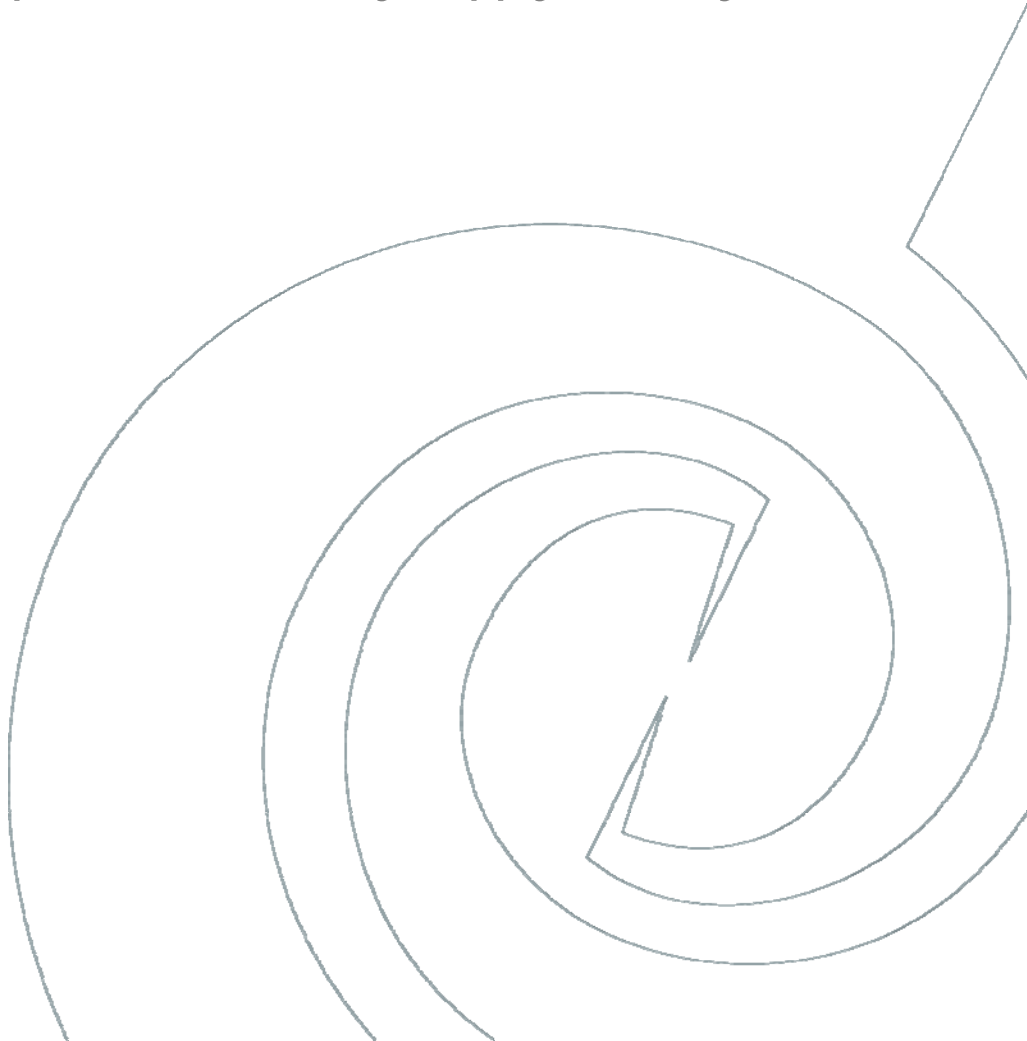


ADDRESSING THE SKILLS GAP



Monitoring changes in the Skilled Labour Shortage
and 'Skills Gap' in the Electricity Supply Industry



In association with the University of Otago.

UNIVERSITY
of
OTAGO



Te Whare Wānanga o Otāgo

This report was written by Lauren Julian based
on research conducted by Scarlett Bradfield,
under the supervision of Professor Alan Geare.

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Article I. Executive Summary

Article II. This is the sixth in a series of independent research reports, commissioned by ESITO, to identify and monitor skills gaps within the Electricity Supply Industry. The research was conducted by the University of Otago in mid-2007. It consisted of two parts:

- 2009 postal questionnaires were sent to all sectors of the industry. 478 responses were received.
- In-depth, qualitative interviews were conducted with 17 senior managers and contractors representing all industry sectors: generation, network/lines, transmission and telecommunications.

Article III. Key findings

- 83% of respondents still believe there is a skilled labour shortage.
- The areas of technical shortage remain the same as in previous reports, predominantly in the lines distribution area. Electrical fitters are also highly sought after.
- The reasons behind the labour shortage, or ability to retain staff, have not dramatically changed, with pay being the main reason skilled technical tradesmen are leaving the industry to undertake job opportunities overseas.
- 48% of all respondents – trade and professional – who indicated they plan to leave the industry within three years cite pay as the most important reason, followed by the quality of co-workers (45.3%) and the quality of supervisors (43.2%).
- Motivation for those in professional roles remains internally focused, with supervisor and co-worker quality being the dominant motivational factors when employees are considering whether to stay or to leave the industry.
- 41% of staff say they intend to leave the Electricity Supply Industry within the next eight years. This is not a significant increase.

- Respondents have worked an average 16 plus years in the industry. Those currently aged 20 -29 years are likely to stay in the industry for the least amount of time.
- Over 84% of the workforce feels they are fully or mostly trained for their role.
- Despite this, 62% of respondents say they want further training. Almost 30% of these would like further training in technical trade skills, followed by training in management, administration, legal and financial matters, and basic skills.
- 6% in technical trade roles and almost 10% in professional roles expressed interest in basic skills training.
- Low levels of literacy and lack of basic skills were highlighted in in-depth interviews as impacting on the industry.
- 25% of those working in technical trade roles do not have any trade qualifications or recognised certifications in any area.
- Employee satisfaction has increased overall. However, pay is still the aspect of least satisfaction for technical trade staff.
- The area of least satisfaction for professionals is career prospects, with a lack of defined career paths reported by many.
- The area of highest satisfaction for both technical trade and professional roles is the overall satisfaction of their work.
- Overall, respondent loyalty is predominantly high to jobs, employers and also to the industry. The older the respondent, the more loyal he/she is likely to be to the industry.

- Career paths within the industry could potentially help to retain skilled workers and also entice newcomers.

Article IV. This study found that although the skilled labour shortage has not increased since the 2005 gap analysis, it has not - as predicted by earlier reports - continued to decline steadily. It demonstrates that there remains a significant skilled labour shortage within New Zealand's Electricity Supply Industry. It also highlights significant skills gaps among those currently employed in the industry.

However, the study identifies key positive factors, which could be built on to increase employee job satisfaction, retain knowledge and skills, stem further declines in the skilled labour force, and attract new recruits to the industry.

Job satisfaction for many is dependent on a range of factors, including the quality of supervisors and co-workers, and defined career paths, not simply remuneration. There is also a high level of loyalty among industry employees.

While employers may not be able to compete in the international market for skilled labour on salary, they do have control over factors such as on-the-job training, professional development, and providing opportunities for advancement.

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1.0 Introduction

This report is the sixth in a series of independent reports commissioned by ESITO to identify and understand the impact of the skills gap in the Electricity Supply Industry.

Prior research has identified the key areas where there are skills gaps, and helped ESITO and industry organisations to put in place a number of strategies to address these. This report continues to track progress to date, and to highlight areas for further focus. It also gauges demand for ongoing initiatives to address current issues.

The skills gap has been defined in earlier research as the “skilled labour shortage”. However, this report seeks to draw a distinction between the “skills gap” and the “skilled labour shortage”. For the purpose of this report, the “skills gap” refers to skills needed by those currently employed in the industry. The “skilled labour shortage” refers to additional staff needed to meet present industry workforce requirements.

The study identifies significant gaps in basic skills, or skills not traditionally considered essential to particular roles, and makes recommendations to address these. It also identifies gaps in the labour force, which require different strategies.

Research in 2006¹ noted growing confidence in the industry that strategies to reduce the skills gap were working, but there still remained a lack of skilled workers. While the skills gap decreased by one third between 2005 and 2006, it was “nonetheless alarming” with a gap of between 10.6% and 13.4% in the technical trades labour force².

The research undertaken for this report confirms that the skills gap is still very much a factor within the industry and has not decreased significantly. Further initiatives are needed to address this issue.

Respondents were split into two groups - technical trades and the professions. Technical trade roles include operators, electrical and mechanical fitters and telecommunication specialists. Professional roles include engineers, managers, administrators and call centre operators.

¹ “An Industry Skills Strategy for the New Zealand Electricity Supply Industry” Dec 2006, p3.

² “Light at the end of the Tunnel? The 2006 Revision of the Annual Skills Gap Analysis”, Nov 2006, p1.

Previous research identified the key work motivators for employees in the Electricity Supply Industry and noted the differences between the aspects of the job that motivated those in skilled trades and those in professional roles.

The key drivers for those in technical trade roles were pay, hours of work and job stability. This study confirms that this is still the case. Monetary considerations remain highly important for this group and, with overseas opportunities being perceived as far more financially rewarding, appear to be the primary reason for the lack of skilled labourers and the ability to retain them. This group also considered opportunities for advancement and training as highly important factors when considering staying or leaving the industry.

While remuneration was important for those in professional roles, job satisfaction for this group was more dependent on key factors such as the internal workings of the job itself, and the quality of supervisors and co-workers. This study confirms previous research in this respect.

Drivers of job satisfaction for both technical trades and professionals have not changed significantly; however, the workforce appears increasingly loyal and more satisfied.

2.0 Methodology

2009 postal surveys were sent to a cross-section of industry. In-depth, qualitative interviews were conducted with 17 senior managers, representing all sectors of the Electricity Supply Industry.

As in previous gap analysis research commissioned by ESITO, survey questions covered a range of topics, including the respondents' demographics, their industry sector and their role in it, and their training needs. Respondents were asked to rank factors affecting job satisfaction and their future in the industry. They were also asked to specify areas where they felt there was a lack of skilled workers and to estimate the number needed to fill those gaps. Questions on loyalty towards the industry, the employer and the job were also included.

