

**Position: Low Carbon Pathways  
Science Associate**

Type: Open-ended Contract  
Start: Early October 2021

Application deadline: 10 September 2021

The transition of the Refining industry and the new fuel production technologies is at the centre of this Research Associate position and the work is directly linked to Concawe's activities in the Low Carbon Pathways programme and the Refining in the Energy Transitioning Management Group (RET MG).

**Who are we?**

- Concawe is the science division of an international non-profit association (The European Petroleum Refiners Association aisbl) whose mission is to provide research and technical support to the EU oil refining industry in the study of environmental, health, safety and toxicity issues relating to the refining of crude oil and the distribution and use of petroleum products. Its goal is to improve the understanding of these issues by the industry, authorities, users and other interested parties.
- The Association represents the interests of 40 Companies operating petroleum refineries in the EU. Members account for almost 100% of EU petroleum refining capacity and more than 75% of EU motor fuel retail sales.

**What do we offer?**

- Open-ended contract
- Attractive salary and fringe benefits
- International and dynamic multicultural environment

**What do we expect from you?**

The role of the Research Associate combines general duties with responsibilities specific to the field of the Concawe's Low Carbon Pathways programme regarding the integration of low carbon technologies and alternative sustainable feedstocks within the European Refining system (<https://www.concawe.eu/low-carbon-pathways/>)

**What would be your activities?**

**General duties**

- Support the development and implementation of the annual technical research plan as agreed with the relevant Joint and Management Groups and the Science Director. The scope of the work will be mainly focused on conducting and/or supervising technology scouting of key low carbon technologies and alternative feedstocks for the refining industry with a significant contribution to the European Commission's 2050 climate ambition targets.
- Develop an in-depth knowledge of the European and global techno-economic issues related to the transition to a low emissions future of the refining industry sector with special focus on new conversion and GHG mitigation technologies.
- Together with the SEs, develop the scope, review proposals and manage projects (including cost control) related to the specific research areas.
- Support the Science Executives and chairs of the Concawe Refining into the Energy Transition Management group (RET MG) in the execution of their responsibilities.
- Coordinate the STF-3 group (Biofuel availability group) defining the research programme and conducting / leading the agreed projects, in collaboration with the Member Companies' experts and the SE RT.
- Liaise with external consultants in the development of the research programmes.
- Liaise with Member Companies and external stakeholders and provide written documentation of the results
- Report progress and inform appropriate Management Groups, Science Committee as appropriate on his/her activities.
- Assist in the writing and editing of Concawe technical reports, briefing papers, articles etc., on topics related to the field of activity.
- Participate in international scientific conferences and develop network
- Comply with the governance rules of the Association and ensure that the STFs are aware of these rules.

### **Specific research programmes and responsibilities**

This Research Associate position will focus on the following main tasks, each of which is relevant to the others:

#### **1) Low Carbon Technologies – Technology Scouting**

Improving the scientific understanding on the opportunities and challenges for different low-carbon technologies and feedstocks to achieve a significant reduction of the CO<sub>2</sub> emissions associated with both the manufacturing and use of refined products in Europe in the medium (2030) and longer-term (2050) by:

- Supporting both SE RT and SE RE in conducting specific technical deep-dives on key low carbon technologies and fuels identified under the scope of the LCP project.
- Conducting and/or coordinate techno-economic analysis on relevant technologies, including the assessment of their technology readiness level, potential scale-up and the CO<sub>2</sub> abatement cost comparison of different options (conducted internally within the Concawe Secretariat and/or in collaboration with external consultants/contractors as deemed appropriated).
- Liaising with SE RT and SE RE in assessing the potential impact of future legislation in the energy, transport and refining sector when different uptake of future low carbon fuels and GHG mitigation technologies are considered.
- Supporting the SE RT in the FuelsEurope's related tasks contributing to improve the understanding of existing and future challenges linked to their Clean Fuels For All strategy.
- Being responsible for drafting and / or contributing to relevant scientific publications and articles to disseminate the results of the Concawe's analysis in the subject.

