

Process Engineer

Who we are

The world still needs hydrocarbons — but given the climate crisis, we cannot rely on fossil fuels. The answer lies in carbon dioxide utilisation: carbon-to-value, power-to-X.

OXCCU TECH LTD, a climate-tech spin-out from the University of Oxford, is on a mission to develop novel catalysts and reactor designs to convert carbon dioxide and hydrogen into hydrocarbons. These technologies will help meet growing demand for sustainable aviation fuel (SAF) under global regulations, as well as petrochemical products such as surfactants, synthetic lubricants, and plastics.

Following successful funding rounds with leading US and UK venture funds, oil majors, traders, and end users, OXCCU is scaling up rapidly. We are expanding our facilities, increasing our UK-based team, and deploying a demonstration plant at Oxford Airport.

Our culture

We are passionate about making an impact in the fight against climate change by developing technologies to reduce gigatons of CO₂ emissions by 2050. We believe in hard work, innovation, and big thinking — balanced with humility, teamwork, kindness, and mutual respect. Diversity and inclusion are core to our success, and safety is paramount in everything we do.

Position description

We are seeking a Process Engineer to contribute to the design, optimisation, and scale-up of cutting-edge CO₂ utilisation processes. You will work alongside senior engineers and multi-disciplinary teams to deliver projects from laboratory development through to pilot and demonstration plants, ensuring processes are safe, efficient, and commercially viable.

You will play a key role in:

- Supporting process engineering design, modelling, and analysis.
- Developing and improving CO₂ hydrogenation, hydrocarbon upgrading, and separation processes.
- Translating pilot plant data into scalable process designs.

This role requires strong technical skills, attention to detail, and the ability to collaborate effectively within a high-performing engineering team.

Key responsibilities and accountabilities.

- Assist in process design, modelling, and optimisation for OXCCU demonstration and commercial plants.
- Support the implementation of engineering best practices, ensuring compliance with safety, quality, and regulatory requirements.
- Contribute to process development, troubleshooting, and optimisation of catalytic conversion and downstream separation systems.
- Prepare and maintain PFDs, P&IDs, and mass/energy balances.
- Participate in hazard studies (HAZOP, LOPA) and safety reviews.
- Collaborate with cross-functional teams to meet project milestones and deliverables.
- Contribute to continuous improvement and innovation across the engineering function.
- Demonstrate OXCCU's company values in all activities.

Qualifications and experience

Essential

- MEng, or MSc in Chemical Engineering (or equivalent).
- Industrial or placement experience in process or chemical engineering.
- Knowledge of catalytic processes, hydrocarbon synthesis, or related chemical conversion technologies.
- Familiarity with process modelling tools and engineering documentation.
- Understanding of process safety principles and plant HSE requirements.
- Strong problem-solving and teamwork skills.
- Ability to communicate effectively with technical and non-technical colleagues.

Desirable

- Experience in synthetic fuels, SAF production, or CO₂ utilisation processes.
- Exposure to pilot plant operations or technology scale-up.
- Knowledge of techno-economic analysis or lifecycle assessment.

Closing statement

Consistent with our commitment to diversity & inclusion, we value people with the ability to work in diverse teams and with a diverse range of people. We especially encourage members of traditionally underrepresented communities to apply.

We know the right candidate might not check every box in this job description. You could also have important skills we haven't thought of. If you think you're a great candidate for this role, apply and tell us why.

Apply Today!

To apply, please send your CV and cover letter to info@oxccu.com, outlining why you are the right fit for this role and what you will bring to our mission.