Senior managers with first-hand knowledge of their company's Asset Management Plans were interviewed in depth on a range of topics aimed at identifying skills gaps, changes in labour shortages and future needs. In contrast to the 2006 skills gap review, Asset Management Plans were not utilised as a primary source of information as project forecasts were considered unreliable as a measure of workforce needs in any one year, given the consenting process. Rather the focus was on discussion with asset owners, with knowledge of actual project plans, and contractors.

Previous research reports provided a benchmark for comparison and monitoring change in perceptions and industry workforce needs. These included:

- ESITO report of October 2005, "Has the Skills Gap Increased?: Long Term Planning and Strategy for Effective Training in the Electricity Supply Industry"
- ESITO report of December 2006, "An Industry Skills Strategy for the New Zealand Electricity Supply Industry"
- ESITO Report November 2006, "Light at the End of the Tunnel? The 2006 Revision of the Annual Skills Gap Analysis".

Figure 1: Responses by employer category

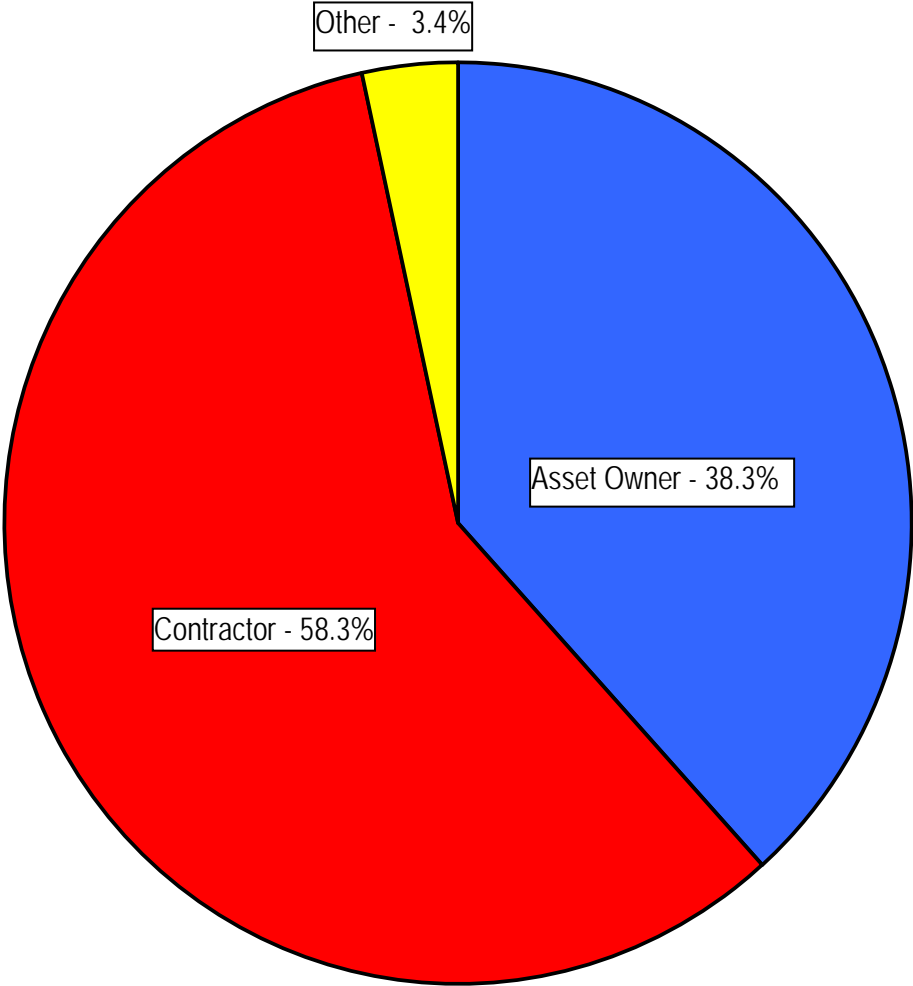


Figure 1 shows the percentage of responses from employers by category. More than 50% of responses were from employers in contracting businesses – the dominant direct employer category. This was a 10% reduction on the last report.

Of the approximately 2009 questionnaires distributed, the response rate was 477, of which one questionnaire was not used as the respondent had submitted two.

Although some responses included sections which were not fully answered, the majority of responses contained information that was usable and relevant to the findings. The response rate was 23% which is the highest response rate yet, with previous years yielding 15% - 20%.

Table 1 shows respondents by the region in which they mostly work. The largest percent of respondents were from the central North Island and the northern South Island. A number of respondents did not specify the region where they worked, and a few stated "all of New Zealand" as the region they mostly worked in. Geographically each area was reasonably well-represented; suggesting the method of collecting the questionnaires was relatively successful.

Table 1: Representation of Respondents by Region

	Frequency	Percent	Valid Percent
Northern North Island	79	16.6%	18.0%
Central North Island	131	27.5%	29.9%
Southern North Island	53	11.1%	12.1%
Northern South Island	107	22.5%	24.5%
Southern South Island	68	14.3%	15.5%
Total	438	92.0%	100.0%
Unspecified/Other	38	8.0%	
Total	476	100.0%	

Seventeen companies, representing the generation, distribution, transmission and telecommunications sectors, participated in qualitative in-depth interviews which canvassed a range of topics.

3.0 Identifying the skilled labour shortage

3.1 Perceived shortage by current workforce

In October 2005, it was reported that the severe shortage of technical trades labour in New Zealand meant recruitment advertising for vacancies in the industry sometimes failed to gain any interest at all. However, filling vacancies and skilled labour gaps were not the only issues. Retention of those already in the industry was considered important, as skilled workers leaving the industry added to the labour shortage.

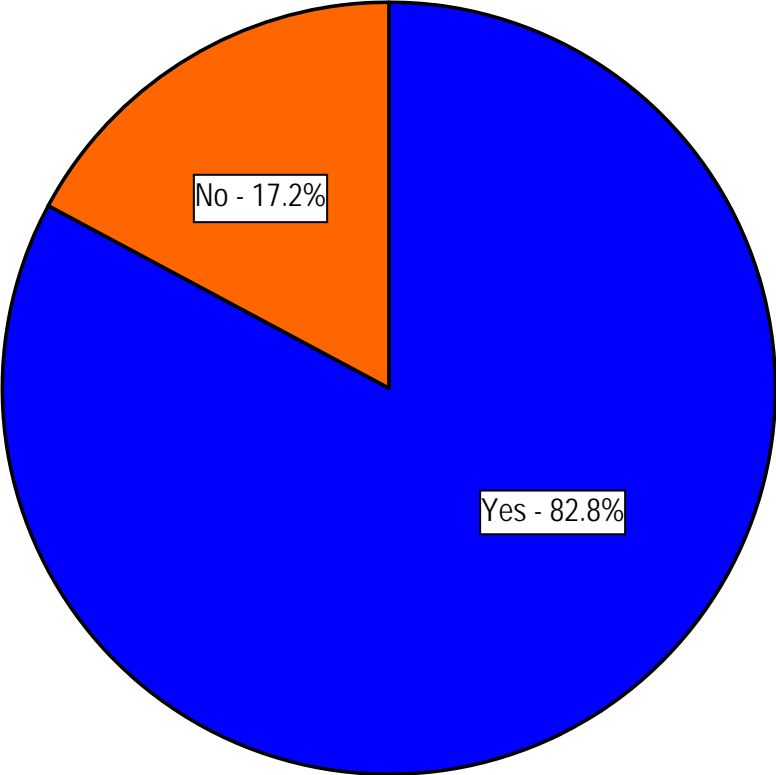
This study shows that the situation is relatively unchanged, with some vacancies for skilled workers taking more than twelve months to fill. Technical trade roles are still the hardest to fill. For vacancies requiring less skill and experience, it was reported that often none of the applications was a “stand out clear choice” for the position.

One manager interviewed for the study described it as, “choosing the best of the worst”.

“But when you are in need of the labour, and don’t have a deep skilled labour pool to choose from, and positions do not warrant extensive international searches, you are not left with a lot of choice,” he said.

The in-depth interviews also reinforced the finding (illustrated in Figure 2 below) that a significant proportion of industry employees believe there is a skilled labour shortage.

Figure 2: Do current employees believe there is a skilled labour shortage?



More than three quarters of industry respondents (83%) believed there was a shortage of staff within the industry. Of the responses, only four did not specify whether or not they thought there was a shortage of staff. The perceived areas of staff shortage were also identified in Table 2.

