GETI
Global Energy Talent Index

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The Global Energy Talent Index Report

2019

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Welcome

Since its inception two years ago, the Global Energy Talent Index (GETI) has become a definitive guide for workforce trends in the energy industry. We've achieved this by taking a bold look at the developments that are redefining how companies attract, retain and develop talent.

This year is no exception. In 2018, respondents expressed great concern over the threat of a skills shortage in the years ahead. A number of factors contributed to this, including:

- A vast wave of imminent retirements
- Less young talent entering the field
- The emergence of automation and the need for more digital skills
- A chronic shortage of women in the industry

This year, we're digging deeper to examine how and where a potential skills gap could rear its head. Every sector is in a different place – some are approaching the inflection point where the demand for talent surpasses supply; others have already crossed it.

But regardless of whether a skills shortage has arrived, the whole industry is at a crossroads. Taking the steps to identify and address points of vulnerability will dictate each sector's ability to close the gaps and secure brighter futures.

In this report, we pinpoint the actions that sectors can take to create those favourable outcomes. The solutions vary for each – from leaning on automation and training workforces for digitalisation to a wholesale shift in workplace cultures. Yet, we've recognised one universal truth: money matters less.

It used to be that companies could simply raise wages to attract the talent they needed, but this is no longer the case. As the world has changed, today's professionals now care about:

- Career progression – professionals are hungry to learn new skills and take on bigger roles. More importantly, they want to know that they won't spend years waiting for promotions.
- Flexibility – today's professionals are more intrepid than previous generations in terms of the desire to work abroad, to develop fluid skill sets and, if need be, to move to new sectors.
- Culture – technology is at the heart of what professionals want, from the chance to work with paradigm-shifting solutions to flexible working. A working culture with an emphasis on technology gives individuals the confidence that the industry is evolving and not stagnant.

Shifting recruitment strategies to address these desires will be a gradual process. Nonetheless, there are actions that companies can quickly implement to help address pressing skill needs.

Digitalisation plays a key part in this. As digitalisation progresses, automation will address many of these more urgent needs head on. Automation also promises to free up professionals from tedious tasks, enabling them to shift their skills to other areas of importance.

Along with digitalisation, we advocate the sourcing of new talent from other energy sectors. Skill sets are much more transferable than hiring managers may realise. While this may spur a fierce war for talent,

it opens the door for companies to reach individuals that might have otherwise overlooked their sector.

The same goes for tapping into demographics that have been historically underutilised, namely women. Bringing more women into the industry solves two pressing issues: the skills gap and the gender gap.

It will be a balancing act for talent acquisition teams. Immediate actions must be a priority, but there should also be no letting up on strategic initiatives like graduate and apprenticeship schemes. As we'll see in this report, the sectors that sustained their recruitment programmes throughout the last five years are reaping the benefits. In contrast, those that pulled back on their efforts find themselves playing catch up.

Some sectors appeal more to professionals than others. But every sector has the ability to give the workforce what it desires. In addition to the individual approaches that we offer, there are actions that any energy company can take on to help address the skills gap:

- Evolve your workforce – provide training and development programmes that align with the shifts in business and operating models, primarily as technology becomes more ubiquitous. The aim is to help existing employees fill the roles of the future.

- Emphasise mobility – professionals, especially those below the age of 30, are keener than ever to work and live abroad. Many energy companies can make this happen, providing an important – and currently underutilised - tool for retention.

- Remain competitive on pay – the playing field for compensation has become more level across the energy industry. Money alone is not enough to woo younger professionals, but healthy remuneration rates give individuals one less reason to look elsewhere.

This report aims to provide a compass for any energy company hoping to navigate a talent landscape marred by skills shortages. At the same time, it continues the mission of GETI to deliver valuable insights on the needs, concerns and desires of the energy workforce to enhance recruitment and retention strategies.

Of course, we couldn't do this without you. On behalf of everyone at Airswift and Energy Jobline, we thank the thousands of energy professionals who shared their experiences and views, enabling us to create our most authoritative report yet.

Janette Marx, Chief Executive Officer at Airswift

Hannah Peet, Managing Director at Energy Jobline

Methodology

GETI 2019 is the third edition of the annual GETI series, the energy industry's biggest and best global workforce trends report. This year's index built on last year's success, with 17,000 respondents, from 162 countries and 150 nationalities, completing the 42-question survey.

The survey was open for nine weeks and closed in September 2018, when, with the help of project sponsors and partners (see Partner Directory), GETI achieved its response target.

Airswift and Energy Jobline subsequently studied the data to draw out the key insights detailed in the report. In addition to the survey responses, Airswift analysed key industry and internal data in the following three tiers:

- Active contractor headcount
- Active contractor candidates looking for their next role
- Third party data benchmarks

For ease of reference, salary and rates data has been averaged across several countries within one region, but more specific salary information can be provided upon request.

THE PIPELINE PROBLEM: FILLING THE FUTURE TALENT FUNNEL

Much more than a salary survey, each GETI takes a close look at the critical issues and challenges facing the energy industry. Past iterations have covered subjects such as global and sector mobility, and the impact of digitalisation on the workforce – knowledge that the energy industry had long been calling for.

This year, we're responding to your feedback. In 2017, respondents across all sectors named the ageing workforce as one of the most critical issues the industry faces. So, we're taking a deep dive into the issues – working to identify the intersection at which the new talent entering the industry will no longer be enough to make up for the skills lost to retirement. And at which the industry could have a real crisis on its hands.

When will we reach a crunch point? How will each sector be affected? And, most importantly, what should professionals and hiring managers do to ensure their businesses cross the chasm? GETI seeks to help readers answer these questions and more to prepare for success in an increasingly competitive skills market.

Airswift and Energy Jobline hope this report proves useful to all who read it and invite anybody who requires further detail, analysis or insight to get in touch at enquiries@getireport.com.

Airswift

Airswift is an international workforce solutions provider within the energy, process and infrastructure industries. With more than 6,000 contractors and 700 employees in over 60 offices worldwide, our talent pool and geographical reach are unmatched in the industry.

For 40 years, Airswift has been passionately transforming lives through the workforce solutions we provide, including talent acquisition, global mobility, managed solutions and consulting.

We provide strategic support to our customers, resulting in trusted partnerships that are aligned and efficient. Our team of experts are ideally positioned to meet your needs, whether that is finding top talent, mobilising people around the world, implementing an agile workforce strategy or improving decision-making for workforce planning.

For more information, please contact us or visit our website.

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Energy Jobline

Energy Jobline is the leading specialist job board for energy globally, hosting a database of over 1.5 million professionals, paired with a client base of over 400 energy employers and agencies, advertising over 26,000 energy jobs and placing circa 4,000 professionals every month into new roles in the energy industry. Energy Jobline advertises exciting vacancies in the oil and gas, renewables, power, nuclear and petrochemicals sectors.

Energy Jobline is the pioneer of energy recruitment, hosting a 29 per cent exclusive database. Our job board is a significant value-add to any energy employer or employee on a global spectrum.

The subsectors we cover range from technical engineering to support/procurement. We have an engaged audience who use Energy Jobline for not only their job search, but also the latest energy news.

Whether you are looking for a new job opportunity or looking to hire the best talent in the energy market, please contact us to discuss in more detail.

geti@energyjobline.com

www.energyjobline.com

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Partner Directory

Energy Voice is a global, digital news platform for the oil and gas, renewables and wider energy sectors. Based out of Europe's energy capital, Aberdeen, Scotland, Energy Voice is the authoritative voice on all North Sea developments and breakthroughs.

The platform has a rich global scope and is read in more than 100 countries. It reports breaking news in all of the energy industry's key hubs, including Houston, Norway, Brazil, Russia, China, India and Saudi Arabia.

The Nuclear Institute is the professional membership body for the nuclear industry in the UK.

We work with individuals and companies to facilitate professional development and accreditation, nurture scientific expertise, share knowledge, and provide a place for the nuclear community to interact.

Join us and get involved in shaping the future.

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Oil and Gas

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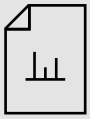

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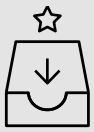

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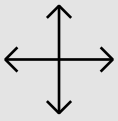

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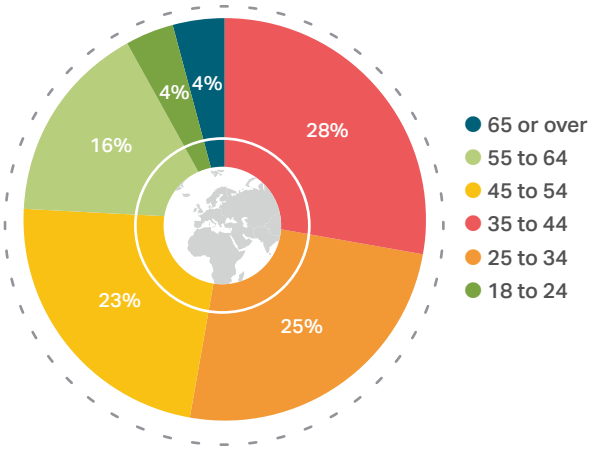
Oil and Gas

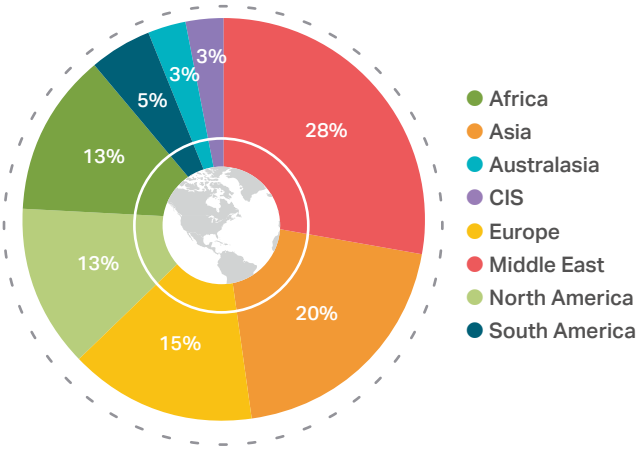
The oil price has rebounded and new projects are on the rise. The challenge now for the sector is to ensure that the talent supply can keep up with demand. The decision to cut graduate schemes, apprenticeships and training during the downturn has left firms in a tough position. Companies will be tempted to offer aggressive pay hikes, but is there a better way?

1. DEMOGRAPHICS

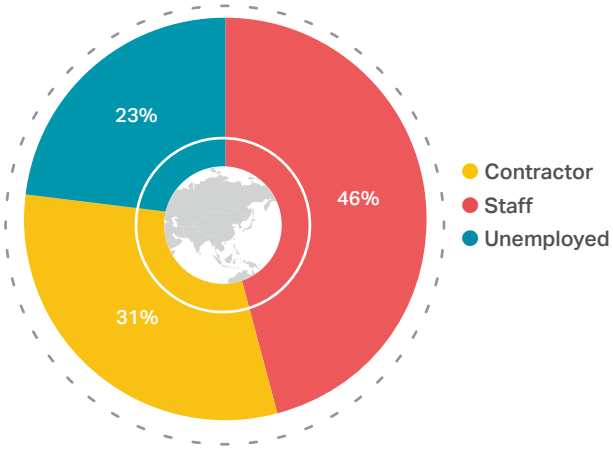
AGE



REGION



EMPLOYMENT STATUS



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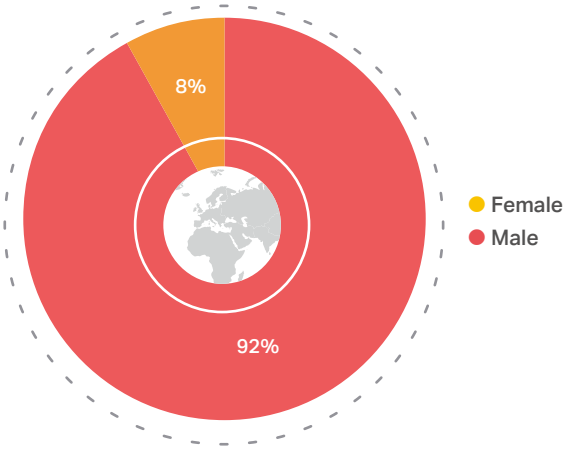


2. SALARIES

When the oil price increases, salaries tend to rise as well. It's no surprise then that the return of the higher oil price environment has translated into robust pay increases. This year, 41 per cent of non-hiring professionals reported a rise in remuneration, compared to just 29 per cent in last year's survey.

PERMANENT WORKER ANNUAL SALARY, USD (GLOBAL AVERAGE BASED ON SIX YEARS' EXPERIENCE)

	Africa	Asia	Australasia	Europe	Middle East	North America
Accountant	60,266	47,127	75,814	54,901	31,000	74,273
Administrator	28,744	32,095	36,875	33,215	14,713	37,157
Chemical Engineer	89,524	64,208	130,750	66,409	72,263	117,576
Civil Engineer	87,043	55,900	129,795	60,197	63,837	115,548
Commissioning Engineer	107,124	95,916	140,276	78,867	68,063	100,094
Construction Engineer	92,352	64,300	129,687	60,159	64,885	103,100
Construction Manager	110,997	78,024	159,272	80,919	115,123	145,000
Contracts Manager	103,221	66,279	139,150	75,751	135,268	95,906
Drilling Engineer	119,115	98,593	182,331	99,625	120,473	129,944
Drilling Supervisor	149,755	133,880	185,384	129,769	137,255	148,476
Electrical Engineer	84,347	73,148	129,666	78,882	83,726	117,536
Finance Manager	95,785	54,802	153,929	74,693	97,398	116,580
Geophysicist	104,003	75,038	154,829	94,434	119,393	128,965
HSE Manager	115,744	76,070	146,507	81,967	110,004	126,874
Inspection Engineer	77,517	62,000	123,469	67,873	71,174	89,712
Instrumentation Engineer	91,383	69,673	129,339	68,452	63,824	115,521
Maintenance Engineer	85,950	71,742	115,468	76,775	79,559	96,926
Mechanical Engineer	82,920	75,001	130,702	72,576	77,662	127,828
Process Engineer	93,445	72,755	135,965	74,718	73,256	125,300
Production Engineer	82,800	65,318	130,724	63,289	69,107	125,600
Project Engineer	95,631	69,713	132,830	66,410	72,174	126,845
Project Manager	128,672	85,686	179,287	87,209	138,271	157,795
QA/QC Inspector	75,641	71,771	102,000	77,805	81,636	110,357
Reservoir Engineer	118,992	106,137	130,716	106,854	130,863	137,156
Welder	70,146	39,618	118,224	45,180	20,783	85,055

CONTRACT WORKER DAY RATE, USD (GLOBAL AVERAGE BASED ON SIX YEARS' EXPERIENCE)

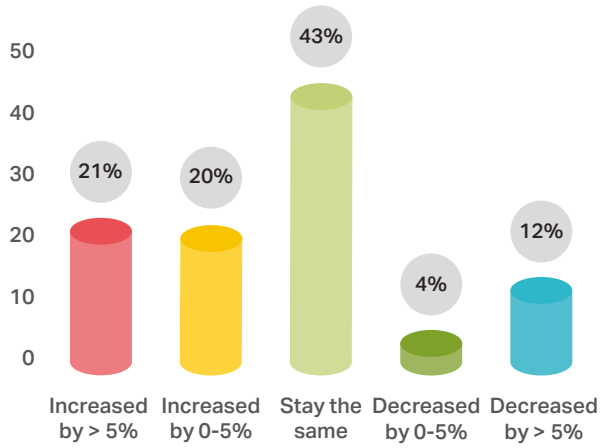
	Africa	Asia	Australasia	Europe	Middle East	North America
Accountant	249	279	279	355	282	394
Administrator	83	128	135	150	100	236
Chemical Engineer	414	496	473	540	455	520
Civil Engineer	420	455	435	535	445	505
Commissioning Engineer	525	623	715	639	563	686
Construction Engineer	450	527	508	570	480	606
Construction Manager	628	662	675	769	655	913
Contracts Manager	470	633	580	720	628	763
Drilling Engineer	833	900	936	905	700	1,030
Drilling Supervisor	1,036	1,263	1,420	1,115	1,050	1,402
Electrical Engineer	521	589	570	600	576	645
Finance Manager	497	515	569	608	533	619
Geophysicist	673	603	656	844	732	756
HSE Manager	515	540	500	643	586	620
Inspection Engineer	400	468	464	533	473	530
Instrumentation Engineer	555	570	583	642	625	717
Maintenance Engineer	543	555	558	560	530	619
Mechanical Engineer	515	520	540	603	555	666
Process Engineer	525	618	594	635	615	720
Production Engineer	348	460	454	580	425	510
Project Engineer	600	640	631	708	648	718
Project Manager	683	750	880	819	721	800
QA/QC Inspector	504	540	564	586	607	587

The oil price continues to rise. Thus, the optimism for future wage hikes has reached new heights. Sixty-five per cent of workers believe their pay will increase in the next year; 39 per cent think that it will increase by over five per cent. Professionals in Africa, Asia and South America are most optimistic, with at least seven in ten anticipating a rise, whereas those in Europe, CIS and Australasia are far lower, at around half.

Hiring managers are just as more optimistic – 63 per cent expect remuneration to grow, with around a third anticipating that larger pay rise.

Expectations have grown, in part, as more professionals anticipate being rewarded for not leaving the sector during the downturn. As Janette Marx, Chief Executive Officer at Airswift, says: "Now that the industry is feeling some relief, these individuals are hoping for pay increases to make up for lower compensation in years past."

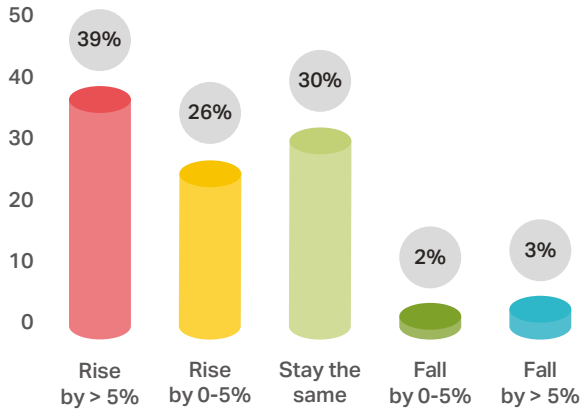
PAY CHANGES AMONG WORKERS IN THE LAST 12 MONTHS (non-hiring professionals)



Competition amongst oil and gas companies for talent is also driving expectations for higher remuneration. When the talent pool is scarce, companies will try to use generous compensation offers to attract individuals away from their competitors.

"Many corporations are reviewing salaries, because they want to prevent other companies from luring employees away," reports Hannah Peet, Managing Director at Energy Jobline. "Executives have told us that they are genuinely afraid of having talent poached."

PAY EXPECTATIONS AMONG WORKERS IN THE NEXT 12 MONTHS (non-hiring professionals)



"Many corporations are reviewing salaries because they want to prevent other companies from luring employees away. Executives have told us that they are genuinely afraid of having talent poached."

– Hannah Peet

3. GLOBAL MOBILITY

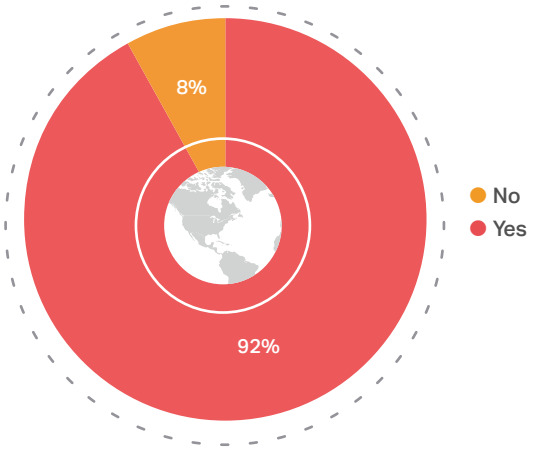
Offering higher wages may not always be the best strategy. According to respondents, money or job security are no longer the top drivers for global mobility. Instead, professionals want career progression – and are more willing to move for it.

This year, nine in ten oil and gas workers said they would consider moving to another region. Thirty-seven per cent said that they would leave in search of opportunities to grow their career, far higher than any other contributing factor.

The Middle East topped the list of preferred regions, a surprise considering it didn't rank in the top three in 2017. The Middle East's rise ties right in with this desire for career growth. It isn't just better pay or favourable tax regimes that captivate individuals – it's the abundance of opportunities to work on innovative, fast-moving projects.

As Peet notes, "During the downturn, professionals moved abroad because local employment was scarce. Now, local jobs are abundant, but a lot of the workforce still wants to move. This tells us that global mobility is now driven by the desire to work on more career-advancing projects."

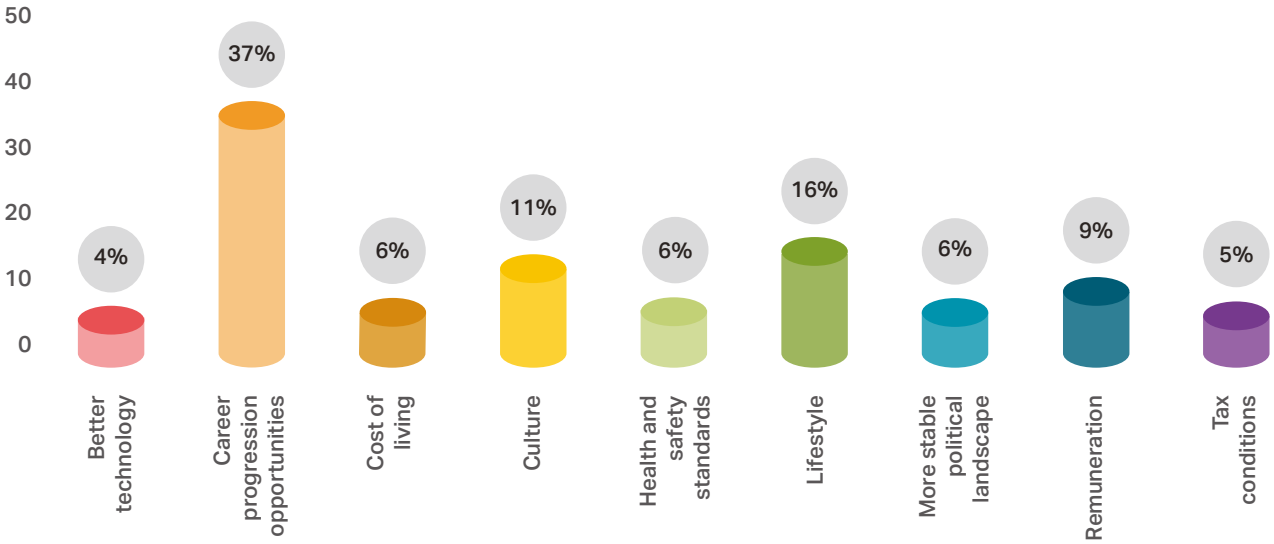
WOULD YOU CONSIDER RELOCATING TO ANOTHER REGION FOR YOUR JOB?



When the oil price was low the high cost of expat labour dampened demand and meant that many employees were repatriated. If skills shortages persist, companies will have little choice but to rely more on international talent.

"There is still a preference for a local workforce, but this is going to be unsustainable if the market grows and the talent pool does not," says Peet.

WHAT IS YOUR MAIN REASON FOR BEING ATTRACTED TO A NEW LOCATION?



4. A LOOMING CRISIS?

To this point, the circumstances in the US Permian Basin can be seen as a warning sign for the talent crunch that looms over the industry.

In the Permian, rapid growth and increased competition has created a massive talent shortfall. Companies are struggling to fill their workforce needs. Even higher salaries aren't attracting the professionals needed.

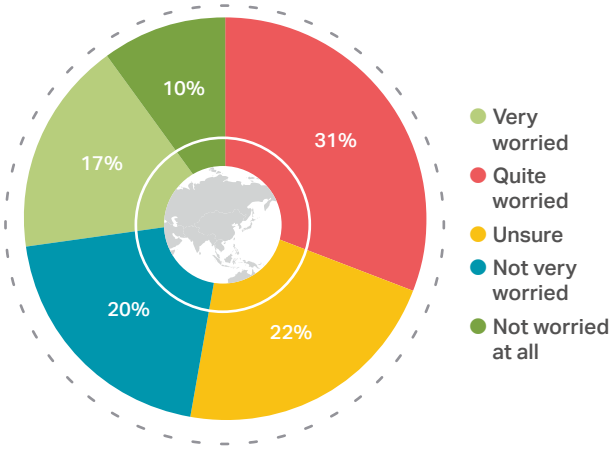
According to Marx: "The Permian is in a unique situation, but it's one that we can see playing out across the world as growth continues. In countries where obtaining visas is arduous, companies are really going to be challenged."

Professionals are starting to see the skies darken. According to respondents, a potential skills shortage is the issue creating the most worry.

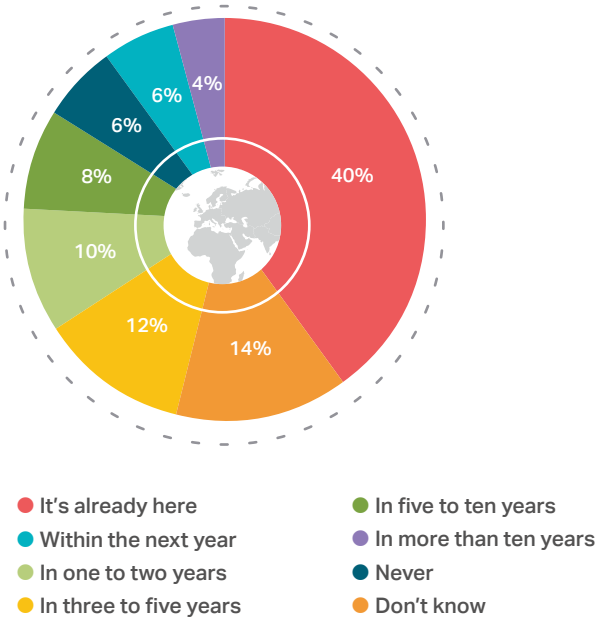
Nearly half of all respondents said they were either quite worried or very worried about an impending talent crisis. Only 30 per cent reported being relaxed about the situation.

More sombrely, 40 per cent of professionals believe that a skills crisis is already here while an additional 28 per cent anticipate the full brunt to take hold within the next five years. Respondents in Europe, Asia and South America were more likely to report that the talent crunch has hit their regions, whereas the figures for North America were slightly below average.

HOW WORRIED ARE YOU ABOUT AN IMPENDING TALENT CRISIS IN YOUR SECTOR?



WHEN DO YOU THINK THE CRISIS WILL HIT YOUR SECTOR?



Younger oil and gas professionals are more concerned about the skills shortage than their older peers. Retirements open opportunities for career advancement; however, the lack of new talent to fill roles may also lead to higher workloads for existing professionals, potentially hampering work-life balance.

"The Permian is in a unique situation, but it's one that we can see playing out across the world as growth continues. In countries where obtaining visas is arduous, companies are really going to be challenged."

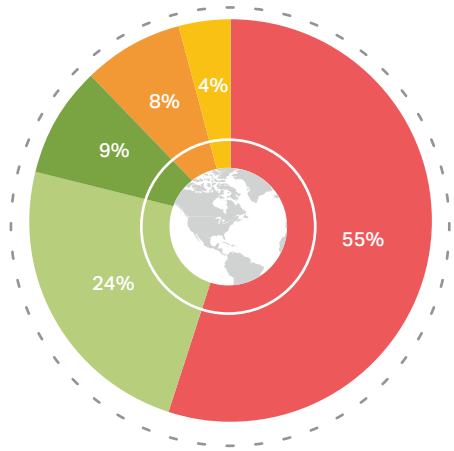
– Janette Marx

5. SKILLS

A NEED FOR BLUE COLLAR

While shortages have yet to fully manifest, over half of survey respondents said that engineering is the most likely business function to be affected by an impending talent crunch.

WHICH DISCIPLINE IS MOST AFFECTED BY TALENT SHORTAGES?



