



LPT 2 School Engagement Programme: 5 Year Social Impact Report

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Executive Summary

In 2020, the National Grid London Power Tunnels 2 (LPT2) team and Connectr set out on an ambitious plan to support 100,000 young people to gain a better understanding of STEM (Science, Technology, Engineering, and Maths) careers and the energy sector. National Grid made a £1.8 million investment to work with students from disadvantaged socio-economic backgrounds across London to help them better understand opportunities that will be created by the transition to Net Zero.

The three key aims of the programme were:

1. Enable young people to identify green jobs and the skills needed to access these
2. Equip young people with the knowledge and skills to become the future green workforce by providing exposure to net zero jobs
3. Inspire young people to pursue careers at National Grid or within the wider energy sector to contribute to Net Zero, and provide them information on how they can take these next steps

The programme has exceeded its target, by achieving over 147,000 interactions with young people in 5 years. An agile approach ensured the aims were achieved through adapting to different circumstances, including the Covid-19 pandemic, changes to careers best practice guidance, and feedback from key stakeholders.

Benefit to students taking part in live activity, since 2020, include

- 56% identified as female, who continue to be underrepresented in STEM*
- 93% felt better informed about the energy industry*
- 87% had a better understanding of which skills they need for a career in STEM*

*All statistics taken from a representative sample of students who chose to give feedback following a live event such as an in-school workshop, site visit, or work experience.

The programme has also brought considerable benefits for National Grid and LPT 2 partner staff, as well as for the wider business strategy and society more broadly. Over 200 people from different disciplines across the project have volunteered for the programme. The Social Value has been calculated as £6.3 million.

This Social Impact Report highlights the London Power Tunnels 2 programme, detailing its design, activities delivered since its inception, and the benefits it has provided to a diverse range of stakeholders since 2020. We are proud to share these insights and the positive impact of the programme.

“We are incredibly proud of everything that has been achieved through the LPT 2 School Engagement programme. By providing young people from diverse backgrounds opportunities to experience careers in STEM and the energy sector, the LPT 2 project team have not only helped support these young people with their futures, but have also contributed to the future talent pipeline of the energy sector.”



Joe Senior,
LPT2 Project Lead,
National Grid



The London Power Tunnels 2 (LPT 2) Project

The London Power Tunnels 2 (LPT 2) project is one of the largest-scale construction projects in London for decades. It has seen the creation of 32-km of deep underground tunnels from Wimbledon to Crayford, in which high-voltage cables are housed to transmit the power to South London. The seven-year, £1 billion project provides an important update to the grid to support the growing city and the race to Net Zero. It follows on from the successful London Power Tunnels project that was completed by 2018, which focused on North London.

Importantly, LPT 2 utilises a Joint Enterprise Model to make the most of expertise and specialist skills across partner organisations. National Grid has worked collaboratively with Hochtief-Murphy Joint Venture (HMJV), Balfour Beatty, Linxon, and Taihan to lead the project to success.

Staff from LPT 2 partners were invited to contribute to the School Engagement programme through volunteering. This created a unique and exciting opportunity for students to hear from people across a range of organisations, to further develop their understanding of STEM and Net Zero careers.

HMJV

HMJV offer tunnelling expertise, and have overall responsibility for building and maintaining the tunnels.

Balfour Beatty

Balfour Beatty are responsible for the infrastructure, such as Headhouses where access to the tunnels is provided.

