The Inspire Education Programme

2014-2019 Independent Evaluation

Technical Report

Written by

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Front cover shows young people from St Peter's First School (Williton), Stogursey Church of England Primary School and Cannington Church of England Primary who won a competition to name three tunnel boring machines.

https://www.edfenergy.com/energy/nuclear-new-build-projects/hinkley-point-c/news-views/tunnel-boring-machine-naming-ceremony

Contents

This companion report contains

1. A summary of the statistical evidence gathered by the independent evaluation between 2014-2019,
2. Expands on the methodology used to calculate the social value generated by the Inspire Education Programme and
3. Considers the educational and political context that the programme has navigated since 2011.

Annex 1: Inspire evaluation statistics

The tables below present the key statistical results from the evaluation; focusing on young people as the key beneficiaries of the Inspire Education Programme.2

Audience	Measure	Evidence (2014/2015 – 2018/2019)	Trend
Young people aged 10-16. Sample 5,562	**Awareness of EDF Energy**	On average, 73% of all pupils have heard of EDF Energy (2018: 71%, 2017: 79%, 2016: 74%, 2015: 68%)	▲
	Aspiration	76% said that if they work hard they can achieve whatever they want (2018: 82%, 2017: 81% 2016: 80% 2015: 61%)	▲
	STEM capital	56% of all pupils said that a member of their family has a STEM related career (Year 4: 56%, 2017: 57%, 2016: 57%, 2015: 54%)	►◄
	Interest in Nuclear power	22% would consider a career in nuclear power (2017: 18%, 2016: 20%, 2015: 19%	▲
	Interest in Engineering	43% would consider a career in engineering (2018: 46%, 2017: 44%, 2016: 45%, 2015: 38%)	▲
	Interest in Construction	31% would consider a career in construction (2018: 34%, 2017: 29%, 2016: 32%, 2015: 30%)	►◄
	Interest in Apprenticeships	60%[1] found the apprenticeship route attractive (2018: 70% 2017: 58%, 2016: 54%, 2015: 56%)[2]	▲

1 This finding is comparable to national research (Sutton Trust 2018) that found 64% of 2,381 young people in 2018 would be very or fairly interested in doing an apprenticeship after leaving school.

[2] Research from Educationandemployers found that of those who expressed interest aged 14-15 11% subsequently took action by age 19. Interestingly, this same study noted 'Between the group of young people who never thought about doing an apprenticeship and those who applied and were successful there is a 7% difference in the amount of employer engagements.

Audience	Measure	Evidence	Trend
Young people who have engaged with the Inspire Programme Sample 1,304	**Aspiration**	29% of 1304 young people had taken part in an Inspire activity before and of those, 54% said it encouraged and inspired them either ‘a little’ or ‘a lot’.	**Baseline finding**
	Aspiration	49% felt inspired to try harder in STEM lessons (2018: 51%, 2017: 53%, 2016: 52%, 2015: 31%)	▲
	Aspiration	30% enjoy STEM subjects more than before (2018: 20%, 2017: 50%, 2016: 42%, 2015: 28%)	▲
	More informed choices	23% are more likely to study/ choose a STEM career (2018: 17%, 2017: 40%, 2016: 39%, 2015: 24%)	►◄
	Job readiness	53% have a better idea of what employers are interested in (2018: 53%, 2017: 60%, 2016: 63%, 2015: 48%)	▲
	Uplift[3] in interest in Nuclear Power	+20% in nuclear power (2018 +16%, 2017: 23%, 2016: +12%, 2015: +28%)	▲
	Uplift in interest in Engineering	+13% in engineering (2018: +11%, 2017: 12%, 2016: +9%, 2015: +19%)	▲
	Uplift in interest in Construction	+10% in construction (2018: +14%, 2017: 12%, 2016: +9%, 2015: +4%)	▲

[3] The uplift is calculated by comparing the interest of young people who have taken part in an Inspire encounter and provided feedback 3-4 months after that intervention (Spring term) compared with the overall sample of young people surveyed in the Autumn term.