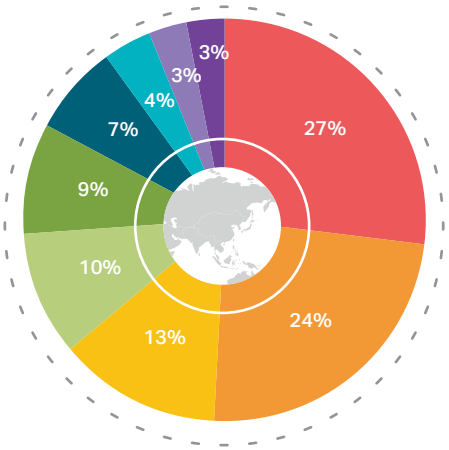
- Corporate
- Engineering
- Geoscience
- IT
- Project leadership

Meanwhile, the pool of available, blue-collar talent has shrunk rapidly. These skills are proving to be the most urgent of needs, especially in regions like the Permian, where rates are already at a premium.

"In the US, blue-collar skills are more in demand than engineering roles," says Peet. "Again, it's a regional trend that should serve as a warning for the rest of the world."

Hiring managers should bear in mind that problem-solving and leadership rank the most highly among the skillsets that respondents expect to be affected by shortages.

WHICH TYPE OF SKILLS IS MOST AFFECTED BY TALENT SHORTAGES?



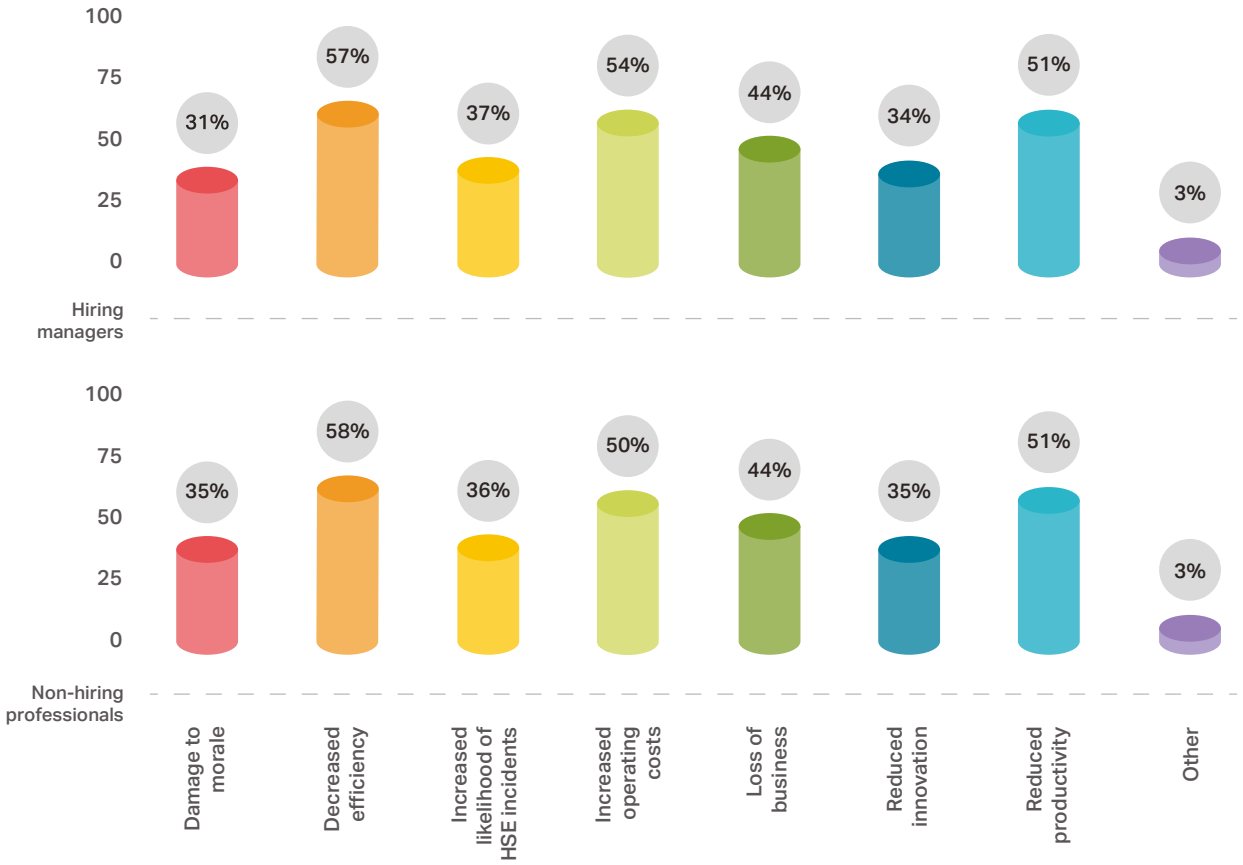
- Analogue technical
- Analytical
- Commercial awareness
- Digital
- Interpersonal
- Leadership
- Problem-solving
- Process management
- Strategic planning

So what's at stake for companies if a skills shortage occurs? Over half of respondents said that decreased efficiency would be the biggest risk, followed by increased operating costs.

"In the US, blue-collar skills are more in demand than engineering roles. Again, it's a regional trend that should serve as a warning for the rest of the world."

– Hannah Peet

WHAT ARE THE RISKS TO YOUR SECTOR OF FAILING TO PLUG ITS TALENT GAPS?



"Automation and digitalisation will improve operational efficiency, but if companies don't move fast enough to implement new technologies and grow their talent pool, the consequences could be painful," says Marx.

Alongside retirements, professionals said that the impact of economic cycles on job stability is a leading cause of the skills shortage. Certainly, job losses during the recession were a catalyst of today's talent crunch. However, this only tells part of the story.

"Automation and digitalisation will improve operational efficiency, but if companies don't move fast enough to implement new technologies and grow their talent pool, the consequences could be painful."

– Janette Marx

6. ATTRACTING TALENT

A CUT TOO FAR?

Historically, the flow of talent in and out of the oil and gas sector has correlated with the economic cycle. When the oil price went up, companies could lean on generous pay to bring back veterans or attract graduates.

During the latest downturn, many oil and gas firms pulled back on university recruitment, graduate schemes and apprenticeships. In most cases, these programmes ground to a halt. The influx of young talent into the sector slowed.

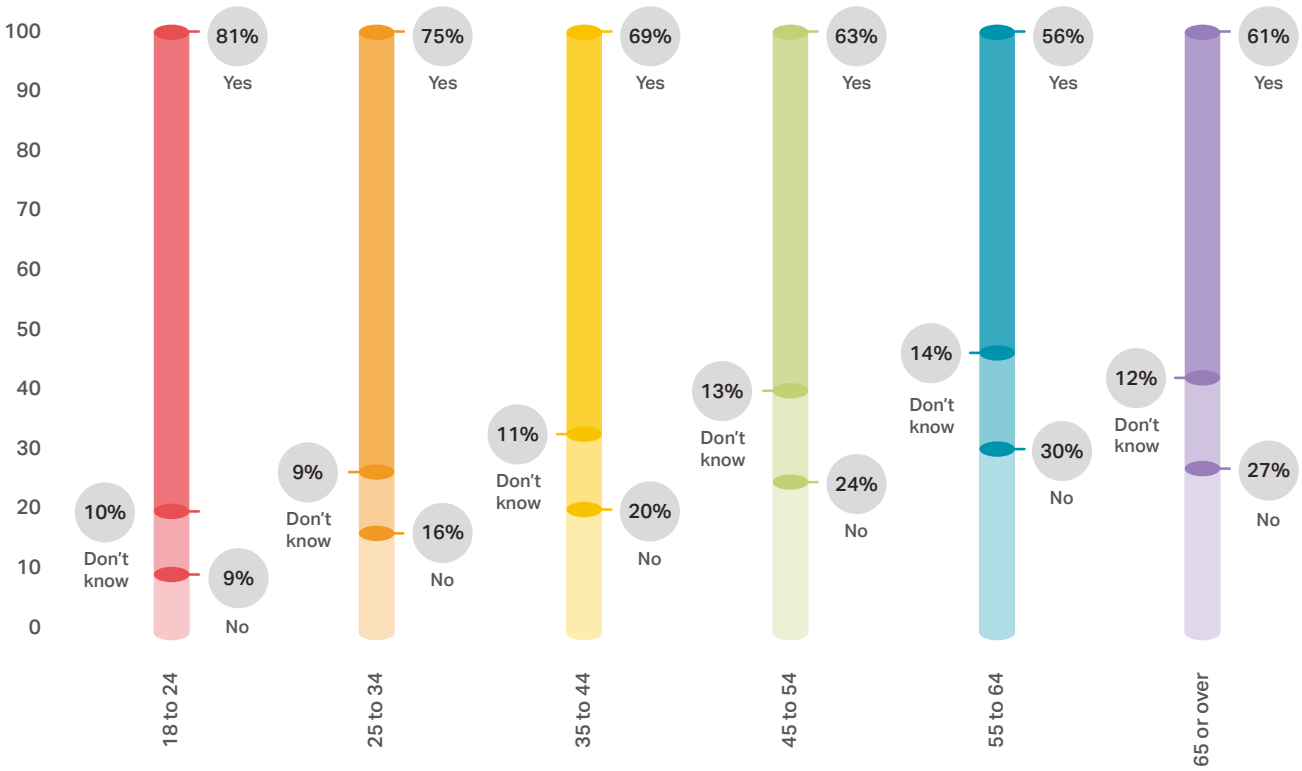
Now that the oil price is recovering, companies are pouring resources back into their programmes. Unfortunately, they're finding that these efforts are not as fruitful. Competition is fierce. Technology firms are going after the pool of engineering students that would have normally flocked to oil and gas.

At the same time, the appeal of high salaries has lost its power. Other energy sectors have increased remuneration, reducing the gap with oil and gas. And money no longer talks among young professionals – just 30 per cent of respondents under the age of 25 believe that higher pay is a way to attract talent.

"Companies have a lot of catching up to do with their graduate recruitment schemes," says Marx. "They're moving fast, but it will still take a few years for new talent to arrive. Companies now realise that, no matter what happens economically, they need to consistently be putting money into their talent strategy."

All this being said, younger individuals in the industry are very satisfied with their career choices. Eighty-one per cent of respondents aged 25 and under said they would choose oil and gas if they were entering the industry today. The pace of recruitment may have slowed in the downturn, but the quality of these efforts has remained strong.

IF YOU WERE ENTERING THE INDUSTRY NOW, WOULD YOU PURSUE A CAREER IN YOUR SECTOR?



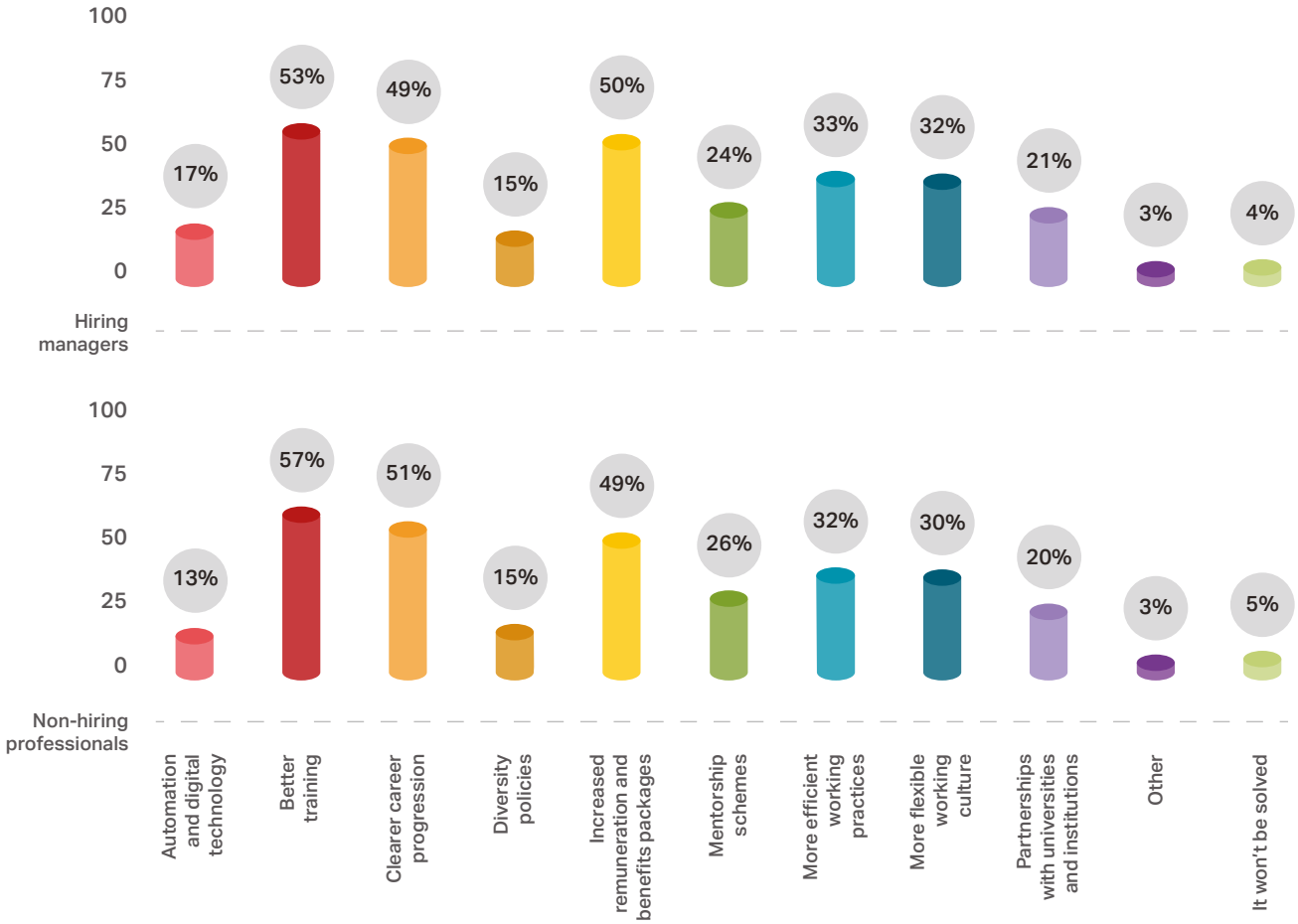
Companies also need to satisfy their skills needs from within. This was a resounding sentiment from professionals – nearly two-thirds of respondents said that companies should be retraining existing employees to secure the talent needed, compared to just one-third saying that graduate talent would be best.

Additionally, companies will need to accelerate their progress in embracing digitalisation and automation. With more manual tasks removed from workloads, professionals can be freed up to fill other critical needs.

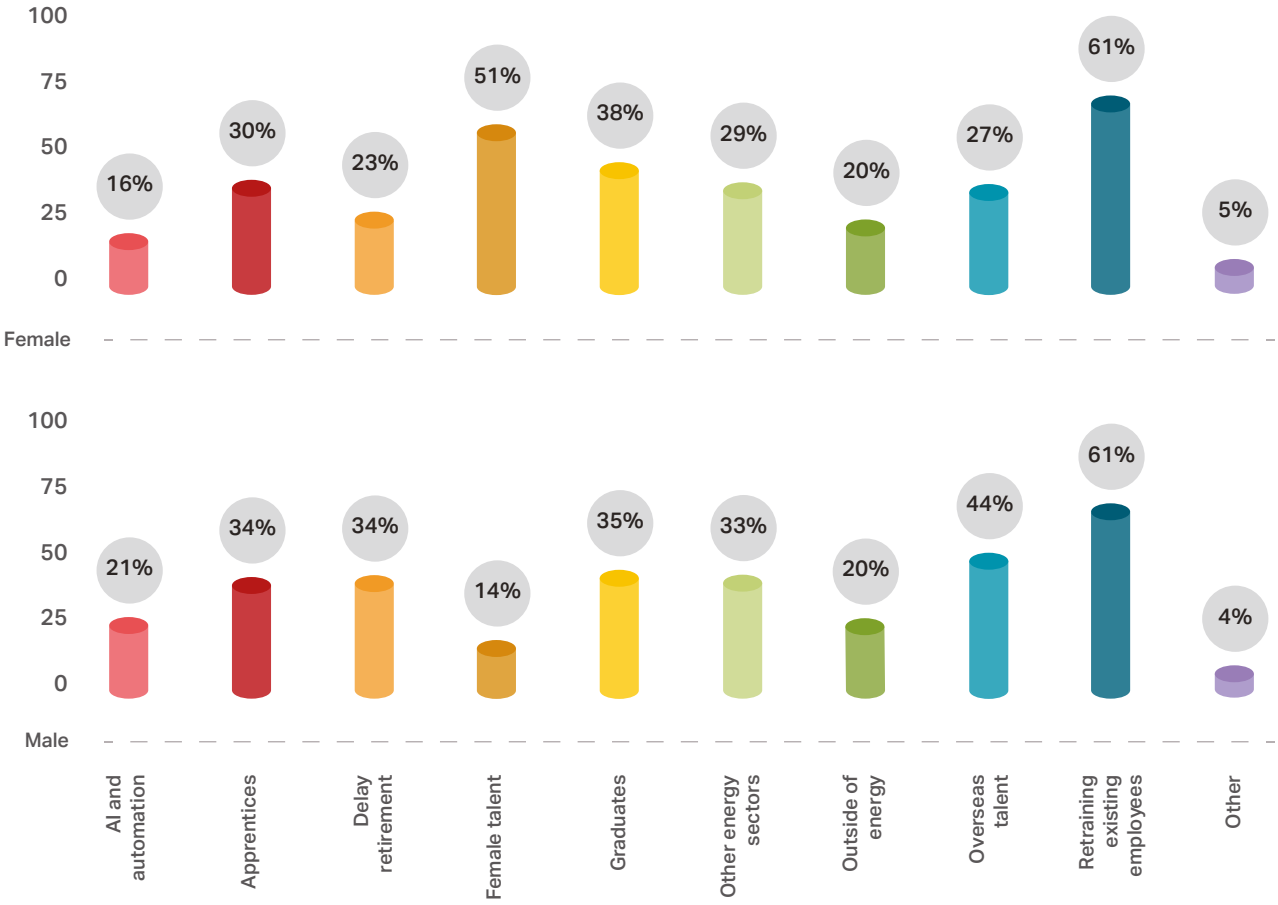
"Companies now realise that no matter what happens economically, they need to consistently be putting money into their talent strategy."

– Janette Marx

HOW CAN COMPANIES IN YOUR SECTOR BETTER ATTRACT THE RIGHT TALENT?



WHERE SHOULD COMPANIES IN YOUR SECTOR BE LOOKING TO GET THE SKILLS IT NEEDS? (split by gender)



Finally, some big cultural shifts are in order. When the question of where companies should be looking was posed, only 17 per cent of respondents suggested attracting more female talent. When divided by gender, our data found that just over half of women agreed with this, versus just 14 per cent of men.

"This data shows a disconnect between what companies are publicly doing to attract more women to the industry and what's happening behind the scenes," says Peet. "Some of this may be inadvertent, because there is pressure to fill roles quickly, regardless of whether the candidate is male or female. Yet the fact that the industry isn't collectively seeing the importance of closing the gender gap is a major concern."

"The fact that the industry isn't collectively seeing the importance of closing the gender gap is a major concern."

– Hannah Peet

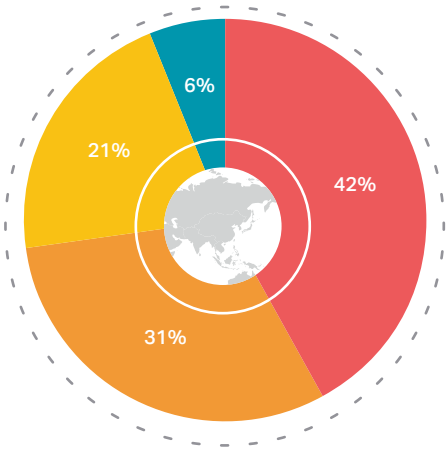
7. RETAINING TALENT

OPENING THE DOOR TO NEW CHALLENGES

As we noted earlier, oil and gas companies will have to ward off aggressive poaching to retain their workforce. But they'll also have to keep an eye on what's happening in the renewables sector, which is more appealing than ever.

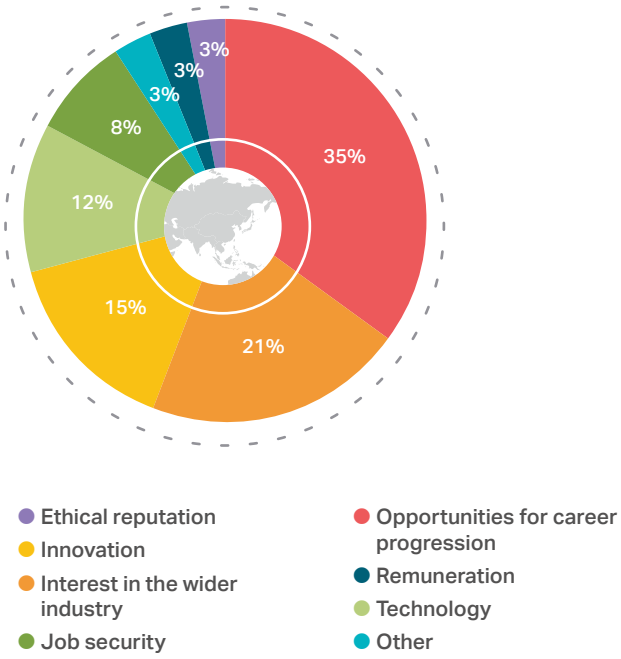
Forty-two per cent of professionals would consider a move to renewables in the next three years – well above the 28 per cent charted in last year's report.

IF YOU WOULD CONSIDER SWITCHING SECTORS, WHICH SECTOR WOULD YOU BE MOST INTERESTED IN SWITCHING TO?



More oil and gas professionals are enamoured by clean energy. However, the opportunity for career progression stands out among respondents as the top reason for considering a move.

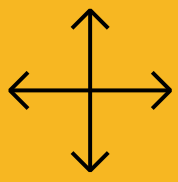
WHAT IS YOUR MAIN REASON FOR CHOOSING THIS SECTOR?



"The desire for career advancement reinforces the importance of internal training schemes," notes Marx. "Training programmes are doubly important – they prepare employees for the path into bigger roles and help preserve the invaluable skills that more senior professionals hold."

"Training programmes are doubly important – they prepare employees for the path into bigger roles and help preserve the invaluable skills that more senior professionals hold."

– Janette Marx



Summary
Oil and Gas

Maintaining a pipeline of new talent has become a challenge for oil and gas companies. But the sector is making more of the right moves. By continuing the momentum with newly-revived outreach programmes, embracing digitalisation and creating a culture that actively encourages women to join the workforce, companies will make great strides.

As Marx summarises: "The oil and gas industry is learning from its decision to cut back on graduate recruitment. Leaders and hiring managers realise that the world has changed and the desires of young professionals are very different. Providing individuals with opportunities to grow their career, travel and work with new technologies will be crucial."

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Petrochemicals

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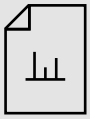

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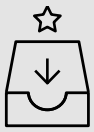

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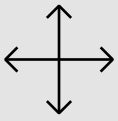


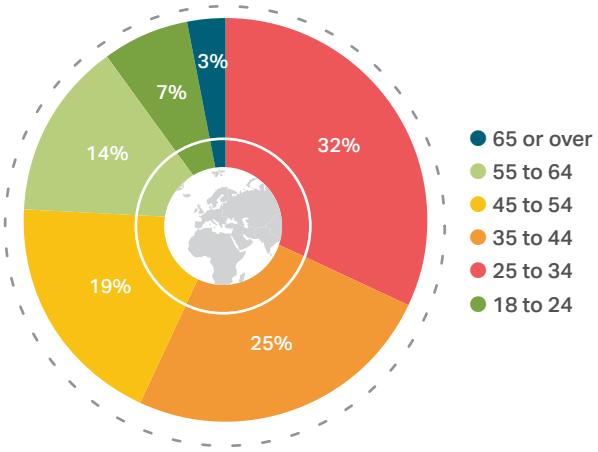
Summary 37

Petrochemicals

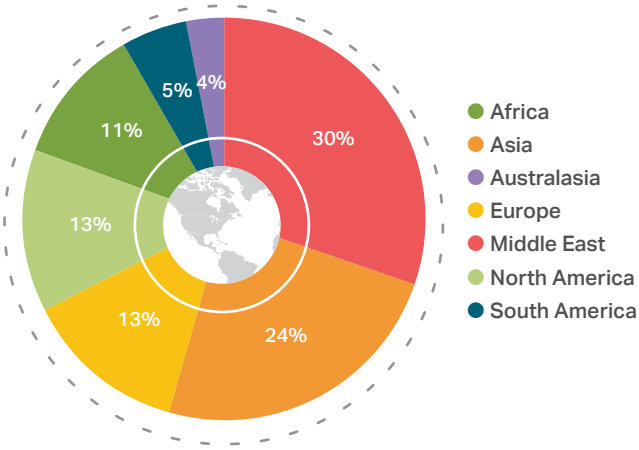
Things are rosy for the petrochemicals sector. Business is booming. Recruitment efforts have paid off. Excitement is high. So, what have companies done right – and how can they keep the momentum going?

1. DEMOGRAPHICS

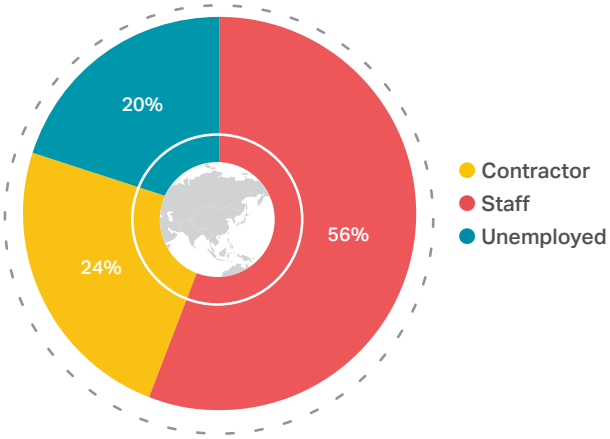
AGE



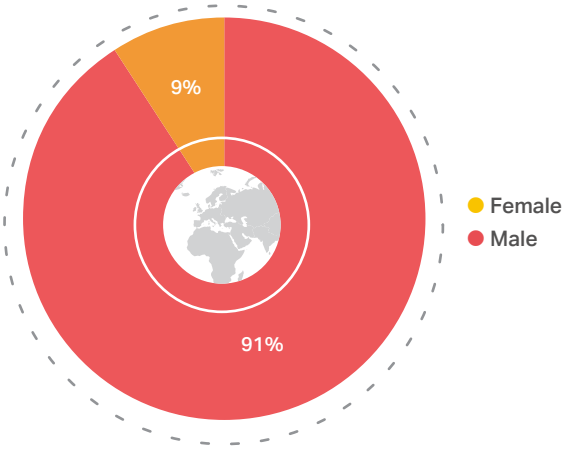
REGION



EMPLOYMENT STATUS



GENDER



2. SALARIES

In recent years, the low price of oil has translated to higher profit margins for petrochemicals companies. Couple this with the growing global appetite for plastics, and it's easy to see why the sector has done so well.

It's little surprise then that petrochemicals professionals saw some of the heartiest pay rises in energy. Thirty per cent of non-hiring professionals reported remuneration increases of at least five per cent, the highest percentage of any sector. All in all, 55 per cent said they had seen some growth in compensation.