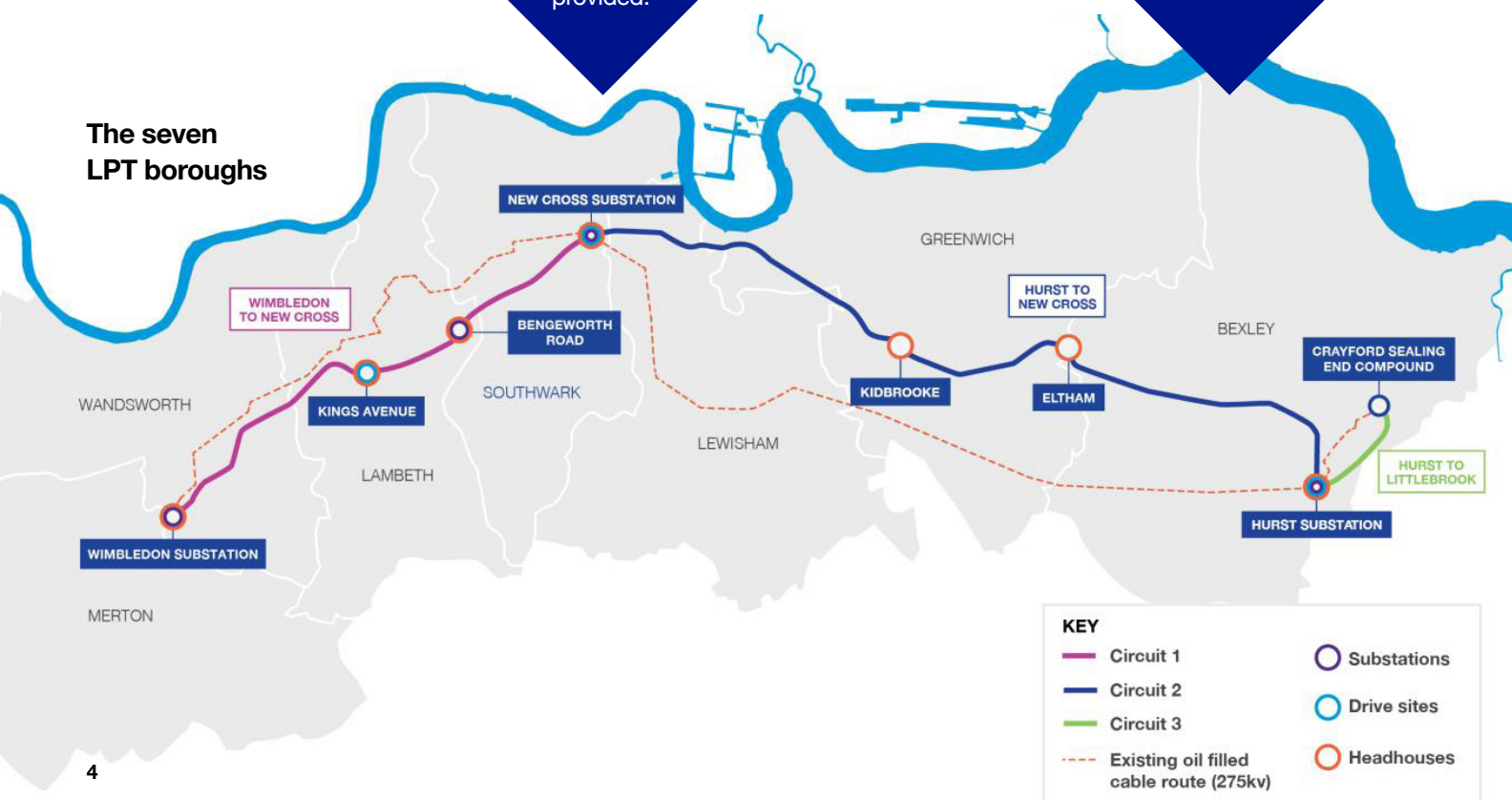
Linxon

Linxon have responsibility for some of the key infrastructure for the project, including a substation.

Taihan

Taihan are responsible for manufacturing and supplying the high-voltage cables.

The seven LPT boroughs



Why

The transition to Net Zero is creating a wealth of opportunities for young people who are starting out in their careers. [Research](#) has highlighted that the UK needs 400,000 new recruits into the energy sector by 2050 to reach this target¹. Many of these roles will need to be filled by young talent, so helping local young people understand the opportunities in the sector is of the utmost importance, as is providing them with the skills to get there.