Audience	Measure	Evidence	Trend
Young HPC members Sample: 19	**Awareness of the Inspire Programme**	21% remember previous events with EDF Energy, and the most commonly identified benefit was a 'sense of achievement (67%).	**Baseline finding**
	Interest in STEM careers	Young HPC is creating new interest in careers in Construction (36%) and Engineering (36%). Half of the 19 respondents were already interested in a career in these sectors. By comparison, 71% of the sample were already interested in a career in nuclear power before joining, but for 7% (1 person), this interest has been created	**Baseline finding**
	Interest in Apprenticeships	93% of those on Young HPC were interested in Apprenticeships	**Baseline finding**
	More informed career choices / talent pipeline	Interestingly, of this small, indicative sample of 7, 6 say as a result of the Inspire Programme they made different subject choices. Compared to the overall sample, they are more knowledgeable and more likely to recommend Inspire to their peers. This sub-group is overall more positive about Young HPC than the wider sample	**Baseline finding**
	More informed career choices / talent pipeline	64% were very likely to apply for a position at HPC, and 36% with EDF Energy. 21% were very likely to study a STEM subject at university and 14% to apply for a job with another STEM employer	**Baseline finding**

Audience	Measure	Evidence	Trend
Current HPC Apprentices Sample 84, 39 went to school in Somerset or Avon, Bristol	**Diversity**	77% male, 23% female in the sample taking part in this evaluation. For EDF apprentices nationally, the proportion of female apprentices has increased from 6% in 2011 to 65% in 2018.[4] Between 2016 and 2019 the proportion of female apprentices has fluctuated between 26% (2016 and 2019) and 42% (2017 and 2018) split is 60% male / 40% female Females account for 42% of level 3 apprentices (2017-2019). At degree level apprenticeship (level 6) women account for 39% of the total (2016-2019)	▲
	Diversity	11% (9) have a physical or mental health conditions or illnesses lasting or expected to last for 12 months or more	**Baseline finding**
	Social inclusion	18% (15) were eligible for free school meals	**Baseline finding**
	Social inclusion	29% (24) would describe themselves as coming from a lower socio-economic background	**Baseline finding**
	STEM capital	Just over half of the Apprentices grew up in families without a family member or close relative in STEM career (55%). Of this group, 45% recall encounters with Inspire or EDF Energy, and nine Apprentices (also 45%) give the Inspire Education Programme 25% 'credit' or higher for their career decision	**Baseline finding**

[4] This finding is considerably higher than the 8% figure for females apprenticeship starts in STEM (2016-2017, nevertheless an increase from 3% in 2011-2012). Source: WISE: Women in STEM Apprenticeships 2017/18. https://www.wisecampaign.org.uk/statistics/women-in-stem-apprenticeships-2017-18/. Further information on the gender split in STEM occupations can be found at https://www.wisecampaign.org.uk/statistics/2018-workforce-statistics/.

	Awareness of the Inspire Education Programme	In 2019, of the 39 Apprentices who grew up in Somerset, nine (24%) of 37 apprentices responding could recall one encounter with EDF Energy and / or the Inspire Education Programme and a further 5 (14%) could remember more than one encounter. Together this is 14 (38%) of local Apprentices	**Baseline finding**
	Job-ready	The largest positive outcome from Inspire was 'I could make a better decision about whether a career in this area was for me or not because I knew where to go for the information' (69%), followed by 'gaining a better understanding of what employers are looking for' (57%)	**Baseline finding**
	Willingness to recommend	Of Apprentices who grew up in Somerset / Bristol or Avon 12 out of 33 (36%) were willing to recommend Inspire to their peers (scoring 8 out of 10 or above), while 3 (9%) were detractors. This gives a Net Promoter Score of 24	**Baseline finding**
	Willingness to recommend	82% (85%) agreed that 'it is important that EDF Energy is active in schools to raise awareness and aspiration and promoting employment opportunities at HPC.'[5]	
	More informed career decisions	Nine apprentices agreed they made different subject choices as a result of Inspire. Responding to a later question, 12% said that Inspire had some or a great influence on their GCSE choices, and 15% said it influenced their post 16 choices.	**Baseline finding**
	Attribution to Inspire	Apprentices gave 14% 'credit' to the Inspire Programme for their career choice[6] Analysis by level of interest in STEM prior to encountering EDF Energy and Inspire: • Little interest in STEM subjects' credit: 11% • Already interested in STEM and considering a STEM career credit: 9% • Interested in STEM subjects but considering / leaning towards a	**Baseline finding**

[5] 86% of those completing feedback following an assessment centre agreed that 'Young people are better prepared for the world of work thanks to programmes run by Employers like the Hinkley Point C 'Inspire' programme and initiatives like school STEM days/workshops, Career Assemblies, Careers Fayres, etc...?