Table 2: Skilled labour shortages

	Responses	
	N	Percent
Lines Distribution	173	18.0%
Electrical Fitter	159	16.5%
Supervisory	93	9.7%
Project Management	86	8.9%
Engineering	81	8.4%
Operator	78	8.1%
Mechanical Fitter	77	8.0%
Lines Transmission	57	5.9%
Other	49	5.1%
Management	42	4.4%
Telecommunications	40	4.2%
Administrative	27	2.8%
Total	962	100.0%

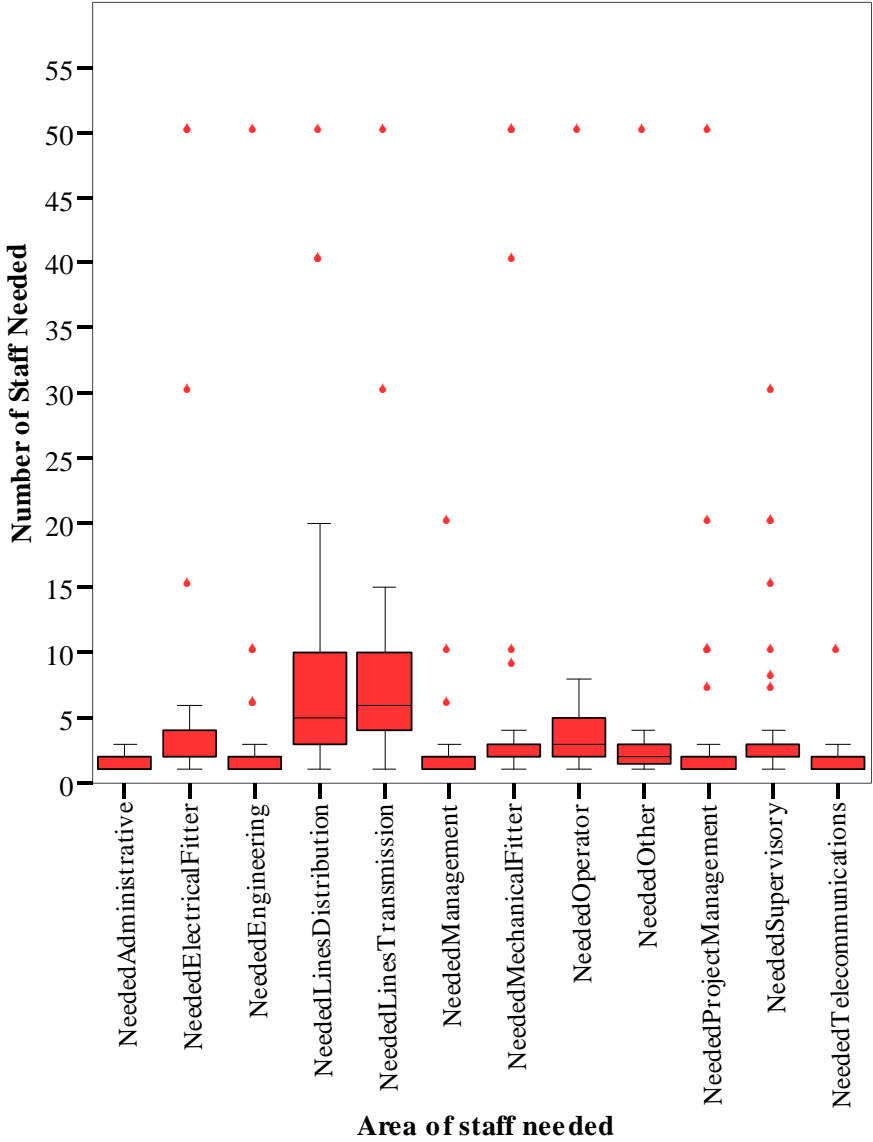
Shortages of skilled labour in all areas of the industry were reported, with the greatest gaps in lines distribution and electrical fitter roles. This was consistent with the findings in previous years, where the largest labour shortage was in lines distribution. The majority of roles in the “other” category were electrical inspectors and technicians.

The questionnaire asked respondents to estimate the actual number they believed it would take to reduce, or close, the labour shortage gap in the areas where they perceived shortages. Responses were varied with some respondents acknowledging particular areas needed more staff, but unable to specify exactly how many it would take to close the gaps.

Respondents provided estimates of the additional staff needed. Figures varied from one up to two hundred in particular areas. Two respondents said lines distribution needed up to two hundred extra staff, whereas five respondents said 100 workers were needed in the lines distribution, transmission and the telecommunications areas. Responses indicating staff needs of that magnitude were treated as outliers, which would skew the results and were excluded. Figure 3 illustrates the responses.

Figure 3: Suggested number of staff required in each area

The line in the middle of the box represents the median number of staff recommended and the box represents the majority of the responses. The stars indicate the extremes (excluding the ones already removed) and the whiskers represent the upper and lower bounds.

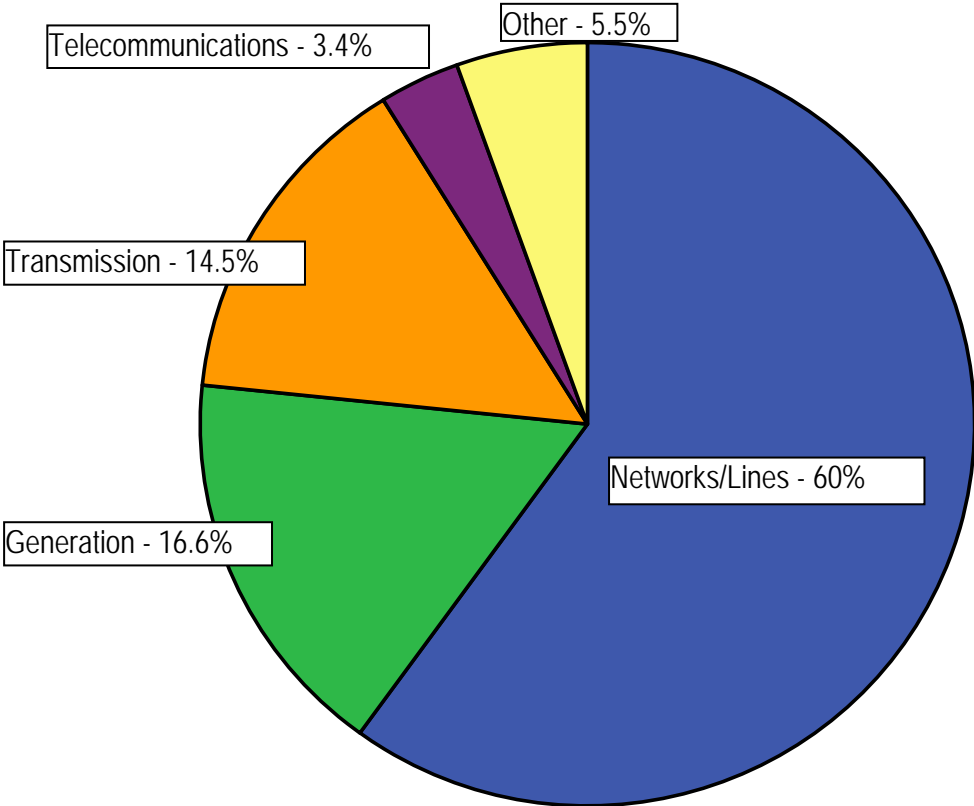


Delays or uncertainties about the outcomes in the resource management consents process are factors contributing to the industry's ability to identify shortages in skilled labour. This was illustrated in the in-depth interviews. For example, one major industry player had a project planned which required external

consent. As he was unsure whether the project would go ahead, or when it would proceed if consent was granted, he was unable to accurately predict how many staff would be needed. He noted also that the organisation had also been in this situation in 2005.

Figure 4 shows the breakdown of the respondents by the segment of the industry in which they work. As 60% of respondents were from the lines/network sector, this could account for the large number of responses indicating the lines/network area needs more workers.

Figure 4: ESI respondents by industry sector



3.2 Impact of skilled labour shortages

More than 55% of the respondents indicated that both the skilled labour shortage and the skills gap affected their ability to work. This percentage was an industry-wide representation, however, when analysed by technical trades staff only, and by professional roles only, there was no more than 1% variation.

3.3 Current workforce exit from industry

Respondents were asked to indicate how long they envisaged staying in the industry, from less than one year to eight years or more. An estimated 41% of the current workforce planned to leave the industry within eight years, including those retiring. Taking into account the ageing workforce, this was consistent with the previous study's worst case scenario two years ago. Table 3, representing all industry roles, outlines the breakdown in timeframes of anticipated industry exits.

Table 3: Current workforce anticipated exit from the ESI

Exit from the ESI	Frequency	Percent	Valid Percent
Less than a year	19	4.0%	4.0%
1 - 3 years	83	17.4%	17.6%
4 - 7 years	94	19.7%	19.8%
8+ years	278	58.4%	58.6%
Total	474	99.6%	100.0%
Missing	2	.4%	
Total	476	100.0%	