Despite the opportunity presented by the energy transition, young people from lower socio-economic backgrounds have limited access to and knowledge of Science, Technology, Engineering and Maths (STEM) careers. Disadvantaged students are [twice as likely](#) to be not in education, employment, or training (NEET) after finishing their GCSEs than their wealthier peers². The [Education Policy Institute](#) has found that disadvantaged young people are less likely to progress to level 3 STEM courses, creating barriers to opportunity as they enter the workforce³. Gender and ethnicity also play a significant role in a person's likelihood to progress into STEM. The gender gap persists, with the [government reporting](#) that in 2023 only 25% of those in STEM employment are female⁴. People from ethnic minority backgrounds continue to be underrepresented in the workforce, one example of this being that only [1% of the engineering workforce](#) are people of Pakistani or Bangladeshi heritage⁵.

The LPT2 programme focused predominantly on the seven London boroughs where the most impact from construction would be experienced. These boroughs are Bexley, Greenwich, Lewisham, Southwark, Lambeth, Wandsworth, and Merton. Five of these seven London boroughs have a higher-than-average free school meal eligibility, meaning students are more likely to be disadvantaged, and [research](#) has also shown that students in London are more likely to end up in 'precarious situations' in their careers than those in other areas⁶.

The LPT 2 programme was designed to tackle these distinct but interlinking challenges. By supporting a diverse group of young people across 5 years to find out more about careers within the energy sector, LPT 2 aimed to inspire the next generation into the Net Zero economy, whilst also increasing diversity within the sector.



1. National Grid, The Net Zero Energy Workforce Report, 2020

2. Teach First, Stark Destination Gap: disadvantaged pupils twice as likely to be out of work or education as their wealthier peers, 2022

3. EPI, Progression at age 16 of young people from underrepresented backgrounds towards careers in STEM, 2024

4. Department for Education, Supply of Skills for jobs in science and technology, 2024

5. APPG, The State of the Sector: Diversity and representation in STEM industries in the UK, 2020.

6. Social Mobility Commission: State of the Nation 2023: People and places, 2023

Designing the LPT 2 programme

The LPT 2 programme was specifically designed to further these overarching aims of supporting individual students, and the wider Net Zero workforce. It did this by providing high-quality, meaningful interactions with National Grid and partner employees to students across a five-year period from 2020 – 2025.

[Research](#) shows that young people who have had multiple interactions with employers are less likely to become NEET⁷, and that employer encounters are [particularly beneficial](#) to young people from disadvantaged backgrounds, who are less likely to be able to build their professional network through their personal connections⁸. The [Careers and Enterprise Company](#) has highlighted how long-term, meaningful interactions not only support young people to build their careers but also support employers in their recruitment aims⁹.

Three core aims were identified when the programme was setup:



Identify emerging green jobs and the skills needed for them across a range of interests.



Equip students with the skills and knowledge they would need to become the future green workforce.



Pipeline students by providing clear information regarding apprenticeship and employment opportunities.

To achieve these aims, a broad range of activity has taken place with support from volunteers:

Work Experience at a National Grid office	Career Talks led by volunteers	Free teacher resources
In-school workshops to help students practice and grow key skills	Careers Fairs to introduce students to career opportunities	Virtual work experience for students to hear about Net Zero careers
Virtual mentoring with volunteers through the Connectr platform	Site visits for students to see the LPT 2 project in action	In-person work experience, including an invitation to parents and guardians to learn more

This approach was adopted to provide both depth and breadth of impact. By making learning resources available to schools across the country for free, enabling tens of thousands of students to find out more about National Grid, and career opportunities in Net Zero. Simultaneously, live activity (anything that was delivered in real-time to students directly, whether that be virtually or in person), was focused in South London, the area that would be most impacted by LPT 2 construction work.

The approach and activities have changed over the course of five years to respond to student and school feedback and other wider considerations, most notably the impact of the Covid-19 pandemic.

7. Education and Employers, Employer Engagement in the school-to-work transitions of young Britons, 2015
8. The Careers and Enterprise Company, Closing the gap: employer engagement in England's schools and colleges in 2019, 2020
9. The Careers and Enterprise Company, From outreach to intake: the business case, 2024

The role of volunteers

From the outset, it was clear that volunteers would be fundamental to the LPT School Engagement programme. Research consistently demonstrates that meaningful interactions with employers brings significant benefits to young people, so creating opportunities to hear from staff was paramount to the project's success.

