

Net Zero Survey Results

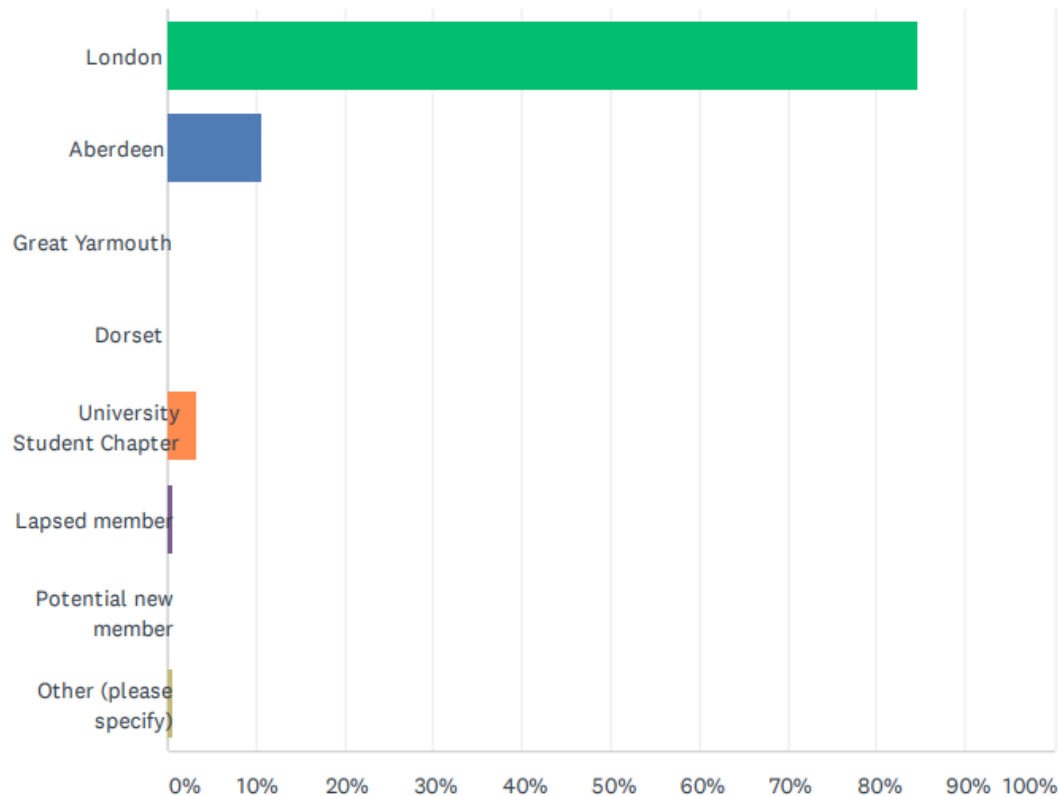
March 2021



Society of Petroleum Engineers

Q1 Which SPE Section are you a member of?

