SSE School Workshops

2020

Key information

Resource type	School Workshop
Duration	1 hour and 30 minutes
Location	Classroom
Max number of students	-
Age group	‘School Leavers’ yrs 12&13 in England, S5&S6 in Scotland
Target number of volunteers	Minimum of 1
Facilitator	Volunteer from SSE
Room set up	Desks and chairs arranged facing a screen with session presentation and connection to sound. The students will be working in teams of 5 for the main activity, therefore it will be helpful if they’re already placed and arranged in these groups.
Required materials	4 substation choices sheet (1 per team) Engineering task instructions (1 per engineering team) Engineering Task Dorchester to Downend Engineering Task Bracknell to Downend Engineering curveball card (1 per engineering team) Finance task instructions (1 per Finance team) Finance curveball card (1 per Finance team) Customer Facing task instructions (1 per Customer Facing team)

	Customer Facing curveball card (1 per Customer Facing team)

Session Aims and Objectives

This session aims to develop the students' understanding of who SSE are and what they do and aims to encourage the participants to consider a role at SSE, particularly within Transmission and Distribution business areas. The session will highlight the vast opportunities available in early careers at SSE, bringing to life the impact that SSE has on power supply and 'keeping the lights on'. By completing an interactive, group activity that challenges them to explore their own skills and traits within the context of an SSE business scenario, they will gain an understanding of what it might be like to work for SSE.

They will also gain a deeper sense of their own aspirations and how they perceive themselves in relation the working world.

Learning outcomes

1. To learn about SSE and power generation (specifically focussing on transmission and distribution).
2. To learn about the job roles and opportunities available within this part of SSE's business.
3. To successfully explore key skills and traits and role specialisms within the context of an SSE business scenario.

Workshop timings

1 hour 40-minute session

SSE Introduction	3 mins
How do the lights in this room stay on?	3 mins
The Journey of Power	5 mins
Spotlight on Transmission and Distribution	15 mins
Extending Supply, Substation Activity	40 mins
Meeting SSE Employees	10 mins
Applying for a Role at SSE	10 mins

Time allocation	Activity	Description/instruction	Checking Learning by	Resources
3 minutes	**SSE Introduction**	The facilitator will introduce themselves to the students, communicating the following information: • Name • What they do for SSE (and in brief what this means) • Their first ever job • A fun hobby they do/interesting fact about themselves The facilitator will introduce SSE and what they (broadly) do using a video to bring this to life. They will conclude the introduction by talking through the aims and objectives of this session. 1. To learn about SSE and power generation (specifically focussing on transmission and distribution). 2. To learn about the job roles and opportunities available within this part of SSE's business.		
3 mins	**How do the lights in this room stay on?**	Start the session by asking this question They will be asked to write down their response. The question is purposefully broad/vague, so students are free to reflect/answer this as they see fit.		**-**
5 minutes	**The Journey of Power**	The facilitator will return to the question posed at the very start of the session and will field some of the answers the students have written down. Hopefully the students will offer a range of responses covering, in part, the generation of power, the science and perhaps a bit about the transmission and distribution aspects if they have any prior knowledge of these areas. The facilitator will then explain the lifecycle of power generation – going into quite granular detail. Covering the following: • Wind comes across the land and turns a turbine/sun shines on solar panels/coal is burned in a power station etc. • Generation source is connected to a grid connection which feeds power into National Grid. • National Grid send the power out across the country and down into local areas DNOs (Distribution Network Operators). • DNOs (for example SSEN) then provide customer and business connections into sites and buildings.	Taking ideas and suggestions from the floor to test their prior knowledge and understanding.	

		• The connections then feed through smart meters and distribution panels and into our homes, schools and businesses. • We switch the lights on. Facilitator to explain that in this session, they will be focussing on the middle section of that process - **transmission and distribution.**		
10 minutes	**Spotlight on Transmission and Distribution**	Facilitator to explain how power journey of power through T&D. **Understanding the difference between Transmission and Distribution.** • Facilitator to explain the difference in scale and responsibility looking at key examples and comparisons to bring this to life. For example, the size of transformers, the miles they would cover, the external stakeholders they would deal with. **Roles within T&D** Then moving on to exploring some of the key roles involved in T&D. This section aims to highlight the range of opportunities at SSE in these business areas, so they can start to make connections between what they see and experience and their own career choices. Roles to explore (in brief) at this stage. Using an image and very brief description of what they do. -Customer Contact Advisor -Linesperson -Jointer -Fitter -Engineer (trainee/project manager) -Designer - Corporate roles The facilitator will sign off this section by explaining that they will learn more from SSE employees and their career journeys as well as routes into professions at SSE later in the session.	The facilitator can use specific points to test comprehension.	
10 mins to set the scene and set up the space and teams and to discuss skills and traits **20 minutes to do the activity**	**Extending Supply, Substation Activity**	**Setting the Scene.** The students will be challenged to work together to connect a new housing estate on an island off the coast of the UK to the electricity grid from transmission to distribution. They will be working in small teams on various tasks that all feed into achieving the overall objective (mirroring how real businesses operate). Also covering: - What a substation is and why you need them (including an image)	The facilitator will be actively involved in running the session, keeping the teams on track and ensuring they understand what to do from the instructions provided.	**4 substation choices sheet (1 per team)** **Engineering task instructions (1 per engineering team)** **Engineering task – Dorchester to**