PERMANENT WORKER ANNUAL SALARY, USD (GLOBAL AVERAGE BASED ON SIX YEARS' EXPERIENCE)

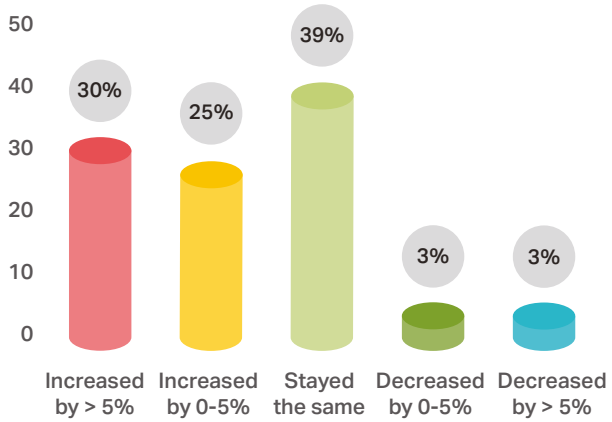
	Africa	Asia	Australasia	Europe	Middle East	North America
Administrator	25,742	37,520	44,276	38,572	35,437	38,520
Chemical Engineer	47,123	53,500	59,129	65,459	60,137	98,636
Chemist	26,755	64,406	56,804	59,004	65,635	90,090
Construction Manager	90,272	50,430	95,524	79,219	84,758	117,856
Electrical Engineer	47,183	74,946	70,791	65,329	77,307	95,443
Environmental Manager	27,889	43,926	64,340	36,205	45,107	87,199
Finance Manager	55,676	79,382	76,986	79,399	72,960	94,307
Health and Safety Manager	40,712	49,308	73,907	51,469	53,594	92,303
HR Manager	49,333	73,886	49,321	74,914	64,430	84,600
Lab Manager	22,509	76,449	83,581	45,002	58,990	80,200
Maintenance Technician	15,943	39,657	65,431	36,417	37,544	79,250
Mechanical Engineer	43,936	67,563	103,806	62,130	71,882	111,630
Office Manager	24,755	38,583	48,228	35,558	35,325	64,340
Planner	19,312	49,325	72,936	45,006	53,570	75,140
Process Engineer	90,241	70,774	102,000	65,433	70,869	123,400
Process Operation Production Manager	48,275	58,962	87,950	65,552	61,223	72,892
Project Coordinator	21,380	38,597	64,368	61,448	36,582	69,408
Purchasing Manager	45,025	65,447	83,698	66,480	59,078	86,950
Quality Assurance Manager	47,178	70,702	75,051	69,705	63,300	122,190
Technical Engineer	27,793	42,772	61,154	40,555	44,989	94,230

CONTRACT WORKER DAY RATE, USD (GLOBAL AVERAGE BASED ON SIX YEARS' EXPERIENCE)

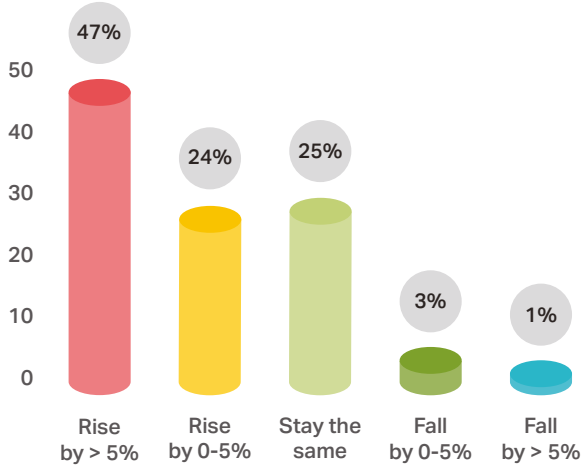
	Africa	Asia	Australasia	Europe	Middle East	North America
Administrator	80	113	135	150	95	230
Chemical Engineer	370	333	433	535	415	520
Chemist	228	255	240	315	230	280
Construction Manager	530	633	615	669	590	750
Electrical Engineer	348	400	440	530	425	463
Environmental Manager	350	339	359	480	380	525
Finance Manager	336	330	348	490	353	430
Health and Safety Manager	430	482	432	610	469	583
HR Manager	220	240	223	341	220	260
Lab Manager	250	265	268	330	250	292
Maintenance Technician	226	245	263	425	255	343
Mechanical Engineer	364	385	444	530	415	470
Office Manager	186	222	220	180	189	264
Planner	257	305	288	400	280	535
Process Engineer	320	348	360	447	330	356
Process Operation Production Manager	355	376	385	479	360	422
Project Coordinator	318	418	395	425	370	448
Purchasing Manager	348	371	400	440	380	410
Quality Assurance Manager	388	440	450	589	433	676
Technical Engineer	306	375	383	470	360	450

On the whole, hiring managers agreed with the pace of wage growth, but a few painted a more earnest portrait when it came to pay cuts. Eleven per cent said that remuneration for professionals had fallen, more than double the number of non-hiring workers reporting a decrease in pay.

PAY CHANGES AMONG WORKERS IN THE LAST 12 MONTHS (non-hiring professionals)



PAY EXPECTATIONS AMONG WORKERS IN THE NEXT 12 MONTHS (non-hiring professionals)



"Confidence in the sector is high. Across the board, companies are reporting strong financial performance. The workforce is feeling hopeful of wage increases."

– Janette Marx

Professionals expect the good times to continue. Seventy per cent of hiring managers and 72 per cent of non-hiring professionals anticipate further increases, with those in Africa, Australasia and North America especially optimistic.

"Confidence in the sector is high. Across the board, companies are reporting strong financial performance. The workforce is feeling hopeful of wage increases," says Janette Marx, Chief Executive Officer at Airswift.

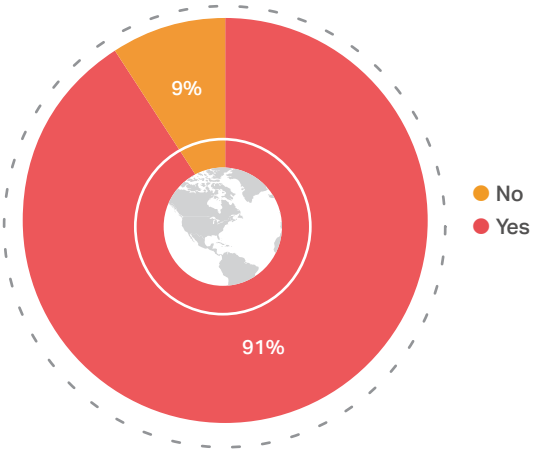
3. GLOBAL MOBILITY

This widespread satisfaction with pay is reflected in global mobility trends. In the previous edition of GETI, remuneration was among the leading motivators for relocation. This time, compensation didn't make the top three.

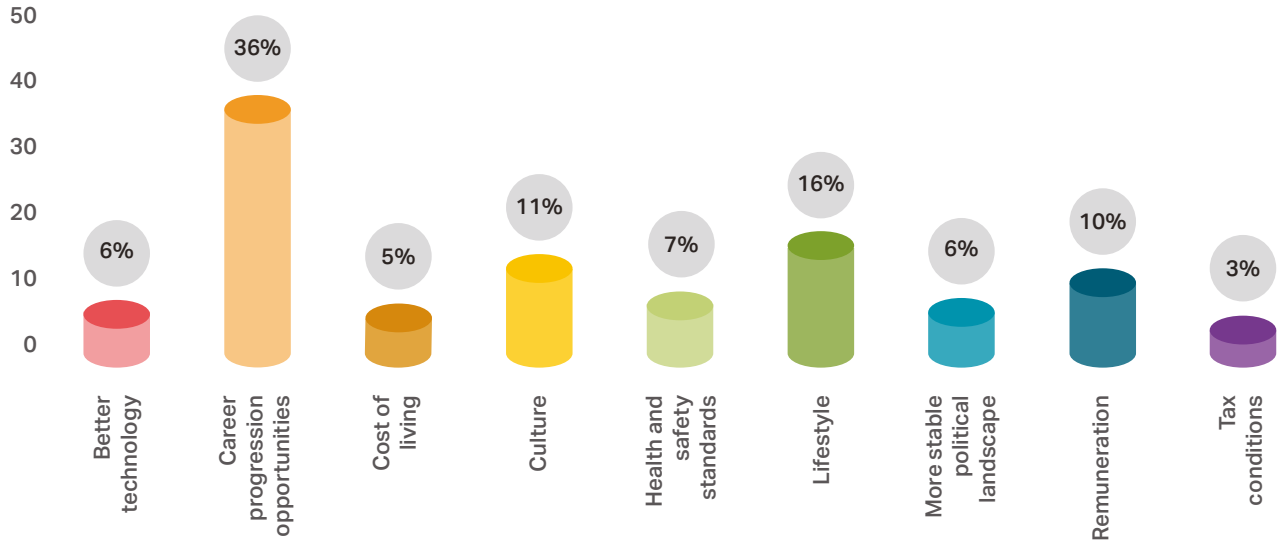
"Employees are happy with their pay, but that doesn't mean they won't consider a move," according to Hannah Peet, Managing Director at Energy Jobline. "This is especially true for younger professionals, who may look elsewhere for career advancement, especially if they feel unable to move into new roles."

Our data confirms this sentiment, with career progression replacing compensation as the top motivation for a potential move. Respondents were more than twice as likely to cite advancement over any other reason.

WOULD YOU CONSIDER RELOCATING TO ANOTHER REGION FOR YOUR JOB?



WHAT IS YOUR MAIN REASON FOR BEING ATTRACTED TO A NEW LOCATION?



In terms of popular regions for relocation, the Middle East shot to the top of the list. As we've chronicled in other chapters, the pace of new projects in the Middle East has exploded. Many of these projects offer the chance to work with innovative technologies, affording professionals with experience they may find difficult to acquire elsewhere.

Thirty-one per cent of respondents stated their preference for a move to the Middle East. In contrast, only 13 per cent favoured the two regions that topped the list in last year's report, North America and Asia.

As Marx notes, "People don't move as frequently in petrochemicals. So when companies in the Middle East are eager to attract expat talent, ambitious professionals are going to take notice."

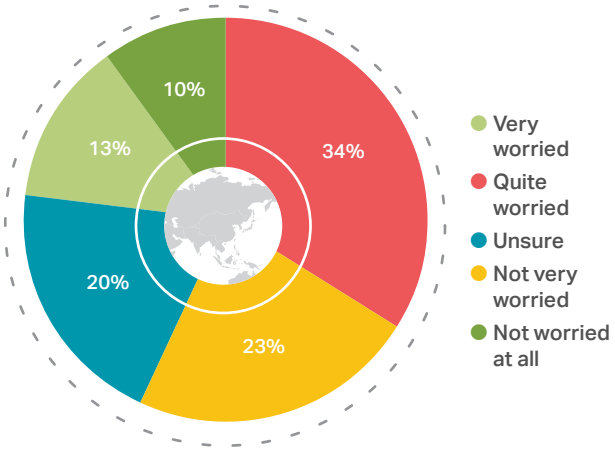
4. A LOOMING CRISIS?

Even as the petrochemicals sector thrives, it is still vulnerable to the threat of a talent shortfall.

In recent years, the sector has benefitted from an influx of oil and gas professionals fleeing the downturn. It's likely that this will slow as the oil price recovers. On top of this, petrochemicals companies have struggled historically to satisfy their blue-collar skills needs.

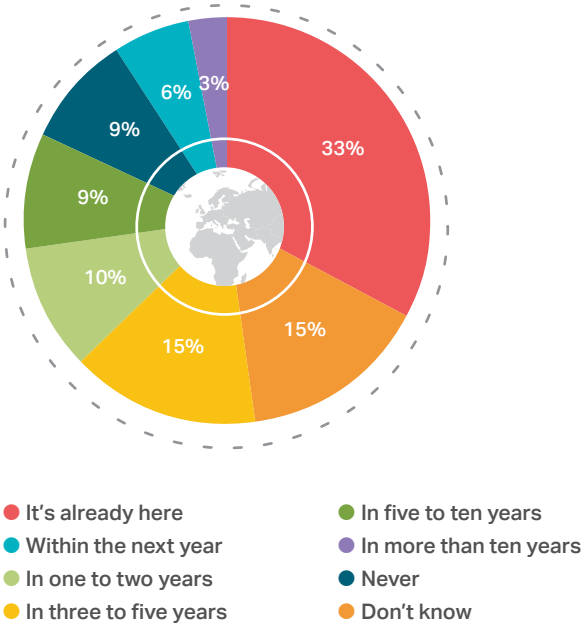
Many companies may be feeling the pinch. Fifty-two per cent of professionals said that their company has been impacted by a skills shortage, one of the highest rates across all sectors. And nearly half said that they were worried about an impending talent crunch.

HOW WORRIED ARE YOU ABOUT AN IMPENDING TALENT CRISIS IN YOUR SECTOR?



Similarly, close to one-third of the workforce feels that a skills shortage has already hit the sector. Professionals in North America and Africa were most likely to say that their regions are being impacted at the moment, while those in Asia feel that the issue is less acute.

WHEN DO YOU THINK THE CRISIS WILL HIT YOUR SECTOR?



In spite of the figures, the sector's younger professionals aren't so worried. Just 37 per cent of individuals aged 24 and under said they were concerned about a skills shortage, a rate that was nearly half that of their peers in oil and gas.

Why are younger professionals feeling so relaxed? As we'll see shortly, petrochemicals companies have been very successful in building a steady pipeline of new talent. Indeed, the workforce is quite fresh – a quarter have just under five years' experience and 59 per cent less than 15 years' experience.

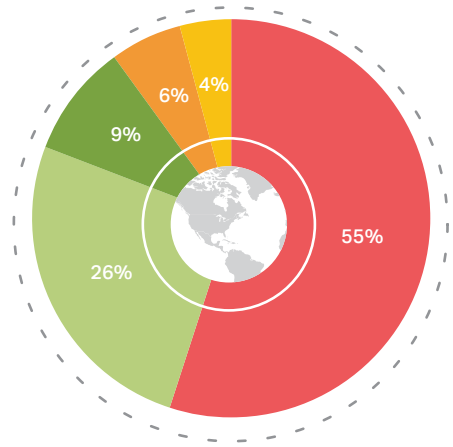
"The petrochemicals sector has embraced the importance of young talent", says Peet. "Companies have created a vibrant culture that graduates are getting excited about."

5. SKILLS

DIGITALISATION TO THE RESCUE?

In addition to the need for more blue-collar professionals, engineers will be in demand. Fifty-five per cent of respondents said that engineering – namely process engineering – would be impacted the most if the talent crunch worsens.

WHICH DISCIPLINE IS MOST AFFECTED BY TALENT SHORTAGES?

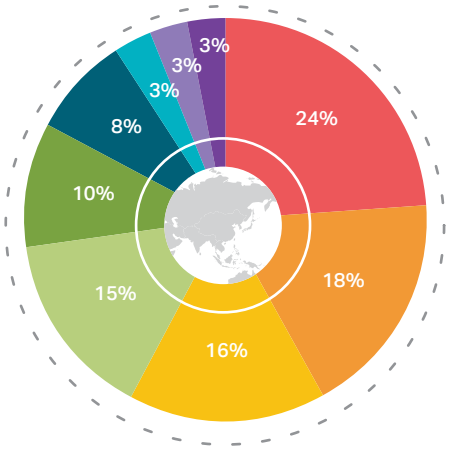


- Corporate
- Engineering
- Geoscience
- IT
- Project leadership

"Digitalisation and robust company culture are hallmarks of this new generation. We'll be curious to see how this reshapes the makeup of the typical engineer in the years ahead."

– Janette Marx

WHICH TYPE OF SKILLS IS MOST AFFECTED BY TALENT SHORTAGES?



- Analogue technical
- Analytical
- Commercial awareness
- Digital
- Interpersonal
- Leadership
- Problem-solving
- Process management
- Strategic planning

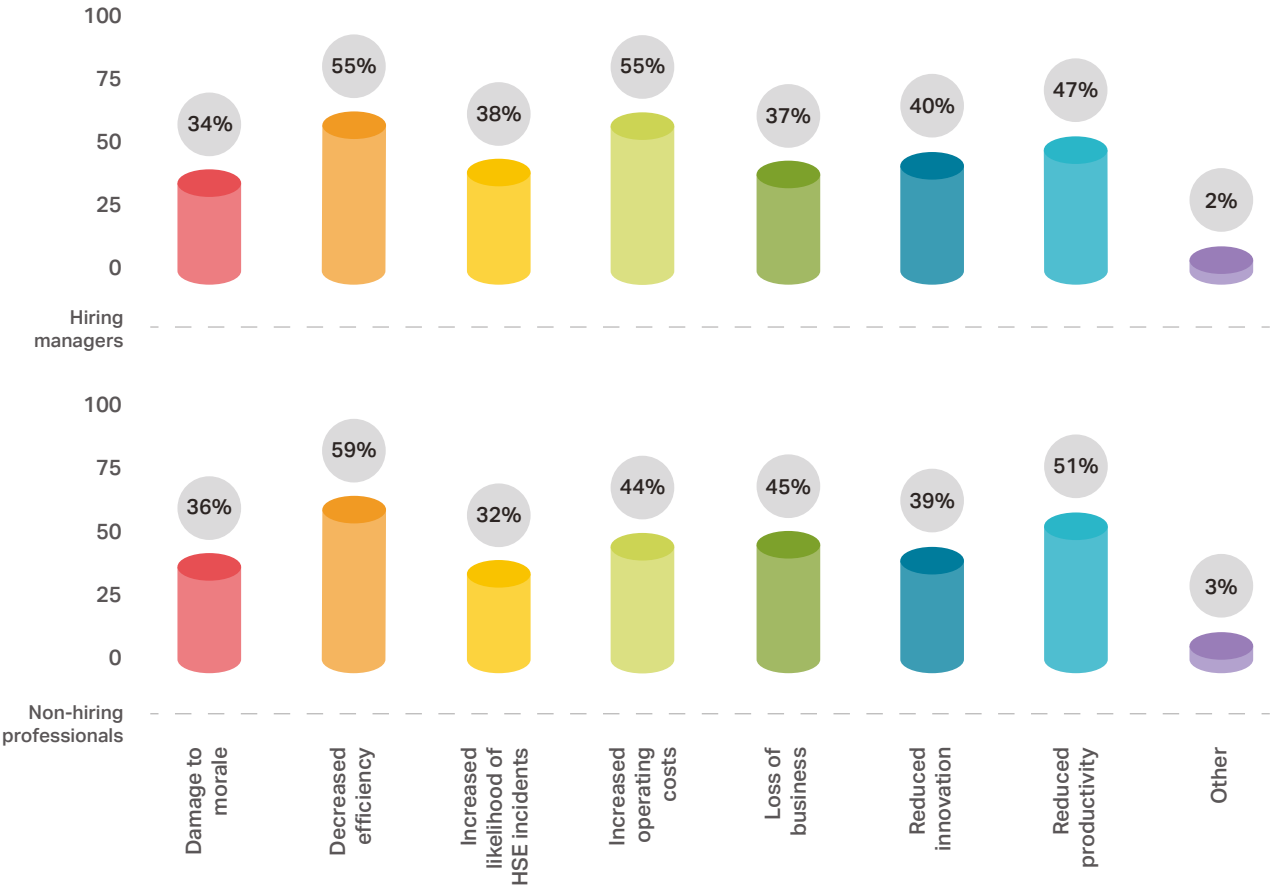
Younger professionals seem to be at odds with their older peers with regard to the skills that will be affected. Workers in their prime and nearing retirement said that leadership skills will be impacted, whereas those under the age of 25 were almost twice as likely to emphasise interpersonal and analytical skills.

The importance of analytical skills continues a theme seen in last year's GETI, where younger professionals were highly optimistic about the power of technology to enhance their decision-making capabilities.

"Digitalisation and robust company culture are hallmarks of this new generation," says Marx. "The desire for strong analytical and interpersonal skills reflects these qualities. We'll be curious to see how this reshapes the makeup of the typical engineer in the years ahead."

Digitalisation and automation will be essential in counteracting the potential impacts of a skills shortage. Respondents said that a failure to close the talent gap would hurt efficiency and raise costs. Last year, many of these same professionals acknowledged that operational efficiency and reduced costs would be the top benefits of digitalisation.

WHAT ARE THE RISKS TO YOUR SECTOR OF FAILING TO PLUG ITS TALENT GAPS?



When asked about catalysts for a potential skills shortage, younger respondents were more likely to point towards reductions in graduate schemes and apprenticeships, acknowledging the critical roles that these programmes have played. In contrast, other professionals were more concerned with the impact of retirement.

Digitalisation and automation will be essential in counteracting the potential impacts of a skills shortage.

6. ATTRACTING TALENT

A MODEL FOR SUCCESS

What a difference a year makes. In last year's GETI, we noted that petrochemicals was perceived as a bit of an outdated industry, namely due to the prevalence of blue-collar roles. Now, the tone has become one of excitement and vigour.

Over the last few years, petrochemicals companies have prioritised efforts to appeal to graduates and younger prospects. Organisations factored recruitment more heavily into their business strategies and secured buy-in from leaders. Alongside promoting the sector's stability and elevating pay rates, companies have emphasised the use of cutting-edge technologies and have created more collaborative workplace cultures.

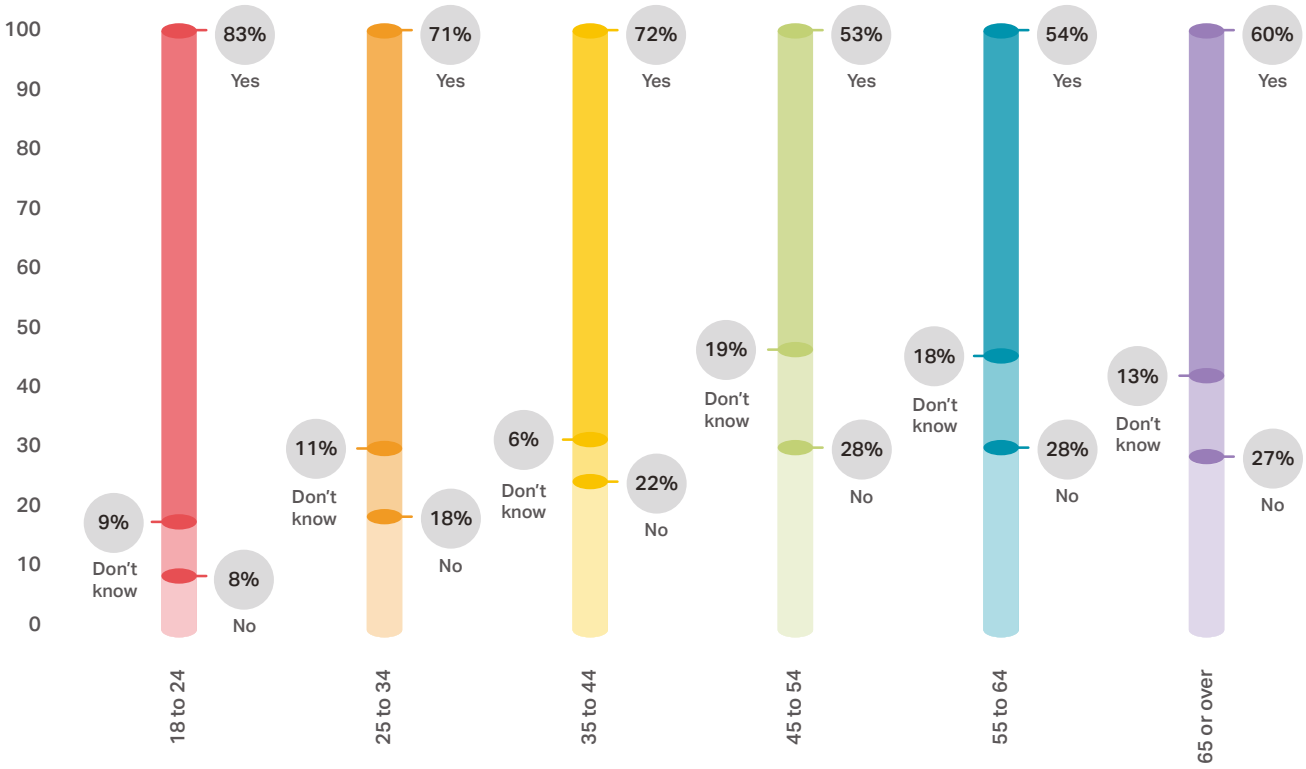
"When oil and gas companies pulled back on their recruitment schemes, it left a massive opportunity for a new sector to swoop on that talent. Petrochemicals firms really seized their chance," comments Marx.

And the satisfaction of those newer professionals is bolstering recruitment efforts. As Peet notes, "A lot of candidates are being drawn to the sector by word-of-mouth. They're hearing about the success, the stability and the opportunity for career growth and want a part of that."

What's more impressive is that recruitment for most petrochemicals roles continues to be local or regional, whereas oil and gas has to rely more on expat labour. The significance of this, according to Marx, is that "companies have effectively created a local ecosystem for talent, where institutional connections and employee referrals are bringing more candidates through the door."

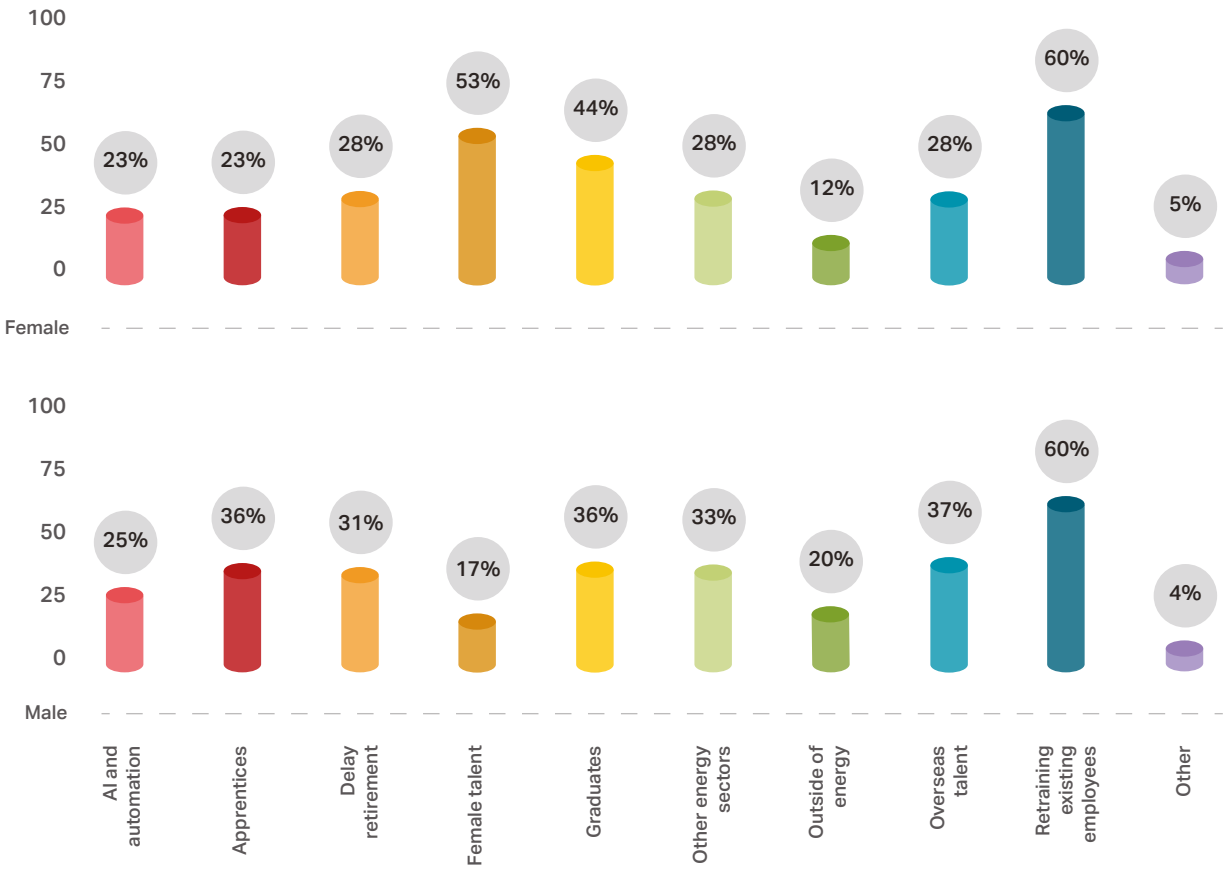
As one would expect, there is little sense of remorse among petrochemicals professionals. If given the opportunity to revisit their choice to enter the sector, nearly three-quarters of respondents said they would opt to pursue a career in petrochemicals. And while that figure drops for the over-55s, it still represents a healthy majority.

IF YOU WERE ENTERING THE INDUSTRY NOW, WOULD YOU PURSUE A CAREER IN YOUR SECTOR?



Yet, as well as the sector has done to build a pipeline of new talent, it will also need to bolster the development of its existing workforce. Sixty per cent of respondents said that retraining existing employees is an ideal way to acquire the skills that the sector needs.

WHERE SHOULD COMPANIES IN YOUR SECTOR BE LOOKING TO GET THE SKILLS IT NEEDS? (split by gender)



"When oil and gas companies pulled back on their recruitment schemes, it left a massive opportunity for a new sector to swoop on that talent. Petrochemicals firms really seized their chance."