Figure 5: Age of respondents and expected time within the ESI

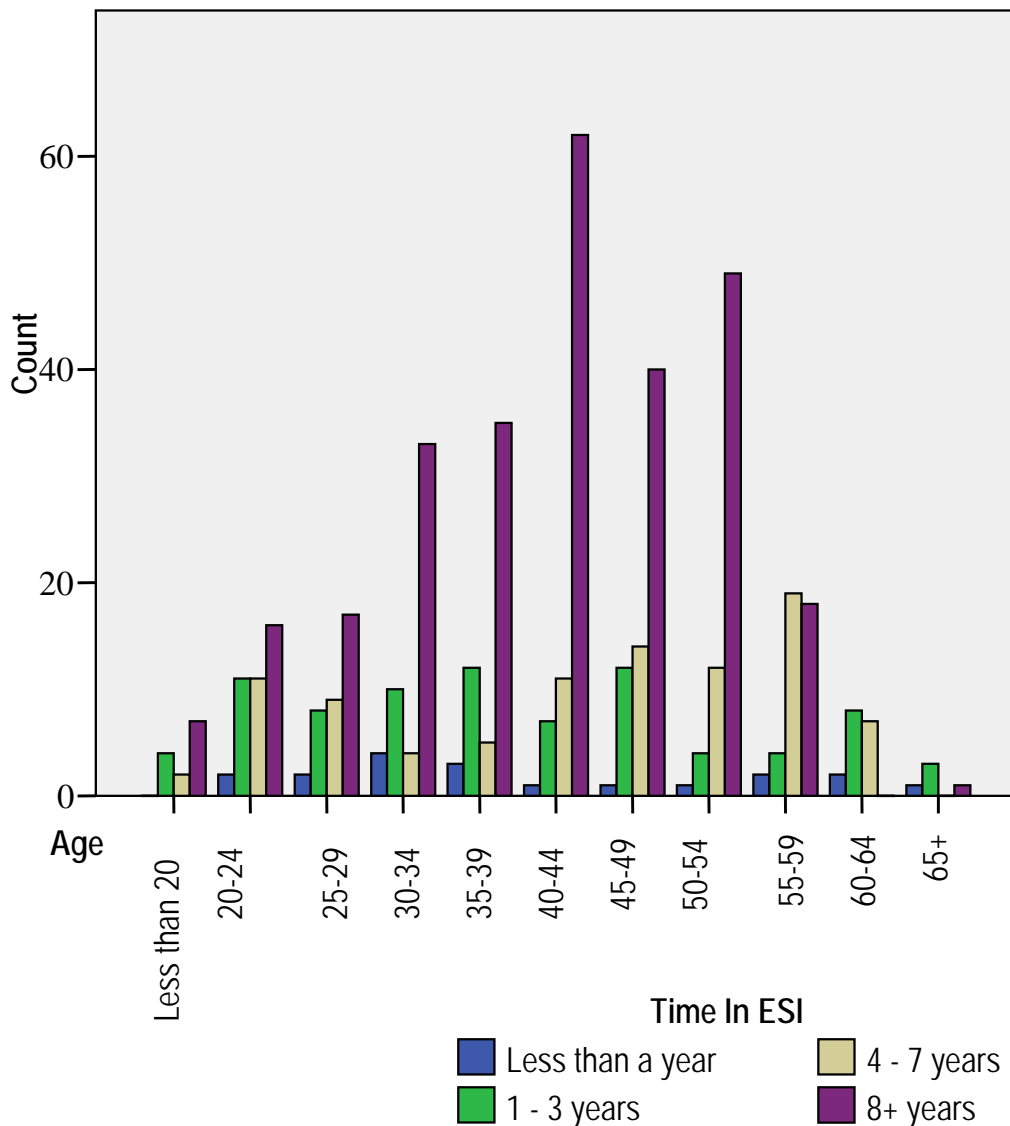


Figure 5 illustrates the age groups of the respondents and their anticipated time within the Electricity Supply Industry. Identifying the ages of those in the industry, and those who intend to spend the longest and the shortest time within it, is important. It provides insight into who should be targeted and what can be done to retain workers in particular age groups. Statistics show there is a relationship between the ages of the respondents and the time they foresee continuing in the industry³. Those aged 20 – 29 years indicated they intended to stay in the industry for the least amount of time compared with those aged from 40 – 44 years and 50-54 years who planned to stay in the industry for more than eight years. This contrasted with previous research in which respondents viewed the ageing workforce as a serious issue.

³ Test of Independence estimated by Pearson Chi-Square, alpha = 0.05, p-value = 0.000, (40.9% cells have an expected count of less than 5, which makes the statistical strength not highly significant)

Recruitment of professionals was not considered to be such an issue within the industry. Interviewees said the industry was able to recruit people, such as planners, project or human resource managers, from other industries in New Zealand. Previous research showed that those roles were hard to fill, and often determined “the success of the project”⁴. Often staff in those roles had previously worked in a technical trade job, which meant they carried a vast amount of invaluable knowledge that was transferable within the industry. However, interviewees said staff orientation and Electricity Supply Industry overviews, which most industry organisations now run for new staff members, enabled employees from other industries to come in and carry out their job efficiently.

⁴ ESITO – An Industry Skills Strategy, December 2006

4.0 Reasons behind skilled labour shortage

More attractive job opportunities outside the industry with higher pay both overseas and in New Zealand, the quality of co-workers and the quality of supervisors are three key factors for those considering leaving the Electricity Supply Industry. Other contributing factors behind the skilled labour shortage are retirement and the ability of the industry to attract potential employees.

4.1 Higher pay

In the 2005 study, 34.5% of respondents stated either moderately high or extreme interest in taking overseas jobs. When the benefits of taking an overseas job were broken down, higher pay was the leading area of interest.

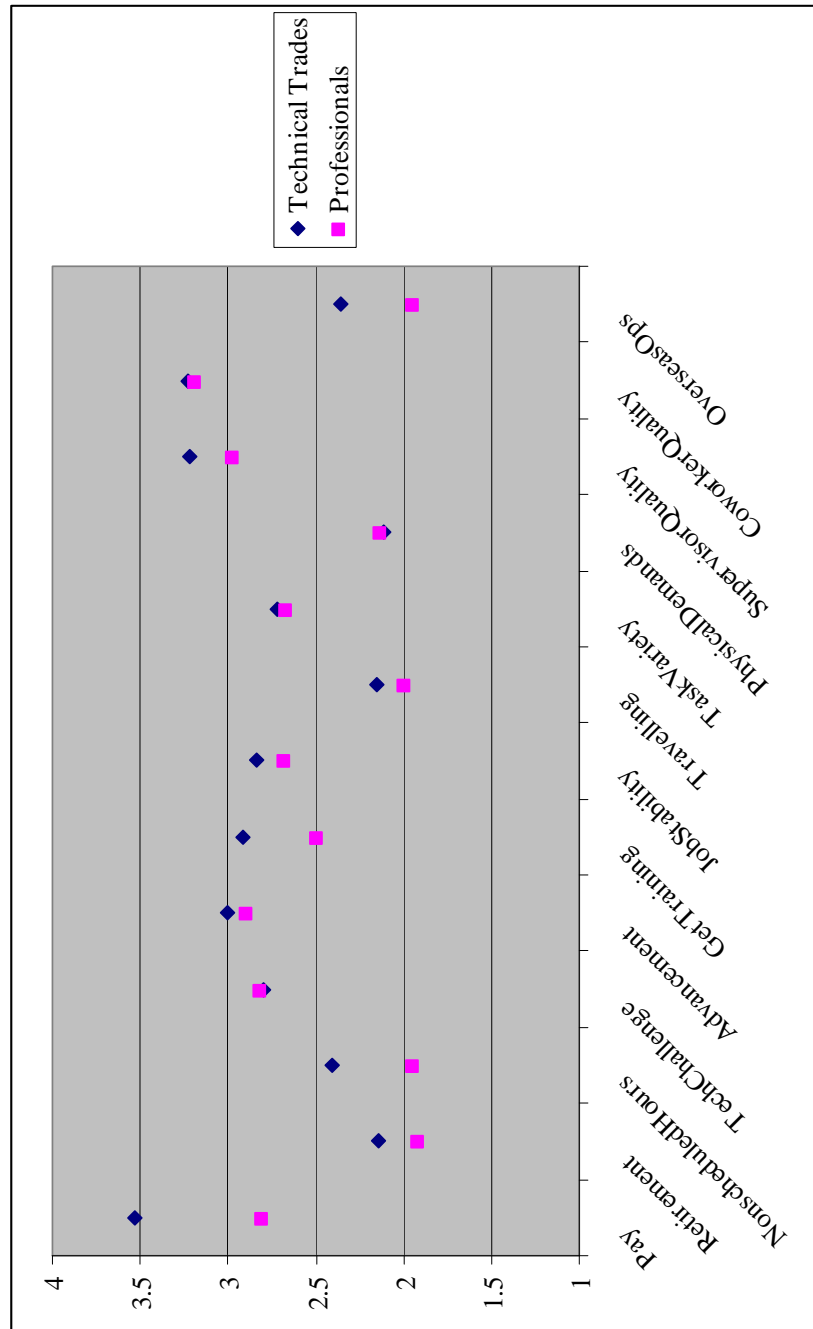
In this study, respondents who indicated they would be leaving in the next three years were asked to state the reasons for their departure. They were asked to rank a number of factors contributing to their decision from not important to highly important.

Table 4 shows the percentage of respondents who ranked the importance of each of the factors and Figure 6 illustrates the differences in average importance of each factor between technical trade staff and professional staff.

Table 4: Importance of factors for those considering leaving the ESI

Factor	Highly Important	Important	Fairly Important	Not Important	Overall Rank (highly Important)
Pay	47.8%	38.0%	9.8%	4.3%	1
Quality of Co-workers	45.3%	33.7%	14.7%	6.3%	2
Quality of Supervisors	43.2%	35.8%	12.6%	8.4%	3
Chance for advancement	39.4%	33.0%	11.7%	16.0%	4
Job stability	33.3%	28.0%	21.5%	17.2%	5
Chance to get training	33.0%	29.8%	16.0%	21.3%	6
Technical Challenge	25.5%	40.4%	17.0%	17.0%	7
Opportunity to go overseas	22.1%	18.9%	22.1%	36.8%	8
Retirement	20.2%	13.8%	16.0%	50.0%	9
Level of variety of tasks to do	18.3%	49.5%	15.1%	17.2%	10
Working non-scheduled hours	16.1%	25.8%	28.0%	30.1%	11
Amount of travelling	14.7%	22.1%	24.2%	38.9%	12
Physical demands of the job	10.6%	23.4%	30.9%	35.1%	13

Figure 6 – Importance of factors when considering leaving the ESI



(The key for the above scale is: Highly Important = 4, Important = 3, Fairly Important = 2 and Not Important=1)

Almost 48% of respondents cited pay as the most important of 13 factors, followed by the quality of co-workers (45.3%) and the quality of supervisors (43.2%). The opportunity to go overseas was ranked eighth.

For a long time, it was felt by some in the industry that overseas employers were “poaching” New Zealand Electricity Supply Industry workers. While overseas opportunities could not match all of the

important factors workers consider when making a move, generally salaries were substantially higher. Higher salaries, even marginally, were enough to entice skilled workers off shore.

However, previous studies have shown that those in technical trade roles and those in professional roles are motivated differently.

Previous research found that remuneration, hours of work and job stability were the key drivers for technical trade staff. This study confirmed that pay is still the most important factor for this group. However, the quality of co-workers and supervisors overtook other external factors as key drivers of job satisfaction, representing a significant change compared with previous research.

Pay, while important, was not the largest contributing factor for professional or non-technical staff considering leaving the industry. Other on-the-job factors such as the quality of supervisors and co-workers were ranked of higher importance.

In 2005, a total of 12.4% of the workforce was considering exiting the industry temporarily to head overseas. The 2005 report also noted that the average age of the group taking up overseas opportunities was high. Figure 7 represents the percentage in 2007 stating overseas opportunities highly important by age grouping.

