

# Valuable people

Understanding SSE's Human Capital





# About SSE

**SSE has an essential purpose at its core – to provide the energy people and businesses need in a reliable and sustainable way.**

At SSE we have a responsibility to customers, employees, communities and shareholders, to ensure this need is met, both now and for the long term. This is why we work hard to ensure the lights remain on, energy costs are affordable and the environmental impact of producing energy is kept to a minimum. To achieve environmental, social and economic well-being for current and future generations, it is SSE's aim to always make decisions and choose actions which are ethical, responsible and balanced.

We are the UK's broadest-based energy company, involved in the generation, transmission, distribution and supply of electricity; in the production, storage, distribution and supply of gas; and in other energy services.

Our business is organised into three core business segments: networks, retail and wholesale.

## **Networks**

Our electricity networks transmit and distribute electricity to 3.7 million homes and businesses through 130,000km of overhead lines and underground cables. We are also involved in the distribution of gas to around 5.7 million homes and businesses via 75,000km of gas mains.

## **Retail**

Our retail segment supplies electricity and gas to around 9 million households and business accounts under our brands: SSE, Scottish Hydro, Southern Electric, SWALEC, Atlantic and Airtricity.

## **Wholesale**

Our wholesale business comprises of the production and storage of gas, the generation of electricity, and energy portfolio management. We are one of the UK's largest generators of electricity with the most diverse portfolio of power stations.

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Valuable people

# Foreword

**SSE is one of the biggest companies in the UK: we provide energy to millions of customers across the UK and Ireland and we contribute £9bn to the UK economy every year. For SSE, undertaking our business sustainably and responsibly is the starting point for any commercial success we earn.**

SSE's ethos regarding its people is very deliberate. We like to directly employ the people we need, grow our own talent, recruit the majority of our managers from within, and limit redundancy in favour of redeployment and retraining. Creating sustainable jobs, investing in people and following an in-house operational model means we don't out-source core work and we don't offshore work outside of the UK or Ireland.

There may no longer be jobs for life, but I like to think we are creating a modern notion of sustainable employment.

This approach is deeply embedded within the culture of SSE. We've always believed it was good for business, but this year we wanted to start to prove it. Of course, companies the length and breadth of the country claim that their people are their greatest asset. This report is an attempt to quantify that value for SSE.

Human capital should not be thought of as an asset a company owns, rather it's the people SSE 'borrows' from society which allows our business to operate and to grow. But this does not mean we don't have a responsibility to invest in our employees. On the contrary, the responsibility is even greater because it's not just the company that benefits from that investment: society does, for example through increased tax payments; and, the individual does through increased earnings.

Although finding out the size of SSE's human capital is interesting, we also wanted to understand how we can most effectively manage and grow that value over time. Since 2007 we've recruited more than 800 apprentices and invested more than £60m in advancing the knowledge and skills of our employees. Knowing that the investments we are making in our human capital are delivering a good return is crucial to the future success of our business.

We now know the value of the human capital employed by SSE on 1 April 2014 was £3.4bn. We also found that for every £1 we invest in our apprenticeship programme, £4.29 of economic value is created and shared between wider society, the employer and the individual. Similarly, for every £1 we invest in our Technical Staff Trainee (TST) programme, wider society, the employer and the TST share £7.65 between them.

SSE is now the first company in the UK, and one of less than a handful globally, to quantify the economic value of the people it employs. This new knowledge helps demonstrate the business case of our people strategy, endorses the concept of sustainable employment and provides important evidence to support strategies for the future. In turn, that builds SSE's opportunity for commercial success over the long term.

**John Stewart**  
Director of Human Resources





# What is human capital?

## Understanding SSE's sustainability impacts

During the last year SSE has been working to advance understanding of the impacts our company has. For example, this has included building our in-house capacity to evaluate sustainability impacts of key infrastructure developments. At a company-wide level, we worked with PwC to calculate the economic impact of our operations, and now know that over the past three years we contributed £27bn to the UK economy and over €2.5bn to the Irish economy.

Without our employees and their hard work, SSE would not be able to make any impacts or contributions. The huge value of our workforce to the company is now something we have begun to advance our understanding on too.