[6] The Inspire education Programmer was the third ranked influence, with parents 1st (35%), then subject teachers (24%. Data gathered by EDF Energy at the Apprentice Assessment Centres found that 8% (of 36 applicants) found out about the opportunity from Inspire

		different career: 21% • Not interested at all in STEM subjects' credit: 16% *(also higher than the all sample average)*	
	Attribution to Inspire	14% would not have applied to EDF Energy without the HPC Inspire Education Programme	**Baseline finding**
	Attribution to Inspire	42 of apprentices raised locally agreed The Inspire Programme had changed their career path	**Baseline finding**
	Career ambitions	76% of 66 Apprentices responding to this question said they are very likely to complete their Apprenticeship, whilst 20% were quite likely. Apprentices who recall EDF Inspire are not more likely than the rest of the cohort to complete.[7]	**Baseline finding**
	Career ambitions	68% of 66 are very likely to continue working with the same employer for the next 2-3 years and a further 24% are quite likely. Those recalling more than one encounter with EDF Energy are more likely to continue with their same employer for the next 2-3 years compared to the all sample average (100% compared with 73%).	**Baseline finding**
	Career ambitions	39 (46%) are very likely to continue working in the same sector in the next 2-3 years, whilst a further 18 (21%) say they are quite likely. This suggests that there is a relative contentment and potential future 'adherence' to the STEM sector they have selected for their career.	**Baseline finding**

[7] While not directly comparable, this is higher than national data where 65% of employers reported that all their recent apprentices were still with the organization. Source: Department for Education. Apprenticeships evaluation: employers research report (November 2017).

Annex 2 Context

Education Context 2011-2018

The Secretary of State for Education has changed four times – 2010-2014 Michael Gove, 2014-16 Nicky Morgan, 2016 – 18 Justine Greening, 2018 incumbent, Damian Hinds.

Similarly, in Skills, there has been Ministerial change – Matt Hancock, Robert Halfon and now, Anne Milton being at the helm. Where skills and apprenticeships 'sat' also changed. In July 2017, the Department for Business, Innovation and Skills (BIS) was split up and skills and apprenticeship policy went back to the Department for Education (DfE). The Department for Business, Energy and Industrial Strategy (BEIS), was also created at this time.

Despite the leadership changes, the education strategy set down by Michael Gove has been adhered to by the subsequent Ministers, who have largely left the framework/ideology untouched. That doesn't mean there hasn't been change, of course. Key items include;

- Careers and Enterprise Council established in 2015 to help link schools and colleges to employers, in order to increase employer engagement for young people. Enterprise Adviser Network and Careers Hub are an outcome of CEC generated activity.

- New National Careers Strategy was launched in 2018 for schools, including the 8 Gatsby Benchmarks[8] that are the accepted measure of a good careers strategy. The CEC is fundamental in seeing the strategy turn into reality with its local stakeholders and funding partners.

- Progress 8 and numerical scoring of GCSEs rather than alphabetical. E.g. grade '5' equates to a C. The higher the number, the greater the achievement level.

- Curriculum change, and standards change – e.g. New Math's and English GCSEs were taught from 2015 (first results were therefore summer 2017) and all other revised GCSEs were taught from September 2016, with first results in Summer 2018. The Math's GCSE became harder with learners needing to memorise more key mathematical facts and formulae. Sciences changed from single sciences to a combined science (all three sciences are studied but not examined or graded separately), or the 'triple' (grades achieved separately for each of the three sciences).

- English Baccalaureate subjects pushing some subjects into obscurity, and this has a knock-on impact on take up of these subjects at post-16.

- National Collaborative Outreach Programme launched, largely taking the place of the historical programme 'Aimhigher'. NCOP aims to ensure young people from deprived backgrounds are aware of and are encouraged to pursue Higher Education. In 2010, the Universities Minister David Willetts introduced "progressive" reform in

[8] 1) A stable careers programme. 2. Learning from career and labour market information.3. Addressing the needs of each pupil. 4. Linking curriculum learning to careers. 5. Encounters with employers and employees. 6. Experiences of workplaces. 7. Encounters with further and higher education.8. Personal guidance. Source https://www.gatsby.org.uk/education/focus-areas/good-career-guidance.

the structure and cap on tuition fees (£9000 as long as the University let disadvantaged young people in).