Figure 7: Percentage stating overseas opportunities highly important by age grouping

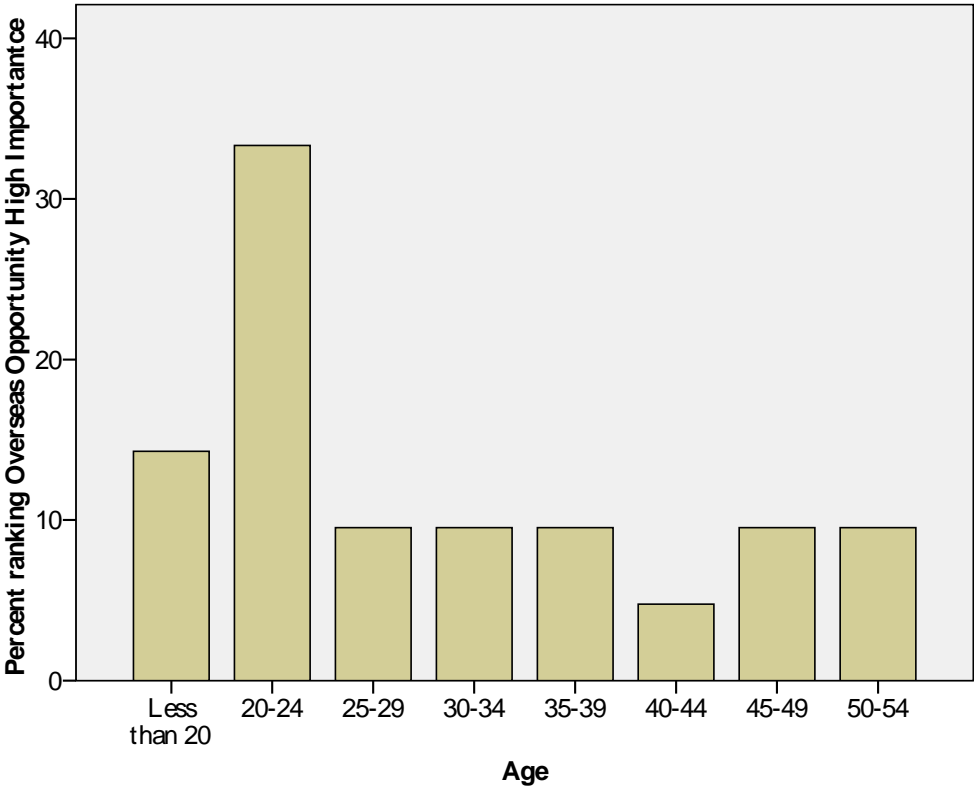


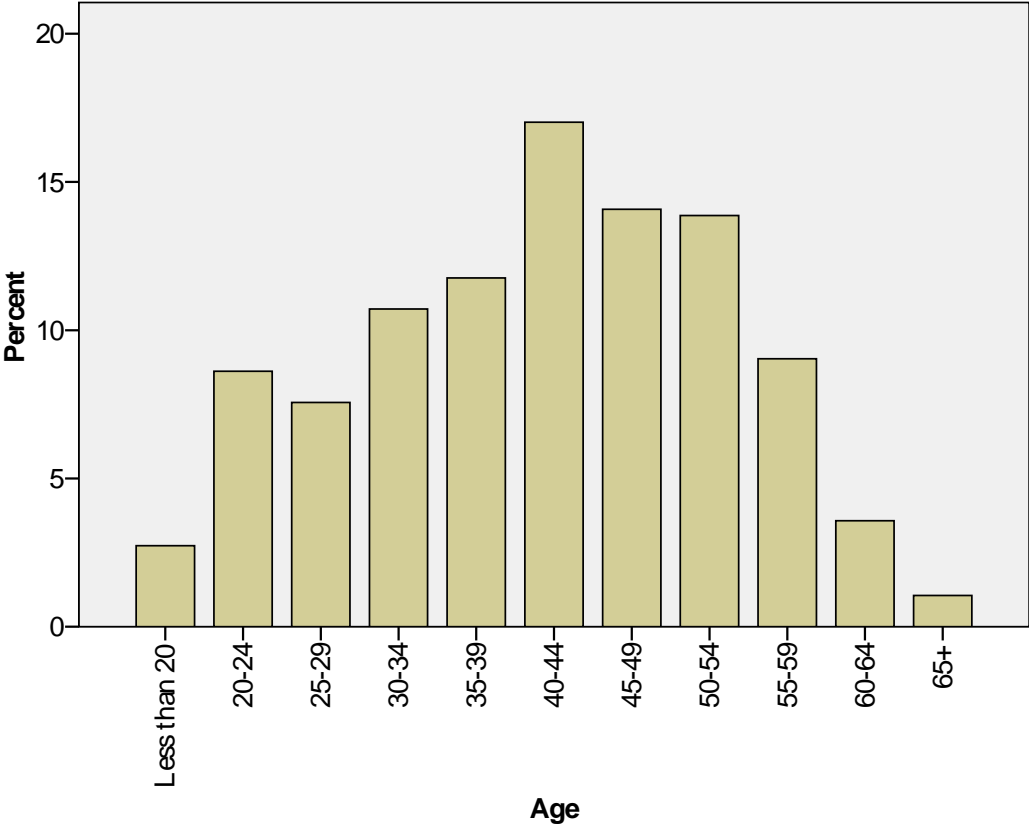
Figure 7 shows that overseas opportunities are most important to 20-24-year-olds followed by under-twenties. However, all age groups were consistently represented in citing overseas opportunities as highly important when considering leaving the Electricity Supply Industry. Managers interviewed considered overseas experience was important for advancing their careers in the industry on their return to New Zealand. They believed the numbers leaving the industry to go off shore were effectively offset by overseas workers being attracted by key industry players to New Zealand.

More than 80% of the respondents were married or had a partner, and 53% had children less than 18 years of age. While family considerations may have reduced the number of workers going off-shore in the past, higher pay and cheaper living costs, for example in Australia as a result of the current mining boom, are creating attractive opportunities for skilled workers and their families.

4.2 Retirement

Respondents were not asked specifically at what age they planned to retire. However, 14% of respondents were aged 55 years and over, and could be expected to retire in the next few years. However, with 28% of the industry in middle age, the industry exit due to retirement does not pose the same threat that it did a few years ago. Figure 8 shows the age spread of respondents.

Figure 8: Representation of age of industry respondents



Continuing high demand for technical trades labour may result in workers delaying retirement. However, this age group indicated they were looking to find supervisory or managerial roles within the industry where their knowledge and skill could be used to train younger, less experienced workers.

Table 5 illustrates the responses of those aged 55 years and older to the question, "If you stayed in the Electricity Supply Industry, what would you like to do?"

Table 5: What those aged 55+ would like to do if continuing in the ESI

	Frequency	Percent	Valid Percent
Stay in your current job with the same employer	46	65.7%	70.8%
Change to a different employer with the same job	3	4.3%	4.6%
Advance to a higher technical position	11	15.7%	16.9%
Advance to a higher managerial position	5	7.2%	7.7%
Missing	5	7.2%	-
Total	70	100.0%	100.0%

Almost 71% said they would remain in their current job with the same employer, while 24.6% would look to advance to a higher technical or managerial position within the industry. Only 4.6% would consider changing their employer.

How well workers approaching retirement age understood the options available to them was an issue raised in the in-depth interviews. One interviewee outlined a major communication breakdown, which might have significantly impacted on skilled labour shortage. Some senior employees were approached to see if they would continue in the industry in training or supervisory roles. The staff indicated they would be interested but did not think they had the option to stay on. Conversely, when senior managers were approached to offer such roles to staff, they believed the workforce would not be interested and did nothing.

4.3 Appearance of the industry

Given the competition within New Zealand and off shore for skilled workers, there is scope to better promote jobs and career opportunities within the Electricity Supply Industry to increase its attractiveness to potential employees.

Some of the main industry players have graduate recruitment strategies in place, which attract a small number of tertiary qualified students (mainly specialising in the area of the technical roles such as electrical engineering) each year. Summer internships enable potential graduates to gain first-hand experience of working in the industry. While these are valuable tools to secure skilled individuals, an industry-wide approach appears to be lacking. Further initiatives are needed, for example aimed at school-aged students who have not yet chosen a career path.

5.0 Identifying the skills gap

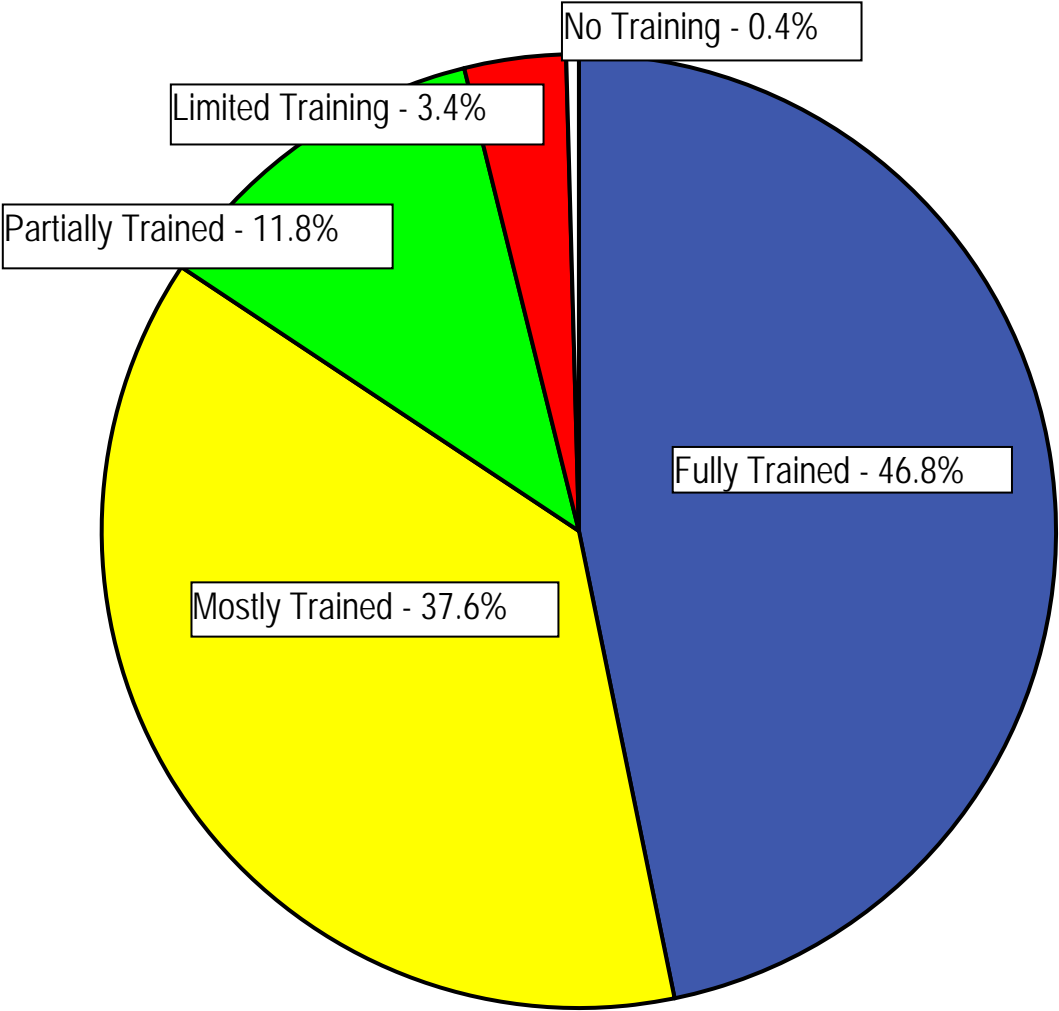
While the need for finding skilled labour was initially the focus of the Electricity Supply Industry skills gap research, identifying and understanding the skills gap for the current workforce is also a major issue.