Answered: 150 Skipped: 1



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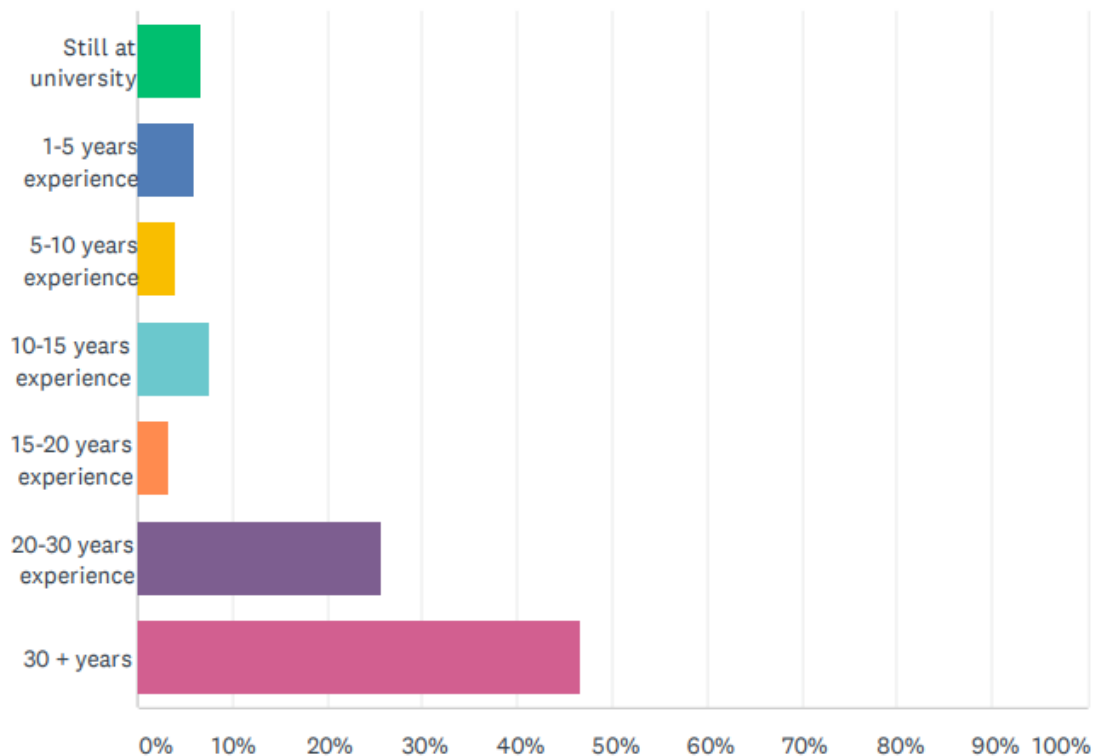
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Society of Petroleum Engineers

Q2 How many years of experience do you have?

Answered: 148 Skipped: 3



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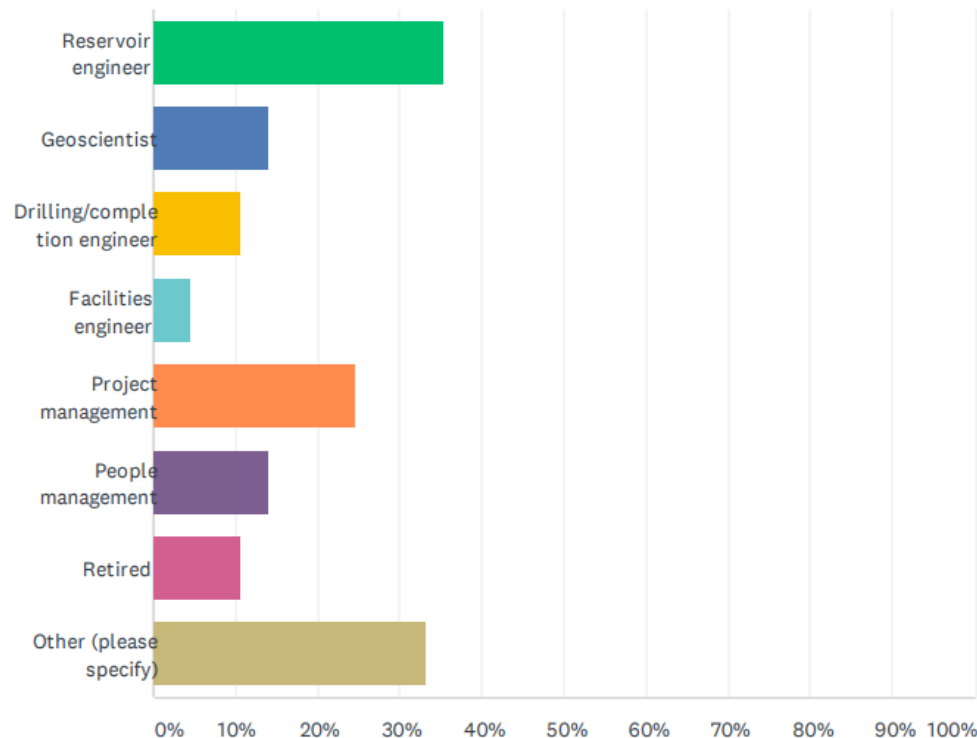
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Q3 What function best describes what you do? Tick all that apply.