Knowing the impact SSE can have on its human capital will help drive investment in this important asset. It provides evidence of the business and societal case for creating sustainable jobs and taking actions to maintain SSE's reputation for being a responsible employer.

The development of the methodology and analysis included in this report was undertaken by professional services firm PwC in conjunction with SSE. A full description of the methodological approach taken is available at:

<http://sse.com/beingresponsible/reportinganddata/>

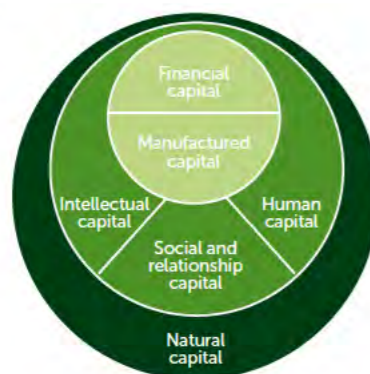
## Different kinds of capital

All businesses use resources in their day to day operations so they can create value and grow. These resources include things companies can directly own such as financial assets, manufactured assets and some natural resources. However, it can also include resources which companies don't own but make use of for a period of time, such as people, ideas and the environment.

The International Integrated Reporting Council (IIRC) describes these different resources as 'capitals' and defines them as 'a store of value that, in one form or another, becomes an input to the organisations business model'. The IIRC identify six key types of capital businesses make use of in their operations.

## The IIRC's six capitals

Some capitals, particularly those that can directly be owned by companies, are well documented using well-established financial accounting and reporting processes. Other kinds of capital, such as human capital, are however less easily quantifiable, with limited consensus on how to value, measure and record them.



Capitals that are well documented and reported

Capitals that are not well documented and/or reported

Source: Adapted from IIRC, 2013.

## Human capital explained

**Every individual has their own stock of human capital. An individual's human capital is their productive capacity, made up of two key components: innate ability and talent, and learned knowledge, skills and other attributes.** This means that certain individuals may start off with a higher level of human capital than others, but education, training and life experiences will all contribute to growing and advancing our own personal stores of human capital.

Human capital determines our economic productivity as individuals and our ability to produce goods and services and to generate ideas. To earn money we "lease" our human capital to our employers, so a higher level

of human capital can raise economic productivity and increase earnings. It is therefore in the interest of both employee and employer to invest in developing our human capital as it is a key driver of our own individual earnings as well as economic and business growth.

The human capital of a company or organisation is not the actual value of an asset it owns, nor is it a measure of the impact or contribution of the company or a 'fair value' of its workforce that can be added to its balance sheet. **It is the sum of the current and future economic valuation of the skills and capabilities embodied within all the individuals that make up the total workforce of the organisation.**

## Why quantify human capital?

For SSE there have been four key drivers for carrying out this evaluation:

1. To be able to **report the significance** of the human capital SSE employs to internal and external stakeholders.
2. To **understand the value** of the human capital SSE employs, in order to have a better understanding of the contribution it makes to SSE and to wider society.
3. To **provide insight** into the factors which enhance or erode the value of SSE's human capital.
4. To **inform decision making** on SSE's approach to human resource management at all levels of the organisation.

Academic research and literature on human capital quantification has been developing since the 1960s, though applying theory into business practice has, so far, been limited. However, at a national level, valuation of human capital is being recognised as a key measurement indicator: for example, the Office for National Statistics (ONS) has been measuring the UK's human capital since 2004. Nevertheless, there remains no real consensus within or between the academic, private and public sectors on the best way to quantify and report on human capital.

Creating a better economic and financial understanding of the significance of employees to a business and that business's value creation can provide companies with insights into the drivers of future business growth. This generates opportunities for an organisation to take actions which result in the most efficient way of enhancing the productivity of its workforce. SSE's decision to develop a methodology which quantifies its human capital value is the first step in a journey which will advance its knowledge and future strategy in human capital measurement and management.



# Measuring human capital

Human capital is not a financial asset. However like more conventional kinds of capitals, such as manufactured and financial capital, human capital can still be thought of as having a total asset value at any given point in time. This asset value calculation is therefore based on the current characteristics of the workforce on 1 April 2014.