7minutes for activity reflection		The teams will be working to choose the most suitable position of the new substation according to their group's specific roles and responsibilities. They will also have an additional problem/task to solve that will be specific to their team they're on. Each team will also be presented with a curveball scenario that they will need to respond to within the activity. They will be working in one of three teams/departments: **Engineering** **Finance** **Customer Facing** **Skills and Traits** The students will be presented with some of the key skills and traits the SSE look out for when hiring new talent: Drive Resilience Safety Social Adaptability Collaboration Ownership Learning Agility They will be asked to consider each of these as they engage with the exercise, reflecting on which of the skills and traits they're using and to which extent. **Team Tasks** For a class of 30, the students should work in teams of 5, so there will be should be 2 sets of each business area being covered. Each team will be provided with a map of the new housing development and **4 possible locations** for the new substation that have already been identified. It will list some basic advantages and disadvantages of each option.	They can also use the reflection session to ask extension questions.	**Downend (1 per engineering team)** **Engineering task – Bracknell to Downend (1 per engineering team)** **Engineering Curveball Card (1 copy)** **Finance task (1 per Finance team)** **Finance curveball card (1 per Finance team)** **Customer Facing task (1 per Customer Facing team)** **Customer Facing curveball card (1 per Customer Facing team)**

		<u>Engineering Team</u> This team are answering to a Project Manager. **<u>Key skills for engineering</u>** All listed SSE skills and traits are important, however, being passionate about the environment and safety are particularly central. This team will be given the task of connecting power from source to the new substation. They will be required to select the relevant route based on the challenges displayed. the route of the power, considering the geography, climate, wildlife/conservation, pre-existing infrastructure and sustainability variables that will be presented to them. They will be given a map that will highlight the main source of supply, local towns and villages, conservation areas and public areas. They will also be provided with the different approaches to power transmission they can use when creating their route (pylons, underground lines, tunnels etc.) **Curveball card:** Unexploded World War 2 bombs have been discovered in the sea between the mainland and the island on the route the underground tunnels will take. What should you do? • Do you need to replot your route? • How long can you delay before there are issues? **<u>Finance</u>** This team are answering to a Financial Controller. **Key skills** All listed SSE skills and traits are important; however, ownership and resilience are particularly central. **Team Task** Team will be presented with 2 possible routes that could be used to link the new sub-station to the source of power. Group needs to decide which route is more financially viable and calculate the total cost of construction based on the costs and distances provided. **Curveball Card** Unexploded World War 2 bombs have been discovered in the sea between the mainland and the island on the route the underground tunnels will take. It will cost the army £500,000 to dismantle them		

		safely – what should you do? • Consider how you can reallocate funds. **<u>Customer Facing</u>** This team are answering to a Project Liaison Manager. **Key skills** All listed SSE skills and traits are important, however social adaptability and communication are particularly central. **Team Task** This team will be presented with different groups of people that will affected by the new power route. For example: • The residents in a neighbouring town that will be disrupted by the new supply because of the widespread development of the new infrastructure (digging, drilling, waste, traffic). • A landowner who is refusing to sell his farmland. • The route is going through an area of outstanding natural beauty that is home to a rare breed of bird. Local wildlife conservationists are currently planning a protest. For each scenario they will need to develop action plan following background information provided on an A4 page. **Curveball Card** Unexploded World War 2 bombs have been discovered in the sea between the mainland and the island on the route the underground tunnels will take. You are required to deliver a press release highlighting in what you're doing to alleviate the problem. You'll need to choose your messaging wisely. • Think about how you can reassure your customers. **Activity reflection** The students will be asked to prepare to feedback on the activity/role they were engaged with. Giving them a few minutes as group to answer the following questions. • What they had to do • What was challenging/easy about the activity • How they worked as a team to get it done • What they feel the outcome was • Which of the SSE skills and traits do they feel they used?		

		Link the activity to key SSE skills that are assessed when assessing candidates. Facilitator will host a feedback session. Linking this to soft skills such as reflection and speaking.		
10 mins	**Meeting SSE Employees**	This section will showcase the stories/career journeys of 3 key people at SSE. These will be in video or image/word format. The employees will be guided to discuss the following themes:		
10 mins	**Applying for a Role at SSE**	**Routes in** The facilitator will offer an overview of the apprenticeship schemes and graduate opportunities at SSE that they could consider. **Application process (for the apprenticeship scheme)** The facilitator will outline of the stages of the apprenticeship application. **Strength-based interviews** What are they and how can you prepare for them? The facilitator will offer an overview of a skills-based interview to put the students at ease. Looking at examples of common questions and encouraging the students to practice answering them in their own time. **Video interview guide video** Video showcasing interview tips. **Final Recap** If you're interested in working for SSE- what they can go away and do tonight. Provide line/QR code for SSE careers website here.		

Feedback links
Please ensure your host supports us with feedback on the session:
Host feedback link

Please also provide us with your feedback on the session:
Volunteer feedback link

Further Information

For more information about STEM careers, in particular Engineering careers, please visit the Institution of Engineering & Technology's education website at https://education.theiet.org. You will also find a large range of our STEM education recourses and activities available free of charge, along with competitions and funding opportunities to support your STEM education engagement.

Additional resources:
In this careers broadcast, we join Chris, an apprentice at SSE, as well as Cain, an apprentice instructor, to discover some key insights about the *Cable Jointer Apprenticeship Programme* at SSE.

A series of videos showcasing *Skills for Work*