



# Change is constant. The skills shortage need not be.

*Author: Matthew Robinson, Head of Strategic Service Development*



**Specialist Consultants  
to the Electricity Industry**  
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# Introduction

*Our industry is experiencing a revolutionary transformation. More change and advancement are occurring now than we have seen in decades. With these opportunities come challenges and access to skilled and capable resources is critical for many in the energy sector right now. Not only is competition for resources high, but the pace of change in so many areas means that traditional training and development struggle to keep pace with the speed to market of new technologies, new business models, changing regulatory requirements and the application of novel techniques.*





## The way forward

We all agree we need to do something, but what is the best way forward? How do we better leverage resources and plan for 'more' - more change at an accelerated pace requiring a workforce with a more diverse skill set?

At PSC, we're motivated to seek novel approaches to meet challenges that both our clients and we face. We may not fully realize these opportunities by training people as we have in the past; we must learn to do new things.

Part of the answer lies in different industry parties collaborating to find solutions to these problems. By working together to upskill our entire industry workforce, recruit, and train new talent, we hope to achieve a better result: a steady influx of engineering expertise and new skills benefiting the entire sector.

Today's industry skills shortage is partially the result of decades of workforce reductions and a mindset to do more with less. Now we are challenged to do more - and do new things - with our current people and cultivate emerging talent during an era of extraordinary transformation.

Many leaders welcome the opportunity afforded by this challenge. As an industry, we do not have all the answers, but we are certainly adept at trying different ways to solve our problems.



# Innovative approaches

The need for new resources in a tight global labor market encourages us to think and act differently. One approach PSC is taking is partnering with universities to help us recruit and train our engineers while exploring new and innovative research.

Identifying research opportunities helps us prepare and plan for what's next. We are exploring a model that considers the benefits of knowledge sharing between industry, government, and academia to address some of the energy sector's challenges.

Through a developing partnership with [Monash University's Energy Institute](#), PSC engages in research programs and student placements. Within the partnership, communication fosters a greater understanding of the role of industry to help drive innovation. Beneficial collaboration comes from being open and available to talk things through, and by working together and helping each other address common issues.

Another approach we are encouraging is the facilitation of staff swaps, secondments and knowledge transfer sessions among our clients and between clients and industry partners. PSC has witnessed clients with staff rotation programs to support a broader perspective and knowledge sharing. These efforts expose individuals with knowledge in one discipline to new experiences outside their job function or department and provide an opportunity for more active collaboration.

"The temporary movement of an employee opens up their field of vision," said [Martin Stacey](#), PSC Senior Consultant. "Admiring an issue from other perspectives helps to better define it and identify alternative approaches to address it."

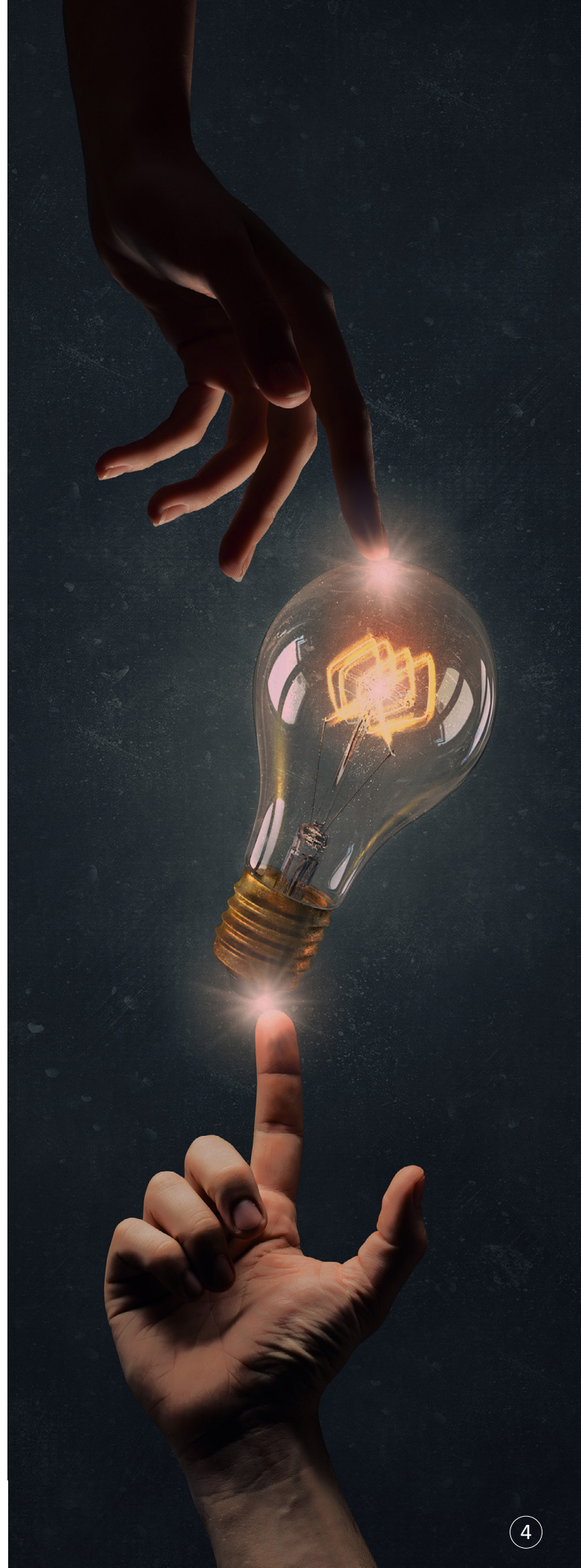
PSC encourages knowledge transfer by working on a common problem between those who have experience operating the grid and those whose work focuses on IT/OT solutions. The outcome provides an enhanced engagement with a client and enables PSC staff to grow and share knowledge and evolve our new staff, giving them greater purpose for their work.