## SSE's workforce: Key statistics on 1 April 2014

Total number of employees included in analysis	19,631
Average remuneration	~£30,000
Average age	~40 years
Gender split	Female: 30%, Male: 70%
Average retention rate	~91%
Geographical split	UK: 96%, Republic of Ireland: 4%



The total value of SSE's human capital has been valued at:

# £3.4bn

For each of our 19,631 employees this corresponds to an average human capital per head of:

# £173,000

## The key steps of our approach

The equation below outlines the basic calculation for quantifying SSE's human capital value.



To calculate the total value of SSE's human capital we used the income-based approach which assumes the value of each individual's human capital is equivalent to their discounted expected total lifetime earnings. Lifetime earnings are estimated for each employee, based on assumptions surrounding their job function and expected future earnings based on projected career progressions.

An individual will only contribute to SSE's total value of human capital for the length of time they are employed by SSE. This length of service adjustment takes into account factors such as average SSE employee (in)voluntary leaver rates and leaving due to sickness estimates.

In the theoretical scenario that all of SSE's employees on 1 April 2014 continued to be employed by SSE for their entire working life, the total value of SSE's human capital would be much larger.

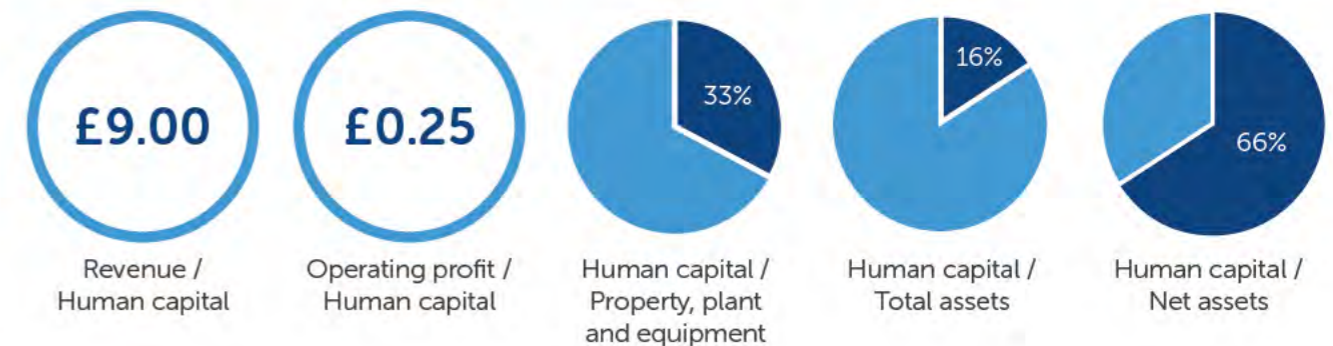
The methodology developed for this exercise is bespoke to SSE and uses SSE-specific inputs in the calculation. To ensure results were not overestimated, a discount factor which incorporates an SSE-specific company risk profile was used. This rate is higher than the HMRC discount factor of 3.5% used by the ONS when calculating the total value of the UK's human capital.

## The value of SSE's human capital as an asset

The total value of SSE's human capital at 1 April 2014 has been valued at £3.4bn. This monetary measurement is the total asset value of human capital embodied in all 19,631 of SSE's employees on this date, adjusted for the period of time they are expected to work for SSE. This total value corresponds to an average value of £173,000 of human capital for every SSE employee.

## Human capital ratios

As we are not aware of any companies in the UK which have quantified the value of human capital embodied in their employees, we placed our human capital value in the context of several of our key financial indicators in FY14. As well as providing an indication of human capital's relative importance to these measurements and assets, it allows SSE to track these ratios over time to assess the changing role of human capital within the organisation.





# SSE's human capital in the UK and Republic of Ireland

SSE is a diverse business, and as such it employs a wide range of individuals with different skill sets, qualifications, experience and responsibilities. This includes roles such as customer support personnel, engineers, technicians, joiners, lawyers and business administration staff. All of these different types of jobs will have varying earning potential and a different typical length of service with SSE, consequently generating different values of human capital.