Answered: 150 Skipped: 1



Other: Technical Safety Engineer, Business Development, Trading Operations, academic, Chief Executive, Production Engineer, Technical Data Management, Environmental Consultant, strategist and negotiator, Data Scientist, Commercial leader, ESG, Computational physicist, management consulting, HSEQ and Management Consultant, Safety, Logging and Interventions, Subsurface Manager, Geomechanics Specialist, Production Chemistry, Chemical engineer, Technical Director & Lecturer, Digital Transformation Consulting and plant performance analytics, Industry trends / strategic advisor, retired, Managing Director, Software Company Director, Corrosion Engineering, Flow Assurance, Risk management engineer, Energy Transition Services, Research, Operating model advisory, Petroleum Engineering, Reliability engineer, Petrophysicist, Portfolio Management - Business Planning

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Q4 How would you best define your knowledge/experience in net zero? Tick all that apply.

ANSWER CHOICES	RESPONSES	
Very little knowledge and keen to know more	18.12%	27
Have read and attended talks and conferences on the subject for the last 1-3 years so have knowledge of overall trends but not utilising it in my current job	46.98%	70
Have worked on a net zero initiative/project/ incorporated some thinking around reducing carbon emissions into my day to day job	22.15%	33
Have working for 1-2 years on projects/permanent roles in your company on the energy transition/actions to reduce carbon/sustainability	14.77%	22
Have working for 5 years or more on projects/permanent roles in your company on the energy transition/actions to reduce carbon/sustainability	5.37%	8
Are studying for/have a qualification in sustainability etc	8.05%	12
Are recognised as an expert in this space (asked to give talks/write thought pieces on)	2.68%	4
Other (please specify)	10.07%	15
Total Respondents: 149		

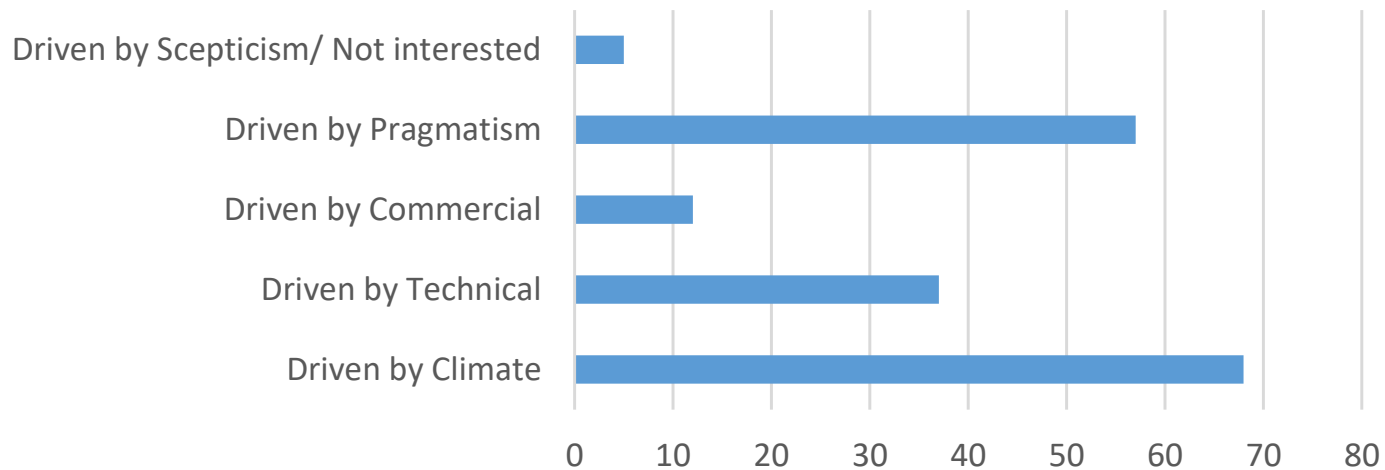
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Why are you interested in the energy transition,
net zero and/or sustainability?



Definitions	
Driven by Climate	Mentions climate change or notes responsibility for future, sustainability, etc
Driven by Technical	Interest in technical aspects of net zero or learning new skills
Driven by Commercial	Sees business opportunities while delivering net zero
Driven by Pragmatism	The energy sector is changing so better be a part of it, eg for future work
Driven by Sceptic/ Not interested	Does not believe in the move to net zero or is not interested

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Q6 What for you is the most important thing the SPE net zero committee should do? Pick up to 3.