There is a strong desire, driven by both management and employees at all levels, to up-skill the current workforce. Many organisations have made a significant investment in in-house and external training as a major part of their strategic plan. However, this study has identified areas that need to be addressed to cover basic skills and keep the workforce up-to-date with new technologies, enabling the skills gap to be reduced.

5.1 Training

Over 84% of the workforce felt they were fully or mostly trained for their role. Figure 9 illustrates the breakdown.

Figure 9: How well the industry workforce feel trained for their jobs



While the majority of respondents were mostly or fully trained for their role, more than half of the respondents - 62% - indicated they wanted further training.

These results indicate that the less trained a person feels for their role, the more they are likely to desire further training.

Key training areas identified by respondents were:

Basic skills - computer skills such as MS Excel, MS PowerPoint, MS Word, word processing and general office programmes.

Technical skills – including all of the technical trade specifics, such as cable jointing, SCADA design, networking, lines distribution, electrical apprenticeships up to full electrical registrations.

Administrative, financial and legal – including planning, financial analysis, accounting skills, legal aspects and contract management.

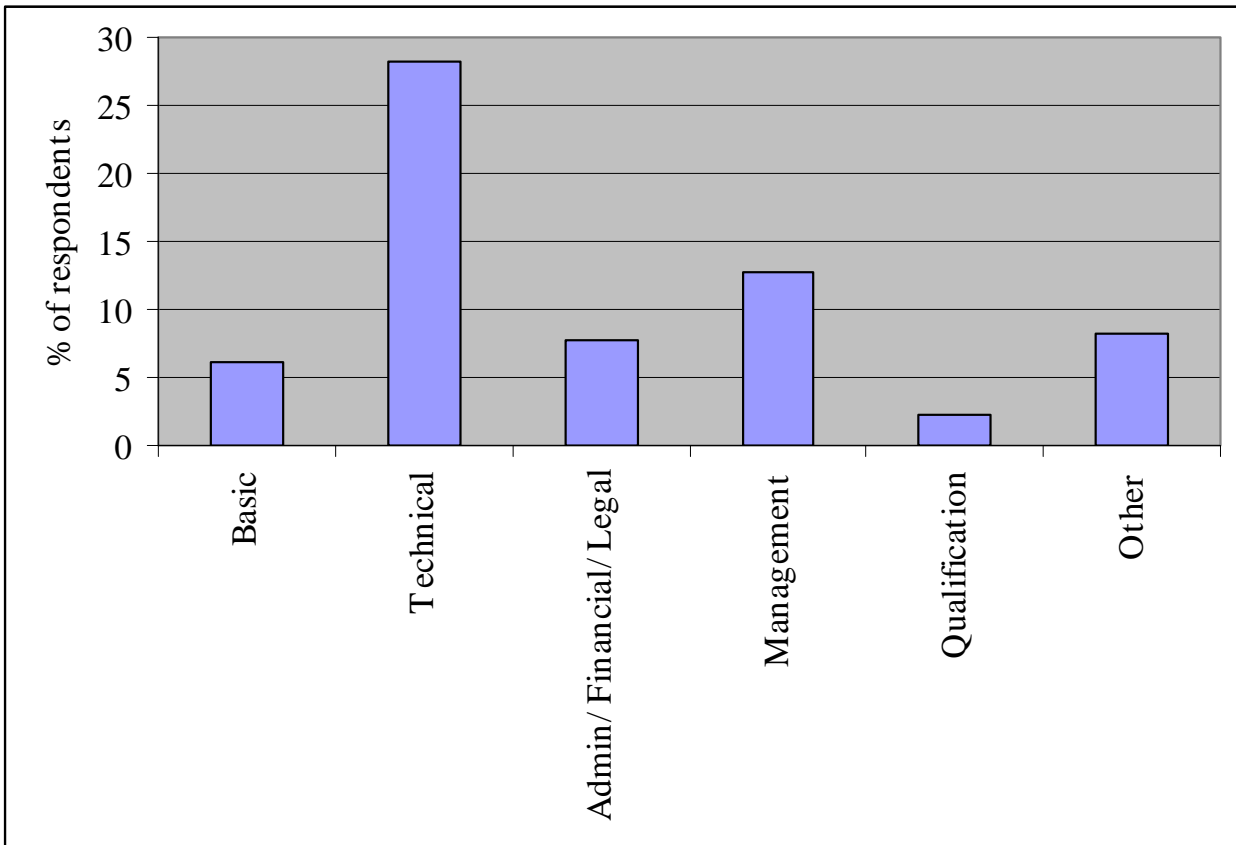
Management training – for any type of management, such as first line management, project management, human resource management involving recruitment and staff training.

Training for qualifications – some specified they would like particular degrees, such as recognised tertiary Bachelors, Masters, PhD and MBA degrees.

Other – the biggest area in this category was for health, safety and protection training

Figure 10 illustrates the percentage of respondents who want training in specific areas.

Figure 10: Percentage of respondents wanting training in specific areas



Nearly 30% of respondents wanted industry-specific technical training, followed by almost 15 % who wanted management training. The latter may indicate that those in a technical trade role see other career options within the industry. (Career paths are discussed later in this report.)

The need for “basic skills” training across the industry was another area identified. A total of 6.2% from technical trade roles and just under 10% from professional roles said they were interested in basic training. The need for basic skills training was reinforced in the in-depth interviews. It was reported that some highly skilled workers were performing challenging tasks in the field, but their ability to report on what they had done or communicate effectively were limited. This is significant and should be addressed.

6.0 Reasons behind skills gap

Three key factors are contributing to the skills gap within the current industry workforce: industry demographics; soft vs hard skills; and employee qualifications.

Recruitment of younger workers helps reduce labour shortages, but increases internal skills gaps and training needs in the short to medium term. The study identified additional training needs for staff – outside role-specific training. It also highlighted a significant gap in technical trade qualifications.

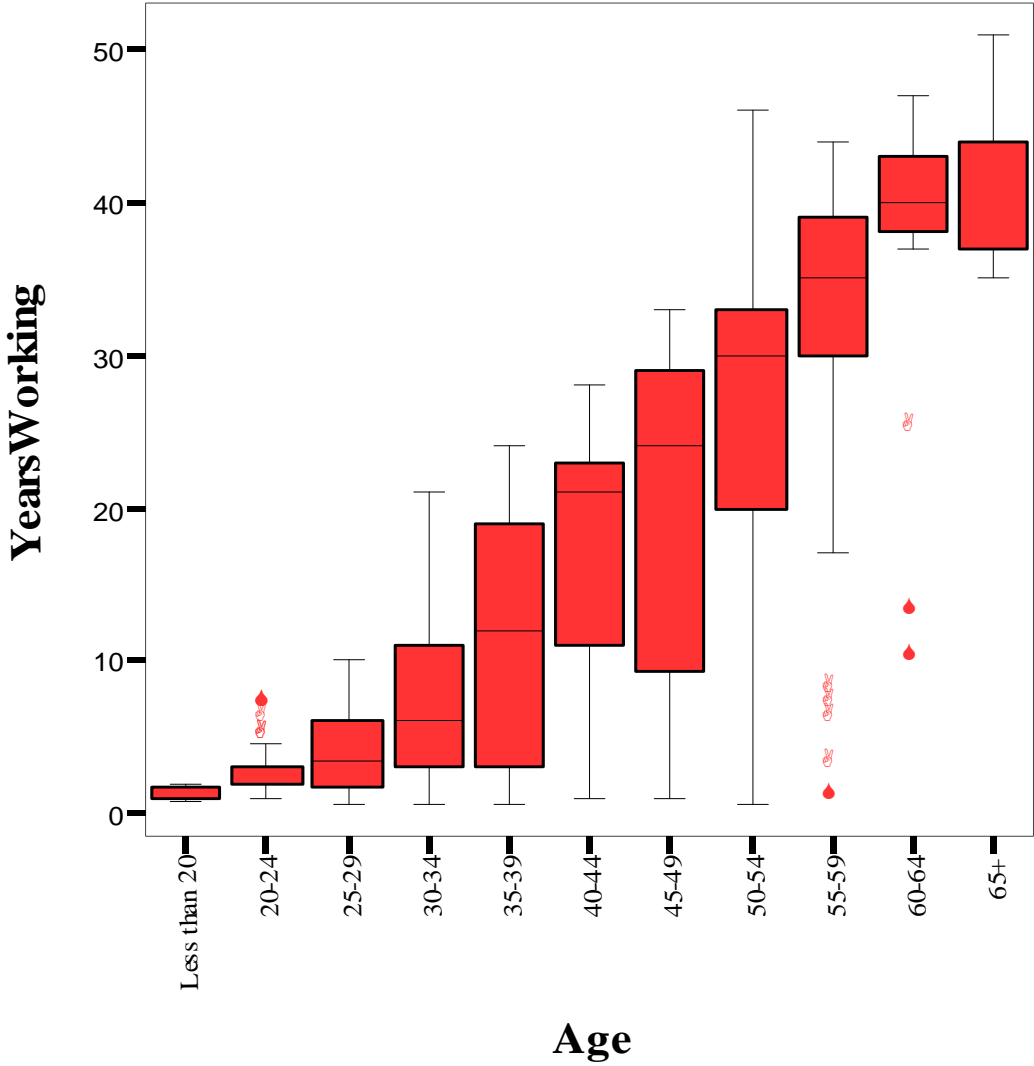
6.1 Industry demographics

The ages of the respondents were normally distributed, reflecting the initiation of recruitment efforts, especially recruitment of younger workers. However, younger workers do not have the same skill level as that of older employees in the industry.