Volunteers from National Grid, Balfour Beatty, HMJV and Linxon have supported the project through:

- Giving career talks to young people in schools
- Supporting with in-school workshops
- Virtually mentoring students through the Connectr platform
- Running speed networking or practice interview sessions during work experience

The programme has brought together volunteers that possess a diverse range of career experience and in a variety of roles, ranging from trainees who are in the first year of their career to those in senior leadership roles. This range of experience enables students to broaden their understanding of the different career paths available, as well as routes available to them.

Student feedback has made it clear that working with volunteers has significantly deepened the benefits of hearing from National Grid:

"The speaker used his personal experience as an example to how we as students can think about our future jobs."

Year 9 student, Greenwich

"The thing I found most interesting was how inclusive the volunteer was, and learning about all of the career options that National Grid can provide."

Year 10 student, Wandsworth

The session was **"very engaging and informative** as the session mentor was helpful and **relatable."**

Year 12 student, Lewisham

"I really enjoyed the engaging talks and tasks that were delivered. I felt comfortable and welcomed."

Year 13 student, Bexley

We have worked with over 200 volunteers, who have given 1,600 hours of volunteering time.



Key outcomes

Overall reach

Since 2020, the LPT 2 programme has facilitated 147,000 interactions with young people in total.

Of these interactions, 33,000 have been delivered through live activity (anything delivered in real-time, directly to students, either virtually or in person).

We have delivered live activity to students from 181 schools in 67 different local authorities. Within this larger group, 40 schools were offered interactions across multiple academic years, to ensure depth of impact for those students.

Seven target boroughs

Of the 40 schools that we've delivered live activity to across multiple academic years, 26 of them have been within the seven boroughs that the LPT 2 construction work has had the most impact.

We also adopted a partner school model in these boroughs, meaning that a small number of targeted schools received priority access to events across multiple academic years, and were provided the opportunity to engage in roundtables to share their feedback and ideas for the programme.

Impact on students

93.4%

of students told us that participating in live activity has helped them feel better informed about the energy industry*.

86.6%

of students told us that participating in live activity has improved their understanding of the skills they need for a career in STEM or at National Grid*.

63.7%

of students told us that participating in live activity has increased the likelihood of pursuing a career in the industry*.

The students themselves

70.8%

of the students who have participated in live activity are from ethnic-minority backgrounds*.

57.9%

of the students who participated in live activity identify as female or non-binary*.

68.2%

of the schools that we have worked with across multiple academic years had an above-average free school meal eligibility, meaning students are more likely to experience disadvantage. An additional 15% of the schools were all-girls schools, to target girls who continue to be under-represented in STEM.

*All statistics taken from a representative sample of students who chose to give feedback following a live event such as an in-school workshop, site visit, or work experience.