The values of SSE's human capital across the regions and nations of the UK and the Republic of Ireland demonstrates the diversity of SSE's business.

The total value of SSE's human capital has been valued at: **£3.4bn**

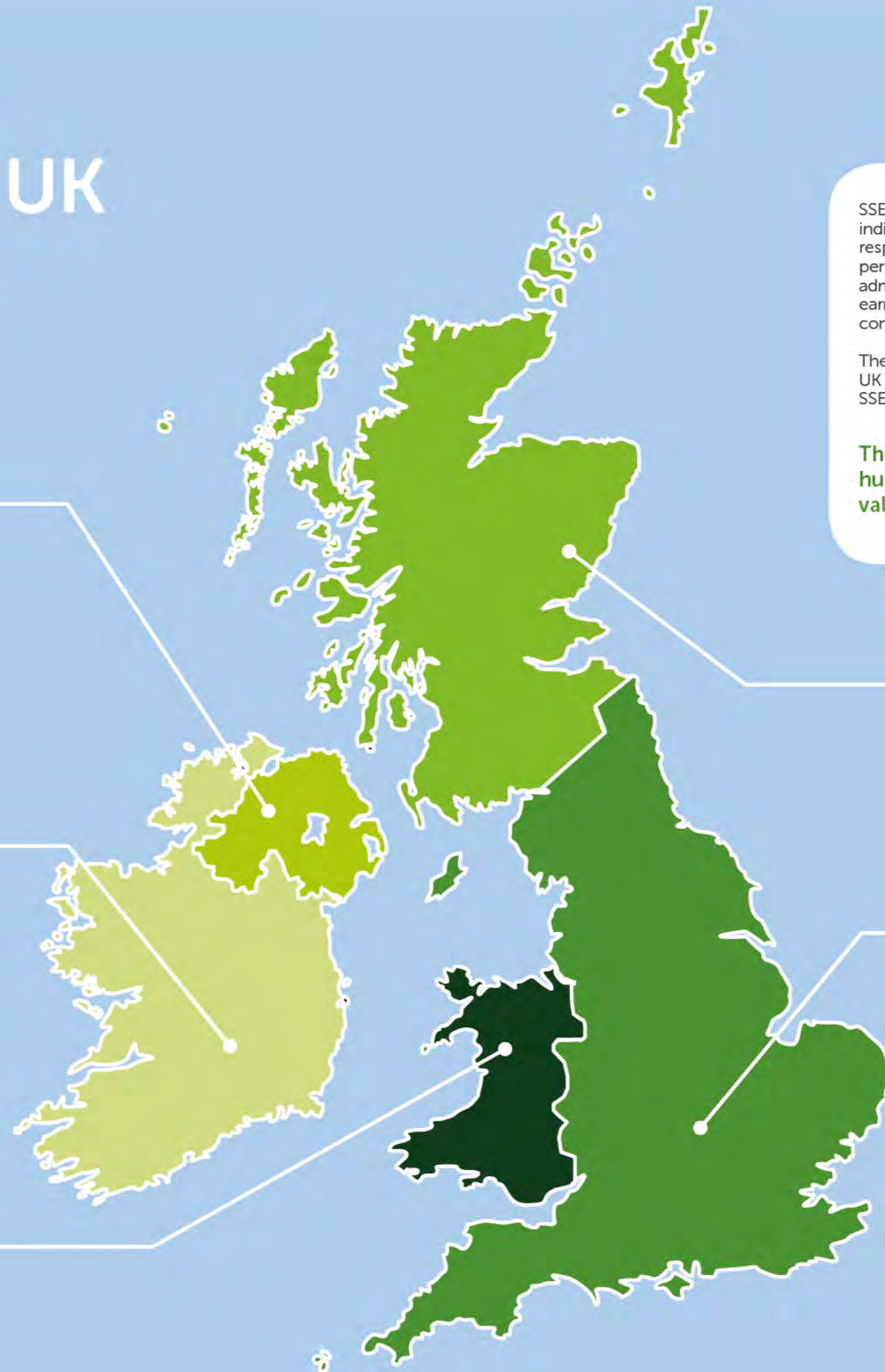
Northern Ireland: £20m  
- 106 employees

Republic of Ireland: £170m  
- 801 employees

Wales: £270m  
- 1,798 employees

Scotland: £1.12bn  
- 6,241 employees

England: £1.82bn  
- 10,685 employees





# Growing human capital

## Enhancing SSE's human capital value

The human capital value of an individual, organisation or nation can increase or reduce between two points in time, with this change commonly referred to as the 'flow' of value.