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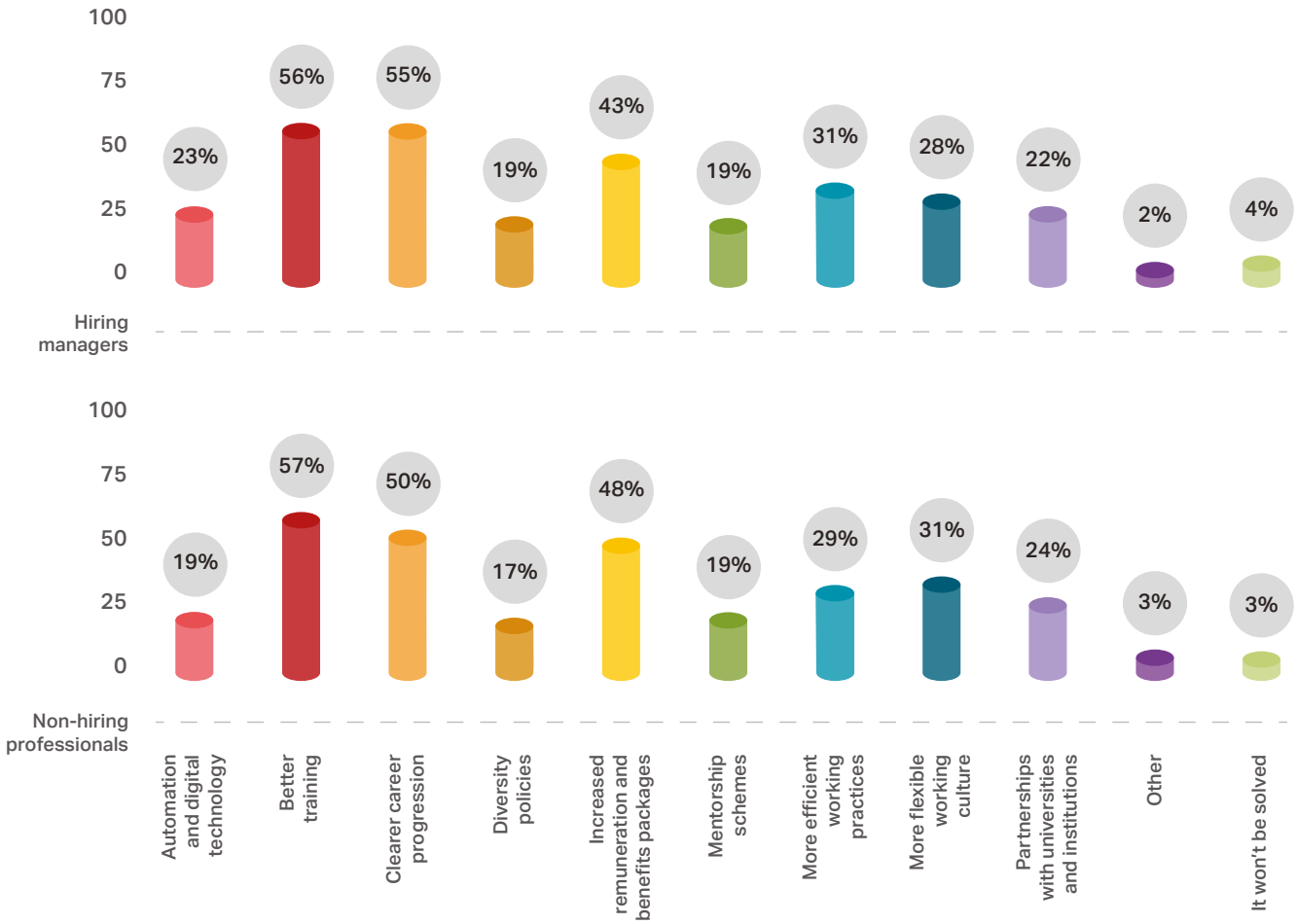
HOW CAN COMPANIES IN YOUR SECTOR BETTER ATTRACT THE RIGHT TALENT?



Areas of growth for talent acquisition include creating more opportunities for female candidates to join the workforce. Our data demonstrates a gulf in views between men and women in the industry – 53 per cent of female respondents said that attracting more women would be essential in attaining the skills needed, compared to just 17 per cent of male respondents.

Bringing more women into the industry is a real opportunity to ward off a talent crunch. The pool of female talent is largely untapped and, given the vibrant culture thriving within the sector, petrochemicals companies have much to offer. If companies can expand upon their recruitment successes to attract more women, they can be a leading force in closing the energy industry's gender gap.

"A lot of candidates are being drawn to the sector by word-of-mouth. They're hearing about the success, the stability and the opportunity for career growth and want a part of that."

– Hannah Peet

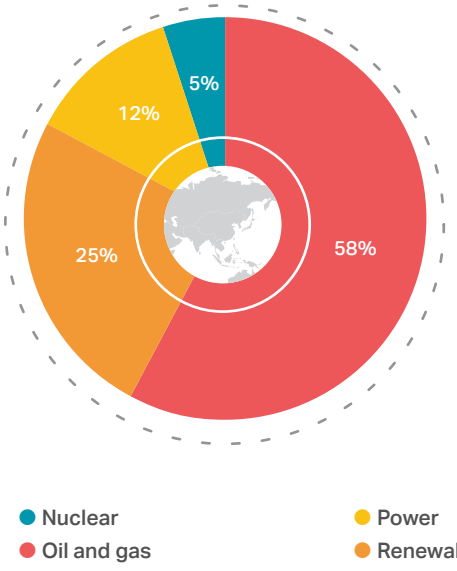
7. RETAINING TALENT

KEEPING THE FOOT ON THE GAS

As noted throughout this chapter, the demand for career progression is strong. Investing in training and development programmes, especially those that focus on analytical, technological and interpersonal skills, will ensure that members of the workforce at all levels can adapt, especially as digitalisation takes hold.

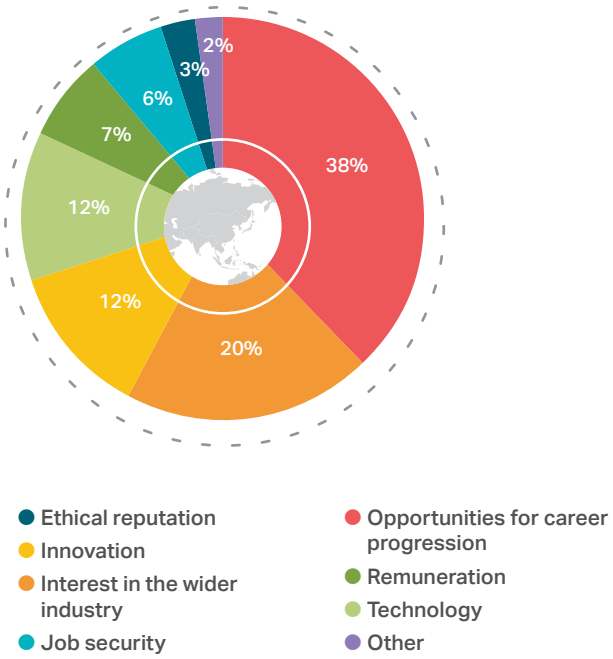
Indeed, career progression is also a leading reason why a petrochemicals professional would consider a cross-sector move. And, surprisingly, many in the workforce are thinking about moving. Eighty-two per cent of respondents in the sector said they would consider switching sectors in the next three years, the highest such figure across almost any energy sector.

IF YOU WOULD CONSIDER SWITCHING SECTORS, WHICH SECTOR WOULD YOU BE MOST INTERESTED IN SWITCHING TO?



"Professionals are happy, but that doesn't stop them from thinking about their futures," notes Marx. "Good training programmes show that a company is willing to invest in its people."

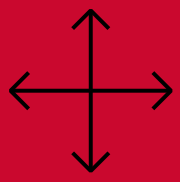
WHAT IS YOUR MAIN REASON FOR CHOOSING THIS SECTOR?



Petrochemicals companies may also have to fend off advances from oil and gas firms. Now that the oil and gas sector is healthy again, those companies may lure back professionals that left in the downturn. Our data shows that oil and gas is the sector of choice for any professional considering a move away from petrochemicals.

"Petrochemicals has set the example for how to build a pipeline of new talent, but the sector can't rest on its laurels," says Peet. "Companies will have to continue emphasising the sector's job security, maintaining consistency with pay increases and promoting the importance of culture."

The dangers of complacency toward talent retention must not be underestimated. Other sectors will undoubtedly increase pay, create opportunities for advancement and play up their technological prowess. The talent crunch can only be avoided if petrochemicals companies can keep their workforce content.



Summary Petrochemicals

Having developed a working culture that thrives on innovation, youthful vigour and community, petrochemicals companies must ensure that this momentum continues. Pouring more resources into professional development is crucial, as is bolstering efforts to bring more women into the sector. The opportunity is there for petrochemicals to set the standard for how the energy industry cultivates talent.

"The strong sense of community has elevated the quality and satisfaction of the petrochemicals workforce," says Peet. "As young people enter the sector, grow in their careers and communicate these benefits to the next wave of graduates, the calibre of new candidates gets even better. If this momentum continues, petrochemicals will be an exciting sector for years to come."

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Power

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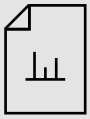

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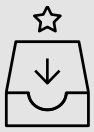

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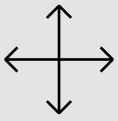


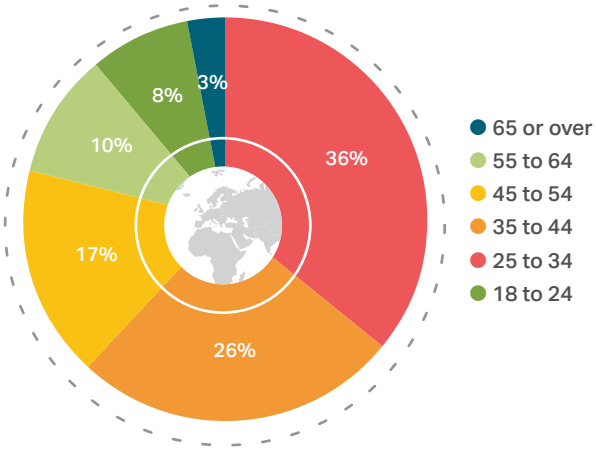
Summary 54

Power

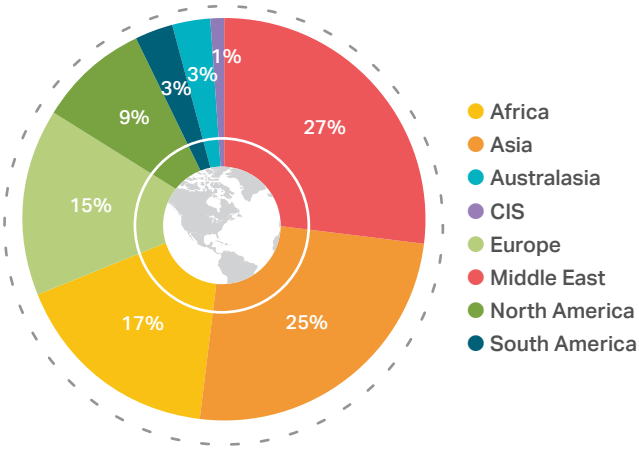
In the energy sector, power has traditionally been a byword for stability. With lower exposure to the oil price and less reliance on subsidy support than renewables, professionals are less vulnerable to market swings. This has translated to high pay but low loyalty. As skills shortages bite, power companies will need to look at better training to attract and retain the skills they need.

1. DEMOGRAPHICS

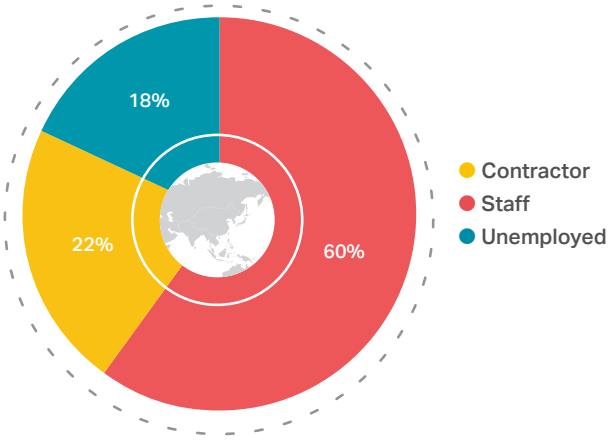
AGE



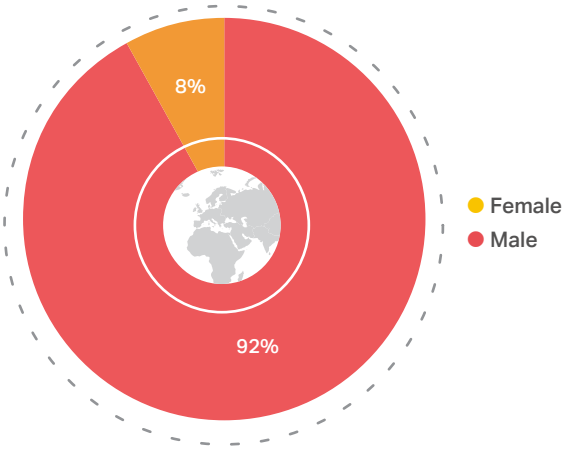
REGION



EMPLOYMENT STATUS



GENDER



2. SALARIES

THE POSITIVITY OF POWER

The power sector's prolonged stability is reflected in a steady increase in remuneration. Fifty-seven per cent of non-hiring professionals enjoyed a pay rise this year, up from 50 per cent in 2017. Of these, 29 per cent received a boost of more than five per cent.

PERMANENT WORKER ANNUAL SALARY, USD (GLOBAL AVERAGE BASED ON SIX YEARS' EXPERIENCE)

	Africa	Asia	Australasia	Europe	Middle East	North America
Business Development	64,813	74,960	64,230	82,978	73,400	85,573
CAD Technician/Operator	35,040	41,713	44,225	47,697	42,893	62,860
Chemical Engineer	46,700	60,980	55,769	57,097	64,886	87,697
Civil Engineer	61,556	72,730	69,500	73,630	74,187	89,728
Commercial Manager	69,068	78,188	74,744	84,400	76,381	95,930
Commissioning Engineer	54,168	72,739	67,412	69,480	64,910	108,255
Construction Manager	65,847	73,868	78,972	76,759	77,494	115,410
Control Room Operator	43,430	45,993	42,209	50,799	52,400	77,356
Design Engineer	51,946	54,538	54,805	56,065	59,660	86,635
Electrical Engineer	62,749	74,895	66,338	76,754	69,132	95,915
HSE Manager	57,313	68,530	63,398	70,657	68,227	87,683
Inspection Engineer	54,138	63,444	61,126	63,311	66,365	82,480
Instrumentation Engineer	52,184	67,586	54,870	57,100	65,019	89,697
Maintenance Engineer	54,167	74,950	63,224	74,700	76,453	87,000
Mechanical Engineer	57,381	69,700	65,326	71,570	74,396	100,100
Plant Manager	51,000	59,900	60,021	62,260	68,083	83,530
Project Engineer	55,290	66,415	67,433	72,606	63,870	91,787
Project Manager	63,655	73,800	71,526	78,853	75,420	123,750
QA/QC Inspector	65,853	70,660	72,709	74,673	80,598	94,902
Quantity Surveyor	47,817	63,117	64,220	62,212	66,027	79,200

CONTRACT WORKER DAY RATE, USD (GLOBAL AVERAGE BASED ON SIX YEARS' EXPERIENCE)

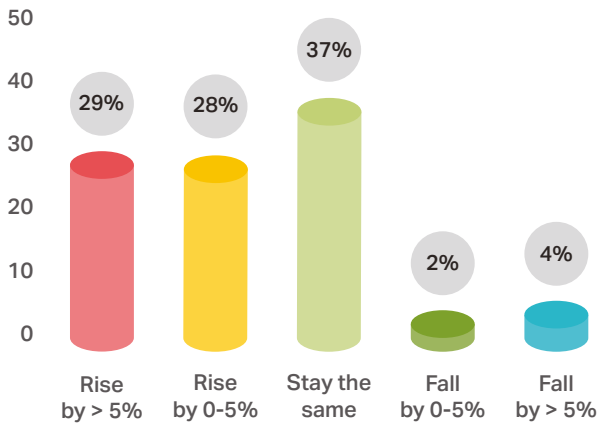
	Africa	Asia	Australasia	Europe	Middle East	North America
Business Development Manager	480	546	520	525	515	640
CAD Technician/Operator	190	230	245	330	240	260
Chemical Engineer	403	469	450	505	455	495
Civil Engineer	515	536	530	490	535	555
Commercial Manager	500	612	544	550	540	600
Commissioning Engineer	420	504	463	520	450	485
Construction Manager	466	600	570	667	540	620
Control Room Operator	325	353	356	390	340	418
Design Engineer	387	420	425	470	415	430
Electrical Engineer	525	505	560	550	548	625
HSE Manager	428	470	445	575	450	520
Inspection Engineer	437	458	452	495	460	510
Instrumentation Engineer	420	440	436	504	452	460
Maintenance Engineer	471	550	539	520	595	570
Mechanical Engineer	505	515	540	545	532	585
Plant Manager	407	505	454	555	498	472
Project Engineer	425	444	515	607	480	567
Project Manager	558	644	616	733	640	715
QA/QC Inspector	530	550	566	593	560	650
Quantity Surveyor	403	449	430	460	418	450

This good fortune converts into optimism for the year to come. Three quarters of workers look forward to pay rises in 2019, 44 per cent of which are expected to be greater than five per cent. The highest rates of optimism were found in Asia and Africa with 85 per cent and 86 per cent of workers respectively expecting a rise. The outlook was bleaker, however, for professionals in CIS where just a third were confident of one materialising.

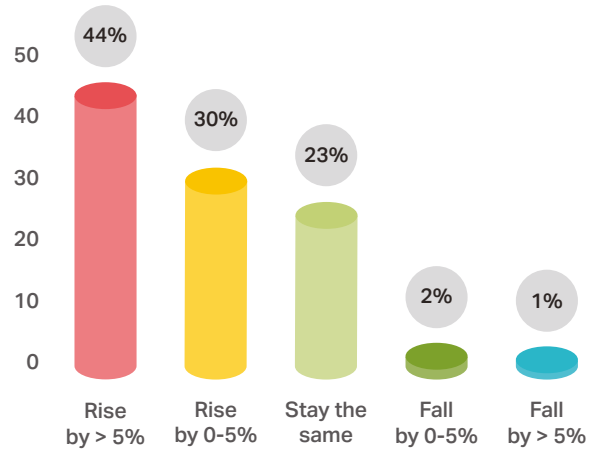
If hiring managers' opinions are anything to go by, this optimism is well-founded: 68 per cent expect pay to rise, with 39 per cent at the higher rate.

From one perspective, the power sector seems to be in a virtuous circle. Hannah Peet, Managing Director at Energy Jobline, comments: "The power industry has remained strong and consistent, creating optimism. Continued stability then leads to positive outcomes for workers, reinforcing that optimism for the next year."

PAY CHANGES AMONG WORKERS IN THE LAST 12 MONTHS (non-hiring professionals)



PAY EXPECTATIONS AMONG WORKERS IN THE NEXT 12 MONTHS (non-hiring professionals)



However, the outlook may not be as sunny as first appears. Janette Marx, Chief Executive Officer at Airswift explains: "Remuneration is tied to supply and demand. Rising rates could be a sign of an impending skills shortage that may not be such good news for the sector."

"The power industry has remained strong and consistent, creating optimism. Continued stability then leads to positive outcomes for workers, reinforcing that optimism for the next year."

– Hannah Peet

3. GLOBAL MOBILITY

THE DOWNSIDE OF STABILITY?

Stable doesn't mean settled. Nine in ten power professionals indicated they would be willing to relocate to another region – five per cent more than last year.

Overwhelmingly, career progression was the main reason for doing so. Forty per cent of workers pointed to this as a reason to make a move, trailed by lifestyle and culture.

Peet notes that: "Stability can cut both ways. On the one hand it offers good security and rewards for professionals. On the other, change creates opportunity and some power workers may feel that's not happening enough for them to grow their careers where they are."

The destination of choice for unsettled workers was Europe, closely followed by the Middle East and then North America. Partly, this reflects the stated motivations for improved lifestyle or culture, but also fits neatly with the desire for career progression.

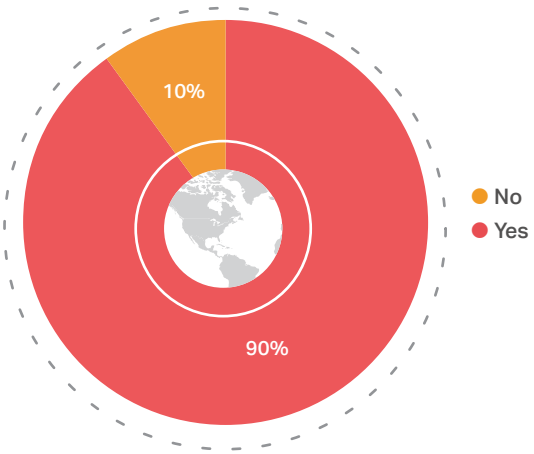
Twelve per cent of professionals noted that their current companies did not offer opportunities to relocate.

Marx notes, "Power is a traditionally loyal sector and is dominated by a handful of major global players. Willingness to move region won't always equate to willingness to move company, so those companies offering opportunities for progression and relocation should keep on doing what they're doing."

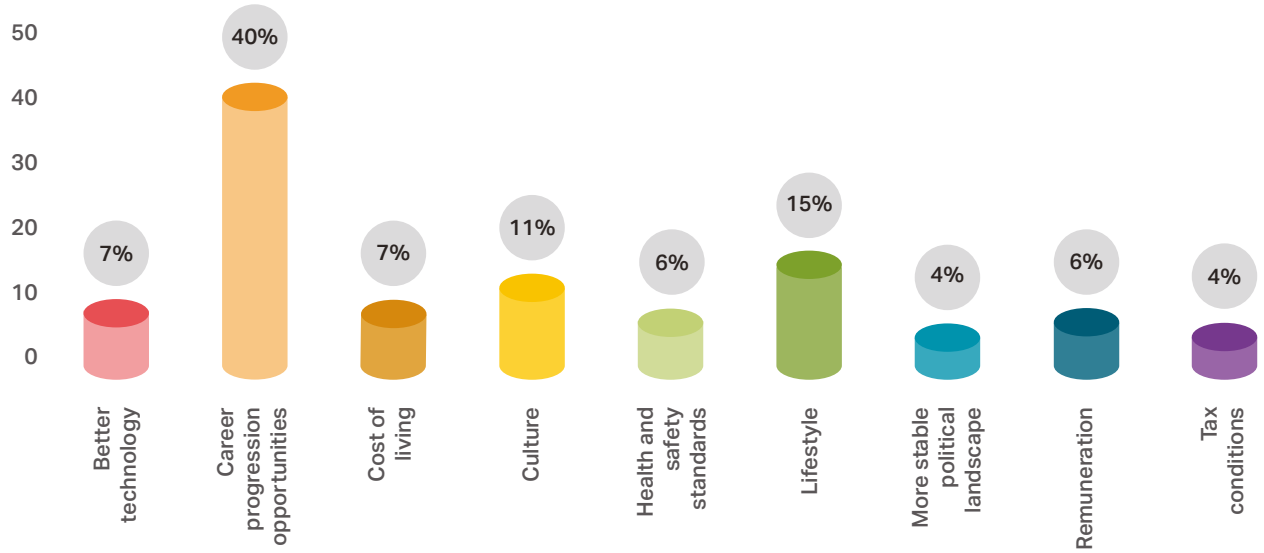
"Stability can cut both ways. On the one hand it offers good security and rewards for professionals. On the other, change creates opportunity and some power workers may feel that's not happening enough for them to grow their careers where they are."

– Hannah Peet

WOULD YOU CONSIDER RELOCATING TO ANOTHER REGION FOR YOUR JOB?



WHAT IS YOUR MAIN REASON FOR BEING ATTRACTED TO A NEW LOCATION?



Peet adds: "Many years ago, most power jobs were tied to the local power station and sourced from the community. Newer, more technology-focused roles are more mobile, so this could account for some of the increased openness to relocation in recent years."

This is borne out by the reasons given by those not open to a move. Twelve per cent said opportunities to relocate just weren't there for them and 40 per cent cited proximity to family as their reason for staying put.

"Power is a traditionally loyal sector and is dominated by a handful of major global players. Willingness to move region won't always equate to willingness to move company, so those companies offering opportunities for progression and relocation should keep on doing what they're doing."

– Janette Marx

4. A LOOMING CRISIS?

Despite widespread optimism and technological advancement, the power sector is not immune to the sense of impending crisis that afflicts the wider energy sector.

Asked about the most worrying issue for the sector, 20 per cent fretted about the skills shortage and another 20 per cent about innovation.

In fact, these factors are closely interlinked. Marx puts it down to, "the difficulty power companies have in keeping up with the pace of change. Innovation is great, but it changes the nature of the workforce and if you can't adjust quickly enough, it's a problem."

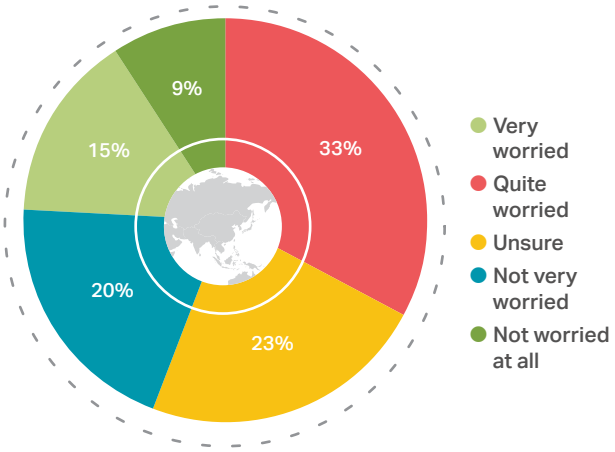
Peet agrees: "For many, the power industry has a reputation for being dull and old-fashioned and it's been slow to shed that. Young, digitally-skilled graduates don't see energy as an exciting sector to go into. For those that do look at energy, it's the renewables sector that catches attention."

The concern shows: almost half of professionals are worried about a looming talent crisis in the sector. Only a third were more relaxed.

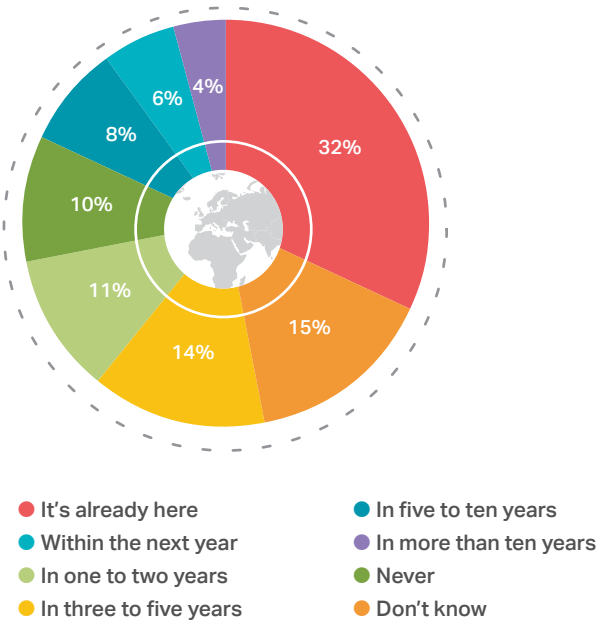
But are the storm clouds on the horizon or already overhead? Sixty-two per cent believe the crisis will hit within five years, including 32 per cent who think it already has. Only a tenth believe the crisis would never hit while four per cent think it's more than ten years away.

The fear was most palpable in South America, where more than half of professionals think the crisis is already with us, while Asia and North America were most concerned for the next five years. Curiously, CIS was the most relaxed, with comfortably the fewest respondents thinking the crisis has already hit (27 per cent) and over a quarter thinking it was more than a decade away.

HOW WORRIED ARE YOU ABOUT AN IMPENDING TALENT CRISIS IN YOUR SECTOR?