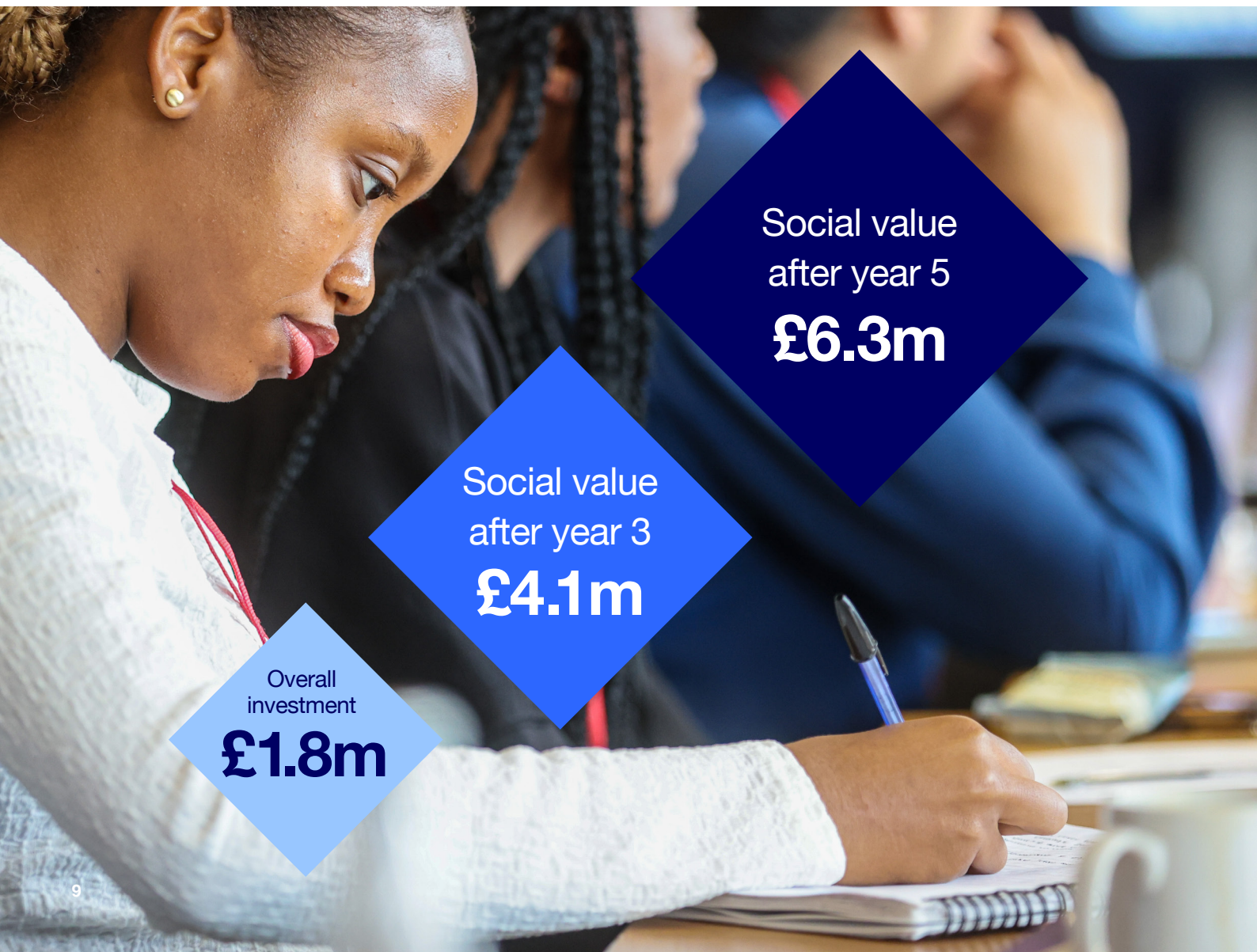
Economic value of the programme

National Grid has invested £1.8 million in the LPT 2 programme over the last five years. Not only has this created significant social value, but there has also been a quantitative benefit to the UK economy.

The LPT 2 programme provides young people with the opportunity to engage in employer interactions over the course of their time in school, which reduces their likelihood of going on to become NEET. For those individuals who do go on to become NEET, there is an associated cost from the public purse. As a result, for every individual who benefits from the programme and does not become NEET, there is a net economic gain.

Part of the return on investment is calculated based on published research, Government economic data, and recorded impact data. The other part of the return on investment is calculated based on the TOMs model of social impact, with a particular focus on how volunteer time is used. Our approach is cautious – the figures stated do not include wider positive impact, including induced or indirect impact.

The social value of this programme overall has been calculated as £6.3 million.



Overall
investment
£1.8m

Social value
after year 3
£4.1m

Social value
after year 5
£6.3m

Impact: Platform and student resources

To support students and schools around the country, high-quality teaching resources were planned, created, and shared with educators for free. In addition, we used Connectr Talent Technology's platform to share information and opportunities, as well as to provide the opportunity to connect directly with National Grid and partner staff, through online mentoring. In total, over **100,000** young people across the country have discovered more about National Grid through learning resources.

By sharing these resources directly to staff in schools, students benefited from up-to-date industry insight to help them understand more about Net Zero, National Grid, and careers across the energy sector. For instance, students learned how Virtual Reality is used to help professionals working underground inside the newly constructed London Power Tunnels to deal with emergencies. Resources were adapted over time based on teacher and student feedback. For instance, teacher insight about the challenges in achieving Gatsby benchmark 4 (linking curriculum learning to careers) was used to create bespoke 'careers in the curriculum' resources, which link jobs at National Grid to specific aspects of the KS3 and KS4 curriculum in eight subjects, including Maths, Science, and Design and Technology.

