



# Postdoctoral Researcher on life cycle assessment (LCA) of bioenergy (IV-103/19)

## About the position

We have a vacancy for a Postdoctoral Fellow at the Department of Energy and Process Engineering, Norwegian University of Science and Technology (NTNU), from 1 August 2019.

The postdoctoral researcher will undertake research on assessing the climate and environmental impacts of bioenergy, both domestically in Norway and globally. The position offers the opportunity for scientific and professional growth through collaborative research in areas where NTNU's competence is internationally recognized, and through interaction with a diverse group of national and international project partners.

The position has a duration of four years. The Head of Department is Professor Terese Løvås. The position reports to Professor Francesco Cherubini and collaborates with Researcher Anders Arvesen.

## Job description

The Intergovernmental Panel on Climate Change (IPCC) has shown that bioenergy can play a critical role in meeting the targets of the Paris climate agreement. At the same time, bioenergy potentials, climate impacts and environmental impacts of bioenergy need to be better understood, both at regional and global levels.

The Industrial Ecology Programme ([IndEcol](#)), Department of Energy and Process Engineering at NTNU has a vacancy for a postdoctoral researcher to work on modelling climate and environmental impacts of bioenergy technologies and future bioenergy deployment pathways. IndEcol is an internationally established research group in the area of holistic environmental technology assessment, with frequent publications in high-ranked journals and contributions to IPCC reports.

The position is funded half by the Centre for Environment-friendly Energy Research [Bio4Fuels](#) and half by the research project [BEST](#). Bio4Fuels and BEST research areas are closely related; both are addressing the climate and environmental impacts of bioenergy systems.

The postdoctoral researcher will combine life cycle assessment (LCA), scenario analysis and climate impact characterization modelling in order to assess climate and environmental impacts of bioenergy, both domestically in Norway and globally. The researcher will perform individual and comparative assessments of alternative bioenergy feedstocks, biomass-to-bioenergy conversion technologies and bioenergy applications. He/she will also address implications, both positive and negative, of economy-wide bioenergy deployment pathways. The research will involve considerations of biomass resource potentials, climate effects of different climate pollutants, and environmental impacts other than climate change.

Major tasks for the postdoctoral researcher will be inventory data acquisition and development, simulations of bioenergy scenarios, contributions to computer code development, quantification of impacts, presentation of research both in Norway and internationally, and scientific publishing.

## Qualification requirements

Completion of a doctoral degree (Norwegian doctoral degree or equivalent foreign doctoral degree) in industrial ecology, engineering, environmental sciences or other relevant fields is required.

Expected qualifications are:

- Strong analytic capabilities
- Programming skills in one or several languages (e.g. Python, Matlab)
- Competence in LCA (i.e. in life cycle analysis and/or life cycle impact assessment methods and/or applications)
- Understanding of fundamentals in mathematics and physics
- Broad understanding of climate and sustainability challenges
- Documented capacity to present research in peer-reviewed international journal journals

In addition, familiarity with bioenergy technologies or systems is an advantage.

Excellent English skills, spoken and written, are required. Applicants from non-English-speaking countries outside Europe must document English skills by an approved test. Approved tests are TOEFL, IELTS, Cambridge English Qualification: C1 Advanced or C2 Proficiency.

## Additional information

The appointment is to be made in accordance with the regulations in force concerning State Employees and Civil Servants and national guidelines for appointment as PhD, post doctor and research assistant.

In the evaluation of which candidate is best qualified, emphasis will be placed on education, experience and personal suitability, in terms of the qualification requirements specified in the advertisement.

## We offer

- exciting and stimulating tasks in a strong international academic environment
- an open and [inclusive work environment](#) with dedicated colleagues
- favourable terms in the [Norwegian Public Service Pension Fund](#)
- employee benefits

## Salary and conditions

The gross salary for the position of Postdoctoral Researcher (code 1352) is normally NOK 515 200 per year. From the salary, 2 % is deducted as a contribution to the Norwegian Public Service Pension Fund.

Appointment takes place on the terms that apply to State employees at any time, and after appointment you must assume that there may be changes in the area of work.

## General Information

### [Working at NTNU](#)

A good work environment is characterized by diversity. We encourage qualified candidates to apply, regardless of their gender, functional capacity or cultural background. Under the Freedom of Information Act (Offentleglova), information about the applicant may be made public even if the applicant has requested not to have their name entered on the list of applicants.

Questions about the position can be directed to Professor Francesco Cherubini (phone +4773598942; email [francesco.cherubini@ntnu.no](mailto:francesco.cherubini@ntnu.no)) or Researcher Anders Arvesen (email [anders.arvesen@ntnu.no](mailto:anders.arvesen@ntnu.no)).

About the application:

Publications and other academic works that the applicant would like to be considered in the evaluation must accompany the application. Joint works will be considered. If it is difficult to identify the individual applicant's contribution to joint works, the applicant must include a brief description of his or her contribution.

Applicants are requested to include a sketch (one page or less) of ideas on how to address the research tasks of the position, based on their own scientific background and interests.

Please submit your application electronically via [jobbno.no](http://jobbno.no) with your CV, diplomas and certificates. Applicants invited for interview must include certified copies of transcripts and reference letters. Please refer to the application number IV-103/19 when applying.

**Application deadline: 24.03.2019**

## NTNU - knowledge for a better world

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The Norwegian University of Science and Technology (NTNU) creates knowledge for a better world and solutions that can change everyday life.

### Department of Energy and Process Engineering

We conduct research and teaching covering the entire energy chain, from resources to the end-user. We look at how energy is produced and used by humans and machines in a sustainable way with regard to health, climate change and the resource base. [The Department of Energy and Process Engineering](#) is one of eight departments in the [Faculty of Engineering](#).

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