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# Pulsed Power Engineer

## Job Ref 92

### Job Description

We are looking for Pulsed Power Engineers to join our team. The Pulsed Power team develops and operates extremely high-energy pulsed discharge machines. The team have designed, built, and operated a series of pulsed power machines, including Machine 3, Europe's largest of its kind. We are currently working on a major next step for First Light Fusion, the design and building of what is expected to be the largest pulsed power facility in the world; Machine 4 (M4).

The size of M4 at the heart of this scientific facility will be circa. £100M, and the facility will accommodate a series of supporting sub-systems. The program will take around five years to deliver with a materials budget exceeding £100M.

Pulsed Power engineers work on projects ranging from designing and building M4, our future experimental driver, to developing our electromagnetic launch capability through simulation and experiments on our existing and external facilities and developing machine and experimental diagnostics.

#### Responsibilities will include:

- Providing expert engineering/scientific input to multidisciplinary teams
- Producing analysis and calculations for design work
- Using schematic capture, circuit simulation and other modelling packages

#### Essential

- Degree in Physics, Engineering or similar
- Ability to perform calculations and analysis associated with electrical engineering
- Knowledge of health and safety matters relating to pulsed power systems
- Passion for fusion and for taking a bold approach to a high-risk transformational technology
- Fast and effective problem-solving skills
- Ability to work under pressure to tight deadlines
- Strong communication and interpersonal skills

#### Desirable

- Experience solving complex engineering problems in a scientific environment
- Demonstrated ability to deliver to agreed objectives and manage resources using project management techniques
- Experience with CAD design tools and simulation software (COMSOL and SolidWorks for example) is useful; training in the specific tools used at First Light will be provided

#### **First Light Fusion Ltd**

Unit 10, Oxford Pioneer Park  
Mead Rd., Yarnton, Oxford  
United Kingdom  
OX5 1QU

Company No – 07555858  
[www.firstlightfusion.com](http://www.firstlightfusion.com)





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## Benefits

- Competitive salary
- 25 days annual leave + bank holidays
- Free lunch, snacks, and soft drinks
- Cycle to work scheme
- Electric vehicle car scheme
- Relocation support
- Flexible working
- Generous share options scheme
- 8% employer pension contribution without matching requirements
- Enhanced maternal / paternal and sick leave

## Additional information

### How to apply

Please send your CV to [careers@firstlightfusion.com](mailto:careers@firstlightfusion.com) quoting the job title in the subject. If you don't hear back from us within four weeks, it means that unfortunately your application was unsuccessful at this time.

Informal enquiries can be sent to [careers@firstlightfusion.com](mailto:careers@firstlightfusion.com).

### Our recruitment process

- ✓ We typically conduct two separate interviews, each one about sixty to ninety minutes long. The first interview aims to understand how your skills match the requirements for the job. The second interview is more focused on your competencies, and your aspirations.
- ✓ We will try to understand the value you will add to First Light Fusion, and how you can thrive and be happy with us. There will be opportunity to ask us as many questions as you like.
- ✓ We do not have a dress code at First Light and regardless of seniority there is a good mix of t-shirts, trainers, shirts and blazers. For your interview, please dress in whatever makes you feel most confident and comfortable.
- ✓ To help with coordination issues, we may arrange so that the two interviews are organised on the same day. We will also reimburse reasonable expenses you incur to come to talk to us.
- ✓ If you are the successful candidate, we will send you an offer letter and, once agreed, a contract.

### Our commitment to equality, diversity, and inclusion

We are a small company with a huge mission. The only important aspect for the team, and for everyone, is the contribution they can make. Our selection process and requirements for career progression disregard gender, gender identity, race, disability, colour, religion, and all other aspects of diversity that make us all humans. Diverse teams have been proven to be better and we strongly believe it. We are not perfect, but we strive to be.

### Information for recruiters

We work with a trusted network of recruiters, therefore CVs sent by other recruitment agencies will not be considered. If the company receives a CV from both the direct applicant and a recruitment agency, the CV will be treated as a direct application by the individual only.

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Unsolicited contact from recruitment agencies will be disregarded.

## First Light Fusion

We are a lean, focused, and agile company researching energy generation by inertial confinement fusion. We spun out from the University of Oxford in June 2011 and are based near Oxford. First Light continues to collaborate closely with the academic community, both in the UK and internationally. The company is well-funded by both institutional investors and private individuals.

Inertial confinement fusion for energy generation is a well-established research field and is being pursued in many laboratories worldwide, most notably in the US at the National Ignition Facility. We are exploring a number of alternative research directions that harness the same fundamental physics, with the prime focus being power generation. Our work to-date has included theoretical analysis, detailed numerical simulation, and experimental validation. We have a clear vision of the pathway to a power plant.

We really believe fusion will be solved in the 2020s. If it is solved by us, fantastic, if it is solved by someone else, still great!

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