#### **2) Integration of Low Carbon Technologies into the EU Refining system**

- Collaborate with the Concawe STF-2 (Refining Technology Task Force) to support specific analysis on the future integration of low carbon technologies into the refining sector.
- In this context, the SA LCP will explore and support the integration of the low carbon technologies and feedstocks identified into the Concawe's EU refining model, in collaboration with the Science Executive Lineal Programming modelling and other potential external consultants.
- Be responsible for drafting and / or contributing to relevant scientific publications to disseminate the results of the assessment / modelling work.

#### **3) Low Carbon sustainable feedstocks: Availability and Sustainability**

Alternative low carbon feedstocks will play a key role, progressively replacing oil in the transition towards 2050. These alternative feedstocks will included, among others, biomass residues and waste materials.

The SA will contribute to gain understanding on the following issues:

- Potential sustainable availability of different type of feedstocks for fuel and petrochemical products and current/future R&D needs.
- Sustainability and biodiversity impacts
- Technical implication of related RED II and other pieces of legislation.
- Opportunities and challenges for the supply chain development, in a potential cross-sectorial collaboration with other Research Centres, Universities or scientific associations.

This third activity will be coordinated and supervised within the Concawe STF-3 task force, under the responsibility of the Science Associate Low Carbon Pathways (supervised by SE EM). This analysis will be complemented with an in-depth analysis of electrification and CO<sub>2</sub> as feedstock for the production of Power-To-Fuels (e-fuels).

As with the other tasks, the SA will be responsible for drafting and / or contributing to relevant scientific publications to disseminate the results of the assessments and/or modelling work conducted during the execution of the research plan.

#### 4) **Support on other related Technical Projects:**

In addition to the targeted activities described above, it can be expected that the SA will be involved in related technical and cross-disciplinary projects within Concawe, regarding the Low Carbon Pathways programme.

The work can be structured in such a way that projects can overlap and progress in parallel. A permanent position is proposed in order to ensure that the expertise is properly retained internally.

#### **What is your professional profile?**

##### **Education & Experience:**

- A science/engineering background and a proven track record in a Member Company / oil refining industry / bio-industry, consulting firms, research institute or similar.
- Interest in the transition of the EU industry towards climate change ambition.
- Sound understanding on the key GHG mitigation technologies and alternative fuel options.
- Familiarity with Well-to-Wheels principles and modelling techniques to assess the CO<sub>2</sub> impact of different technologies and alternative fuels.
- Familiarity with the bioenergy related pieces of legislation at EU level (e.g. RED II).
- Some familiarity with process modelling tools (Modelling experience in this field is desirable but not essential), and an interest in acquiring a more in-depth knowledge and working relationships with those active in these fields.

##### **Skills & Competencies**

- Highly organised individual
- Proficiency in English (oral and written) is essential; other EU languages are an asset
- Capacity to quickly learn and understand the refining and biofuel industry issues.
- Keen interest and awareness of the European institutions decision-making processes for technical issues.
- A team player with the capacity to effectively facilitate technical teams
- Good communication skills, both verbal and written
- EU citizen or permit to work in EU required

##### **Additional**

- Self-starter
- Ability to work in autonomous way
- Ability to adapt in multicultural environments
- Team-working spirit

#### **Organisational Fit: Reports to the Science Executive Refining in the Energy Transitioning**

The position is based in Brussels (Belgium)

To apply, please send your CV, your bibliography and motivation letter to: [recruitment@concawe.eu](mailto:recruitment@concawe.eu) mentioning "CONCAWE Low Carbon Pathways Science Associate " in the subject of your e-mail.

*By applying for this vacancy, you agree that we use your personal data for recruitment purposes only.  
All your private information will be deleted from our files after the recruitment process.*