In the post-16 sector, there has been reform to funding and a reduction in the number of qualifications that attract funding. Employer involvement was always important for FE, but has increased substantially. Some examples of new initiatives or approaches are listed below:

- Introduction of Technical Levels for post-16 education, coined as 'the vocational A-Level'. Importantly, these new qualifications have a 350hr work experience element to them.
- 2018 Opening of the National Nuclear College in Bridgwater and Taunton College, alongside significant investment by EDF Energy)
- Apprenticeship Levy introduced, and upper age limit removed
- Degree and Graduate Level Apprenticeships created to create a realistic routeway to HE qualifications, whilst being employed.

- There are 254 state-funded schools (including 86 Academies), 4 FE colleges, 1 Free school and 31 Independent schools in Somerset (January 2018)[9] DFE data for the same year, there were 73 secondary schools, 7 middle schools and 274 primary schools in the county.[10]

Attainment

- Analysis by Somerset County Council on DFE performance data for 2018, found that the number of pupils entering biology, chemistry & physics at the end of Key Stage 4 in Somerset was lower compared to national figures (Somerset: 4606 (23.90%), England: 523,626 (27.40%)). This is an increase on 2016[11] Somerset: 5137 (21.90%), England 540,656 (23.90%)
- The average masks real variation, from 9% to 46% (in West Somerset Community College)
- However, when looking at the change between 2016 and 2018, Somerset schools saw an average 4% improvement overall, but for Bridgewater and Cannington schools, the average increase was 6%. The gap in take up is closing, both compared to Somerset and nationally.

West Somerset Opportunity Area

The West Somerset Opportunity Area is one of 12 selected areas to benefit from additional support due to the multiple disadvantages young people face growing up here. One of the four priorities is 'Workplace Skills' which is designed to:

> *"Ensure that local businesses increase employment opportunities for local people by prioritising apprenticeship and training programmes in West Somerset."*[12]

EDF Energy is a 'cornerstone' employer and EDF Energy sits on the Opportunity Area Board.

[9] http://www.somersetintelligence.org.uk/somerset-facts-and-figures/#ESL
[10] https://www.compare-school-performance.service.gov.uk/schools-by-type?step=default&table=schools&region=933&la-name=somerset&geographic=la&for=primary
[11] Data prior to this is not comparable due to a change in the way GCSEs were graded.
[12] https://westsomersetopportunityarea.co.uk/priority-4/.

Encounters and careers education

Since 2011, 988 activities have been delivered involving over 166,000 pupil interactions. In 2017/2018 124 STEM and Career activities were delivered across Somerset and beyond, leading to nearly 15,000 pupil interactions across 163 institutions – a 10% increase year on year since 2014.

Before 2010/2011, every school had an independent careers adviser, for a minimum of 1 day per week, and sometimes up to 3 days. This package of support was valued at c.£25k per annum. Schools received support from the Education Business Partnership to arrange and support a Programme of 2-week placements. Schools received the Careers and EBP provision free.

By the Autumn term of 2011, this support was no longer in place, and schools were expected to fund and pay for careers advice. The decision to fund this activity and hence whether to provide this support lay with schools. Connect South West who were the provider of CIAG provision at the time visited every school to explain the options before them, and presented to the respective secondary and primary heads associations.

As of end of the Autumn term 2011 there were 1,080 Approved Ambassadors across Bristol, Bath and Somerset. As of the end of the Autumn term 2018 there were 1,372 Approved Ambassadors across Bristol, Bath and Somerset.[13] In 2018, there 3,071 approved ambassadors currently registered across a wider area that includes Dorset, Gloucestershire and Wiltshire.[14].

A programme of Talent Academies set up in Somerset's key sectors, for young people to gain insight into a sector that they've registered an interest in, have been set up and are running well. This initiative is being rolled out across Somerset and EDF/HPC and their Tier 1 contractors have been very supportive of the STEM Academy.

The majority of Somerset secondary schools are now Academies with 5 main Multi Academy Trusts being present, along with some single school trusts. The Regional Schools Commissioner (RSC) is of increasing importance to the Council area as it is the RSC who is responsible for decisions related to new and existing Academy and Free Schools, including challenging poor performance, governance and complaints. The South West RSC has changed three times during the report period. Our current RSC is Lisa Mannall.

In February 2018, the National College for Nuclear opened in Somerset, offering Level 4 and above qualifications in the energy sector. It is a valuable asset in Somerset's growing HE infrastructure. Bridgwater and Taunton College launched their University Centre in 2017 and have stated an aspiration to be a university will full awarding rights in the future.

