

Jobbnorge ID: 283510
Deadline: 8/17/2025
Website: <http://www.ntnu.no>
Scope: Fulltime
Duration: Temporary

We are looking for

PhD Position within Investment and Policy Analysis under uncertainty for CCS Value Chains

This is NTNU

NTNU is a broad-based university with a technical-scientific profile and a focus in professional education. The university is located in three cities with headquarters in Trondheim.

At NTNU, 9,000 employees and 43,000 students work to create knowledge for a better world.

You will find more information about working at NTNU and the application process [here](#).

Video: <https://youtu.be/Xt-yHCN5QS0>

About the Research Centre

There is a temporary PhD position for 3 years available at the [Department of Industrial Economics and Technology Management](#) - Section Managerial Economics, Finance and Operation Research. The position is resident at NTNU's campus in Trondheim. This is an educational position, which will provide promising research recruits the opportunity for professional development through studies towards a PhD-degree. The position is connected to the PhD program at the Faculty of Economics and Management and the faculty will be your employer.

The PhD position will be part of the part of the Research Centre for Carbon Capture and Storage called gigaCCS and the work focuses on topics covered by Mission Area 4 CCS value chains. More information about the centre can be found here www.gigaccs.no.

About the specific work package

The position will contribute to WP 4.1 Policy, governance, and regulations that will facilitate upscaling of CCS deployment through three activities:

1. Accelerate the deployment by identifying the most suitable policies to enable the gigatonne scale.
2. Identify and propose the most suitable governance strategies for the deployment of shared large-scale infrastructures.
3. Mature national CO₂ storage licensing regime and regulatory aspects of cross-border CO₂ transport at the gigatonne scale.

About the position

The process of increasing CCS volumes from the megatonnes scale of today to gigatons in the future requires policies and governance structures that make investments that happen today a steppingstone towards projects that are investable on commercial terms. One important element in that process is the management and sharing of risk among agents in the CCS value chains like CO₂, suppliers, shippers, infrastructure owners, storage owners, as well as regulators and governments. Risks are related to technological maturity, volumes and CO₂ prices, as well as political risk. This project will address the instruments, policy measures, regulation and market design that stimulate the best investment choices and formation of robust cooperation designs needed to allow for scaling of the value chains.

The project requires knowledge of real options analysis, quantitative modelling skills and understanding of the CCS value chain.

The aim of the project is to:

- Develop methodologies to assess investment decisions in the CCS value chain under uncertainty.
- Develop methodologies to test different cooperation designs among stakeholders in the CCS value chain.
- Analyze how different policy measures and regulation impact investment behavior and robustness of cooperation designs among different agents in the value chain.
- Identify policies that incentivize management and sharing of risk among agents in the CCS value chains.

The workload is expected to result in 3-4 academic articles, contributing to the work of gigaCCS WP 4.1.

You will report to your supervisor, Professor Verena Hagspiel-Janssen. The position will also be co-supervised by Dr Simon Roussanaly, Research Scientist at SINTEF Energy Research

Duties of the position

- Execute a PhD project within 3 years (including formal analysis and dissemination).
- Complete the necessary doctoral coursework as per NTNU's guidelines.
- Attend center meetings and develop a collaboration network with center partners.
- Disseminate research findings through national/international academic conferences and open access scientific journals that meet the requirements for the PhD position.

Be prepared for changes to your work duties after employment.

Required selection criteria

- The PhD-position's main objective is to qualify for work in research positions. The qualification requirement is completion of a master's degree or second degree (equivalent to 120 credits) in mathematical economics, quantitative finance, energy economics, operations research, or equivalent education within the thematic areas relevant to the project. Applicants should have a strong academic background with a grade of B or better in terms of [NTNU's grading scale](#). Applicants with no letter grades from previous studies must have an equally good academic foundation.
- The position requires excellent English oral and writing skills.

In addition, the following qualifications will contribute positively to the evaluation of the applicant:

- Background and/or experience relevant to the project topic
- Documented experience with real options analysis, decision making under uncertainty, and/or value chain analysis.
- Documented experience with the carbon capture and storage sector

Recent graduates, or applicants who are in the final stage of their Master's program, are encouraged to apply. Such an applicant may be offered the position under the condition that the diploma will show satisfactory final term results.

Personal characteristics

- A high level of personal responsibility and initiative
- Ability to work independently as well as part of a team in accordance with the project objectives
- Ability to work in a structured way, set goals and make plans to achieve them
- Ability to work in interdisciplinary teams
- Suitable candidates should have good communication skills, be flexible and solution-oriented

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

- An exciting job with an important [mission](#) in society
- Developing tasks in a strong and international professional environment
- Career guidance and [follow-up during the PhD period](#)
- Open and inclusive working environment with committed colleagues
- [Working capital](#) that can be used to implement the project
- [Mentor programme](#) as a [new employee at NTNU](#)
- Favorable terms as a member of the [Norwegian Public Service Pension Fund \(SPK\)](#)
- Free Norwegian language training at a basic level ([A2](#)).

As a PhD Candidate at NTNU, you will have access to [employee benefits](#).

Diversity

Diversity is a strength, and at NTNU we aim to be an employer that reflects the diversity in society and that makes use of the potential of the population's collective skills. Our vision is [Knowledge for a better world](#) and [our values are creative, critical, constructive and respectful](#). We believe that an organization that is equal, diverse and gender-balanced is essential for us to achieve our goals.