ANSWER CHOICES	RESPONSES	
Educate you through programme of events on the energy transition and other sectors of the energy transition (i.e. not just oil and gas)	65.56%	99
Educate you through a programme of events to educate and discuss how the oil and gas industry can support net zero targets	56.29%	85
Provide networking opportunities for you to meet other likeminded professionals in this space	41.72%	63
Provide you insights and understand the skills/experiences needed so that you are able to better make a career transition from your current role into the new "net zero" world	43.71%	66
Act as a force for change in the industry to increase the speed of change in the industry	43.71%	66
Other (please specify)	13.25%	20
Total Respondents: 151		

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Q6 What for you is the most important thing the SPE net zero committee should do? Pick up to 3.

Other: Highlight the continued future need for oil and gas, Inject some techno-economic reality to the discussions, SPE should focus on oil and gas company and employee activities, Training to transition from O&G to wind/CCS, Maintain a sense of reality with governments to fulfil future requirements of oil and gas away from political spin, I guess the most important thing we need to do is to bring in the SPE with other societies to form a Society of Energy Engineers (SEE) so we can merge initiatives and projects to achieve the net zero. Geothermal is very similar to oil and gas but with water, and they are a different group of people. Same goes to CO2 storage, we are using same simulation tools in oil and gas, but now in reverse. So it is crucial to bring in the other societies and push forward, Help us understand what technologies will be required to facilitate the transition, Seek ways to communicate the steps that are being taken to the outside world, not just within the O&G industry, get presentation on different challenges in relation to wellbore integrity, multi-phase behavior of CO2 and material selection, material selection (seals and metals) for hot geothermal wells, etc., Provide information to members as to alternative ways of reducing CO2 emissions and also how many engineers (and geologists) are going to be needed for a long, long time to help produce more oil and gas from the earth, Show how oil & gas engineering skills can be 'transferred', Educate on the complete life cycle of sustainable activities, Recognise that we will remain Petroleum Engineers for many years to come and the skillsets associated with petroleum engineering will be vital to delivering the necessary changes - I joined SPE as a petroleum engineer, I remain a petroleum engineer - do not disown petroleum engineers in response to a necessary cultural shift, Take a more balanced view on the issue; provide rigorous criticisms of IPCC output; propagate the benefits that the fossil fuel industry have provided mankind, Stop being weak and giving in to terrorism. Defend our industry's contribution to mankind. Become the go-to source of facts and analysis in order to educate the general public and to offset the harmful effects of greenwashing and fake news, Improve understanding of benefits of Sustainability ethos, Make sure that realistic voices are represented, I suppose doing nothing is not a virtuous option? Putting basic knowledge into press for the general public to assimilate

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Q7 Which of the following topics are you interested in learning more about?

Answered: 150 Skipped: 1

	NOT AT ALL INTERESTED	SOMEWHAT INTERESTED	VERY INTERESTED	TOTAL	WEIGHTED AVERAGE
The energy transition overview	3.57% 5	36.43% 51	60.00% 84	140	2.56
CCUS (carbon capture, utilisation and storage)	4.11% 6	25.34% 37	70.55% 103	146	2.66
Hydrogen	5.56% 8	33.33% 48	61.11% 88	144	2.56
Geothermal	14.18% 20	33.33% 47	52.48% 74	141	2.38
Wind	24.06% 32	45.11% 60	30.83% 41	133	2.07
Energy storage	8.45% 12	35.92% 51	55.63% 79	142	2.47
Oil and gas decarbonisation (including methane emission reduction & electrification)	11.81% 17	24.31% 35	63.89% 92	144	2.52
Financing the energy transition	18.31% 26	32.39% 46	49.30% 70	142	2.31
Policies/regulation to deliver the energy transition	10.79% 15	54.68% 76	34.53% 48	139	2.24
Business models to deliver the energy transition	13.14% 18	40.15% 55	46.72% 64	137	2.34
Data management and analysis for the energy transition	26.09% 36	47.10% 65	26.81% 37	138	2.01
Impact measurement (e.g. carbon footprint, quantification of natural capital)	15.56% 21	45.19% 61	39.26% 53	135	2.24
Innovation to deliver the energy transition including entrepreneurship	14.60% 20	37.96% 52	47.45% 65	137	2.33
Transferable skills & reviewing upskilling opportunities	14.39% 20	35.97% 50	49.64% 69	139	2.35
Change management -how do we adjust?	19.85% 27	50.74% 69	29.41% 40	136	2.10
Nature-based solutions & biodiversity	21.90% 30	51.09% 70	27.01% 37	137	2.05
Circular economy	28.47% 39	41.61% 57	29.93% 41	137	2.01
Social responsibilities in sustainability	23.40% 33	45.39% 64	31.21% 44	141	2.08