WHEN DO YOU THINK THE CRISIS WILL HIT YOUR SECTOR?



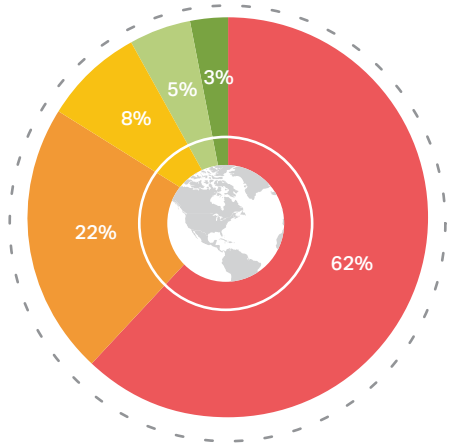
Concern about the skills shortage was relatively uniform across age groups. Forty-eight per cent of those in the prime of their career or older were worried compared to 44 per cent of younger colleagues.

5. SKILLS

TRAINING REQUIRED

Despite the sense of crisis, just under half of professionals said their company has already been affected by the skills shortage, with only 38 per cent saying they haven't. When asked where the shortage was most acute, there was broad consensus that the sector urgently needs new engineers.

WHICH DISCIPLINE IS MOST AFFECTED BY TALENT SHORTAGES?



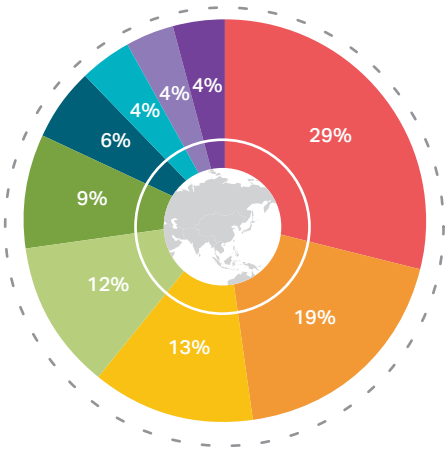
- Corporate
- Engineering
- Geoscience
- IT
- Project leadership

Sixty-two per cent of professionals said engineering was the discipline most affected by talent shortages. Of those, 40 per cent pointed to electrical/E&I engineers, 26 per cent said mechanical engineers and 14 per cent said R&D engineers.

In terms of the specific skills affected, there was agreement across age groups that the industry needs more problem-solving (29 per cent), leadership (19 per cent) and process management (13 per cent) skills.

"The need for more engineers points to an industry concerned with meeting its immediate needs," says Marx. "But the skills respondents identified are exactly those you need to successfully manage change. It looks as though the power industry has one eye on the present and one firmly on the future."

WHICH TYPE OF SKILLS IS MOST AFFECTED BY TALENT SHORTAGES?



- Analogue technical
- Analytical
- Commercial awareness
- Digital
- Interpersonal
- Leadership
- Problem-solving
- Process management
- Strategic planning

The contributors to the skills shortage are diverse. The most cited was lack of apprenticeship opportunities (38 per cent), just ahead of automation and digitalisation changing the profile of skills required (35 per cent) and economic cycles prohibiting long-term career stability (33 per cent).

Professionals' outlook on these contributors varied widely with age. For example, while 58 per cent of those aged 55 or over cite retirement as the biggest issue, only 11 per cent of those under 25 thought the same. Instead, they suggest a lack of apprenticeships (49 per cent) and automation and digitalisation (40 per cent) were most relevant.

Peet comments: "We're used to hearing that automation and digitalisation reduce the need for human labour. However, in the power sector they are exacerbating the skills shortage due to a lack of talent familiar with the new technologies."

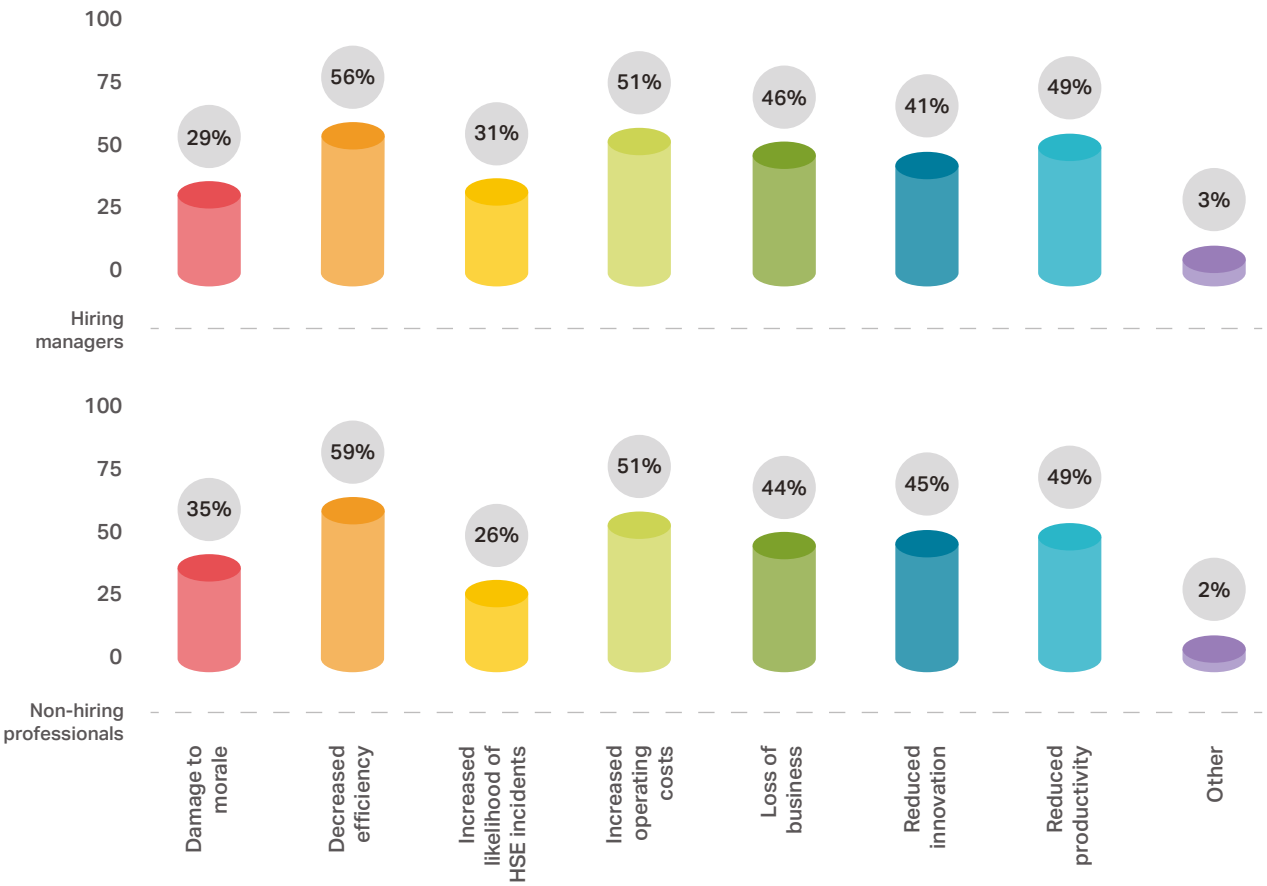
Marx agrees, "Some power companies find that professionals in digital roles don't stay as long as senior management roles, making them the talent crunch points. In part, this is down to a fear that if you stay too long in one place in this sector, you get stuck – power needs to do better at appearing as a dynamic destination for talent."

And what is that price? Fifty-eight per cent of professionals identified decreased efficiency as the biggest risk of the skills shortage, with roughly half looking to increased operating costs and reduced productivity.

"We're used to hearing that automation and digitalisation reduce the need for human labour. However, in the power sector they are exacerbating the skills shortage due to a lack of talent familiar with the new technologies."

– Janette Marx

WHAT ARE THE RISKS TO YOUR SECTOR OF FAILING TO PLUG ITS TALENT GAPS?



6. ATTRACTING TALENT

LOOKING WITHIN

The good news for the power sector is that, if they were just entering the energy industry now, 74 per cent of professionals would still pursue a career in power. Only 15 per cent would not. This is especially true of younger workers, with older colleagues more hesitant.

This is encouraging, as young people were seen as more important than their older counterparts for bridging the skills gap. When asked where the sector should look to bring in the skills it needs, 38 per cent said graduates and 36 per cent said apprentices, both eclipsing the 25 per cent who suggest delaying the retirement of older professionals.

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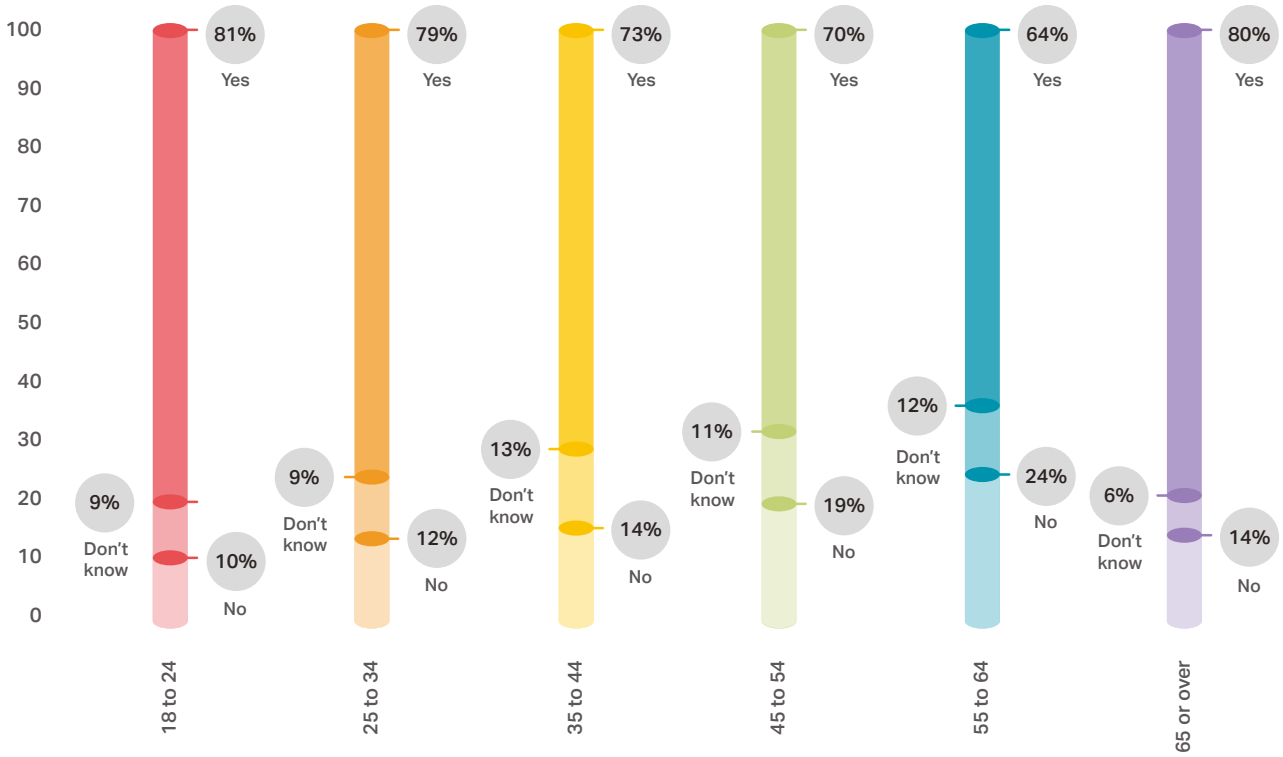
IF YOU WERE ENTERING THE INDUSTRY NOW, WOULD YOU PURSUE A CAREER IN YOUR SECTOR?



However, the top priority for sourcing skills was retraining existing talent. More than half of professionals thought this was the answer.

Peet says: "The fact that so many power professionals are looking internally for solutions to the skills gap suggests that they're less concerned about the raw numbers of recruits to the sector but rather about the specific skills the changing industry demands."

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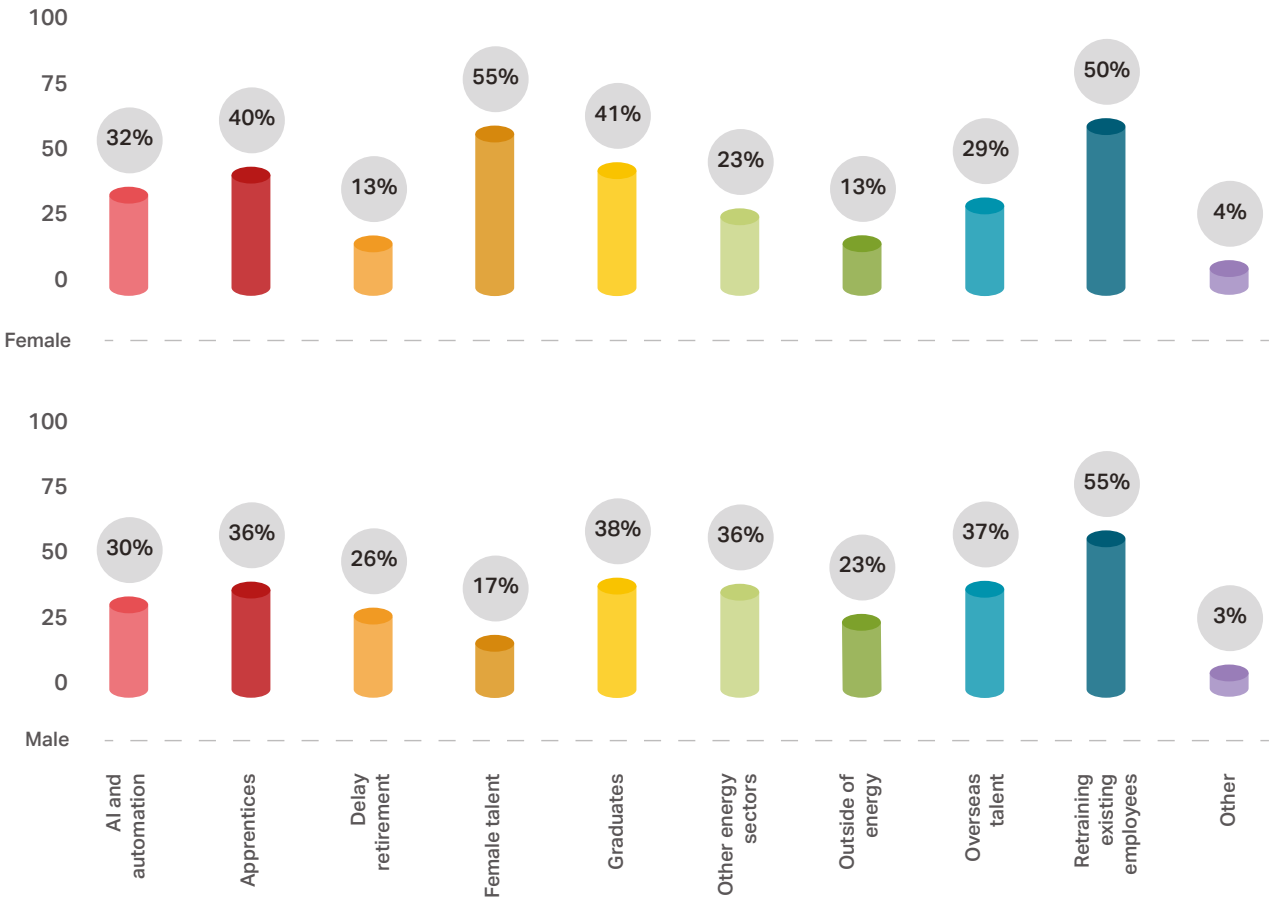
– Hannah Peet

WHERE SHOULD COMPANIES IN YOUR SECTOR BE LOOKING TO GET THE SKILLS IT NEEDS? (split by gender)



What can companies do to better attract that new talent? Fifty-eight per cent of professionals of all ages agreed that better training was essential. Forty-seven per cent and 43 per cent respectively then suggested clearer career progression and increased remuneration and benefits packages were important. However, the older the professional, the more likely they were to emphasise pay.

Marx comments: "The call for better training echoes the suggestion that the answer to the skills gap is internal. Combine that with the faith in youth and you have a powerful argument for increased investment in both graduate training programmes and apprenticeships in the power sector."

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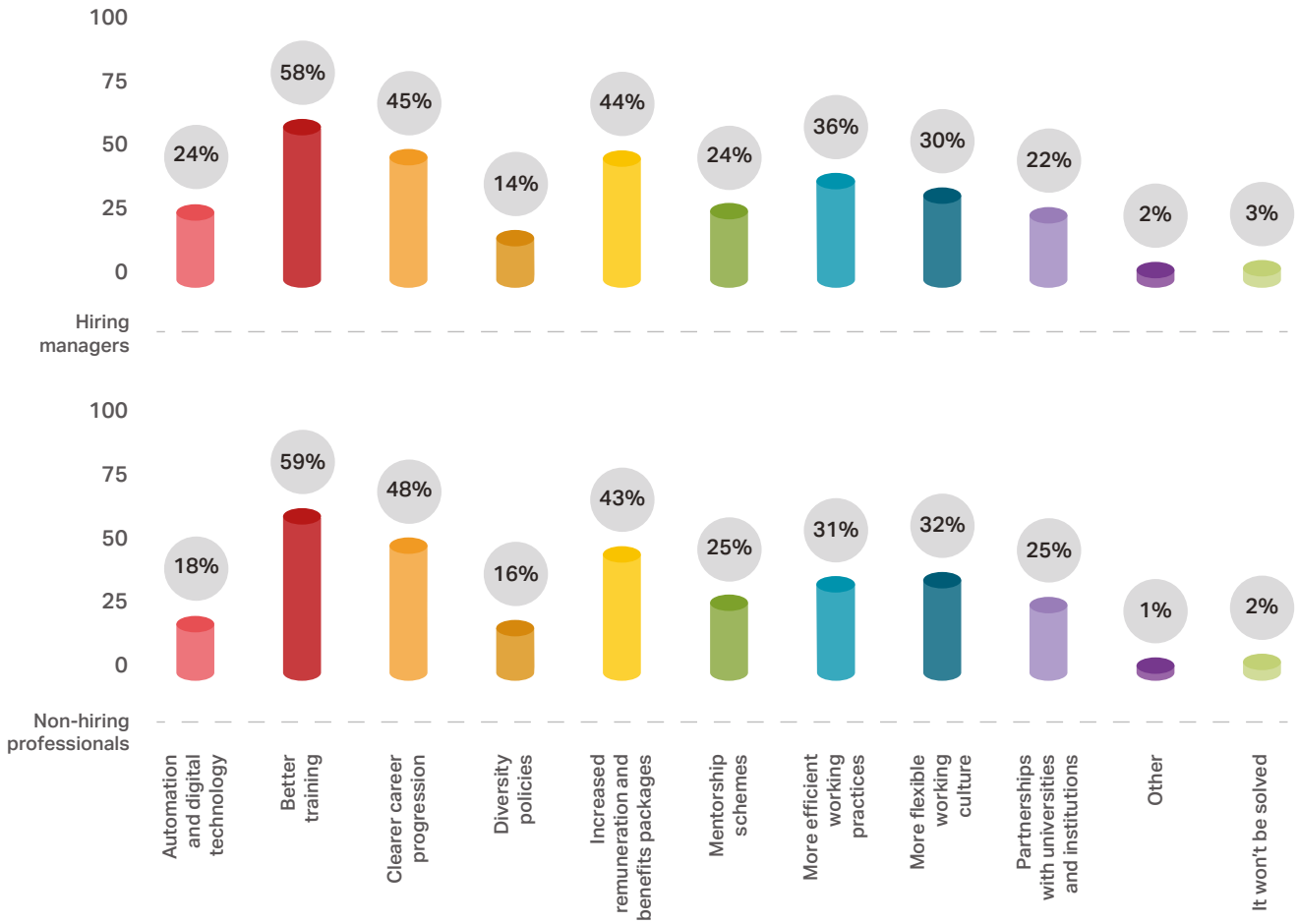
– Janette Marx

HOW CAN COMPANIES IN YOUR SECTOR BETTER ATTRACT THE RIGHT TALENT?



7. RETAINING TALENT

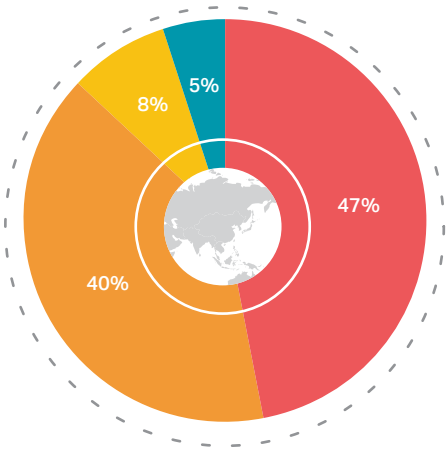
WANDERLUST

Just as the majority of professionals would be happy to move region, 81 per cent would consider switching sector – a surprise in a traditionally high-loyalty sector.

As is the case across the energy industry, the renewables sector was the most popular destination, chosen by 47 per cent of workers, followed by oil and gas with 40 per cent.

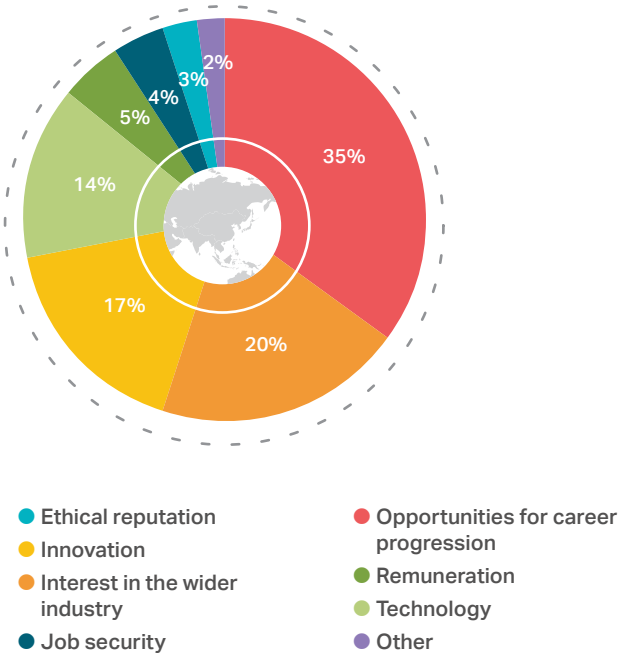
Marx argues: "Both these sectors do something power doesn't, which is to tell a powerful story. Renewables have attractive green credentials, while oil and gas is well-known as a top paying sector. Power has an appealing narrative that needs to be shared."

IF YOU WOULD CONSIDER SWITCHING SECTORS, WHICH SECTOR WOULD YOU BE MOST INTERESTED IN SWITCHING TO?



Just as with willingness to relocate, the main motivator was career progression, followed by interest in the wider industry, innovation and technology.

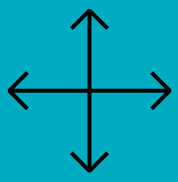
WHAT IS YOUR MAIN REASON FOR CHOOSING THIS SECTOR?



"Power sector professionals have wanderlust," says Peet. "Despite their relative comfort over the past few years where other sectors have suffered downturns, the grass appears greener to many. It's a lesson for power companies that stability is good, but too much can be stifling."

"Renewables have attractive green credentials, while oil and gas is well-known as a top paying sector. Power has an appealing narrative that needs to be shared."

– Janette Marx



Summary
Power

The power sector has a balancing act on its hands. On the one hand, it needs to keep doing the things it is doing well, offering stability, security and steadily increasing remuneration. On the other, it needs to ensure that stability doesn't become inertia, stunting career progression and repelling new talent.

Marx concludes: "The power sector has done well so far but is well aware of the troubles brewing. Hiring managers understand what those skill shortages are and know where to go to alleviate them. But knowing and doing are different things. Graduate training schemes and increased use of apprenticeships will help, but the power sector needs to do a better job of marketing itself to young, digitally-inclined talent. Otherwise, transformations like the smart grid can't fulfil their full potential."

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Renewables

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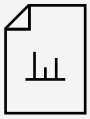

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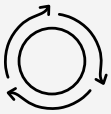

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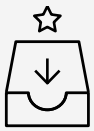

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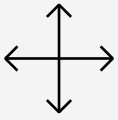


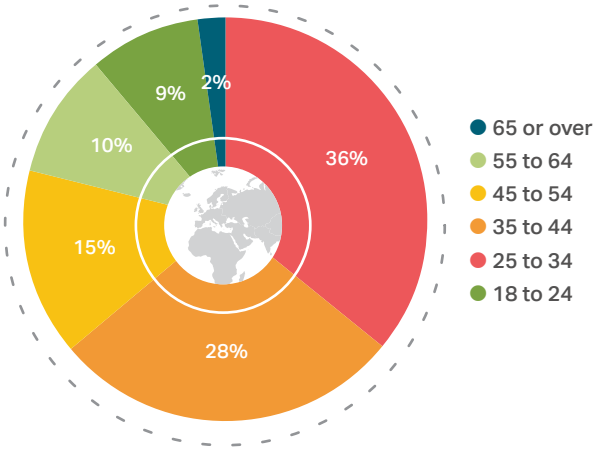
Summary 70

Renewables

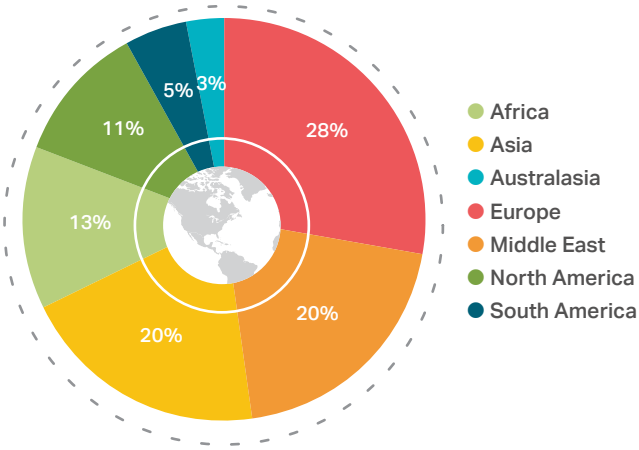
Optimism abounds in a renewables sector that has enjoyed a good year and expects even better things to come. Pay is up, the sector continues to enjoy unmatched popularity across the energy spectrum and the sense of crisis is less pronounced than elsewhere. That said, a shock lies in store for companies that might think it's smooth sailing ahead.

1. DEMOGRAPHICS

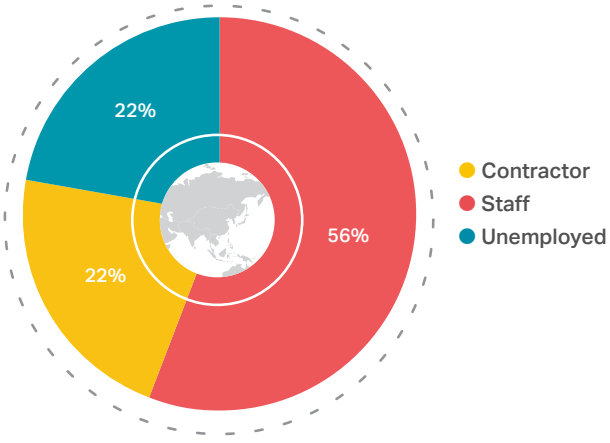
AGE



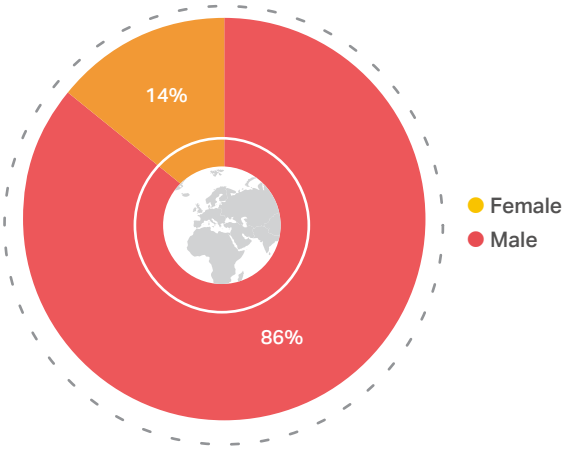
REGION



EMPLOYMENT STATUS



GENDER



2. SALARIES

RISING RATES A TASTE OF THINGS TO COME?