Much of the younger workforce is currently completing apprenticeships or has only received training on particular parts of their job. This contributes to significant skills gaps within the industry, and is an initial target for continued training.

Figure 11 illustrates the years worked in the industry by age. The median number of years is displayed by the line in the middle of the box, and the box represents the majority of the responses. The finger symbols indicate the extremes, the circles are the outliers, and the whiskers represent the upper and lower bounds.

Figure 11: Years working in the Electricity Supply Industry by Age Grouping



The average length of time respondents have worked within the industry was just over 16 years, with the shortest time being less than one year, and the longest 51 years. Recruitment of young technical trades staff is a positive achievement in reducing the skilled labour shortage. However, in the short to medium term the internal skills gap is increased as these workers undergo training. This leaves room for error, creating more work for those who are responsible for training and ensuring work is done to an acceptable standard.

6.2 Soft skills vs. hard skills

As outlined in Section 5, over 84% of respondents felt they were mostly, if not fully, trained for their role. However, 62% indicated they would like additional training in skills not necessarily specific to their roles. This study has identified the need for basic training in literacy. It has also highlighted a serious lack of soft skills throughout organisations, including among specialist and professional staff. Although routine tasks may require only a small amount of soft skills, accurate documentation and written communication are of great importance in working efficiently and effectively.

6.3 Qualifications held by respondents

Respondents were asked to specify the type of qualifications, registrations, licences or degrees which they held. These were categorised into four groups as follows:

- Trades Qualifications: any technical trade qualification or registration was put into this category, including those with full electrical registrations, and those who had completed papers in specific areas such as cable jointing, or mechanical fitter – irrespective of the level achieved
- Bachelors Qualifications: all Bachelors' qualifications, including those not related to the electricity industry or to specific roles
- Postgraduate/MBA Qualifications: any postgraduate qualifications, including Diploma for Graduates, Masters, PhDs and MBAs and other executive education
- Office/Administration or Diploma in Management Qualifications: those respondents who have completed business administration papers or qualifications are represented by this category along with those who have completed diploma in management courses.

Table 6 illustrates the number and percentage of specific qualifications held by the respondents, divided into those who work in a technical trade role and those who work in a professional role.

Table 6: Qualifications held by respondents by technical trade roles and professional roles

	Frequency held by Trades staff	Frequency held by professional staff	% held by trades staff who hold	% held by professional staff who hold
Trades Qualification	280	102	75.3%	58.3%
Bachelors Qualification	34	42	9.1%	24.0%
Post Graduate/MBA Qualification	10	11	2.7%	6.3%
Office/Admin or Diploma in Management Qualification	10	20	2.7%	11.4%

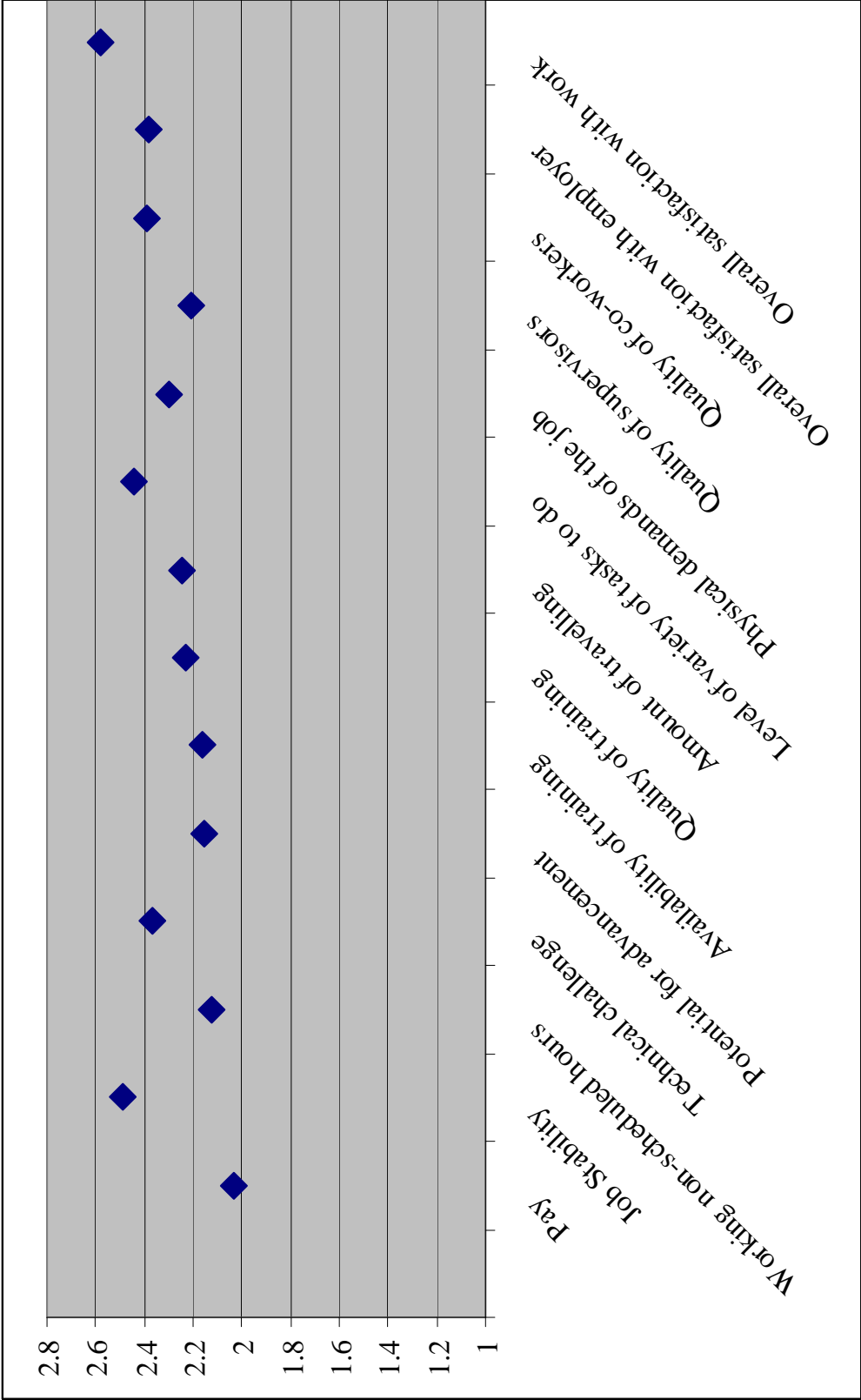
A total of 75.3% of respondents who hold trade qualifications work in the technical trades roles. However, 58.3% of those working in professional roles also hold a trade qualification. This figure reflects the value the industry places on technical trade qualifications as a starting point for career advancement.

The industry relies heavily on a skilled workforce. However, a significant proportion of the technical trades' workforce - 24.7% - does not have any type of trade qualification. Only 9.1% of those in a technical trade role and 24% of those in professional roles have a Bachelors degree. Office administration and management qualifications are held by 11.4%. These figures highlight for the industry skills strategy to focus on the key areas identified in this report as impacting on both the internal skills gap and the skilled labour shortage.