SSE's total human capital value of £3.4bn is calculated at the beginning of SSE's 2015 employee performance year, on 1 April 2014. There are a large number of factors which will generate this flow of human capital value: either enhancing or reducing the total asset value over time. These include variables which change the number of people SSE employs and variables which change the human capital value per employee.

Some of these factors can be directly influenced by the human resources strategy of the company, for example recruitment drives and investment in training programmes, whereas others can only be partially influenced by the company, for example retention rates and the productivity of employees.

The diagram below illustrates the impact of potential positive and negative changes in the value of human capital between two points in time. In this case the net flow is positive, but the value of human capital can also decrease over time.



## Understanding the impacts of training

Quantifying SSE's human capital allows us to better understand how future actions by SSE can impact the flow of human capital and ultimately grow our total human capital value over time. One key way of increasing an individual's human capital is to provide them with training. As training increases the skills and capabilities of individuals, an investment in training is expected to increase an individual's productivity and the associated human capital value of this individual.

We assessed the economic impact of SSE's investment in two of the company's key training schemes: the Technical Staff Trainee (TST) and the apprenticeship programmes. The impacts are measured over the lifetime of the trainee and are calculated using wage premiums which reflect the expected increase in productivity from higher formal qualifications. The total economic impact of this higher productivity from training is equal to the increased value shared between the individual (wages), the employer (profit) and society (taxes).





# Technical Staff Trainee (TST) programme

The Technical Staff Trainee (TST) programme is a unique training scheme which is fully funded by SSE. The TST programme is vital to SSE, allowing the business to sustainably develop and grow the human capital engineering resource needed to provide customers with energy in the future.

TSTs undertake a three year course, for which the first two years are spent completing a foundation degree in electrical power engineering. This includes 26 weeks of academic learning delivered in two to three week blocks. The teaching covers important engineering and mathematical skills the TSTs will need in their future careers. The trainees use this knowledge to undertake an industrial project in their second year.

While not studying for their degree, TSTs learn from hands on experience and working on placements throughout the business alongside experienced colleagues in power stations, control rooms, depots or out on sites. In their

third and final year TSTs are given more responsibility, managing small jobs that involve technical decision making, safety management and supervision of craftsmen or contractors.

SSE's investment in TST scheme in FY14 is estimated to be around £15,000 excluding wages per trainee per annum. This has a threefold impact and it is estimated the FY14 intake of 25 individuals will generate an additional: £1.2m in wages for the TSTs on the scheme; £4.6m in profits for any employer of the TSTs over their lifetime; and £1.2m in taxes paid to the Exchequer. This equates to an economic return of £7.65 for every £1 invested by SSE in the programme, shared between wider society, the employer and the individual. Over their lifetime, it is estimated that the each TST will on average have an increase of £49,200 in net earnings as a direct result of their participation in the scheme. Due to SSE's total funding of this scheme, 100% of the economic impacts can be attributed to SSE.



## Total economic impact of the 2014 TST programme\*



\*The value attributed to employer is not only expected to accrue to SSE, as employees may leave and contribute to other organisations in the future.

## The gamble paid off

### Darren Burnside

Darren Burnside explains why five years ago, at age 28, he gave up a steady sales job to join SSE's Technical Staff Trainee (TST) programme.

"I was comfortable, but after a while I felt stuck in a rut," Darren explains, "where the sales jobs were well paid and I was doing well – but I wasn't being challenged and couldn't see a way to progress. I was at a crossroads and decided if I wanted to change things, it was up to me."

Darren applied to SSE's TST programme in 2010 and began later that year. There were two things that attracted him to the programme: SSE's reputation as a good employer, and the recognised qualification, and most likely a secure job, at the end of it.