[13] A slight reduction from 1,380 recorded in 2014.
[14] Source: STEM Learning. These ambassadors have recorded 31,754 hours since April 2018. (Figures for 2011/2012 were not recorded).

Hinkley Point C

The Hinkley Point C Project is developing quickly and, following the Final Investment Decision (FID) being agreed in September 2016, a major milestone was reached in June 2019 with the completion of the first unit's foundations. It marked the point where the preparatory earthworks and structures are in place, and building begins on the nuclear power station's structures above ground.

Hinkley Point C is expected to provide a number of benefits;

- Up to 64% of the value of construction contracts to UK companies.
- 25,000 employment opportunities.
- An aspiration that 1,000 apprenticeships will work on the project during the construction phase.
- 900 jobs on site during the 60-year operational lifetime.
- A contribution of £1.5 billion to the local economy during construction.
- A contribution of £40 million a year to the local economy during operation. (Source: NNB HPC)[15]

<u>As of June 2019</u>

- Over 3,200 people were working at Hinkley Point C each day.
- The South West is set to benefit by £200 million each year during peak construction, with £4 billion being generated for the regional economy over the lifetime of the project.
- With more than 80% of contracts awarded, the project is on track to spend 64% of the construction value of Hinkley Point C with UK-based companies, up from the original estimate of 57%

For more information on the wider value created as a result of Hinkley Point C, please see https://www.edfenergy.com/energy/nuclear-new-build-projects/hinkley-point-c/about/realising-socio-economic-benefits.

[15] Source: Department for Business, Energy and Industrial Strategy, Hinkley Point C Wider Benefits Realisation Plan (2016)

STEM workforce

> *"The future workforce relies on many more children and young people being encouraged to take STEM subjects and enter STEM careers."*[16]

The UK Government does not have a stable and consistent set of definitions for STEM, in either an educational or a work context. STEM is a complex and overlapping group of subject areas that can be defined in a number of different ways, depending on the criteria used.

The National Audit Office observed: [17]

> '*In a work context, there is huge scope for different definitions of what makes up a STEM job. STEM jobs are typically identified by the industry or occupation in which they take place, based on Standard Industrial Classification (SIC) codes or Standard Occupational Classification (SOC) codes respectively, but each code covers hundreds of classes of industry and occupation.' This can result in very different analyses being produced.*

Analysis of NOMIS data reveals:

- Overall STEM employment up in the UK, but down in the SW region. Gender balance is has improved by the same percentage at both GB and SW level. The table shows an overall growth in STEM occupations between 2011 and 2018.
- In 2010-11, STEM accounted for 27.06% of the overall GB workforce (6,625,600 of 24,480,400). In 2017/2018, STEM accounted for 28.5% of the overall workforce (7,738,900 of 27,172,700).
- Females in the workforce changed from 19.6% of the workforce in 2010-11 to 21% in 2017/2018.
- In the SW, in 2010/11, STEM represented 28.1% of the total workforce (704,400 of 2,505,600). By 2017-2018, STEM represented 27.27% of the workforce, (752,500 of 2,759,300). With females representing 20.4% and 21.6% of those totals respectively.

Science capital and careers advice

Science capital refers *to "all of the science-related knowledge, attitudes, experiences and resources that you acquire through life" (*Enterprising Science, 2015).

The more science capital you have, the likelier you are to pursue science at A-Levels, university and beyond. Young people from low-income backgrounds have lower levels of science capital and lack access to quality careers advice and university application support.[18] This affects their ability to explore and make informed choices about science career paths.

[16] House of Commons Committee of Public Accounts, Delivering STEM skills for the economy Forty-Seventh Report of Session 2017–19

[17] NAO: Delivering STEM (science, technology, engineering and mathematics) skills for the economy (January 2018)

[18] See ASPIRES: Young people's science and career aspirations, age 10-14. (2013) London: King's College London.

Public Opinion towards Nuclear Power

Data collected for EDF Energy from August 2011 found 36% of residents could, unprompted, recall that EDF Energy is the name of the company that operates the nuclear power station in Hinkley. In 2018, that figure was 57%.[19]

Interest in a career linked to nuclear power (so including Construction, Engineering and Civil Engineering) take place in a context where public opinion is becoming less positive towards nuclear power.