The other method of engaging with schools and educators across the country was through the National Grid Connectr platform. Students who signed up were able to speak to 'buddies' to ask questions and get advice from someone currently working in the sector.

Students who were on the platform were directed to other opportunities, including linking to National Grid's early career website or the virtual work experience. In the final year of the programme, the platform was opened to educators, so that Careers Leaders and other professionals working in schools or colleges were able to hear directly from National Grid or access resources to inform their classroom practice.

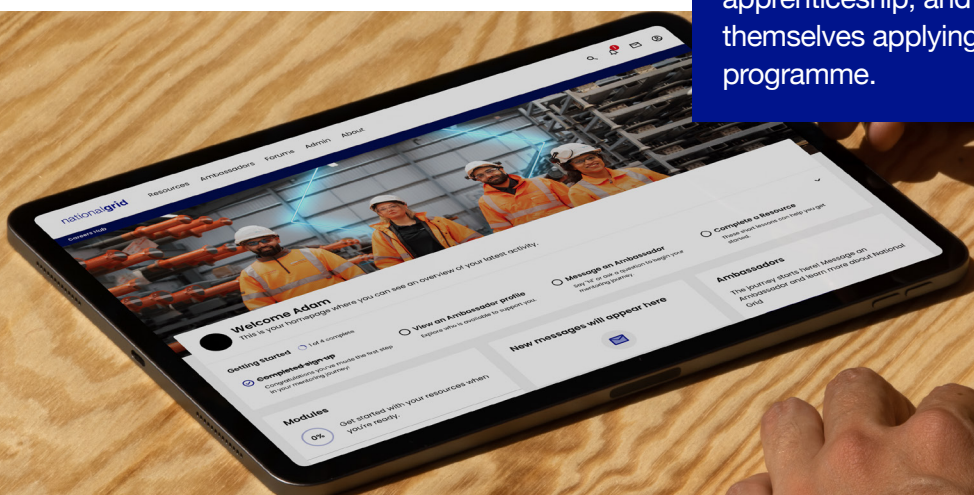
Those staff and students who have engaged in the platform have told us:

"My mentor is very helpful in giving advice, including how to consider your future, and they show their love for their job. It's quite inspirational."

"Getting an outside opinion from a potential employer has been really helpful and insightful."

"It gives a clear view of skills in the world of work, while also providing how you can show yourself to employers."

In the fourth year of the programme, of the students who chose to share their feedback after using the platform, 62% said they could see themselves applying for a National Grid apprenticeship, and 59% said they could see themselves applying for a National Grid graduate programme.



Impact: In-School Workshops

In-school workshops have provided the opportunity for students to meet National Grid staff, hear more about opportunities within the energy industry, and practice their workplace skills through real-life scenarios.

In the workshops, students work with specialist Connectr facilitators and volunteers from National Grid or partner organisations. Over the course of five years, the structure and activities in these workshops have been amended and adapted to reflect student and staff feedback, however core elements remain:

- Students learn more about National Grid, and the LPT 2 programme more specifically
- Students partake in activities to support their transferable skills, such as communication, teamwork, and listening
- Students complete a project based on a real-life scenario, and present these for feedback, to practice their skill development and help them understand the type of work that happens at National Grid

Since 2020, we have delivered workshops to students from year 7 – year 13 (age 11 – 18). The majority of these have been delivered in-person to schools and colleges in South London, but some were delivered virtually or to schools and colleges elsewhere, predominantly in other areas of London.

Feedback from these workshops has highlighted the positive impact of these events, including:

93%

of students told us that, after a workshop, they felt better informed about the industry.**

85.7%

of students told us that, after a workshop, they had a better understanding of which skills they need to pursue a career in STEM or at National Grid.**

After this event, “I have an idea of what National Grid does, I know what to do if I want to pursue a career in this area, and I’ve made a decision on what to do.”

Year 11 student after participating in a workshop.

“It gave me a better idea of what I want to do with my future and education, and allowed me to think about whether I go to university or do an apprenticeship.”