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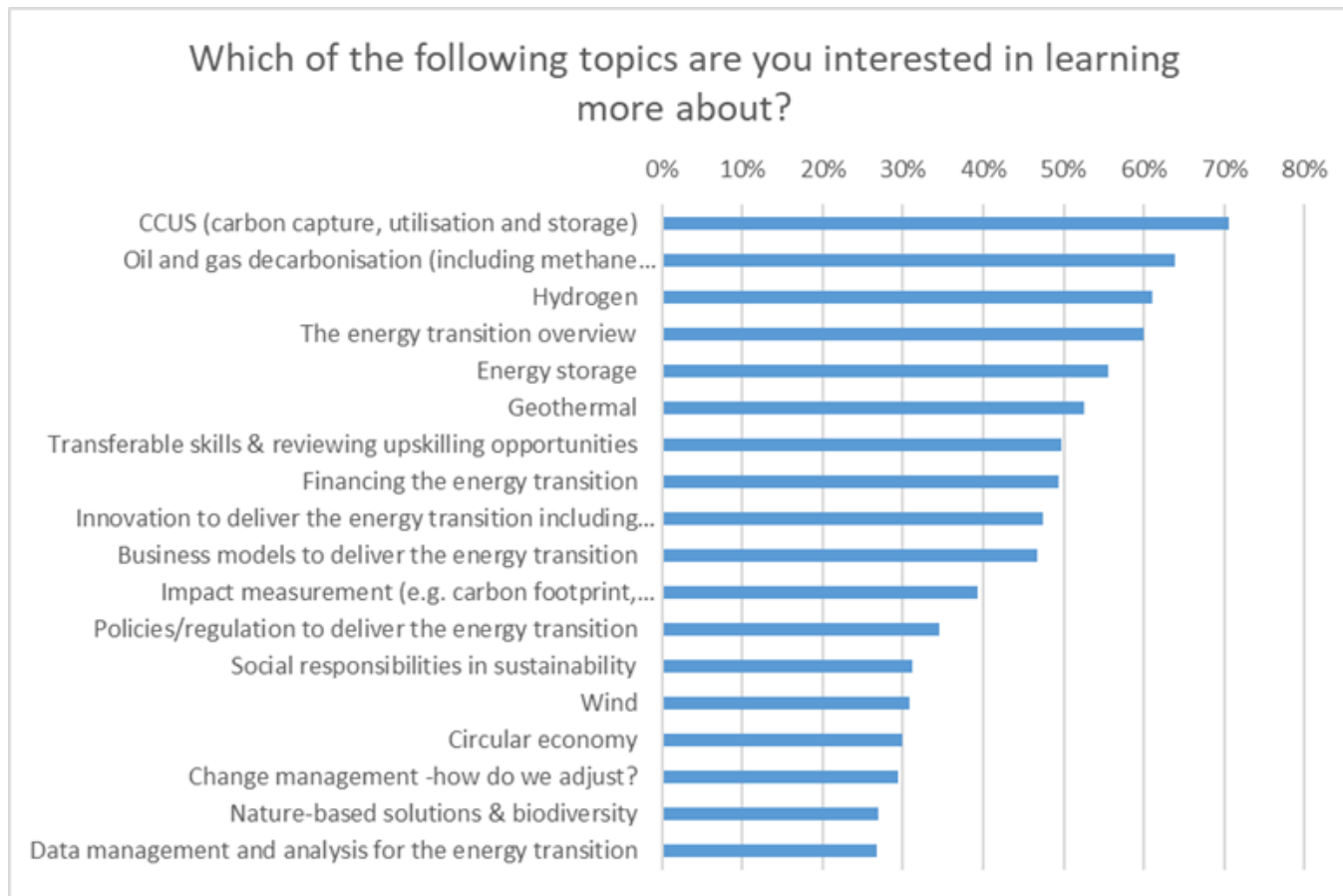
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Q7 Which of the following topics are you interested in learning more about?

