



## Senior Mechanical Engineer in grid-scale Energy Storage Innovation: Gravitricity Ltd, Edinburgh

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Gravitricity are an early stage Edinburgh based company developing a novel mechanical energy storage system. The team is growing, and we need dynamic engineers to drive forward the development of this innovative technology.

### Job Brief

**We are looking for an experienced Mechanical Engineer to play a key role in our small team.** The right person will be very self-driven to work proactively across a number of areas of the technology at the same time as supporting areas of commercial and strategic development. This will require a very strong engineering understanding and clear organisational view to take responsibility from early stage conceptual design through to detailed analysis of systems and components. To be successful in this role you will have to learn fast and be comfortable working outside of your core expertise. You will also have to be very pro-active and great at driving your own work. As a small company developing a complex technology, we are building strong partnerships with other organisations and you will need to be expert at managing and developing these partnerships in order to maximise the speed of progress.

### Requirements

- Mechanical engineering experience in industry (minimum 3 years)
- Experience in the Energy sector would be very beneficial and at minimum a strong understanding of the factors affecting the development of modern power systems is required
- Very good understanding of core mechanical engineering concepts
- Strong design skills, both at the conceptual and detail level
- Experience with CAD software essential (preferably Solid works)
- Stress analysis and FEA experience desirable
- MATLAB and Simulink experience beneficial
- Experience in the process of generating and protecting new patents very valuable.
- MEng in Mechanical Engineering or equivalent

### Benefits

- Chance to make a significant impact within a small and dynamic, early-stage company
- Competitive salary dependent on experience. Options scheme for right people.
- Modern, flexible company. All staff encouraged to work 4 day week.
- Location: Edinburgh

### Application

We welcome applications from all candidates. To apply, please submit a CV & Cover letter to:

**Miles Franklin**

Lead Engineer

[Miles.franklin@gravitricity.com](mailto:Miles.franklin@gravitricity.com)

## Responsibilities

- Responsibility for the majority of the internal detailed mechanical design for the demonstration system (with accountability to Lead engineer and in close partnership with external Winch partner)
- Key role in interface with winch manufacturer
- Work on standalone analysis at the component and sub-system level to inform the design of both the demonstrator and full-scale systems (e.g. lifetime, bend radius, efficiency and cost implications of various cable types)
- Tolerance analysis of detailed design to inform design of components and control system.
- Ownership of the costing of mechanical systems and implementation of industry standard costing standards to characterise cost uncertainty
- Contribute significantly to conceptual design of large scale system
- Develop new methods to optimise the system design; both for cost and for performance
- Work on the creation and protection of new IP
- Develop full-scale system installation procedures and protocols
- Depending on skillset and other experience within the team, the successful candidate may:
  - Further develop the analysis of shaft sinking costs and constraints
  - Work with a civil engineering sub-contract to explore future system civil engineering issues
  - Work directly with an external controls partner to develop and analyse system simulations and control algorithms
  - Contribute to future cost modelling
  - Develop test protocols