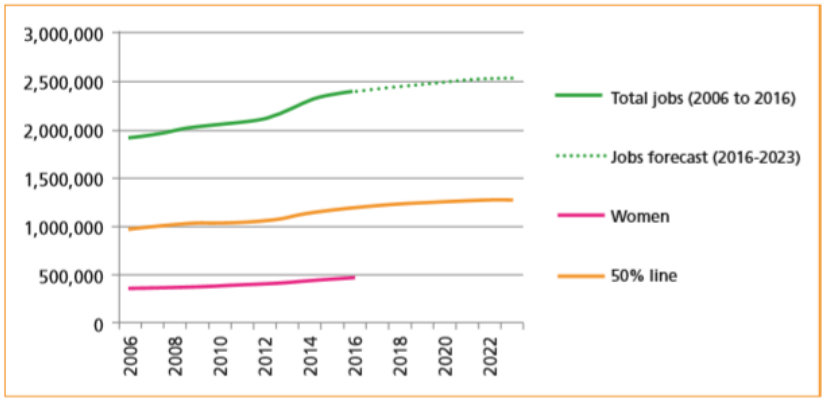
Gender

To recruit the numbers needed to fulfill the expected demand for roles in 2023, more girls will need to study science subjects at school, further education and higher education. [20]

In 2016 there were an estimated 462,000 women working in science, research, engineering and technology (19%); if there was gender parity that number would be 1.2 million.

The £200 million 2018 Nuclear Sector Deal[21] sets out the ambition that females will represent 40% of the nuclear workforce, compared to the current baseline of 22%. EDF and their contractors have committed to meeting this target. Skyblue's research with 11-16 year old's shows improvements in support for careers in nuclear power from female students. Males were more interested in a career in nuclear power, although this difference has reduced. In 2013/2014, 9% of females would consider a career in nuclear power and 34% of males, a difference of 25 percentage points. But this year, 12% of females and 33% of males would consider a career in nuclear power, a difference of 21 percentage points.

Number of core science, research, engineering and technology jobs in total, compared to the number of women working in the same jobs



[19] Based on a sample of 1,001 residents
[20] Jobs of the future Research conducted by Social Market Foundation for EDF Energy (2016)
[21] http://www.nsan.co.uk/news/new-sector-deal-secure-uk-civil-nuclear-future.

The WISE campaign noted the following trends since 2011.[22]

% female apprentice starts	2011/2012	2016/2017
Engineering	7%	3%
ICT	14.4%	10%
Construction	2%	2%
Overall	3.1% (2,040))	8% (5,080)

For 2017-2018, despite an overall fall in numbers, '*the trend in Core STEM apprenticeships was for women to account for a higher percentage of apprenticeship starts the higher the level of the apprenticeship. Given that the greatest skills shortages in Core STEM are at higher skills levels, and given that the occupations these apprenticeships train people to do tend to be better paid and to be more resistant to technological change and automation, this is very positive.'*

The EDF apprentice cohort at HPC is 40% female, while at the National Nuclear College there are c 20% female apprentices.[23]

[22] Women in STEM Apprenticeships 2017/18. https://www.wisecampaign.org.uk/statistics/women-in-stem-apprenticeships-2017-18/. Further information on the gender split in STEM occupations can be found at https://www.wisecampaign.org.uk/statistics/2018-workforce-statistics/

[23] https://www.edfenergy.com/energy/nuclear-new-build-projects/hinkley-point-c/news-views/HPC-boosts-women-in-workplace.

Annex 3: Calculating Social Value

Valuing outcomes

The valuation process will be carried out by Skyblue with Envoy Partnership. This assessment has been conducted in parallel to a separate study conducted by EDF Energy for the overall HPC project.

The analysis takes account of the following aspects, which are defined below:

Deadweight (or counterfactual)

The amount of change that is likely to have happened anyway, whether positive or negative, and usually determined through benchmarks. This has been calculated using primary research with the current apprentice cohort and triangulated from data from smaller samples of Young HPC members and applicants to EDF Energy taking part in assessment centres.