Year 10 student after participating in a workshop.

**All statistics taken from a representative sample of students who chose to give feedback following a workshop



Impact: Work Experience

717 students have participated in either virtual or in-person work experience. Students who participate in work experience benefit from in-depth exposure to National Grid and partner organisations, whilst having the opportunity to develop their workplace skills by engaging in interactive activities with other students.

Meaningful work experience is one of the most powerful ways to support students to learn about future career opportunities and set them on the path to achieving these. [Research](#) has highlighted that good-quality work experience has several benefits for students, including clarifying their career aspirations, encouraging them to achieve their academic goals, and supporting them into employment¹⁰.

During a multi-day work experience placement at National Grid, students have access to:

- Presentations and Q+A sessions from volunteers at National Grid, ranging from early career apprentices to senior leaders
- Hear from National Grid staff about routes into the organisation, including apprenticeship opportunities and how they can access these
- Develop their CV, interview, and assessment centre skills to support them to access career opportunities as they enter the working world
- Complete a scenario-based project, mimicking one which could be found in a workplace such as National Grid, and receive feedback on their work towards this

10. The Education and Employers Taskforce, Work Experience: Impact and Delivery – insights from the evidence, 2012

94.6%

of students told us that they felt clearer about their future options after participating in work experience at National Grid.^{***}

95.6%

of students told us that they were more likely to consider a career with National Grid after work experience.^{***}

“National Grid work experience has given me an idea of a career path within the energy sector to pursue as I have now developed a deep understanding within this industry.”

Year 12 student following work experience at National Grid's Strand Office.

“Mentors who provide guidance, answer questions, and share insights about their careers was useful. Networking with professionals across the organisation can open doors for future opportunities.”

Year 12 student following virtual work experience with National Grid.

^{***}All statistics taken from a representative sample of students who chose to give feedback following work experience



LPT 2 Champions: The LPT2 team



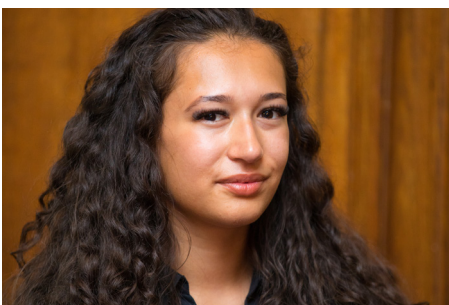
**Testimonial from Gareth Burden,
Construction Director at National
Grid and previous Project
Director of LPT2**

When we first started planning the LPT2 School Engagement programme with Connectr, we knew that reaching 100,000 young people was an ambitious target. I am proud of the team's efforts of exceeding this, by facilitating over 147,000 interactions for young people. Our project outcome and vision are to rewire London and connect with the capital, and our engagement programme was key to achieving this outcome and inspiring the next generation of talent. Much of the work happening on LPT2 is taking place right now below our feet, and as we continue to focus on the energy transition, the efforts in recruiting the talent needed to achieve Net Zero are vital.



**Testimonial from Divine Kuteesa,
Trainee Project Supervisor at
London Power Tunnels 2 and
repeat volunteer**

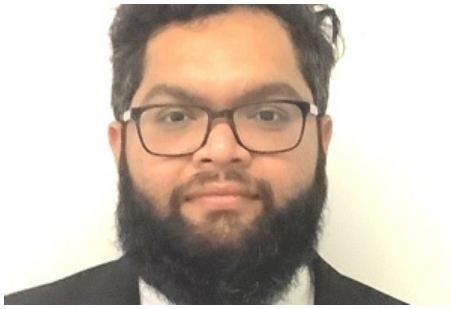
Many students are not aware of the vastness of the opportunities available in their communities. I know this because that was me two years ago. All it took to change my perspective was one workshop that gave me the hope I needed to keep studying and be curious of my future possibilities. I volunteer to give back to the community that set a foundation for the opportunities I have received. If someone had not volunteered their time to come to my college years ago, I would not be where I am today. I do this to continue the cycle, feed the ripple effect, and use every opportunity to do for others what was done for me.