The TST programme combined a mix of practical training, classroom study and lab work at Aston University. Describing the experience as "challenging but rewarding", Darren says it helped him understand where he wanted his career to go: "It wasn't an easy two years, with a lot of coursework, but the practical

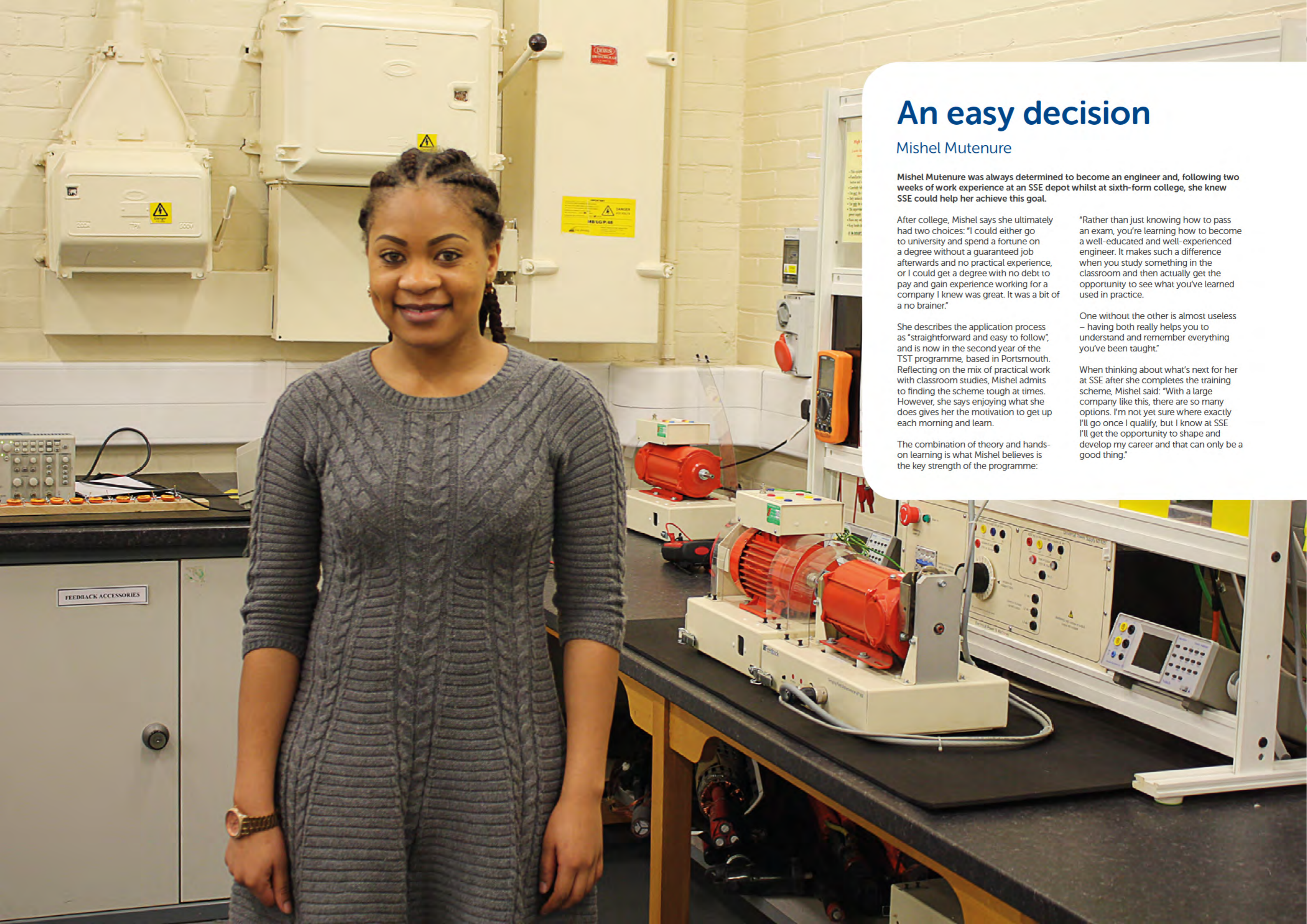
elements and placement really helped me decide where my future lay."

