

TECHFEST'S STEM IN THE PIPELINE - ENERGISING THE TRANSITION ESSAY COMPETITION

TechFest is delighted to announce the launch of the STEM in the Pipeline - Energising the Transition Essay Competition.

The essay competition is open to all S5 and S6 pupils, and there is no limit to how many pupils can compete from each school. This is a solo project that will require independent research and writing. However, it is encouraged that participants get feedback from their peers or teachers before the final submission. Although this competition may be of particular interest to students studying maths, physics, engineering, chemistry, computing, design and technology or economics, there is no pre-requisite and we welcome submissions from any student regardless of what subjects they are currently studying.

Entrants are invited to submit an essay that is relevant to the Energy Industry. There is the option to write broadly about the topic, or you can choose to go into greater detail on a specific aspect or question. Some example essay questions are provided below. Students are welcome to pick one of the example essay topics but are also free to set their own essay question and choose what area they would like to explore.

The essay should be a maximum of 5000 words in length (excluding footnotes, figure captions and references). All sources must be appropriately acknowledged and cited, and the reference list should include all websites that have been consulted. In addition, at least one external industry professional must be interviewed as part of the research for the essay. A database of industry professionals (including their area of expertise and contact details) will be provided to each participating student as potential sources they could contact. However, students are also free to make their own connections, or to get in touch for help identifying an expert in a particular field.

There is no rigid requirement for the structure and format of the essays, but good submissions will present clear arguments, a detailed reference list of sources, include illustrations (which could be graphs, plots, diagrams or pictures) and where possible provide some specific examples or cases. A good level of technical content is expected, but you should aim to make the essay interesting and accessible to an intelligent non-specialist audience. The essays will be judged by a panel of experts from various fields and prizes will be awarded to the winning entries.

STEM IN THE PIPELINE - ENERGISING THE TRANSITION ESSAY COMPETITION PRIZES



First place - £200 worth of Amazon vouchers
Second place - £100 worth of Amazon vouchers
Third place - £50 worth of Amazon vouchers



Taking part in this competition is a brilliant opportunity for students to add additional achievements to their UCAS applications. In addition, their essays will be eligible for CREST awards and guidance on how to achieve this award will be provided as part of the competition.

Students that wish to take part should register their interest no later than 13/09/20 by emailing marthagavan@techfest.org.uk (teachers can register interest of behalf of their students). Students who register will receive a starting pack with information to help them with their essay (this will include tips and advice for writing their essay, a checklist of the criteria they should be aiming for, a guide to show them how to correctly create a reference list and reference in text and a database of industry professionals that they can contact and interview as part of their research).

The deadline for essay submission is 09/11/20. Entrants should email their completed essays and the attached cover sheet to marthagavan@techfest.org.uk. The essays will be assessed by an esteemed panel of judges and the winning essays will be announced on 01/12/20.

STEM in the Pipeline – Energising the Transition Essay Competition Important Dates

Deadline to register interest – 13/09/20

Deadline for essay submission – 09/11/20 (don't forget to submit the cover sheet as well!)

Winning essays announced – 01/12/20

For any queries not answered here please contact Martha Gavan (TechFest STEM Lead) at marthagavan@techfest.org.uk or 01224274188.



EXAMPLE ESSAY TOPICS

1. How is the Energy Industry transitioning towards a greener future?

Atmospheric levels of CO₂ are increasing, and the world is facing the consequences of climate change brought about by human-generated greenhouse gas emissions. Currently, the Energy Industry is going through a transitional period as it drives towards a net zero future. What policies and targets are currently in place and is the UK on track to meet these targets? What changes are currently being made within the Energy Industry? How can the industry solve the dilemma of ensuring there is enough energy generated to meet societal demands while also committing to lowering emissions and reversing the effects of global warming?

2. Electric power generation and consumption.

What are 'renewable sources' of electric power generation? How do they work and what are their strengths and limitations? Are there any new sources being researched and developed that might provide solutions for the future? Is it feasible that the UK will be able to generate all its electricity from renewable sources in the foreseeable future? If not, how can we reduce our demand for electric power so that we don't need to generate as much? There may be opportunities in both domestic and commercial/industrial consumption.

3. Is oil and gas still economical?

With the price of oil reaching record lows is it still economically viable to invest in traditional oil and gas production? What impact has the corona virus pandemic had on the Energy Industry? Which other industries have been significantly affected as a result of the pandemic and what knock on effect, if any, has this had on the Energy Industry? With the easing of lock down restrictions is their any way of predicting how this will affect the price of oil in the long term?

4. The petrochemical industry.

Beyond electric power generation, there are many other products that are derived from crude oil. How widespread are these products and what are their uses? Are there alternatives available? If oil and gas production were to stop, are there any petrochemical products that are vital to our society that we currently don't have a suitable alternative for? What future developments are currently underway that may help solve some of these problems. Out with the Energy Industry, what other industries would be heavily impacted by the loss of crude oil products?