**Testimonial from Rebekah Datt,
Social Impact Coordinator
at Balfour Beatty and repeat
volunteer**

Mentoring young people challenged me to communicate effectively, adapt to different needs and learning styles. It also deepened my level of community involvement and social responsibility, creating a sense of fulfilment as you see the impact you're making in someone's life. Being a young, female, social impact coordinator in the construction industry has allowed me to become a positive role model to so many students. It is wonderful to see how engaged students become when they can see similarities between themselves and volunteers.

LPT 2 Champions: Schools and Students



**Testimonial from Wakib Ullah,
Business Studies Teacher at
Royal Greenwich Trust School,
an LPT 2 Partner School**

The programme is tailored to the educational needs and interests of students. These partnerships provide valuable resources, including guest speakers, workshops, and educational materials that complement the curriculum. The programme has provided our students with invaluable insight into the energy sector, showcasing potential career pathways that they may not have considered. It has inspired them to think beyond traditional career routes and understand the variety of roles available within a leading organisation like National Grid.



**Testimonial from Jonathan,
Degree Apprentice at an
Aerospace Engineering
Company and alumni of National
Grid work experience**

“I am doing a Quality Assurance Engineering Degree Apprenticeship at an Aerospace Engineering company, and what attracted me to them was their Net Zero projects, which I was first introduced to when I attended the National Grid work experience. The knowledge and experience I gained from the work experience significantly supported my degree apprenticeship application and interview. I was able to confidently discuss my passion for sustainability, provide concrete examples from the work experience, and demonstrate strong communication and teamwork abilities.”



**Testimonial from Nadimah,
Engineering student who
participated in National Grid's
work experience in 2025**

“National Grid work experience helped me develop my skills by pushing me outside of my comfort zone, through communication tasks such as short/group presentations and making a pitch. I enjoyed participating in everything while on work experience with National Grid, especially the cyber security task. The event has made me feel more certain about pursuing a career within Net Zero and has inspired me to think about a career within National Grid.”

The legacy of LPT 2

To ensure that the wide range of benefits continue to be felt now that the five-year programme is finished, careful thought has gone into the ongoing legacy of LPT.

Guidance for National Grid volunteers

The learnings, suggestions, and advice from LPT 2 have been collated into a guide for National Grid staff to continue their work in schools.

By enabling members of staff from across National Grid to continue working directly with young people, we hope that students will continue to benefit from continued meaningful encounters with professionals even after the formal programme is complete.

Engaging parents and guardians

Parents and guardians continue to be key influencers in young people's decision making, including about careers. Helping them understand the opportunities in the energy sector will enable more young people to enter these careers.

We provided resources to help parents and guardians find out more about careers at National Grid and hosted a number of parents and guardians at National Grid's London offices. We hope that their influence will continue to support young people to find out more and successfully take their next steps.

Continued access to classroom resources

Through providing direct access to our student and school resources over the course of the programme, we have enabled thousands of young people to engage in interesting and relevant learning about National Grid.

We are pleased that these resources will continue to be made available to schools, to ensure that students in the future can continue to engage in these learnings and activities. These resources can still be accessed on [TES](#)¹¹.

LPT 2 and Connectr's programme has been nominated, and won, nationally-recognised awards:

- Winner of the Environmental, Social & Governance (ESG) Initiative of the Year Award at the Utility Week Awards 2024
- Shortlisted for the Best Educational Programme Award at the Corporate Engagement Awards 2025
- Shortlisted for Excellence in Community Engagement at the London Construction Awards
- Shortlisted for the Commitment to the Local Community Award, and Communication and Education Award, at the Better Society Awards 2025

Reflecting on the legacy of LPT 2, it is pleasing to have created significant beneficial impact not only for young people and schools, but also for the wider energy sector. Through this programme, young people are better informed about National Grid, what it means to be Net Zero, and how they can play their role by starting a career in the energy sector. Many of those young people are better equipped to access roles in the energy sector, and no doubt many of them will do so. In this way, the full legacy of LPT 2 is yet to be fully realised, and it is exciting to see the progress that will continue to be made.

11. <https://www.tes.com/teaching-resource/resource-12817450> and <https://www.tes.com/teaching-resource/resource-12736573>