Nearly three years on and now based in Perth, Darren has progressed to Project Manager within his team – designing systems for new substation infrastructure in the North of Scotland.

"I'm still learning every day," says Darren, "but the TST programme has given me a good grounding and I think I've found a job that suits me right down to the ground."

Darren admits the career switch was a gamble, but one that was worth taking: "As with any change, you do doubt yourself at times but, a few years on, I genuinely don't have a single regret. I'm in a much better place now and looking forward to building a long career with SSE."





## An easy decision

Mishel Mutenure

Mishel Mutenure was always determined to become an engineer and, following two weeks of work experience at an SSE depot whilst at sixth-form college, she knew SSE could help her achieve this goal.

After college, Mishel says she ultimately had two choices: "I could either go to university and spend a fortune on a degree without a guaranteed job afterwards and no practical experience, or I could get a degree with no debt to pay and gain experience working for a company I knew was great. It was a bit of a no brainer."

She describes the application process as "straightforward and easy to follow", and is now in the second year of the TST programme, based in Portsmouth. Reflecting on the mix of practical work with classroom studies, Mishel admits to finding the scheme tough at times. However, she says enjoying what she does gives her the motivation to get up each morning and learn.

The combination of theory and hands-on learning is what Mishel believes is the key strength of the programme:

"Rather than just knowing how to pass an exam, you're learning how to become a well-educated and well-experienced engineer. It makes such a difference when you study something in the classroom and then actually get the opportunity to see what you've learned used in practice.

One without the other is almost useless – having both really helps you to understand and remember everything you've been taught."

When thinking about what's next for her at SSE after she completes the training scheme, Mishel said: "With a large company like this, there are so many options. I'm not yet sure where exactly I'll go once I qualify, but I know at SSE I'll get the opportunity to shape and develop my career and that can only be a good thing."



# Apprenticeship programme

SSE's apprenticeship programme provides training within four of its business areas – Networks, Generation, Contracting and Home Services – providing the expert teaching needed for the apprentices to go on to maintain and grow the country's energy infrastructure.

The programmes run for two to four years, with apprenticeships currently offered for Electricians, Gas Engineers, Mechanical and Electrical Engineers, Wind Turbine Technicians, Overhead Linespersons, Cable Jointers, Heating and Ventilation Engineers and Fitters. The apprenticeship programme is centred on work-based learning and therefore offers training linked directly to the job; teaching functional skills which support communication, critical thinking and problem solving. Trainees on the apprenticeship scheme are provided with the opportunity to achieve a Modern Apprentice Qualification. Upon completion, qualified apprentices will move into the business with an accreditation that allows them to build a successful career in the energy sector.

SSE invests up to £12,000 excluding wages per year per apprentice, working in partnership with other skills development organisations and funding agencies, a full list of which can be found within the methodology report. The FY14 intake of 109 apprentices is estimated to generate an additional: £2.4m in wages for the apprentices on the scheme; £6.1m in profits for employers of the apprentices over their lifetime; and £1.6m in tax revenue. This equates to an economic return of £4.29 for every £1 invested by SSE in the programme which is split proportionally between wider society, the employer and the individual. Each apprentice on the scheme can expect an average increase of £21,700 in net earnings over their working life.

SSE funds approximately 73% of the costs of the apprenticeship programme, which means 73% of the total economic impacts from this scheme can be attributed directly to SSE. This does not change the total impact value, nor does it alter the economic return on investment or the increased future expected net earnings for the individual.



## Total economic impact of the 2014 Apprenticeship programme\*



\*The value attributed to employer is not only expected to accrue to SSE, as employees may leave and contribute to other organisations in the future.

## Sibling success story

### Katy and Tom Fraser

Katy and Tom Fraser, a sister and brother from Aberfeldy in rural Perthshire, have both taken advantage of SSE's Modern Apprenticeship scheme to launch a career in the energy industry. Katy, a 22 year old Apprentice Wind Turbine Technician based at the 156.4MW Griffin wind farm, credits older brother Tom for encouraging her to consider training with SSE.