It's been a good year for renewables professionals in terms of salaries. Just over half of workers reported a pay rise, with 26 per cent enjoying one of more than five per cent. The number of unfortunate professionals suffering a pay cut has also decreased year-on-year from 10 to five per cent.

PERMANENT WORKER ANNUAL SALARY, USD (GLOBAL AVERAGE BASED ON SIX YEARS' EXPERIENCE)

	Africa	Asia	Australasia	Europe	Middle East	North America
Biomass Engineer	37,087	40,619	36,829	45,629	36,612	66,030
Business Development Manager	55,296	63,772	53,707	63,330	49,170	78,356
Civil/Structural Engineer	45,670	50,320	52,643	52,780	50,275	81,478
Commercial Manager	48,875	56,743	53,617	62,277	52,300	68,077
Construction Manager	63,659	70,750	69,570	75,737	66,938	118,730
Design Engineer	44,597	48,155	50,546	47,696	47,048	76,340
Electrical Engineer	43,511	47,123	49,614	50,848	46,103	84,580
Energy Engineer	38,250	46,096	45,305	49,780	42,820	55,592
HSE Manager	62,560	68,633	78,964	54,907	82,392	102,997
Maintenance Engineer	57,360	63,223	51,553	53,937	45,165	83,560
Marine Engineer	42,476	47,155	49,466	49,579	47,293	74,248
Mechanical Engineer	43,600	46,500	48,480	48,834	46,870	92,822
Operations Manager	39,435	45,050	47,400	45,696	42,054	76,340
Project Engineer	41,362	43,884	46,411	44,795	46,512	75,270
Project Manager	46,738	49,338	52,646	53,572	53,289	91,553
QA/QC Manager	45,737	52,490	54,647	56,198	52,676	73,237
Renewable Energy Consultant	38,000	42,752	43,130	44,679	39,294	54,618
Solar Engineer	39,308	44,968	45,280	46,669	42,921	71,168
Wind Farm Project Manager	52,100	59,922	71,639	60,000	63,097	79,410
Wind Turbine Technician	38,269	42,799	45,265	45,602	42,808	66,065

CONTRACT WORKER DAY RATE, USD (GLOBAL AVERAGE BASED ON SIX YEARS' EXPERIENCE)

	Africa	Asia	Australasia	Europe	Middle East	North America
Biomass Engineer	270	300	295	336	240	330
Business Development Manager	565	580	540	650	430	620
Civil/Structural Engineer	370	436	450	560	490	520
Commercial Manager	520	634	525	700	575	730
Construction Manager	475	542	508	670	540	655
Design Engineer	340	460	415	425	526	475
Electrical Engineer	260	400	350	609	375	490
Energy Engineer	255	350	355	372	285	334
HSE Manager	470	605	520	656	490	595
Maintenance Engineer	380	525	480	585	420	570
Marine Engineer	370	400	450	654	430	486
Mechanical Engineer	476	495	490	675	440	615
Operations Manager	433	482	455	550	505	560
Project Engineer	495	540	520	705	536	635
Project Manager	470	560	550	777	560	666
QA/QC Manager	490	535	462	662	560	625
Renewable Energy Consultant	340	450	430	435	405	564
Solar Engineer	430	570	543	529	500	573
Wind Farm Project Manager	575	611	595	699	575	626
Wind Turbine Technician	385	534	481	445	330	478

The feeling, though, is that next year will be even better. Sixty-nine per cent expect a raise next year, with 37 per cent hoping for one of more than five per cent – both figures slightly up on last year. Professionals based in Africa were the most optimistic, with nearly eight in 10 expecting a raise. Those in CIS were the least confident of a raise, with just half of workers confident of one. However, it was South America where the most professionals worried about a cut at 12 per cent.

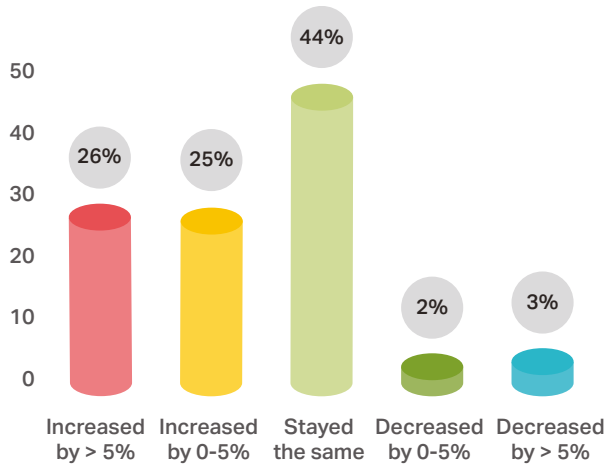
The real bellwethers in renewables, however, are the hiring managers. Last year, 61 per cent of this group expected pay to rise. This year, 58 per cent said that's what they saw. Hiring managers showed themselves to be much more in-tune with events than workers, where there was a 13 per cent shortfall from prediction to reality.

So, what do hiring managers say for the year to come? Seventy-one per cent expect pay to increase, with 41 per cent banking on a rise of more than five per cent. Seven per cent expect a reduction.

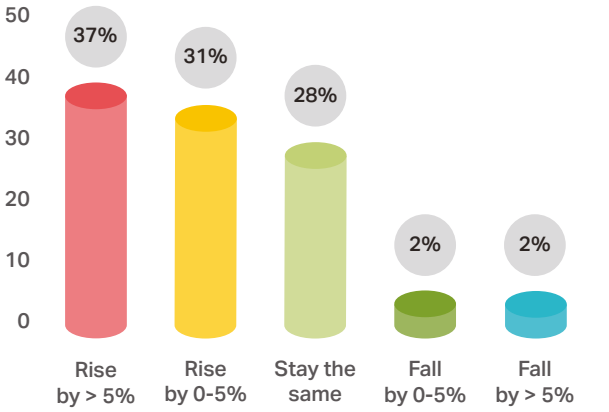
Janette Marx, Chief Executive Officer at Airswift says, "If hiring managers are as accurate as they were last year, then renewables professionals can look forward to a strong year from a salary perspective. One possible reason is that, with the oil price up again, hiring managers are looking sideways at other energy sectors and bracing themselves for having to increase rates to stay competitive."

Hannah Peet, Managing Director at Energy Jobline, adds: "Renewables isn't typically the best paid sector – people tend to be there for other reasons. However, if the pay disparity gets too big, loyalty might be tested. And as the sector grows there's also more competition within renewables to drive up pay rates too."

PAY CHANGES AMONG WORKERS IN THE LAST 12 MONTHS (non-hiring professionals)



PAY EXPECTATIONS AMONG WORKERS IN THE NEXT 12 MONTHS (non-hiring professionals)



"If hiring managers are as accurate as they were last year, then renewables professionals can look forward to a strong year from a salary perspective."

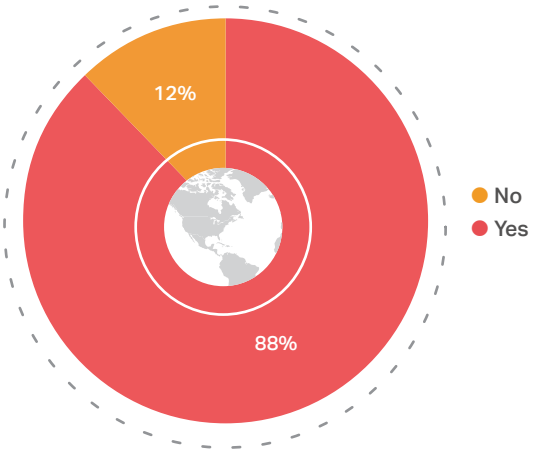
– Janette Marx

3. GLOBAL MOBILITY

LANDS OF OPPORTUNITY

The renewables sector is also more open to mobility than last year. Eighty-eight per cent of respondents indicated they would be willing to relocate, compared to 83 per cent last year. As with other sectors, the main driver is career progression (38 per cent), followed by lifestyle (17 per cent) and culture (14 per cent).

WOULD YOU CONSIDER RELOCATING TO ANOTHER REGION FOR YOUR JOB?



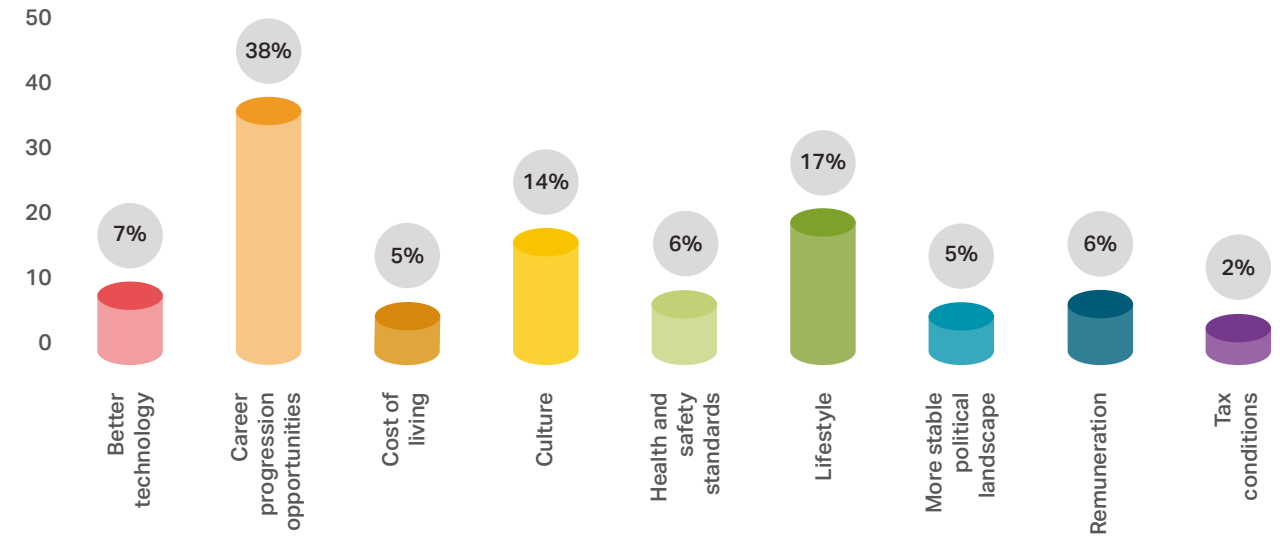
Europe was the most desirable destination; the top choice of 35 per cent of professionals. The Middle East and North America were next favourites at 19 and 15 per cent respectively.

"These destinations are not surprising," says Marx. "These regions are investing heavily in renewables, so candidates can have their pick between some very exciting projects."

Peet comments: "It's interesting to see renewables becoming more mobile. Only a few years ago, this was a sector that preferred to keep talent local. But as skills shortages hit, that became more relaxed. Last year's survey showed that the sector was looking to other energy sectors to fill roles – perhaps this openness increasingly extends to other regions too."

Although, to an extent, this sense of localism remains. Sixteen per cent said there weren't opportunities for them to relocate – more than any other sector.

WHAT IS YOUR MAIN REASON FOR BEING ATTRACTED TO A NEW LOCATION?



4. A LOOMING CRISIS?

Uniquely among the energy sectors, renewables professionals ranked the political landscape as the most worrying issue for their sector. Twenty-four per cent selected this concern, ahead of innovation, skills shortages and climate change (all 18 per cent).

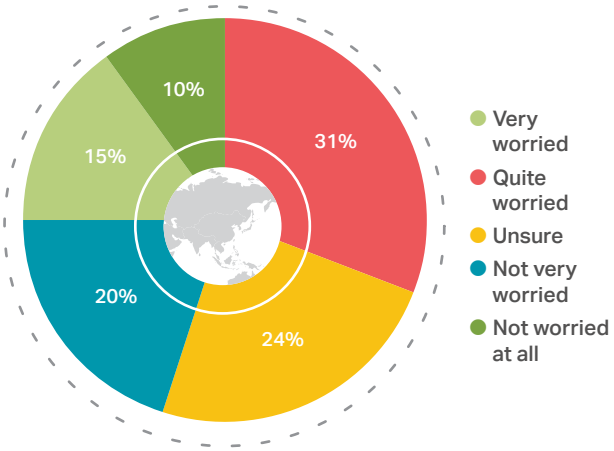
According to Marx: "This makes sense – after all, more so than any other sector, renewables depends on subsidies, which depend in turn on political goodwill – which isn't always guaranteed."

However, despite not taking the top spot, the skills crisis is very real. Thirty-one per cent of workers are quite worried and 15 per cent are very worried by the issue, versus 20 per cent not very worried and only 10 per cent not concerned at all.

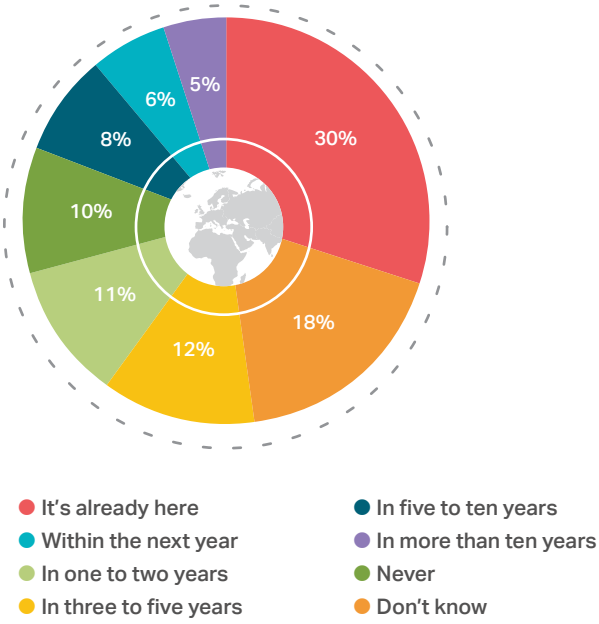
Interestingly, concern escalates among the young – and renewables is a young sector. More than half of under-25s (54 per cent) were worried, against 46 per cent of career-prime professionals and 40 per cent of those aged 55 or over.

Peet comments: "Perhaps the young are nervous that they'll be stuck cleaning up the messes of previous generations. They entered this sector because they wanted to see change and are worried they're not seeing it fast enough."

HOW WORRIED ARE YOU ABOUT AN IMPENDING TALENT CRISIS IN YOUR SECTOR?



WHEN DO YOU THINK THE CRISIS WILL HIT YOUR SECTOR?



How pressing is the sense of crisis? Just under 60 per cent believe it will be with us within the next five years, including 30 per cent convinced that it's already here. Only a tenth think the crisis won't ever hit and five per cent see it as a future problem that will take more than 10 years to arrive. The fact that 49 per cent say their company has already been directly affected by a skills shortage – versus 36 per cent who haven't – reinforces this finding.

"Perhaps the young are nervous that they'll be stuck cleaning up the messes of previous generations. They entered this sector because they wanted to see change and are worried they're not seeing it fast enough."

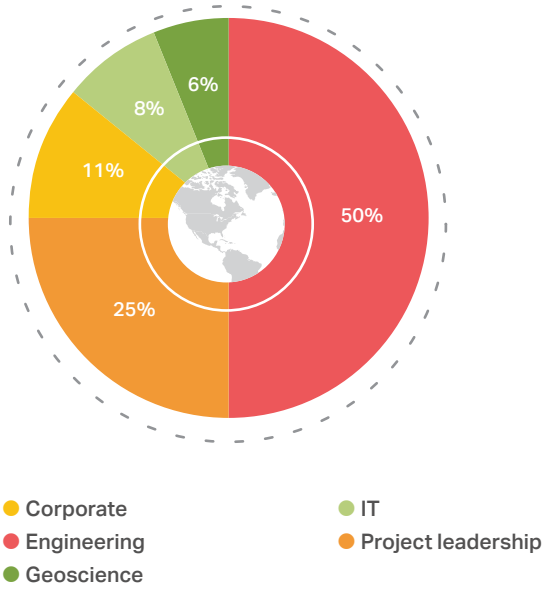
– Hannah Peet

5. SKILLS

BLUE-COLLAR BLUES

Even if the majority don't think the sector has quite hit crisis mode, there is a clear need for new engineers. Half of respondents said engineering was the discipline hit hardest by talent shortages, ahead of project leadership at 25 per cent. Within engineering, mechanical and electrical/E&I engineers (both 25 per cent) were the most needed, followed by R&D (20 per cent).

WHICH DISCIPLINE IS MOST AFFECTED BY TALENT SHORTAGES?



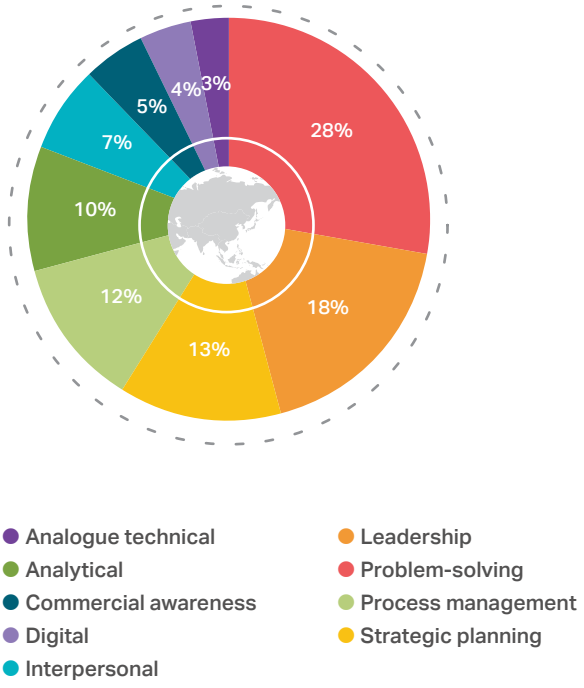
The types of skills most affected are problem-solving (28 per cent), leadership (18 per cent), strategic planning (13 per cent) and process management (12 per cent).

Peet argues that, "The types of skills in demand reflects the skills profile needed by distributed energy resources – with more numerous, smaller projects dotted around, leadership and planning are especially important."

At the same time, there's a pressing need for blue-collar talent, with a real shortage of individual technical contributors. This is borne out by the top reason for the skills shortage being cited as lack of apprenticeship opportunities by 38 per cent.

However, that answer changes significantly depending on who you ask. Older professionals overwhelmingly cited the retiring workforce as the biggest concern (46 per cent), with apprenticeships a distinct second (41 per cent). For under-25s though, apprenticeships are number one (48 per cent), far outstripping any other worry.

WHICH TYPE OF SKILLS IS MOST AFFECTED BY TALENT SHORTAGES?



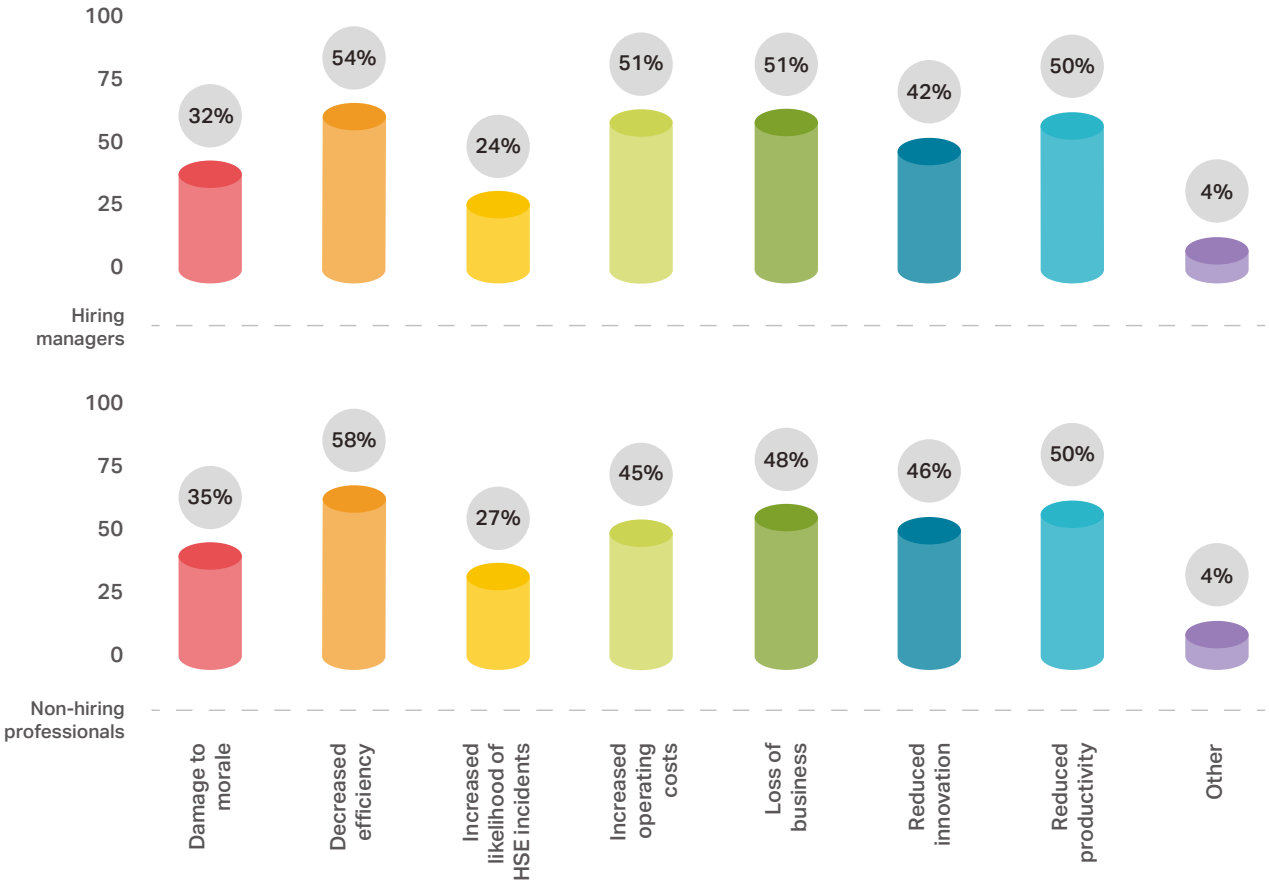
If these skills shortages aren't plugged, the biggest risks according to professionals will be decreased efficiency, loss of business and reduced productivity.

Marx comments: "As a distributed sector, renewables need a lot of local blue-collar talent – which means investing in apprenticeship schemes. The sector is doing so, but apparently not at the pace required."

"The types of skills in demand reflects the skills profile needed by distributed energy resources – with more numerous, smaller projects dotted around, leadership and planning are especially important."

– Hannah Peet

WHAT ARE THE RISKS TO YOUR SECTOR OF FAILING TO PLUG ITS TALENT GAPS?



6. ATTRACTING TALENT

NO PROBLEM FOR RENEWABLES?

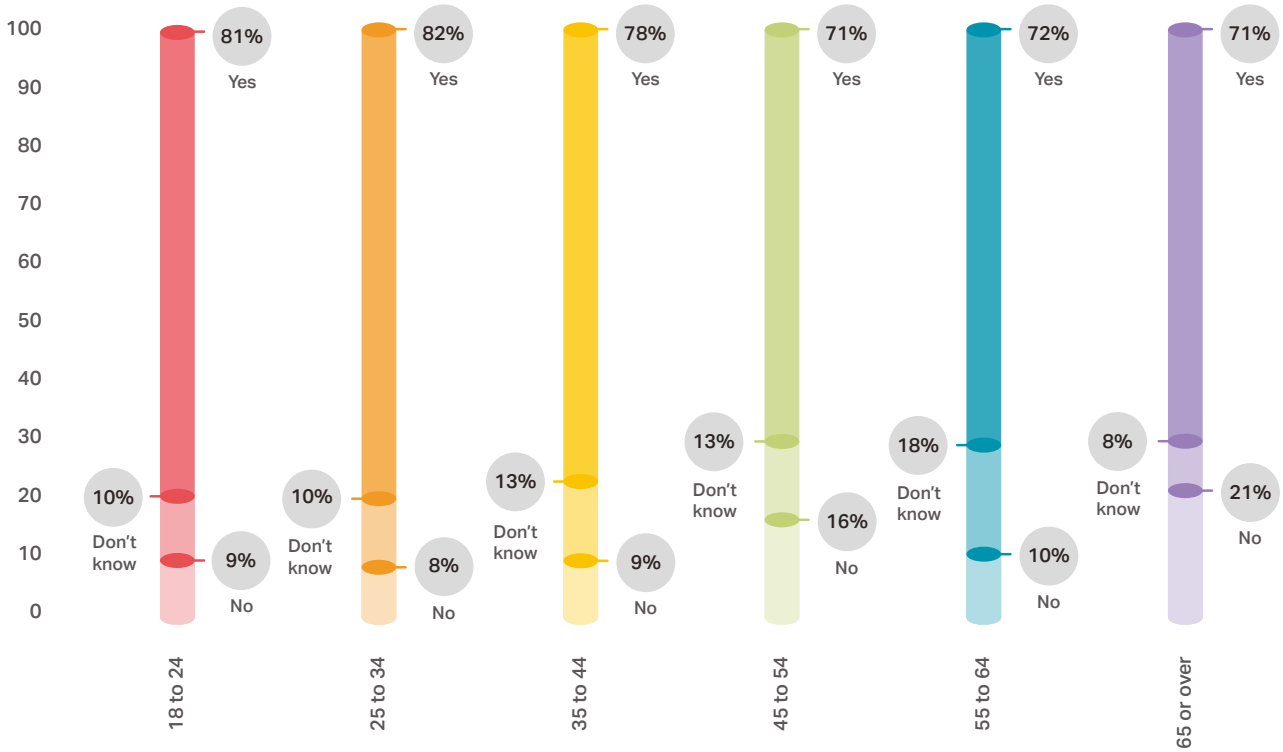
The sense of crisis is potentially lower in renewables owing to its relative popularity. As with last year, renewables was the top destination for talent in other sectors looking for a change, and 78 per cent of current renewables professionals would still pursue a career in the sector if given their time again.

This trend is especially pronounced among the young, with 85 per cent of under-25s still keen, followed by 78 per cent of 25-55s, and 62 per cent of those aged over 55.

"We know renewables is a young sector and that youthful enthusiasm seems to be undimmed. Perhaps it's that young demographic that also encourages companies to look for internal solutions to talent shortages – young professionals are perhaps more open to training in automated and digital technologies."

– Hannah Peet

IF YOU WERE ENTERING THE INDUSTRY NOW, WOULD YOU PURSUE A CAREER IN YOUR SECTOR?