Answered: 150 Skipped: 1



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Q8 What type of talks would you prefer to attend on this subject?

Answered: 147 Skipped: 4

	NOT AT ALL INTERESTED	SOMEWHAT INTERESTED	VERY INTERESTED	TOTAL	WEIGHTED AVERAGE
Technical academics on the latest research	9.93% 14	44.68% 63	45.39% 64	141	2.35
Entrepreneurs on their personal stories of how they made the transitions/how their company has made an impact in the net zero agenda	11.51% 16	41.73% 58	46.76% 65	139	2.35
Large operators in integrated projects talking through a detailed case study from a technical perspective	4.17% 6	27.08% 39	68.75% 99	144	2.65
Government policy/regulatory bodies on their latest consultations/ studies/proposals for the future	6.90% 10	41.38% 60	51.72% 75	145	2.45

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Q9 For an evening event on any of the above topics how happy would you be with the following formats?

Answered: 150 Skipped: 1

	NOT HAPPY	NEUTRAL	VERY HAPPY	TOTAL	WEIGHTED AVERAGE
In depth presentation by one speaker followed by Q&A	3.40% 5	27.21% 40	69.39% 102	147	2.66
Multiple shorter presentations followed by a panel Q&A	4.14% 6	27.59% 40	68.28% 99	145	2.64
Presentations followed by breakout rooms and discussion	19.44% 28	43.06% 62	37.50% 54	144	2.18
Breakout rooms and discussion BEFORE speaker	47.86% 67	42.86% 60	9.29% 13	140	1.61
Discussion only event	44.68% 63	45.39% 64	9.93% 14	141	1.65

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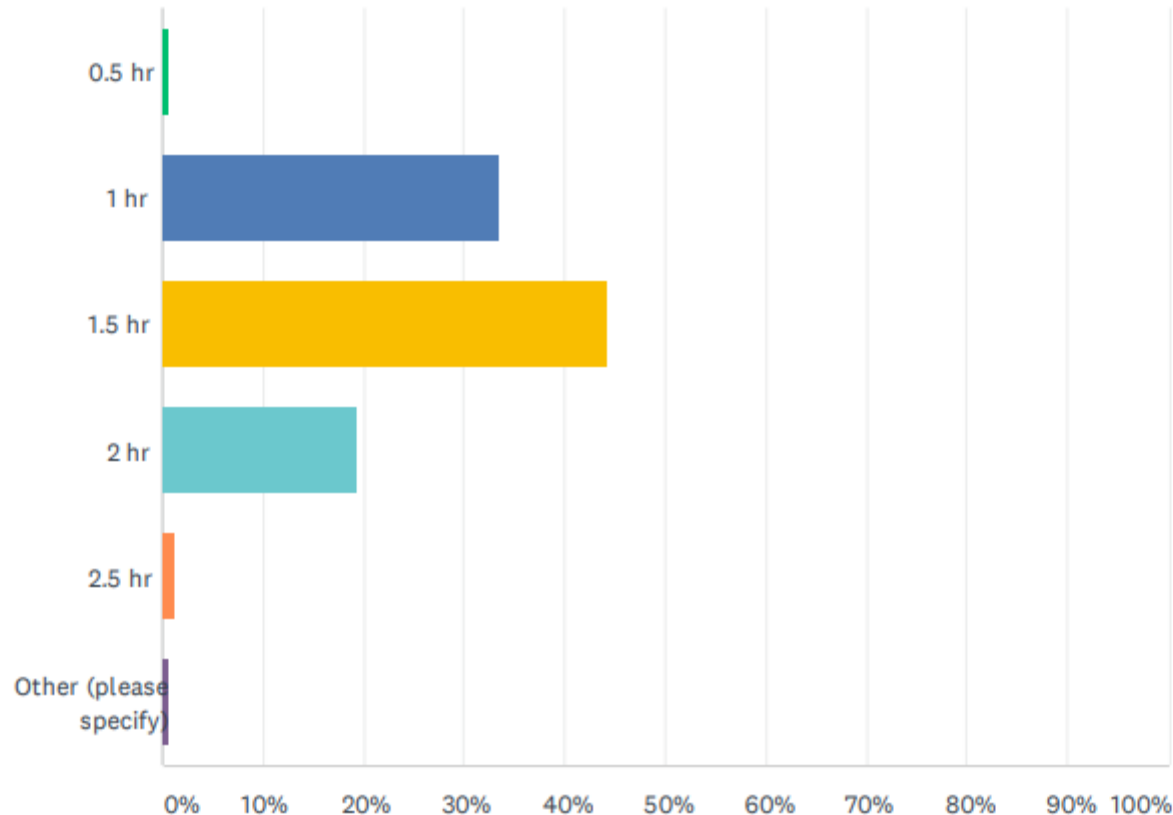
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Q10 For a monthly virtual evening programme, how long should it be?