Attribution

How much of the change is attributable to the project being evaluated considers input of other stakeholders, especially where a project is a catalyst to change. The approach taken to measuring personal and social wellbeing have been derived from the following approach, first set out in 2012. The overall value of a Quality Adjusted life Year has been assessed at £25,000 per year.[24]

Table 4: Division of Well-being value

Well-being domain		Proportion of overall value
Personal well-being	Confidence / self-esteem[39]	10%
	Positive functioning	10%
	Emotional well-being	10%
	Vitality *(not used in this model)*	10%
	Satisfying life *(not used in this model)*	10%
Social well-being	Improved / supportive relationships, or reduced isolation	25%
	Trust and belonging	25%

[24] Source: Global Value Exchange. Measurement of subjective well-being is a relatively new discipline, and there have been relatively few attempts to value well-being. However, equating wellbeing with mental health allows us to use healthcare economics to monetise well-being. The Centre for Mental Health has attempted to put a cost on mental illness through the use of QALYs (Quality Adjusted Life Years).

Improved earnings

To provide an assessment of the social value created by apprenticeships, the evaluators have drawn on the UK Government's TOMs framework, and not actual earnings from EDF Energy or contractors.[25] The relevant indicator is NT10

"No. of apprenticeships on the contract that have either been completed during the year, or that will be supported by the organisation to completion in the following years - Level 2,3, or 4+"

This gives a social value figure of £176.80 per week, derived thus:

> *"The proxy value has been computed combining the current economic benefit to the individual (based on minimum pay given the distribution of achievements by age and their average length), and the annualised future lifetime value to society of achieving the qualification (based on Unit Cost Database v1.4 updated to 2017/2018 prices, and the distribution of achievements by level). Value to the individual therefore includes current increased earnings and annualised value of future increased earnings as a result of achieving the qualification.*
>
> *It is the lower estimate, and reflects an assumption that 50% of the employment benefit is attributed to the qualification (see Unit Cost Database v1.4 for details). Estimates of distribution of achievements by age, average length, and level are based on data from the FE data library: further education and skills (https://www.gov.uk/government/statistical-data-sets/fe-data-library-further-education-and-skills). Per week attribution of lifetime benefits is based on the assumption that each week equally contributes to achieving the qualification. This assumption is likely to be revisited in future editions, to pick up on nonlinearities."*

Displacement

Considers whether value is actually moved from one place to another, rather than new value created. This has not been assessed as part of this study.

> "In conducting sensitivity analyses of **demand-side** employment and training programmes, **60 per cent can reasonably be used as an upper bound value** of the substitution effect and **30 per cent as a lower bound value**. In principle, this sensitivity test should take account of displacement effects that result from wage subsidy programmes, as well as substitution effects resulting from such programmes…Sensitivity analysis of **supply-side programmes** might be conducted using **10 or 20 per cent as the upper bound value** of the substitution effect and **zero as the lower bound value**."[26]

[25] The aim of the National TOMs Framework is to provide a minimum reporting standard for measuring social value. Source: National TOMs 2019 Author: Social Value Portal Ltd

[26] Greenberg, D., Knight, G., Speckesser, S., Hevenstone, D. (2011): *Improving DWP assessment of the relative costs and benefits of employment programmes*, DWP Working Paper No. 100. p. 21.

Investment period

To ensure a credible assessment that is not over-claiming, a conservative approach has been taken, whereby a 2-year benefit period has been applied. Beyond this point, it is assumed that there will be a range of other factors that will determine a young person's career progression. As the length of apprenticeships varies from c18 months for a level 3 apprentice and between 3 and 6 years for a degree apprenticeship, an average two-year period has been chosen (and a more conservative one-year estimate based also provided).

Drop off

Attribution drop off: credit (attribution) that can be taken for the outcome diminishes over time. A very prudent approach has been taken here, whereby the 'credit' attributable to the Inspire Programme is used up after the second year of the apprenticeship.

Qualitative research

Wherever possible, qualitative research has been used to illustrate the findings. In order to ensure the comments are contemporary, we have drawn on findings from 2018 and 2019 only.

Limitations

There are no accepted, shared definitions of either social value or STEM – which results in varying estimates of workforce size and a range of value being presented.

The decision to provide a social value calculation, rather than social return on investment was reached after detailed consideration of the availability and accuracy of available data, the use of UK rather than localized proxies on apprenticeship value, and the potential duplication with the wider HPC social return on investment study.

If we take the proxy that 18% have taken part in Inspire before, [27] then it would be possible to estimate based on the whole school aged cohort (c 30,000 young people), or look forward to the talent pipeline from 2020 as young people already engaged will then be entering the workforce. However, the figures these analyses would produce, while attention grabbing, would be open to challenge and have therefore been omitted.

[27] Based on a sample of 226 young people (2018) Of the smaller sample of Young HPC members, 21% recalled an encounter with Inspire while they were at school.