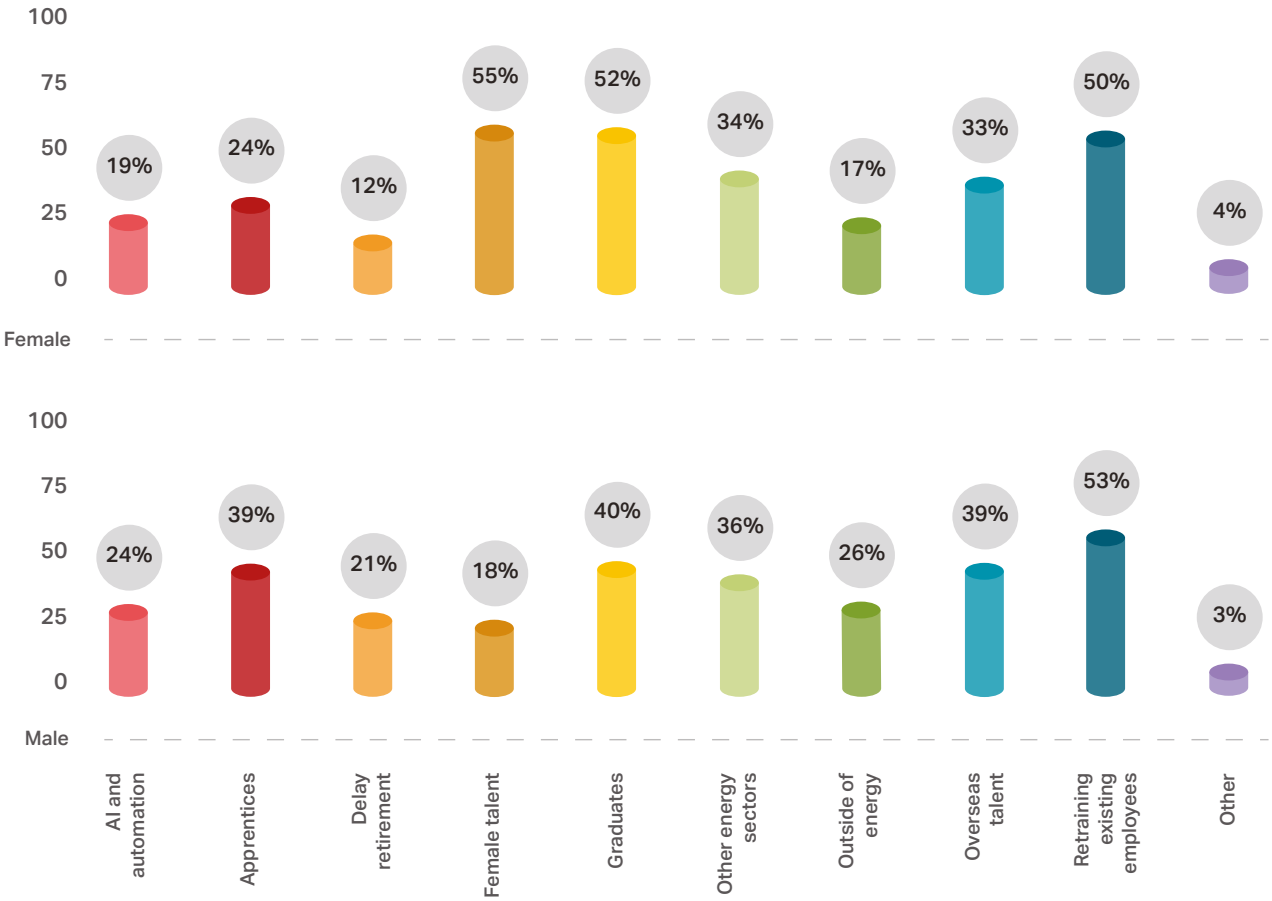
To get the necessary skills into the sector, the most popular avenue was retraining existing employees at 53 per cent. Graduates (42 per cent), looking overseas (38 per cent) and apprentices (37 per cent) took the next spots.

Peet says: "We know renewables is a young sector and that youthful enthusiasm seems to be undimmed. Perhaps it's that young demographic that also encourages companies to look for internal solutions to talent shortages – young professionals are perhaps more open to training in automated and digital technologies."

However, it's not completely plain sailing for companies in the sector. While 39 per cent thought their firms were doing enough to attract new talent, 38 per cent said the opposite.

In order to perform better on that front, 56 per cent suggested better training would attract more talent, 49 per cent said clearer career progression and 41 per cent pointed to increased remuneration and benefits.

WHERE SHOULD COMPANIES IN YOUR SECTOR BE LOOKING TO GET THE SKILLS IT NEEDS? (split by gender)



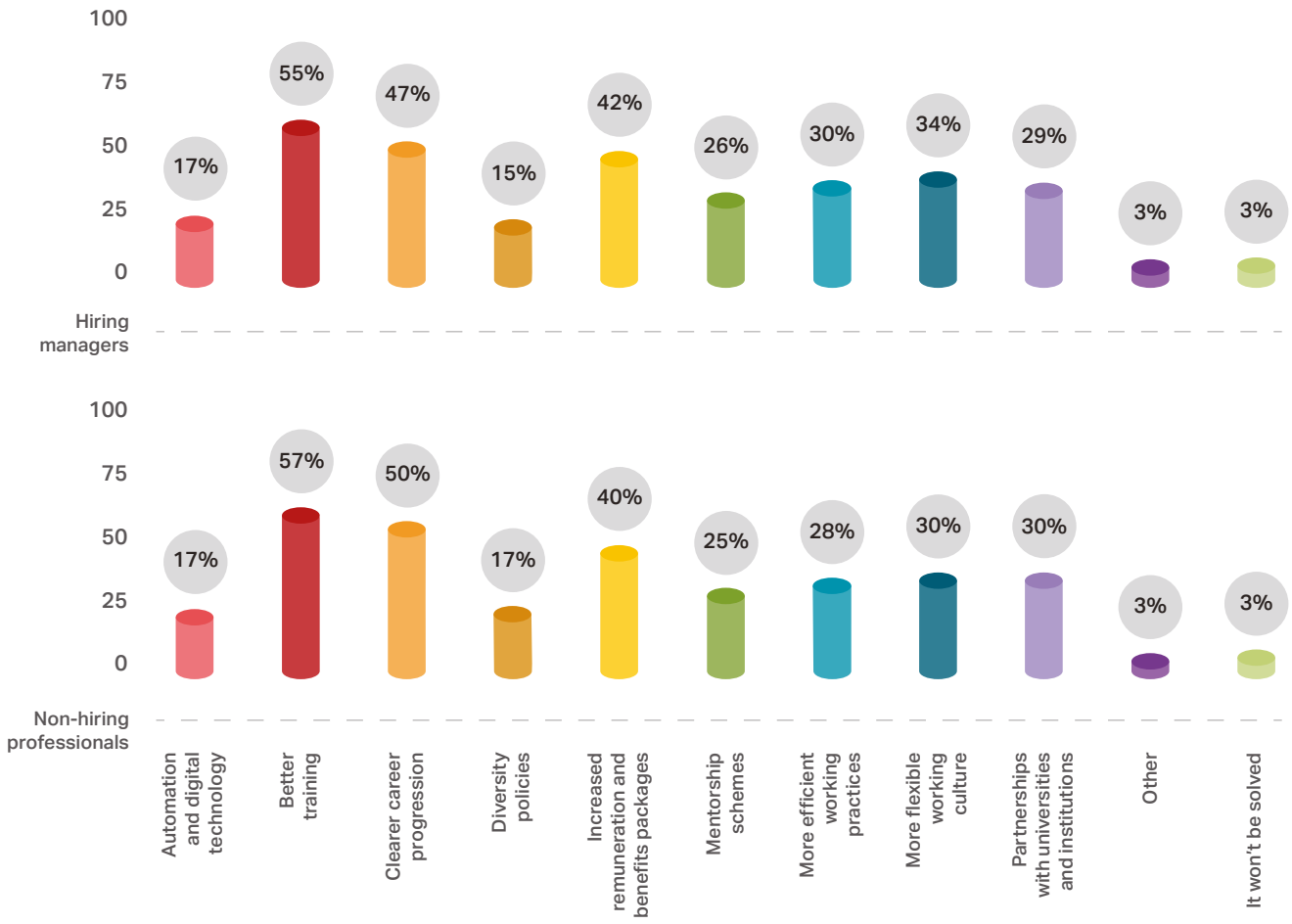
Younger workers were less likely than their peers to cite remuneration and benefits as important to attract talent – just 30 per cent cited this compared to 41 per cent of those in their prime and 45 per cent of older professionals. A similar pattern applied to career progression. However, they were more likely to prioritise partnerships with universities and other institutions. Forty per cent pointed to this option versus just 28 per cent and 29 per cent of workers in their prime and over-55s respectively.

Marx says: "The fact that younger workers prioritise pay less perhaps reflects fewer responsibilities in life. On the other hand, it could be that a greater sense of idealism drives at least some of them. In either case, the testimony of hiring managers on salary expectations suggests it may be more important than young professionals think when push comes to shove."

"The fact that younger workers prioritise pay less perhaps reflects fewer responsibilities in life. On the other hand, it could be that a greater sense of idealism drives at least some of them."

– Janette Marx

HOW CAN COMPANIES IN YOUR SECTOR BETTER ATTRACT THE RIGHT TALENT?



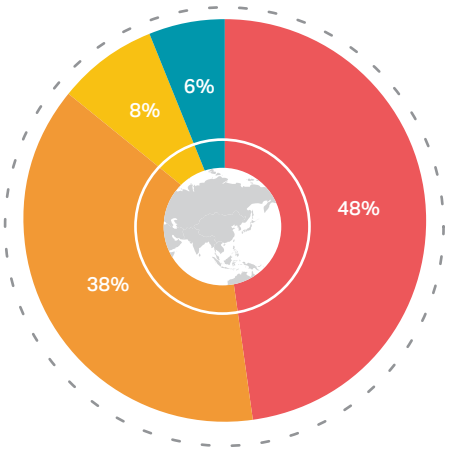
7. RETAINING TALENT

WANDERLUST

By far the biggest shock for the renewables sector in this year's survey is the challenge in retaining talent. Last year, only 43 per cent of professionals said they were open to changing sectors. This year, that contentment seems to have dissipated, as 77 per cent are now open to a move. Power and oil and gas are the most popular destinations.

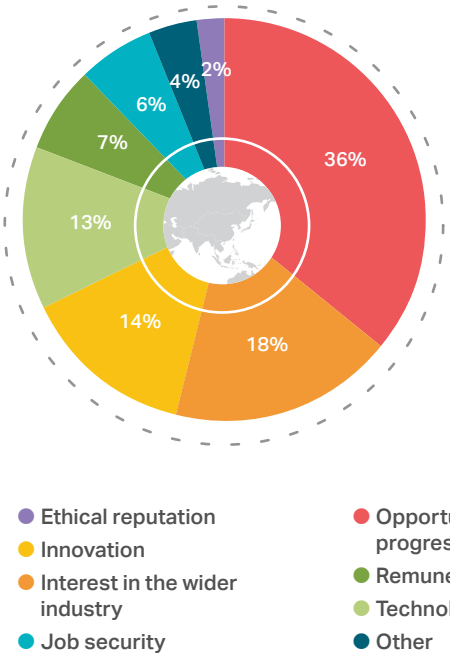
Marx comments that, "The jump in renewables professionals willing to move is one of the big surprises of this year's survey. The destinations: less so – power is the most similar sector and oil and gas the best paid – but last year nowhere near as many people were looking to move."

IF YOU WOULD CONSIDER SWITCHING SECTORS, WHICH SECTOR WOULD YOU BE MOST INTERESTED IN SWITCHING TO?



The reasons for moving echo those given in other sectors. Career progression was first (36 per cent), interest in the wider industry second (18 per cent) with innovation (14 per cent) and technology (13 per cent) following.

WHAT IS YOUR MAIN REASON FOR CHOOSING THIS SECTOR?



Peet says: "Despite pay going up, and there being apparent happiness with the sector, a lot of people are ready to move. Perhaps this reflects unease about the sector's long-term prospects, either due to skills shortages, political considerations or a combination of factors. In any case, it's something for companies to keep an eye on."

"The jump in renewables professionals willing to move is one of the big surprises of this year's survey."

– Janette Marx

Summary Renewables

On the surface, it looks like a great year for the renewables sector. Most professionals enjoyed pay rises and expect more; most would enter the sector again if choosing from scratch and, though there is a skills shortage, renewables has the pull to attract talent from other sectors if necessary. Yet, despite all these strengths, the sector is threatened by a new and sizeable challenge in keeping hold of talent.

Peet says: "It's possible that renewables companies are complacent about the threat ahead, with everything seeming so good. However, hiring managers expect to start paying out a lot more raises next year, perhaps because they see exactly the retention challenge the sector faces. Hopefully, that foresight will be a saving grace because there are a lot of positives for the sector to build on."

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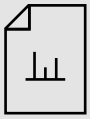
Nuclear

Contents: Nuclear



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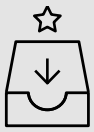

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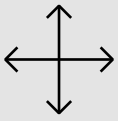


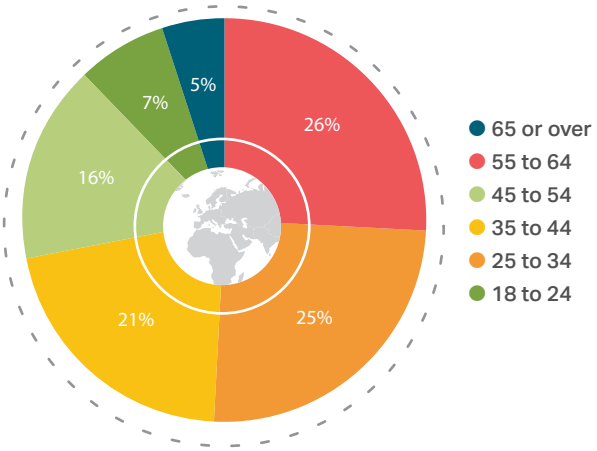
Summary 86

Nuclear

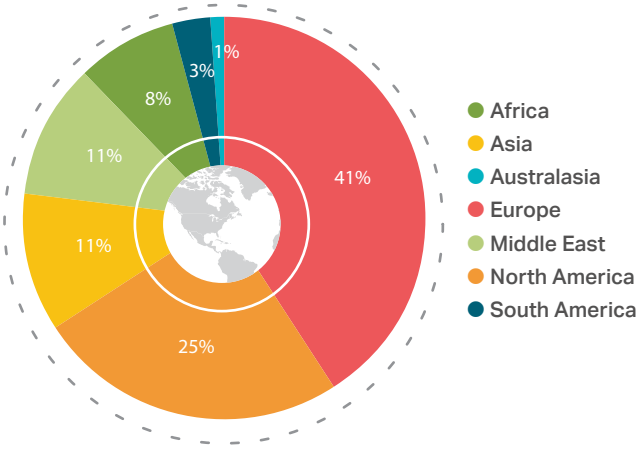
In a bid to attract new talent, the nuclear sector is working to transform its image. New projects and technologies will help shed outdated perceptions. But, to truly succeed, nuclear companies will need to be inventive with how they source and nurture their workforce.

1. DEMOGRAPHICS

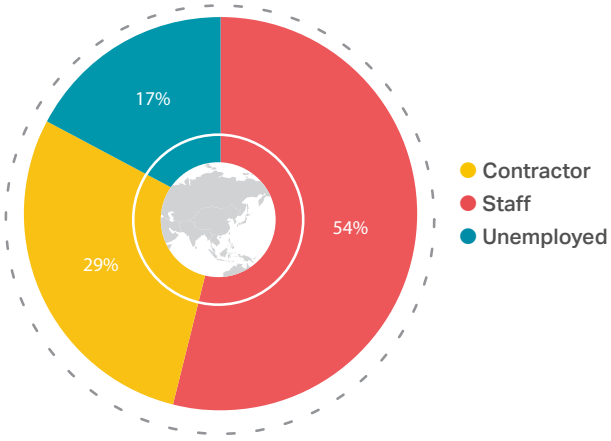
AGE



REGION



EMPLOYMENT STATUS



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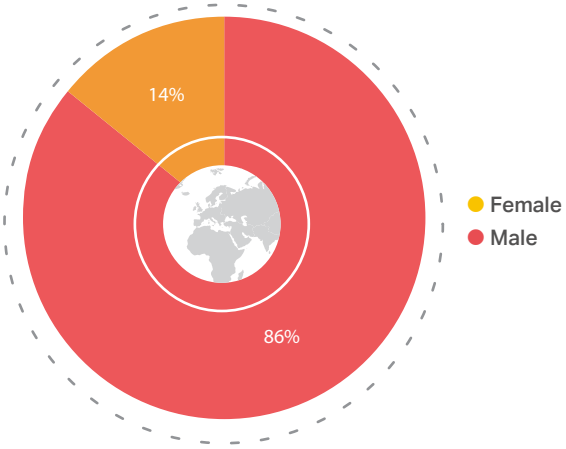


2. SALARIES

RISING RATES A TASTE OF THINGS TO COME?

There is an acute need for talent in the nuclear sector, for two key reasons.

First, certain roles are highly technical and specific to nuclear. These roles are tough to fill. Second, the workforce is older than that in other energy sectors. Nearly a third of professionals are aged 55 or above, compared to just 20 per cent in oil and gas.

Given that talent is in short supply, it's no surprise that salaries continue to grow. Fifty-two per cent of non-hiring professionals said that remuneration increased over the past year, a slight increase from the 48 per cent reported in the 2018 GETI report.

PERMANENT WORKER ANNUAL SALARY, USD (GLOBAL AVERAGE BASED ON SIX YEARS' EXPERIENCE)

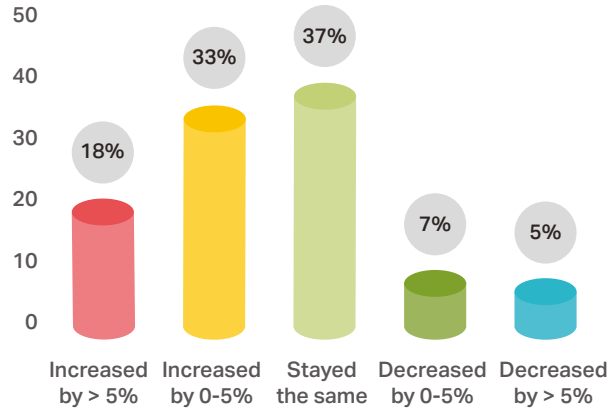
	Africa	Asia	Australasia	Europe	Middle East	North America
Business Development Manager	53,092	82,429	67,416	65,380	71,400	92,790
Chemical Engineer	55,180	63,112	51,598	62,300	54,448	96,000
Commercial Manager	47,820	74,953	53,700	67,460	65,932	82,496
Commissioning Manager	39,270	64,260	55,597	63,160	52,583	90,782
Construction Manager	63,694	73,930	54,788	65,876	93,227	118,565
Electrical Engineer	61,630	72,947	63,230	56,053	81,660	103,160
Environmental Engineer	38,234	68,557	63,412	65,383	62,805	92,820
Facilities Manager	42,095	53,504	65,304	54,970	57,592	67,046
HSE Manager	45,649	79,369	58,798	59,164	80,590	83,549
Maintenance Engineer	42,502	67,475	55,976	64,305	62,774	91,790
Mechanical Engineer	77,528	73,826	54,713	56,039	75,317	96,400
Nuclear Engineer	40,395	82,570	51,880	49,763	43,939	108,250
Planner/Scheduler	32,872	65,327	54,791	57,105	57,612	84,574
Process Engineer	52,023	58,889	50,220	67,458	54,407	103,160
Project Manager	63,737	83,583	58,021	69,700	79,552	91,790
Purchasing Manager/Buyer	32,842	57,798	65,421	65,000	55,405	79,300
QA/QC Manager	41,380	59,526	56,023	60,020	56,536	76,400
R&D Scientist	38,079	69,663	48,048	66,942	42,909	84,000
Supply Chain Manager	35,893	48,119	53,566	55,334	49,216	72,100
Training Coordinator	35,800	45,084	77,106	64,355	47,444	65,010

CONTRACT WORKER DAY RATE, USD (GLOBAL AVERAGE BASED ON SIX YEARS' EXPERIENCE)

	Africa	Asia	Australasia	Europe	Middle East	North America
Business Development Manager	420	555	510	533	465	580
Chemical Engineer	350	375	368	430	405	420
Commercial Manager	430	490	470	525	500	565
Commissioning Manager	450	540	520	638	520	740
Construction Manager	470	560	540	642	550	675
Electrical Engineer	515	490	452	508	525	580
Environmental Engineer	270	420	380	350	283	370
Facilities Manager	400	470	473	540	414	535
HSE Manager	440	530	515	565	450	475
Maintenance Engineer	416	483	490	540	418	485
Mechanical Engineer	330	353	364	509	389	613
Nuclear Engineer	350	380	400	462	435	495
Planner/Scheduler	400	430	415	520	445	530
Process Engineer	375	444	435	600	555	608
Project Manager	395	454	445	566	420	546
Purchasing Manager/Buyer	440	510	469	620	544	575
QA/QC Manager	430	480	450	550	470	640
R&D Scientist	435	474	420	480	440	525
Supply Chain Manager	276	430	405	535	370	465
Training Coordinator	249	375	345	400	340	346

Eighteen per cent said that their pay rose by more than five per cent, a figure that was above expectations. More surprisingly, however, 12 per cent reported a decrease in remuneration. This may have more to do with delayed retirements than with economic prospects.

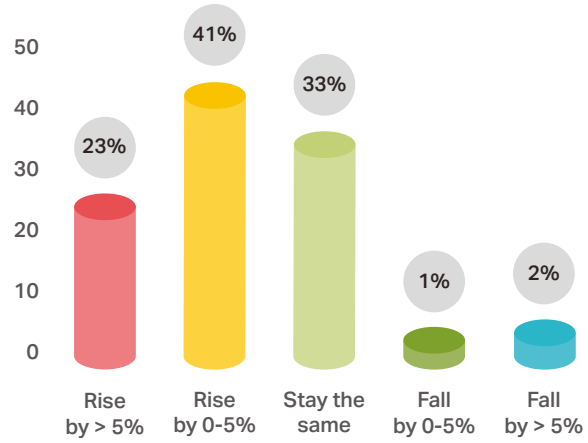
PAY CHANGES AMONG WORKERS IN THE LAST 12 MONTHS (non-hiring professionals)



"Any decrease in pay could easily come from older professionals who have moved from full-time to part-time roles," notes Hannah Peet, Managing Director at Energy Jobline. "Rather than jumping head-first into retirement, professionals are opting to work part-time."

Hiring managers sided with other professionals in terms of salary changes over the last year. It's worth noting that these managers were far more likely to report larger spikes in remuneration: 33 per cent said that pay had risen by more than five per cent, compared to just 18 per cent among non-hiring professionals.

PAY EXPECTATIONS AMONG WORKERS IN THE NEXT 12 MONTHS (non-hiring professionals)



Across the board, the industry is optimistic about wage growth – 66 per cent of hiring managers and 64 per cent of non-hiring professionals expect increases over the next year. Hopes are especially high in Africa and the Middle East, where at least 80 per cent of respondents predict that pay will rise.

"Any decrease in pay could easily come from older professionals who have moved from full-time to part-time roles. Rather than jumping head-first into retirement, professionals are opting to work part-time."

– Hannah Peet

3. GLOBAL MOBILITY

IN SEARCH OF OPPORTUNITY

Senior managers and executives in the nuclear sector typically stay with their companies for a long time. So younger professionals who are eager to progress into these roles are having to look elsewhere.

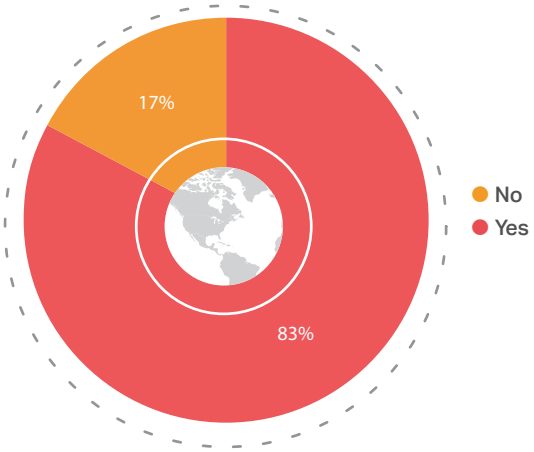
Indeed, the desire for advancement is evident in this year's global mobility data. Eighty-three per cent of professionals said they would consider relocating to another region. Career progression was the leading driver behind a potential move.

"Eighty-three per cent is surprising, considering how localised the nuclear workforce has been historically," says Janette Marx, Chief Executive Officer at Airswift. "With the Middle East and Asia becoming hotbeds of new activity, we could see more professionals uprooting themselves to find better career opportunities."

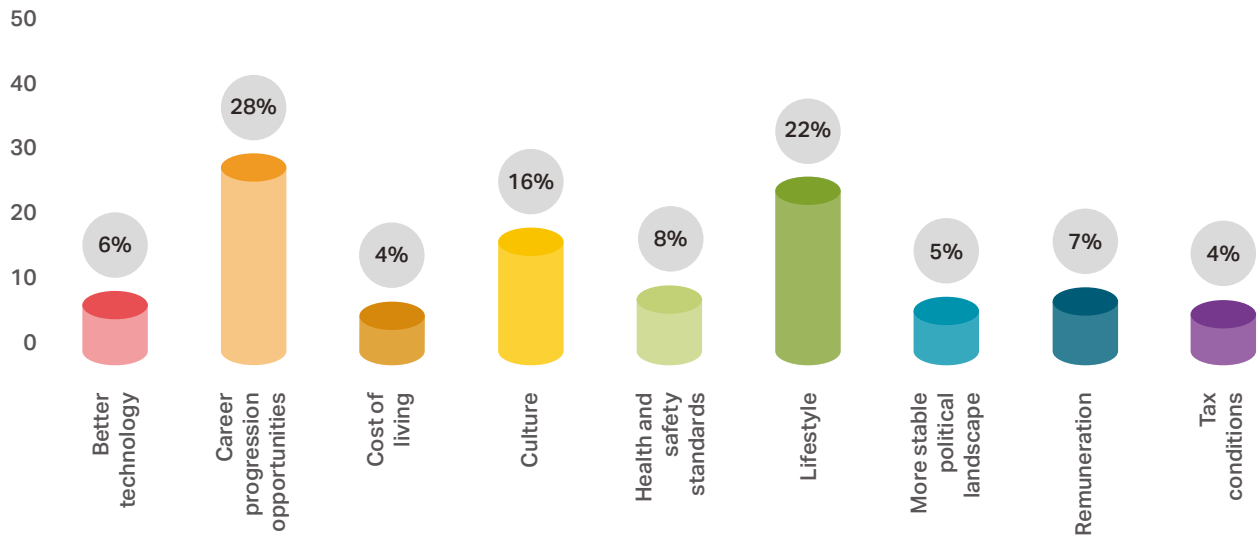
That said, there may be a mismatch between where workers want to go and where the opportunities are located. Europe was the region of choice for potential moves, followed by North America.

"Ultimately, this mismatch could hasten a skills crunch and cause booming regions to struggle if more professionals aren't willing to move where the opportunities are," says Marx.

WOULD YOU CONSIDER RELOCATING TO ANOTHER REGION FOR YOUR JOB?



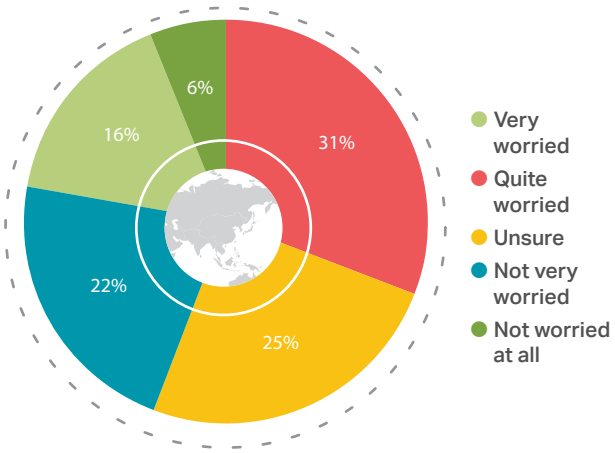
WHAT IS YOUR MAIN REASON FOR BEING ATTRACTED TO A NEW LOCATION?



4. A LOOMING CRISIS?

Professionals and observers alike have warned of a talent crisis for years. So it's not surprising to see that nuclear professionals were the most likely in the industry to say that the skills shortage has already impacted their companies. Over three-quarters of respondents based in South America said they were affected; those from Africa and North America also reported being highly impacted.

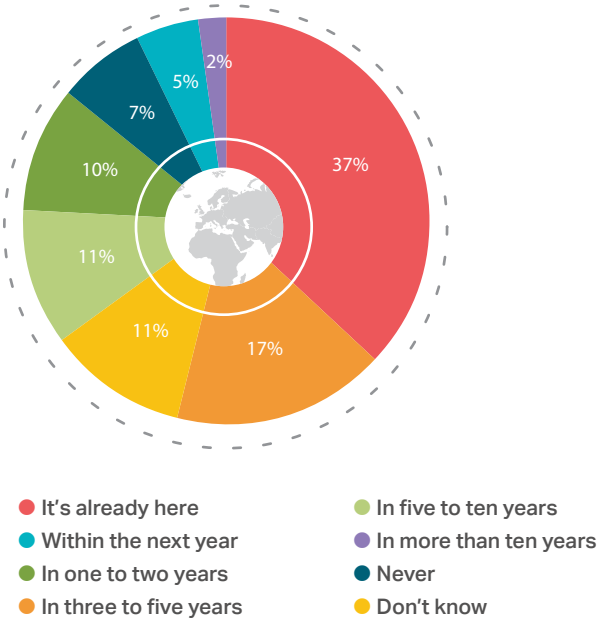
HOW WORRIED ARE YOU ABOUT AN IMPENDING TALENT CRISIS IN YOUR SECTOR?