In the US, PSC is working with key customers on Advanced Distribution Management Systems (ADMS). The solution offerings include procurement, technical skills for implementing complex systems, advanced application modeling and operator training modules leveraging industry training standards and simulators. With the breadth of engagement, PSC has been able to engage our customers as partners to deliver the solution they need and increase the internal knowledge base of our staff.

"We are creating opportunities to learn from our peers, and to help pass on their knowledge to the next generation," said [John O'Hehir](#), PSC Director, Operational Technologies, North America.

In Europe, PSC is piloting a mentoring programme to increase continuity among older and younger employees. This type of knowledge transfer pairs principal consultants with associate-level employees, bridging the gap between legacy best practices and new ways of managing new technologies.

As part of this effort, we also are reaching out to industry retirees to train staff and transfer skills honed from years of managing complex projects. Their experience and guidance help contextualize many of the challenges our industry faces today.





## Recruiting talent

The power sector needs more entry-level and mid-level engineers, which requires senior technical staff and managers to mentor them to become their best selves and, in turn, become leaders. Candidates who can refine both their technical and people skills will help fill the gap left by industry veterans transitioning to retirement and facilitate the collaboration that our industry now needs to engage in.

As noted earlier, private industry is driving collaboration with academic and tertiary institutions to build a more robust pipeline of graduate candidates and develop mid-career staff by exposing them to novel thinking and approaches. As a global organization, we are witnessing the positive effects of such collaboration to address the skills shortage in numerous markets.

“Approximately 20 years ago, young people in New Zealand were not encouraged to study energy,” said [Peter Brown](#), PSC GM, New Zealand. “Our industry is now feeling the effects: there’s a smaller talent pool in the 30- to 45-year-old age range, with fewer engineers across all disciplines.”

In Australia, employment of engineers is increasing at a higher rate in ‘non-core’ engineering industries such as financial and insurance services than in core industries including utilities, according to Engineers Australia.<sup>1</sup>

“Talent is being diverted away from the power sector,” said Stacey. “The technical expertise required for engineering cannot be substituted with other skills, but engineering qualifications are highly desirable in many other industries.”

“American and Canadian universities are graduating more engineers, but they prefer to specialize in computer science and other disciplines over energy,” said [Ann Bhat](#), PSC Head of People. “As an industry, how do we excite engineering candidates about power when everyone wants to make the next killer app?”

<sup>1</sup> Kaspura, Andre. 2019. “[The Engineering Profession: A Statistical Overview.](#)” Fourteenth Edition ed. Barton, ACT: Engineers Australia, pp 18

Today’s graduates typically require five years within an organization before making a tangible impact. During that time, we want to expose them to opportunities in power by offering experiences in various areas across the industry.

Our challenge is to grow the workforce year-on-year and replace retirees with engineers of all ages and career phases who possess a broader skillset and a willingness to learn new ways of working in an agile environment.

“Recruiting and retaining the next generation of engineers requires meeting them where they are,” said Bhat.

Initiatives such as scholarships, apprenticeships and vacation placements help remove barriers to entry for students, accelerate learning and forge connections between engineering candidates and the sector.

“You cannot teach someone by telling them to ‘push this button.’ Instead, you need to provide context and give ownership of a problem to help someone understand the ongoing challenges utilities face,” said [John Camilleri](#), PSC GM Operational Technologies, North America.

Part of the answer lies in developing relationships that look to deliver long-term solutions that benefit the industry as a whole.

In support of New Zealand’s Electric Power Engineering Centre (EPECentre), PSC established a scholarship in 2005 to recognize academic achievement by undergraduate students pursuing courses in Electrical Power Engineering at the University of Canterbury Electrical Engineering School.





The scholarship considers academic achievement, character, leadership potential and industry contributions. As a result, several recipients have gone on to work for PSC or our clients, such as AEMO and Transpower, in multiple countries.