Answered: 149 Skipped: 2



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Q11 Would you be interested in longer sessions on a specific topic area?

Answered: 149 Skipped: 2

	NOT AT ALL INTERESTED	SOMEWHAT INTERESTED	VERY INTERESTED	TOTAL	WEIGHTED AVERAGE
Series of evening classes on a specific topic (free of charge)	10.42% 15	37.50% 54	52.08% 75	144	2.42
Series of evening classes on a specific topic (with some charge)	36.17% 51	43.26% 61	20.57% 29	141	1.84
0.5 day virtual programme on a specific topic (free of charge)	17.86% 25	37.14% 52	45.00% 63	140	2.27
0.5 day virtual programme on a specific topic (with some charge)	40.44% 55	42.65% 58	16.91% 23	136	1.76
One day in person (when possible) class on a specific topic (free of charge)	21.83% 31	38.03% 54	40.14% 57	142	2.18
One day in person class (when possible) on a specific topic (with some charge)	42.65% 58	39.71% 54	17.65% 24	136	1.75

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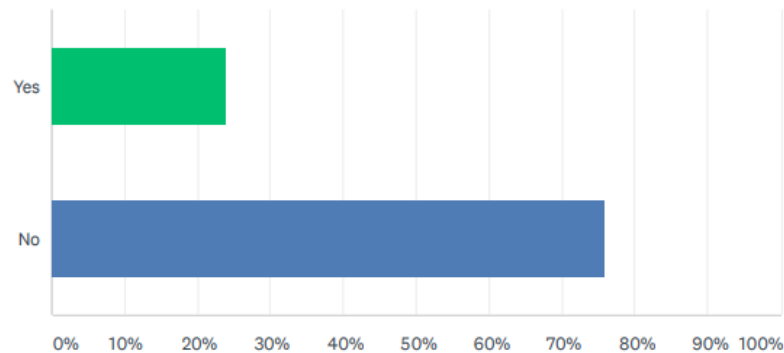
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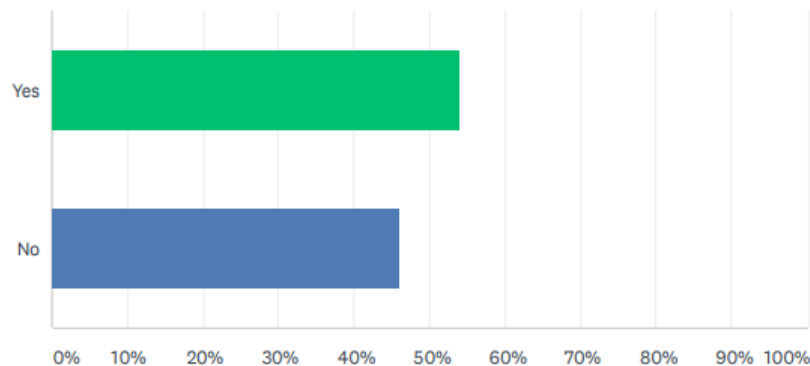
Q12 Have you read any of the SPE London Net Zero 101 series articles on LinkedIn?

Answered: 146 Skipped: 5



Q13 Have you read any of the SPE Review articles on Sustainability and Net Zero?

Answered: 148 Skipped: 3



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Q14 The SPE International Gaia Sustainability program is built on the principles of Aggregation, Engagement and Collaboration. Which organisations, institutions or sections of society, outside of our SPE community, do you think it is most important that we engage with? This could include business, academia, NGOs, other societies, etc.

Answered: 95 Skipped: 56