All this being said, the talent crunch may be unfolding more slowly than anticipated. Thirty-seven per cent of respondents said that the shortage was already happening, a lower rate than that of the oil and gas sector and not far off the industry average.

More surprisingly, younger professionals weren't as fazed as their peers in other sectors. Just over a third of respondents under the age of 25 said they were worried about a skills shortage, one of the lowest such figures across the industry.

WHEN DO YOU THINK THE CRISIS WILL HIT YOUR SECTOR?



That's not to say that professionals aren't concerned about whether the skills shortage could deepen. In particular, respondents said that the political landscape was worrisome – namely how the fallout from Brexit could adversely impact the supply of talent.

According to Peet, "Nuclear companies in the UK hire a lot of their workforce from the European Union. Naturally, hiring managers are worried about whether Brexit will squeeze their flow of talent. And professionals working in the UK are concerned about their ability to remained employed in the country."

*"Naturally, hiring managers are worried about whether Brexit will squeeze their flow of talent." – **Hannah Peet***

5. SKILLS

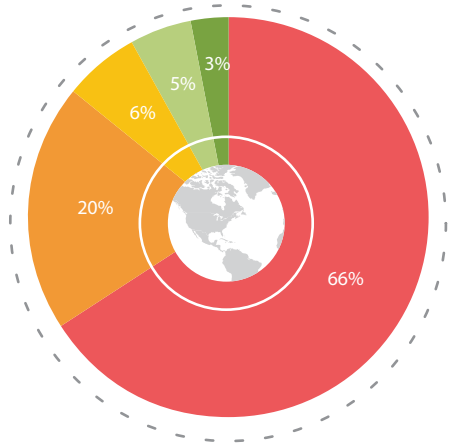
THE NEED FOR CREATIVE APPROACHES

Engineers are in high demand. Around one-third of survey respondents said that mechanical and electrical engineering were the areas most impacted by talent shortages.

Again, these roles have been challenging to fill due to the distinct requirements of nuclear energy. However, the solution may not be as unattainable as hiring managers think.

Mechanical and electrical engineers from other areas of the energy industry have the core skills to succeed in nuclear. All that's needed to fill any gaps is a robust nuclear-specific training programme, which most firms in the sector already provide.

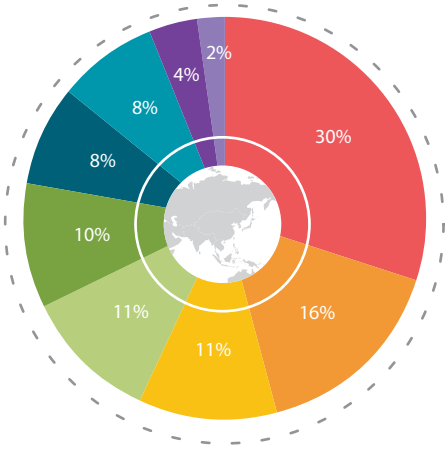
WHICH DISCIPLINE IS MOST AFFECTED BY TALENT SHORTAGES?



- Corporate
- Engineering
- Geoscience
- IT
- Project leadership

With this training in place, hiring managers could find the engineers they need by recruiting from other sectors. And considering that other in-demand skill sets – like problem-solving and leadership – are also easily transferrable, opening up the candidate pool could be highly beneficial.

WHICH TYPE OF SKILLS IS MOST AFFECTED BY TALENT SHORTAGES?



- Analogue technical
- Analytical
- Commercial awareness
- Digital
- Interpersonal
- Leadership
- Problem-solving
- Process management
- Strategic planning

"Hiring managers are warming up to the idea of hiring individuals without nuclear backgrounds," says Peet. "It's something that talent acquisition leaders understand; now it's up to the managers to put this into practice."

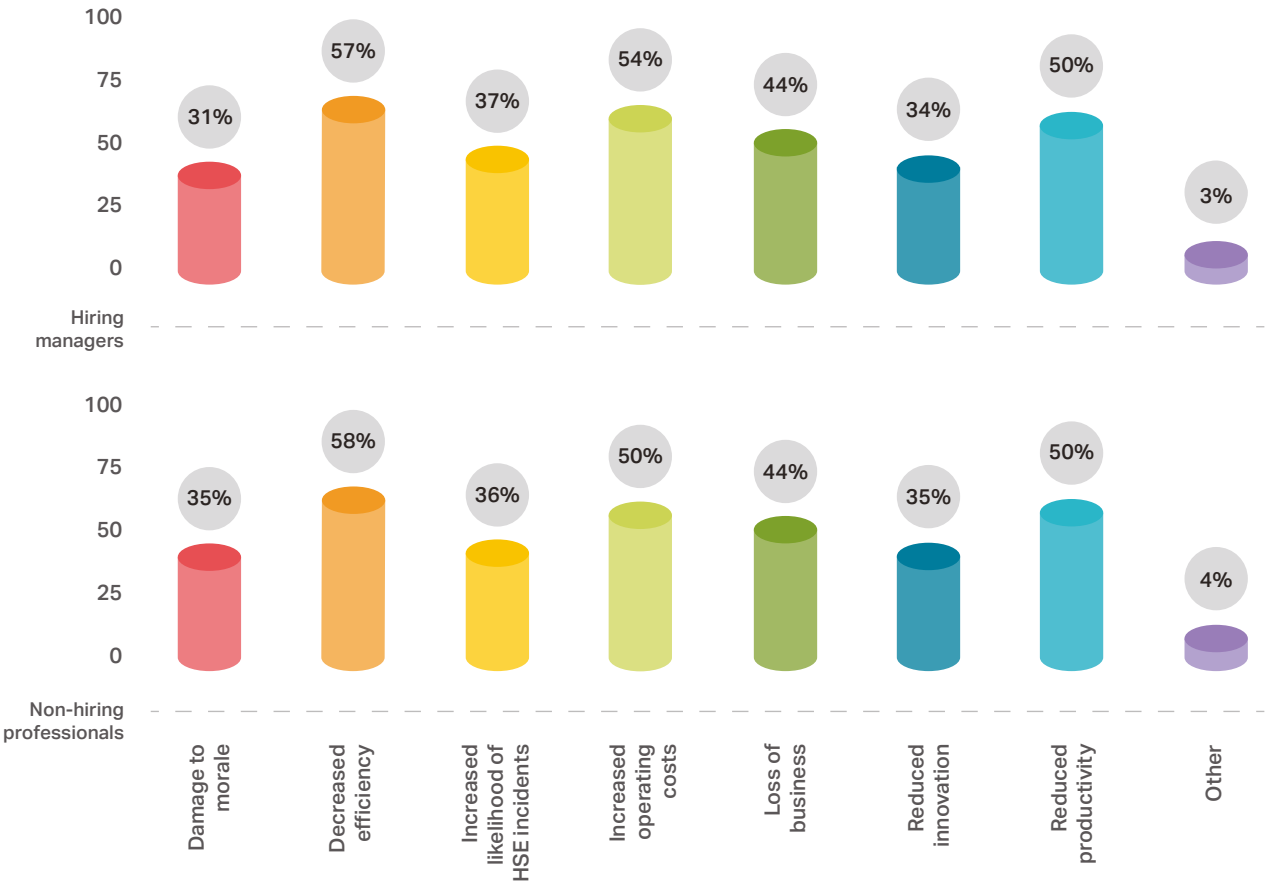
*"New projects in the nuclear sector are technologically advanced. Digitalisation means that some roles no longer require individuals to be in physical proximity to the plants, which is going to facilitate more flexible working opportunities and widen the pool of candidates." – **Janette Marx***

Expanding apprenticeships and university graduate schemes is another approach – and nuclear companies have been doing just that. One interesting example comes from China, where a chronic shortage of professionals has inspired the creation of a 'nuclear university' – an institution dedicated solely to developing new nuclear talent.

Additionally, digitalisation will help alleviate the pain of any talent crunch. The operational efficiencies and cost savings achieved through automation would counteract what professionals deem to be the greatest risks of the skills gap.

"New projects in the nuclear sector are technologically advanced," says Marx. "Digitalisation means that some roles no longer require individuals to be in physical proximity to the plants, which is going to facilitate more flexible working opportunities and widen the pool of candidates."

WHAT ARE THE RISKS TO YOUR SECTOR OF FAILING TO PLUG ITS TALENT GAPS?



6. ATTRACTING TALENT

CHARTING A CLEAR COURSE

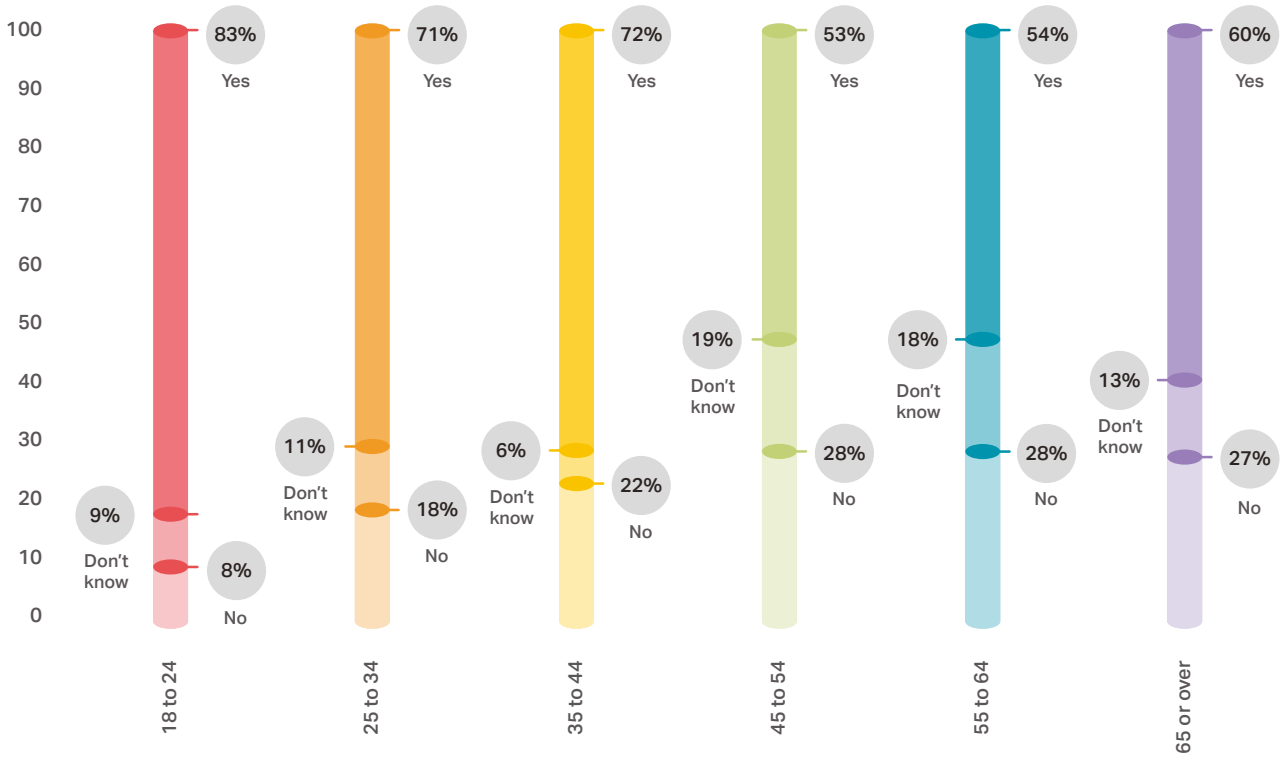
With the influx of new talent slowing down, companies will have to be resourceful with the talent they have. Upskilling and re-training will be essential.

Indeed, nuclear professionals recognise the need to look within for solutions. The majority of respondents said that retraining existing employees is an ideal way to close the skills gap.

"In regions where talent is especially in demand, nuclear companies are recruiting former professionals out of retirement and relocating them to train up local staff."

– Hannah Peet

IF YOU WERE ENTERING THE INDUSTRY NOW, WOULD YOU PURSUE A CAREER IN YOUR SECTOR?



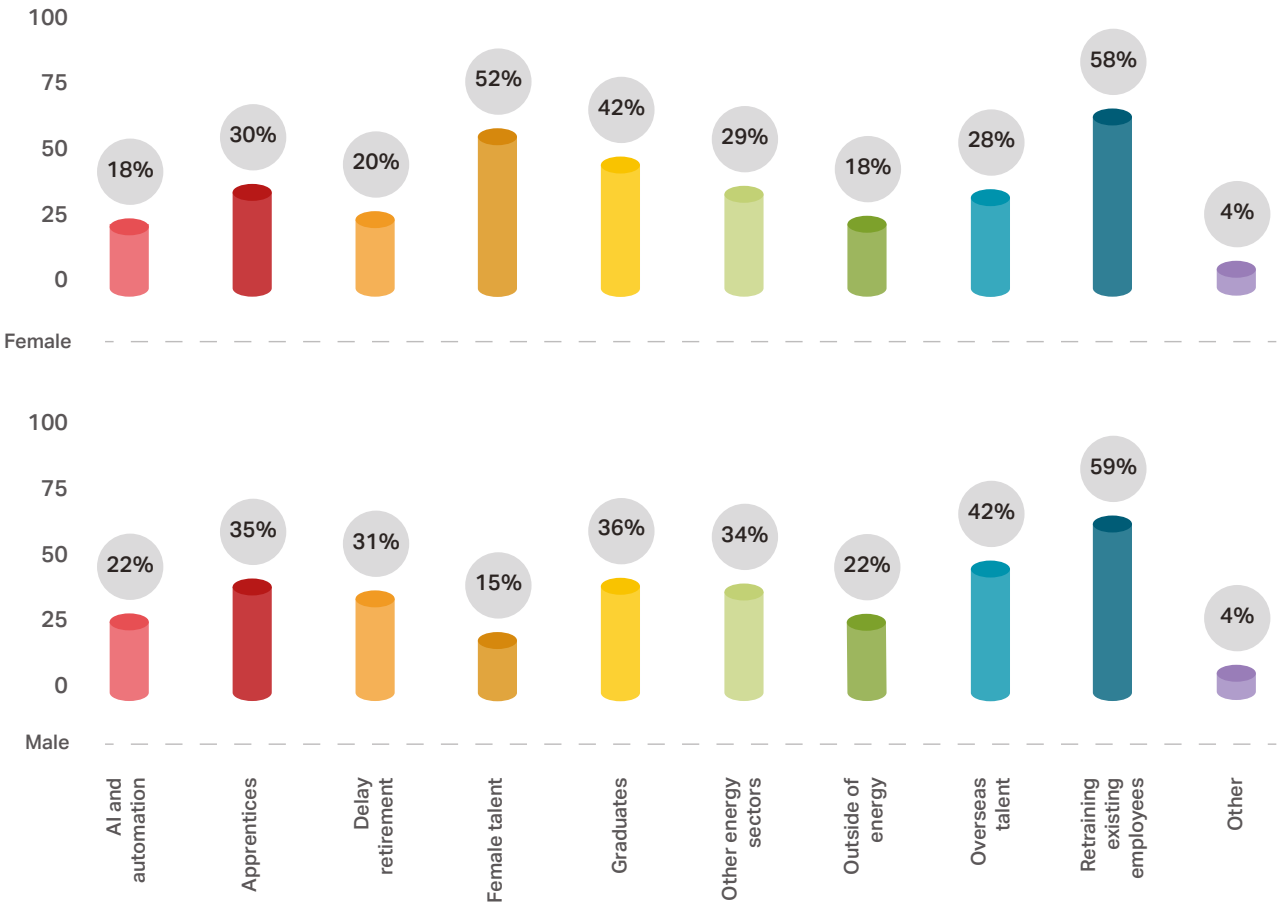
Companies are taking active steps to help strengthen their training programmes. According to Marx, "In regions where talent is especially in demand, nuclear companies are recruiting former professionals out of retirement and relocating them to train up local staff."

On top of training, distinct paths for career development are essential for recruitment. Over half of the professionals surveyed said that clearer career progression is needed to attract the right talent. Better training and higher pay were also important. According to Peet, "This desire for better training may reflect the rise of digitalisation and the need to upskill for new technologies."

"This desire for better training may reflect the rise of digitalisation and the need to upskill for new technologies."

– Hannah Peet

WHERE SHOULD COMPANIES IN YOUR SECTOR BE LOOKING TO GET THE SKILLS THEY NEED? (split by gender)



In last year's report, we noted that young professionals in the nuclear sector were especially enthusiastic about digitalisation. This interest in working with innovative technologies may explain why these individuals aren't as enamoured by pay. Respondents under the age of 25 were far less likely than their older peers to say that compensation was important for recruitment.

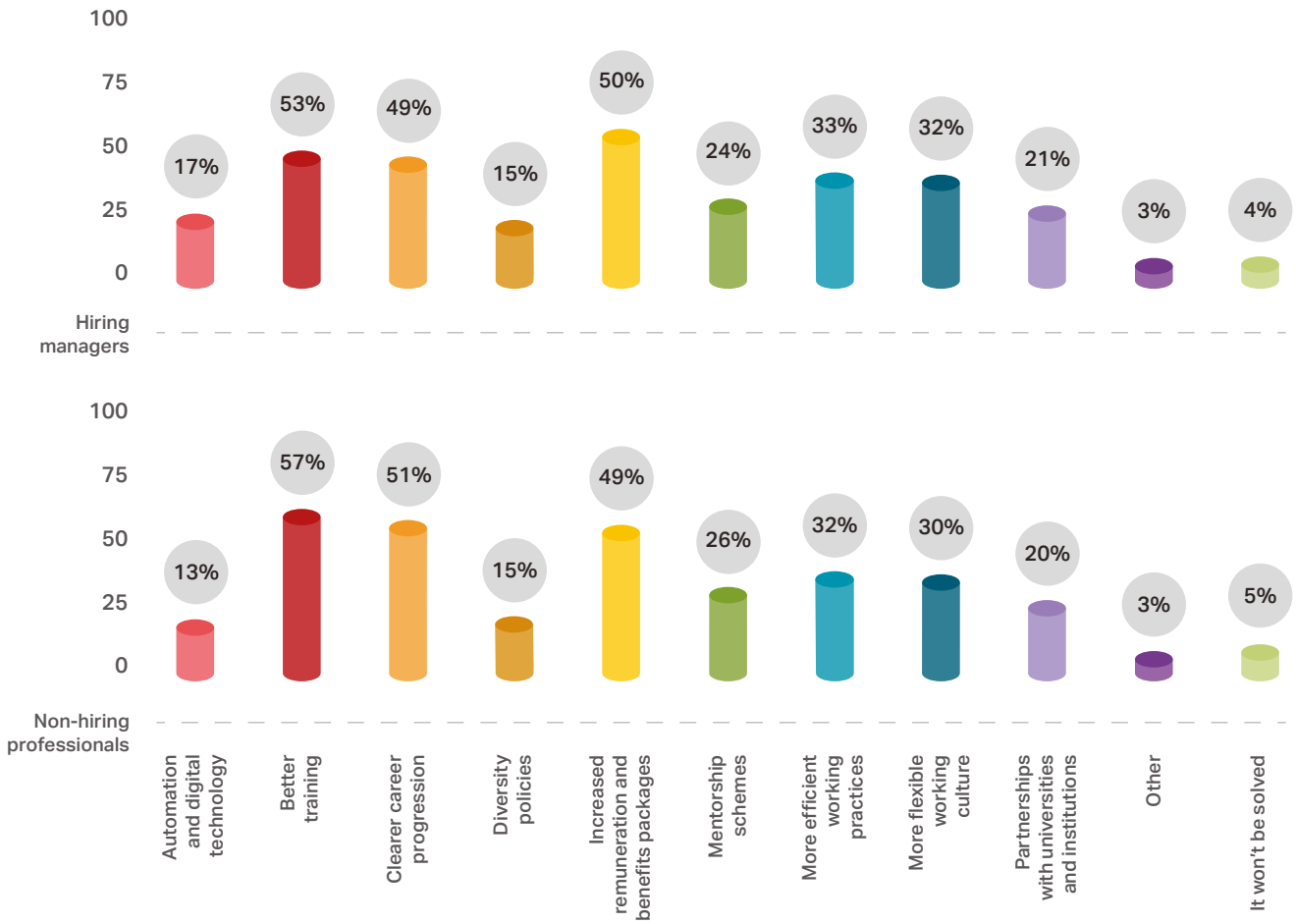
Younger professionals were also more confident in their decision to enter the sector. This optimism, however, is countered by a sense of remorse at the other end of the age spectrum. Twenty-eight per cent of people aged 55 or over would rethink their career choice if they were starting out today.

Any company seeking to cultivate a happy workforce would certainly do well to create a vibrant, diverse working environment. Considering this, and the need to source talent from all avenues, it would be advantageous for nuclear companies to hire more female professionals.

Unfortunately, this thinking has yet to catch on with the workforce. Just 15 per cent of male respondents saw closing the gender gap as a way to address skills shortages, compared to 55 per cent of women.

"This could be a big missed opportunity if greater efforts aren't taken to recruit women," comments Marx. "Given how tough it can be to attract new talent, the sector can't afford to overlook the role that women can play in addressing skills needs."

HOW CAN COMPANIES IN YOUR SECTOR BETTER ATTRACT THE RIGHT TALENT?



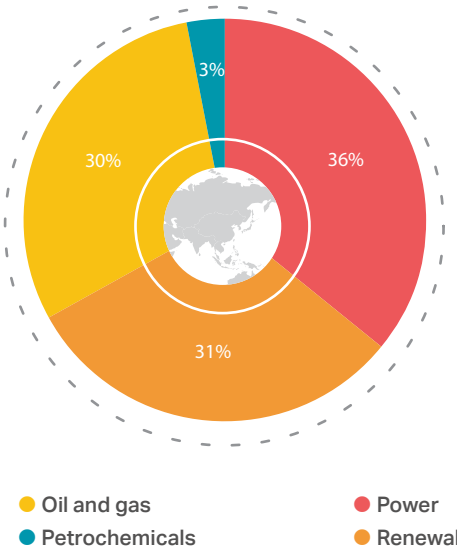
7. RETAINING TALENT

TAKING THE POWER FROM POWER

Nuclear companies have their work cut out for them. Not only do they need to find inventive ways to address skills shortages, they need to ensure that their workforce isn't lured away by attractive opportunities elsewhere.

To do this, nuclear companies will have to emphasise their strengths relative to the power sector. Power was the destination of choice for nuclear professionals considering a move within the energy industry, followed closely by renewables.

IF YOU WOULD CONSIDER SWITCHING SECTORS, WHICH SECTOR WOULD YOU BE MOST INTERESTED IN SWITCHING TO?

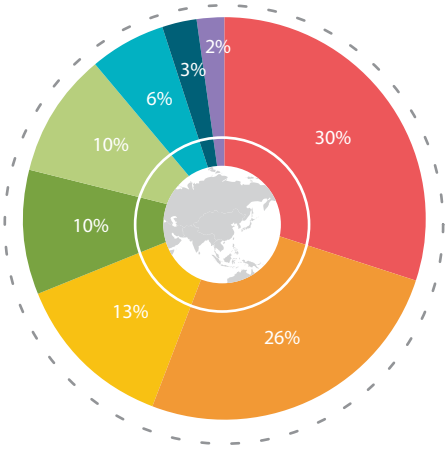


According to Peet, "Power is appealing because it is stable, growing and filled with opportunities to work with cutting-edge technologies. A lot of nuclear skills are transferable into power, which makes the leap easier."

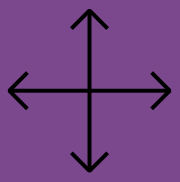
There is no shortage of emerging technologies in the nuclear sector. The issue is that these projects are moving along more slowly than those in power. To ensure that the patience of the workforce doesn't wear thin, companies will need to demonstrate a long-term commitment to technological innovation – and show people how they'll play an important part.

This theme of advancement also arises when looking at the motivators for a cross-sector move. The opportunity for progression was the leading reason, followed closely by curiosity in the wider industry.

WHAT IS YOUR MAIN REASON FOR CHOOSING THIS SECTOR?



Ultimately, hammering home a message of advancement, adaptation and evolution may help companies convince professionals that the future is bright in nuclear. As Peet notes, "People want to be more than just technical experts. They need to feel confident that they'll be able to find their place in a sector that continues to advance."



Summary Nuclear

Creativity and resourcefulness need to be at the center of any recruitment strategy. This means two things: hiring more professionals without nuclear experience, and showcasing the sector's technological development. The more that companies can convey the sector's vitality, innovation and growth, the more that individuals will see their potential.

"Nuclear professionals want to know that their careers will progress and that the sector will continue to evolve," says Peet. "Having a clear roadmap into the future should be a priority for companies."

Summary

The skills shortage that has loomed over the energy industry for years is rolling in. Hiring managers are worried about what may unfold. But with inventiveness and flexibility, they can weather the storm – and reach new heights in their efforts to recruit and retain talent.

What exactly do we mean by inventiveness? For starters, it means finding solutions in new or overlooked places. This includes being receptive to candidates from other sectors. For decades, talent has moved easily between oil and gas and petrochemicals; today, professionals have the skills to go between the power, renewables and nuclear sectors.

In the same vein, a recognition of the importance of female talent could be the next great leap forward for the industry. Women account for no more than 14 per cent of the workforce in any sector; in some sectors, this total is around eight per cent. Elevating these totals would be advantageous for the industry. And yet, only a tenth of male respondents said that hiring more female professionals would be a viable way to close the skills gap, compared to over half of the women surveyed.

Many energy companies have pledged to address the gender gap. These organisations are adopting new recruitment practices to bring more women into the industry. Technology is helping to digitise physically burdensome tasks and facilitate flexible working, removing some of the barriers for women. The next step will require a shift in mindsets, wherein more professionals embrace the value of an expanded female workforce.

Additionally, companies will benefit from efforts to develop more blue-collar talent. Every sector, even technology-heavy ones like renewables and nuclear, needs blue-collar skills. Many blue-collar professionals will move for lucrative opportunities, but even the prospect of generous pay isn't enough to secure the talent needed, as persistent shortages in some areas of the US for oil and gas projects show.

The answer to the blue-collar challenge may lie at the local level. As we've seen in many sectors, training and development programmes for surrounding communities has proven effective in addressing skills shortages and reducing staffing costs. Apprenticeships will also be essential, especially in sectors like renewables and nuclear where professionals see an acute need for these opportunities.

As much as hiring managers are concerned with bringing new talent in, they must also work hard to ensure that professionals stay. This year's GETI saw a massive increase in the number of professionals considering a cross-border and/or cross-sector move. The secondary reasons for a move vary: stability, higher pay, the chance to work with new technology. But the primary reason is fairly consistent across all sectors: career opportunities. Professionals want to know that their career is headed in a clear direction. They also want assurances that their roles or skill sets won't become obsolete. Here, professional development programmes become even more critical. A clear roadmap outlining an individual's path to progression is essential. When progression is impeded, the opportunity for relocation or upskilling can also be useful.

Similarly, energy companies must continue preparing their workforces with the tools and knowledge to adapt to a digital world. Professionals are eager to move into the new roles created through technology. Digitalisation affords opportunities for progression that traditional roles may not offer. With the right training, companies can satisfy professionals' desires for advancement while enhancing the value of their current workforce.

Getting the right culture in place is also important. The success that petrochemicals and renewables companies have had in creating vibrant working cultures is a model that can be followed by other sectors. The more that companies can showcase their innovative projects and promote a collaborative working environment, the more that young professionals will tout the strengths of the energy industry to their peers.

If there's anything that the energy industry has demonstrated over the years, it is resilience. From economic shocks to a changing business landscape, energy companies have consistently turned challenge into triumph. The skills gap is no different. We believe that the skills gap demands fundamental changes to the makeup of the workforce and that, in time, these changes will transform how the energy industry operates. Tomorrow's workforce will be more diverse, mobile and technologically endowed than ever. As skill sets and working environments become more flexible, companies will be readily more prepared to seize the opportunities that digitalisation and other revolutionary developments will present.

It is our privilege to continue guiding the energy industry to those brighter days ahead.

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