Not-for-profit organizations such as [The Power Engineering Excellence Trust \(PEET\)](#) are helping students realize an education and defined career in the energy sector. As its current Deputy Chair, PSC GM, New Zealand, Peter Brown helps PEET educate young people about the meaningful work taking place in the power industry and prepare them to transition to the workforce.

“A successful engineering career requires more than technical expertise,” said Brown. “Through early engagement and mentorship with industry executives, students are exposed to interpersonal communication and conflict management outside the classroom.”

In Europe, PSC facilitates time and space where recent graduates and new PSC hires gather to brainstorm potential innovation projects and exchange ideas. “We’re building community by sharing information in ways that reflect how we work now - and how younger generations of engineers engage with each other,” said [Tim Miles](#), PSC MD, Europe.

Vacation placements and apprenticeships also are proving grounds for second- and third-year students eager for hands-on experience and businesses that need immediate support and are willing to mentor potential candidates. We launched a summer programme in New Zealand to expose students to a variety of different workstreams at PSC; one of our interns accepted a position with our firm after graduation.

In Europe, we are considering a pilot program that places graduates on client sites for 6-month rotations in different areas of the industry.

“Some of the best technical performers may not be the best academic performers,” said Brown. “We are trying to meet more young people willing to learn and try new things. We want to help channel them into further studies and organizational training programs to develop the next generations of engineers.”



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# Lets talk!

If your organization is interested in finding ways to alleviate the skills shortage, wants to explore new ways to work or has ideas for collaboration, please reach out to us at [apac-clients@pscconsulting.com](mailto:apac-clients@pscconsulting.com)

# About the author

## Matthew Robinson

Matt is an energy sector leader who holds a strong belief that the engineering sector is fundamentally about change and creating positive, sustainable progress for society. Matt has spent the last 25+ years working across the full spectrum of electricity supply and generation in Australia, United Kingdom, Asia and the USA. He has delivered numerous complex projects including the first integrated control and protection system in the UK, delivering capex projects to all the major network companies in Australia and advising government and private sector clients on energy projects and strategy.

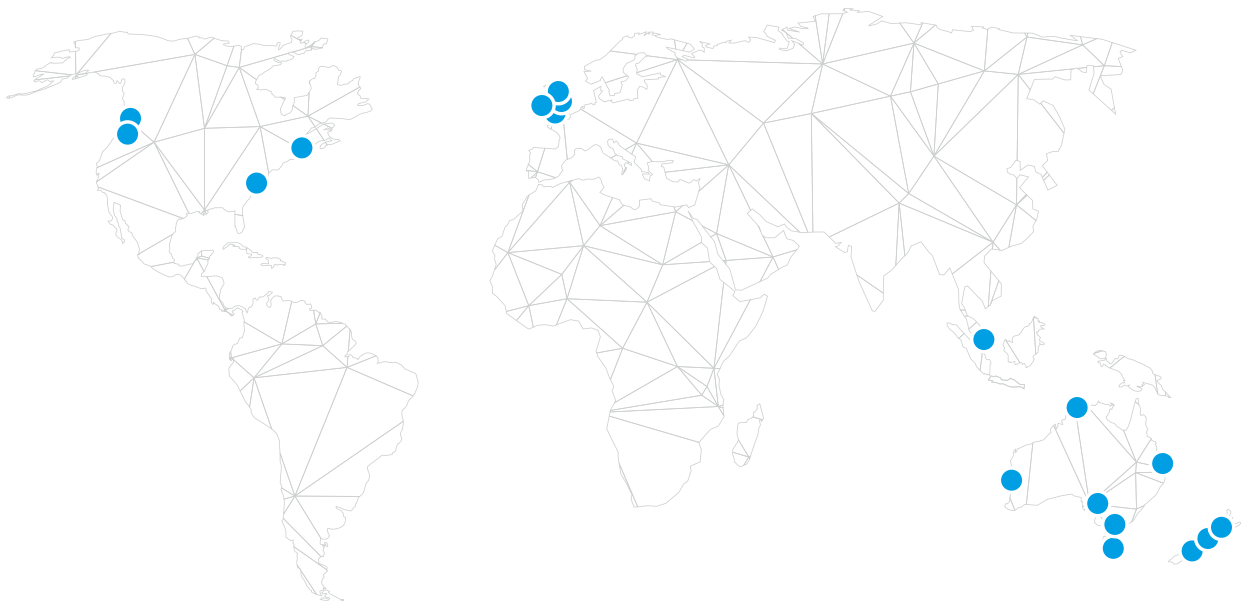
Matt has led strategic thinking on how government and industry can navigate the energy transition toward an economically robust and sustainable future for communities and businesses. As part of his role at PSC, Matt works closely with partners such as the Monash University Grid Innovation Hub and frequently authors articles and presents at conferences on various aspects of the subject.



## At PSC, we're helping power a more sustainable world

Our global team of electricity experts has been tackling the thorniest problems for some of the most prominent industry players for over 25 years. By empowering people to make a difference and do the right thing, we help our clients and employees innovate and thrive in a rapidly changing industry.

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