Storage Demonstrators: Learning by Doing

What is the role of storage in whole energy systems?

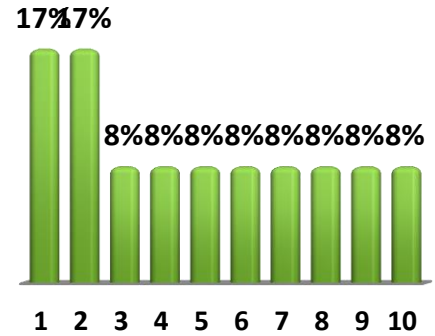
1	FLEXIBILITY	2	12%
2	AGEN	1	6%
3	ALLOWING MORE RENEWABLES	1	6%
4	BUFFER	1	6%
5	DURABILITY SECURITY SUPPLY	1	6%
6	FLEXABILITY	1	6%
7	FLEXIBILITY AND BACKUP	1	6%
8	FLEXIBILITY TO HELP SUPPLY DEMAND MATCHING	1	6%
9	FLEXIBILITY, SECURITY, ADEQUACY	1	6%
10	Others	7	41%
		<b>17</b>	<b>100%</b>



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### Energy Storage Demonstrators: Learning by Doing

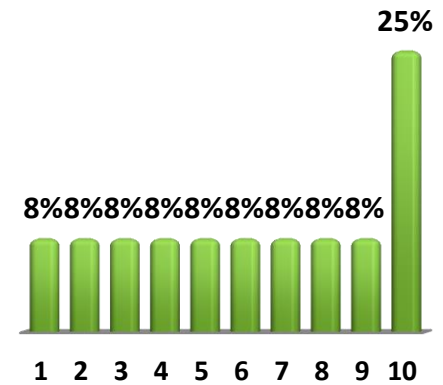
1	AMMONIA	2	17%
2	YES	2	17%
3	ELECTROLYSIS	1	8%
4	HAMSTERWHEELS	1	8%
5	LAES	1	8%
6	LIQUID AIR	1	8%
7	NO	1	8%
8	SMES	1	8%
9	WATER STORAGE	1	8%
10	Others	1	8%
		<b>12</b>	<b>100%</b>



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### Energy Storage Demonstrators: Learning by Doing

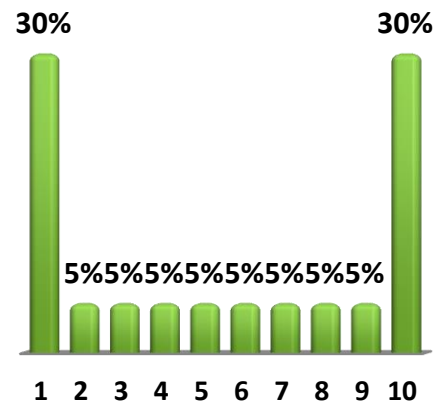
1	COST REDUCTION	1	8%
2	DEMONSTRATION	1	8%
3	DEMONSTRATORS	1	8%
4	ENERGY DENSITY	1	8%
5	FLOW BATTERIES	1	8%
6	INTER SEASONAL	1	8%
7	INTER SEASONAL STORAGE	1	8%
8	LARGE SCALE	1	8%
9	MANUFACTURABILITY	1	8%
10	Others	3	25%
		<b>12</b>	<b>100%</b>



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What types of new technologies (large, small, hybrid or digitalised) might deliver

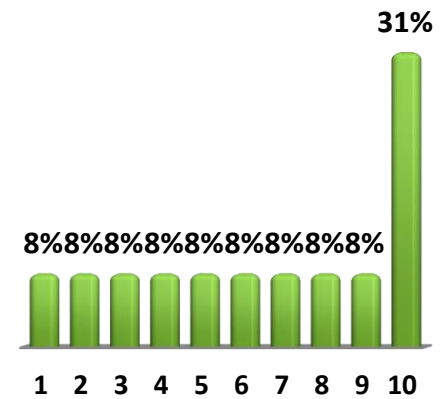
1	HYBRID	6	30%
2	BATTERIES	1	5%
3	ELECTROLYSIS	1	5%
4	FLOW BATTERIES	1	5%
5	GRAVITY	1	5%
6	HYBRID DIGITALISED	1	5%
7	INTEGRATED. CROSS-SECTOR. CHEMICAL	1	5%
8	LARGE	1	5%
9	PUMP STORAGE	1	5%
10	Others	6	30%
		<b>20</b>	<b>100%</b>



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How can academia help industry with 'Chasm' bridging strategies for more effective

1	BETTER FASTER RESEARCH	1	8%
2	BETTER UNDERSTAND COMMERCIAL CRITERIA	1	8%
3	CLOSER COLLABORATION WITH INDUSTRY	1	8%
4	DEMONSTRATION AND VALIDATION	1	8%
5	ENCOURAGEMENT	1	8%
6	LAB DEMONSTRATIONS	1	8%
7	LESS BLUE SKY THINKING	1	8%
8	OPEN FACILITIES AND SHARE EXPERTISE ROYCE INSTITUTE	1	8%
9	PUBLISH-LESS-NOVELTY-PAPERS	1	8%
10	Others	4	31%
		<b>13</b>	<b>100%</b>



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## How are open innovation, crowd-sourcing or hackathons applied?

1	NOT	2	17%
2	?	1	8%
3	AD-HOC	1	8%
4	GRANT MONEY	1	8%
5	HYPHENATED-EXPRESSIONS-ARE-GREAT	1	8%
6	INCREASINGLY GROWING IMPORTANT	1	8%
7	NOT WELL	1	8%
8	OPEN SOURCE PUBLISHING AND NEED FOR IMPACT	1	8%
9	RARELY	1	8%
10	Others	2	17%
		<b>12</b>	<b>100%</b>