7.0 Employee satisfaction

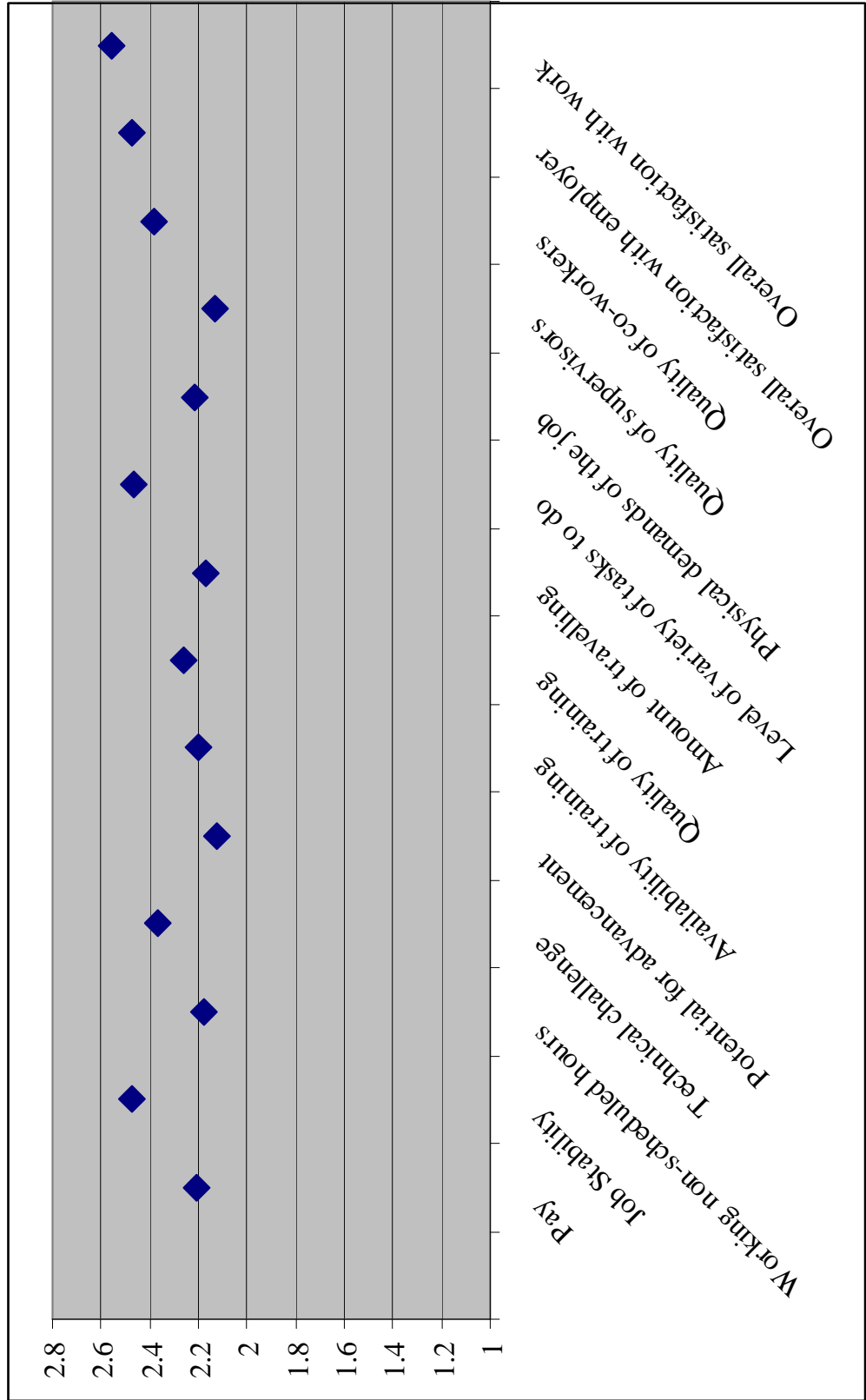
Training is a key component of employee satisfaction. Employees were asked to indicate how they felt about fourteen aspects of their job, ranking each in one of three degrees of satisfaction; dissatisfied, neutral or satisfied. The responses were broken down into those who identified with technical trade roles and those who identified with professional roles. Figures 12 and 13 illustrate the satisfaction averages for each group.

Figure 12 – Mean response to work satisfaction by staff in Technical Trade Roles



(The key for the above scale is: Satisfied =3, Neutral = 2 and Dissatisfied = 1)

Figure 13 – Mean response to work satisfaction by staff in Professional Roles



(The key for the above scale is: Satisfied =3, Neutral = 2 and Dissatisfied = 1)

7.1 Technical trade roles perspective

Overall, there was a high level of job satisfaction among those working in technical trade roles. None of the average ratings fell below the neutral ranking of two. In previous years, pay was the area of greatest dissatisfaction. While pay remains the source of least satisfaction, the mean is still slightly above the neutral line on the positive end of the scale. Non-scheduled working hours was the other area of least satisfaction in contrast to previous years when satisfaction with working hours had been ranked more highly.

On-the-job variety moved up the scale to become the third most satisfying aspect of the job, reversing the trend downwards reported in the 2005 study. Job stability was "slightly" to "moderately" satisfied in 2005. However in this study, job stability moved up to second place as one of the highest overall areas of job satisfaction.

7.2 Professional roles perspective

Respondents in professional roles recorded similar moderate to high levels of job satisfaction, with none of the average ratings falling below the neutral ranking of two. However, the areas of least satisfaction were the potential for advancement and the quality of supervisors. The qualitative research found that the potential for advancement was often unknown in many circumstances and the industry often lacked clear career plans.

Job stability and overall satisfaction with work scored the highest rankings. These findings contrast with previous ESITO gap analysis studies which reported, "a failing of the industry in providing the appearance of job stability".⁵

⁵ ESITO - An Industry Skills Strategy, December 2006

8.0 Career paths

Confusion and misunderstanding about the potential for advancement in the industry was highlighted. Respondents likely to continue in the industry were asked to indicate their job and career expectations, selecting from four options. Table 7 below indicates anticipated career paths. (Some respondents gave more than one response.)

Table 7: Anticipated career paths for those continuing in the industry

	Frequency	Percent	Valid Percent
Stay in your current job with the same employer	206	37.9%	39.4%
Change to a different employer with the same job	37	6.8%	7.1%
Advance to a higher technical position	127	23.3%	24.3%
Advance to a higher managerial position	153	28.1%	29.2%
Total	523	96.1%	100.0%
Missing	21	3.9%	
Total	544	100.0	

Nearly 38% said they were likely to stay in their current job with the same employer. This was not unexpected, given the reported high levels of overall job satisfaction in this study. However, more than half of the respondents (53.5%) indicated they would like to advance to a higher technical or managerial position.

Identifying employees who wish to advance is important for the industry. Working with staff to develop career paths and provide training will lead to greater individual job satisfaction and retention. It will also assist with succession planning, providing internal resources to cover skills gaps.

9.0 Loyalty to the industry

9.1 Loyalty to the job, employer and industry

Respondents were asked to indicate their loyalty to their current job, their current employer and also the Electricity Supply Industry as a whole. The following tables represent the responses by both technical trade and professional staff.

Table 8: Respondents loyalty to their job

	Frequency Trades staff	Frequency Professional staff	% of trades staff	% of professional staff
None	11	4	3.0%	2.3%
Slight	10	5	2.7%	2.9%
Moderate	56	33	15.2%	18.9%
High	213	94	57.9%	53.7%
Extreme	78	39	21.2%	22.3%

Table 9: Respondents loyalty to their employer

	Frequency Trades staff	Frequency Professional staff	% of trades staff	% of professional staff
None	22	5	6.0%	2.9%
Slight	27	14	7.4%	8.0%
Moderate	81	34	22.1%	19.5%
High	176	90	48.0%	51.7%
Extreme	61	31	16.6%	17.8%

Table 10: Respondents loyalty to the industry

	Frequency Trades staff	Frequency Professional staff	% of trades staff	% of professional staff
None	13	13	3.6%	7.4%
Slight	35	21	9.6%	12.0%
Moderate	103	51	28.1%	29.1%
High	144	63	39.3%	36.0%
Extreme	71	27	19.4%	15.4%

Both technical trade and professional staff felt a high degree of loyalty towards their job, their employer and the industry,⁶ with a strong correlation between all three. There was no apparent relationship between the age of respondents and job loyalty⁷, or for that matter between age and the employer⁸. There was, however, a correlation between a respondent's age and their loyalty to the industry⁹, as loyalty increased with the age of the respondents. Overall, loyalty seemed to lie first with the job, then with the employer and then with the industry.

⁶ Test of Independence estimated by Pearson Chi-Square, alpha = 0.05, p-value = 0.000, (40% of cells have an expected count of less than 5, which makes the statistical strength not highly significant)

⁷ Test of Independence estimated by Pearson Chi-Square, alpha = 0.05, p-value = 0.280, (52.7% of cells have an expected count of less than 5, which makes the statistical strength not highly significant)

⁸ Test of Independence estimated by Pearson Chi-Square, alpha = 0.05, p-value = 0.802, (47.3% of cells have an expected count of less than 5, which makes the statistical strength not highly significant)

⁹ Test of independence estimated by Pearson Chi-Square, alpha = 0.05, p-value = 0.017, (45.5% of cells have an expected count of less than 5, which makes the statistical strength not highly significant)

10.0 Conclusions and recommendations

This study has highlighted significant gaps in the skilled labour force in the Electricity Supply Industry despite strategic initiatives implemented to address the problem. There are also skills gaps among those already employed in the industry at all levels – technical and professional – and the need for further training and upskilling of the workforce.

Economic and population growth is increasing demand for electricity by a compound rate of two percent a year. This, combined with the Government's target of 90 percent generation from renewable sources by 2025, places further pressure on the industry to meet needs now and plan for the future.

Employers and ESITO have worked hard to alleviate the skills gaps in various ways, including investing heavily in training, bringing skilled workers to New Zealand and by endeavouring to promote careers in the industry.¹⁰ Initiatives to reduce the shortage appear to be taking effect as, on a positive note, the skilled labour shortage has not increased, and employers are feeling more confident.

A number of approaches – some of which are already in place - should be consolidated across the industry and new strategies adopted to address current issues.

Strategies focusing on job stability, co-worker and supervisor quality would assist in the attraction and retention of staff.

There is potential to expand graduate programmes, which are already attracting young skilled minds into the industry, into a wider range of areas of appeal to recruits. Summer internships could also be extended to school students, who have yet to decide on their future career, as well as those already undertaking tertiary education.

¹⁰ "An Industry Skills Strategy for the New Zealand Electricity Supply Industry, Final Report Dec 2006", p3.

"Taster" courses, such as these, are opportunities to positively promote the industry and increase awareness of its vital role, giving them first-hand experience of an industry that promises great career opportunities, job stability and opportunities for advancement.

The research shows that industry workers are becoming increasingly loyal and have greater job satisfaction. While the Electricity Supply Industry cannot compete for skilled workers internationally on salary alone, it can compete on other factors, such as job stability, co-worker and supervisor quality, all of which are key drivers of employees' job satisfaction. All of these factors contribute to a good working environment and a strategy should be developed to leverage them for the benefit of the workforce and, ultimately, the industry.

An industry which is seen to value loyal employees is more likely to attract new recruits and retain staff. Defined career paths are a positive way to look after those in the industry, giving them not only job stability and career choices, but a sense of personal satisfaction in the direction ahead. It also enables industry to gauge gaps and plan for future cover of roles.

Mentoring programmes are one way to keep more senior, skilled workers in the industry for longer so that their valuable skills and knowledge are not lost. The senior staff member is able to pass on his/her skills to the younger and less experienced in the workforce, while experiencing the challenges and rewards of advancing to another area of the industry.

Identifying the potential for communication breakdowns is important in enabling corrective action and helping to reduce the skilled labour shortage. Other strategies to keep older members of the skilled workforce in the industry are vital.

Overall, the industry has coped well but a shortage of skilled labour and a skills gap for those already in the industry, remain. These are major problems which the industry should move to address.



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