We strive to attract employees with different skills, life experiences and perspectives to contribute to even better problem solving of our societal mission in research and education.

If you think this position is relevant and interesting, we encourage you to apply, regardless of gender, functional ability and cultural background, or whether you have been out of work for a period of time.

Salary and conditions

In the position of PhD Candidate, code 1017, your gross salary will normally be NOK 550 800,-per annum depending on qualifications and seniority. A 2% statutory contribution to the State Pension Fund is deducted from the salary.

The period of employment is 3 years. The position is connected to the PhD program at the Faculty of Economics and Management and the faculty will be your employer. Appointment to a PhD position requires that you are admitted to the [PhD programme in Industrial Economics and](#)

[Technology Management](#) within three months of employment, and that you participate in an organized PhD programme during the employment period. Your work place will be at the Department of Industrial Economics and Technology Management (<https://www.ntnu.no/iot>).

The position is conditional on external funding.

As an employee at NTNU, it is important that you keep yourself up to date with academic and organizational changes and adapt to them.

For the necessary professional and social interaction, it is a prerequisite that you are physically present and available to the institution on a daily basis.

The appointment is carried out in accordance with the principles of the [State Employees Act](#), and [Export control](#) (legislation that regulates the export of knowledge, technology and services. Candidates who, after assessment of the application and attachments, are considered to be in conflict with the criteria in the latter act, will not be able to be employed.

The appointment is to be made in accordance with [NTNUs guidelines for recruitment positions](#) and [Regulations for the degrees philosophiae doctor \(ph.d.\) and philosophiae doctor \(ph.d.\) in artistic development work at the Norwegian University of Science and Technology \(NTNU\)](#) for general criteria for the position.

About the application

The attachments (including a description of your scientific work) must accompany the application as these documents form the basis of the application assessment. The documents must be in English.

Please note: the application will only be assessed on the basis of the information we have received by the application deadline. Therefore, make sure that your application clearly shows how your skills and experience meet the criteria described above. The application and all attachments must be sent electronically via [Jobbnorge.no](#). If you are invited to an interview, you must bring certified copies of certificates and diplomas upon request.

The application must include:

- 1) Application letter concerning your motivation for completing a PhD (400 words/1 page)
- 2) A CV with information on education, previous research experience, together with authorized documentation of certificates and study records.
- 3) Copy of Master's thesis or other relevant publications. If you have recently submitted your Master's thesis, you can attach a draft of the thesis. Documentation of a completed Master's degree must be presented before taking up the position.
- 4) A short project outline containing proposals for an overall description of research questions, theoretical perspectives, methodological design for the project and progress plan (maximum 1000 words).
- 5) Name and address of three references

If all, or parts, of your education has been taken abroad, we also ask you to attach documentation of the scope and quality of your entire education, both Bachelor's and Master's education, in addition to other higher education. If your institution uses "diploma supplement" (normal for most European institutions), you must attach this. A description of the documentation required can also be found [here](#). If you already have a statement from [Norwegian Directorate for Higher Education and Skills \(HK-dir\)](#), please attach this as well.

Joint work will be considered. If it is difficult to identify your contribution to joint work, you must attach a brief description of your participation.

When assessing the best qualified, we emphasize necessary qualifications such as education, experience and personal suitability. Motivation for the position, ambitions, and potential for research will also count when assessing the candidates.

NTNU recognizes a wide range of academic contributions and has committed itself to [The San Francisco Declaration on Research Assessment](#) and [CoARA](#) (responsible assessment of research and recognition of a greater breadth of academic contributions in accordance with NTNU's social mission).

General information

A public list of applicants with name, age, job title and municipality of residence is prepared after the application deadline. If you wish to be exempt from entry on the public applicant list, this must be justified. Assessment will be made in accordance with [current legislation](#). You will be notified if the exemption is not granted.

If you think this position looks interesting and in line with your qualifications, you are welcome to apply.

Questions about the position can be directed to Professor Verena Hagspiel-Janssen, email verena.hagspiel@ntnu.no.

If you have any questions about the recruitment process, please contact HR Advisor Hilde Sellie Egelie, e-mail: hilde.s.egelian@ntnu.no.

Application deadline: 17.08.2025

For practical information about [working at NTNU](#), please visit [this webpage](#).

[The city of Trondheim](#) is a modern European city with a rich cultural scene. [Trondheim is the tech capital of Norway](#), with a population of 200,000. The Norwegian welfare state, including healthcare, schools, kindergartens and overall equality, is probably the best of its kind in the world. Professional subsidized day-care for children is easily available. Furthermore, Trondheim offers great opportunities for education (including international schools) and possibilities to enjoy nature, culture and family life and has low crime rates and clean air quality.

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 Industrial Economics and Technology Management

We conduct research and teaching at an international level in the interface between technology/natural sciences and economics, management, and HSE (health, safety and the environment). Our goal is sustainable creation of value within technology-based areas in industry, business and the public sector in Norway. We have academic groups in Trondheim and Gjøvik. The [Department of Industrial Economics and Technology Management](#) is one of four departments in the [Faculty of Economics and Management](#).

Additional information

Place of service:

- Høgskoleringen 1 7491 Trondheim (Trondheim Municipality)
- Trondheim 7048 Trondheim (Trondheim Municipality)