"I wanted a career change," says Katy, "a job that would challenge me both physically and mentally. My older brother, who works as a Craftsman at Clunie Power Station, had completed the SSE apprenticeship programme several years ago and recommended that I looked into it."

After completing her first year at college, Katy's second year will be learning the technical climbing and rescue skills needed to properly service turbines. Reflecting on her first year, Katy emphasises the variety of learning:

"It has been an interesting year. At the beginning I thought I would have enjoyed the mechanical side of the course most; however I found the electrical side equally interesting."

The variety of career opportunities offered is also one of the main reasons Tom still enjoys working for SSE. A qualified electrical fitter for over four years, he completes his ninth year at the company in September 2015.

The Fraser siblings have no doubts that choosing SSE was the right path for both of their careers and that SSE has allowed them to be part of a dynamic, challenging and rewarding working environment. Tom puts it best, stating; "I have never regretted my decision to join SSE. Like all jobs there are good days and bad days, however the bad days are certainly few and far between."





## A 26-year journey

Mike Trussler

Mike Trussler joined SSE straight from school at 16 as an Apprentice Electrical Fitter with Southern Electricity. Now, over 26 years later, Mike reflects on his long career with SSE since he began the scheme almost three decades ago.

Looking back on his four years of training, Mike highlights how the scheme helped him develop:

"The apprenticeship really set me up for the journey I've had with the company. Coming straight from school was a steep learning curve technically, but I learned how to work with different people, work as part of a team, and take responsibility for others."

Key to Mike's success in advancing at SSE was support he received during his formative years. As Mike puts it, "I was very lucky throughout my training to spend time with experienced fitters who were really good mentors in aiding my development." Later in his career, Mike also worked with colleagues he describes as "great mentors" who helped him progress within the company.

Since training, Mike has worked in numerous managerial roles and gained a huge breadth of experience. Now working as one of SSE's Networks Training Managers in Thatcham, Mike helps to develop training packages for future apprentices and is considered an expert in the business area, with three lead inspectors reporting directly to him. Mike says this role is one he particularly enjoys: "It gives me an opportunity to be more involved with the technical side of the job which was always my favourite part."

Thinking about his overall experience with the company, Mike concludes: "Whilst all those years ago I joined the company with an expectation that there would be opportunities to progress at SSE, I could not have dreamt of where my career would be by now, and I can't wait to find out where it will go in the future."



# Using what we've learned

Quantifying SSE's human capital has been a challenging but interesting and instructive exercise. It has provided us with a benchmark to assess year after year the difference our actions and investments make on the human capital embedded in the people we employ. Future evaluation should allow greater understanding of the impact on our human capital from key human resource policies on things like retention, diversity, performance management, training, engagement and reward.

## Economic impacts

At SSE, our customers come first. We invest in our people so we have a strong and efficient workforce that can provide the best service to our customers and ensure the security of future energy supply. In this study we have focussed on calculating the impact of investment in two of our biggest training programmes, the TST and apprenticeship schemes, and have seen the clear economic value being delivered for the individual, for the company and, importantly, for wider society too.

## Social impacts

This exercise has given us the foundations for further analysis of other programmes at SSE; for example the training we carry out in partnership with Barnardo's and the training on dementia awareness, both of which potentially have very high social as well as economic impacts.

Of course, we know that the TST and apprenticeship training programmes also have wider impacts than economic alone. For example, these programmes produce a new generation of engineers and technicians which help to ensure energy generation and supply is secure for the future. The programmes also have less easily quantifiable impacts for the individual, such as increased confidence as a result of the training. One area of future analysis therefore may focus on looking at how we record and analyse these other areas.

## Next steps

We have shown that SSE is committed to playing our part in developing the dialogue surrounding human capital measurement and management. This is the beginning of our journey in an area we expect will advance significantly in coming years.

As the first UK company to carry out this assessment, we don't have a benchmark to compare our human capital value against. However, we have provided a benchmark for other organisations to use. Going forwards, we know that data quality and insights into human capital accounting will advance and therefore we also know the way we analyse and measure our human capital will change in future as this area progresses. For both of these reasons we invite other organisations to actively engage with us on how we can refine this process and create new benchmarks for businesses in understanding the value of the people they employ.







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