



**Jobbnorge ID:** 284006  
**Deadline:** 8/20/2025  
**Website:** <https://www.usn.no/>  
**Scope:** Fulltime  
**Duration:** Temporary

The Faculty of Technology, Natural Sciences and Maritime Sciences have a vacancy for a position as

## PhD Research Fellow in Energy Technology Management

### About the position

The Faculty of Technology, Natural Sciences, and Maritime Sciences (TNM) has a vacancy for a 100% position as PhD Research Fellow in Energy Technology Management from 01.10.25.

The position is located at the Department of Science and Industry Systems (IRI) and reports to the Head of Department. The place of employment is Campus Kongsberg, Norway.

The employment period will be three years of full time with no teaching obligations, and there is a premise for employment that the PhD Research Fellow is enrolled in USN's PhD program in technology within three months of accession in the position

### About the PhD-project

The PhD project confronts the global imperative for adaptable, low-carbon energy infrastructure by investigating a hybrid system that synergistically integrates different renewable energy sources such as solar photovoltaic generation, hydrogen production, and storage alternatives with microgrid-driven power distribution. Through advanced modeling and optimization techniques, this research aims to identify optimum design and operational strategies that enhance system flexibility, improve resilience to variable supply and demand, and minimize environmental impact. By drawing on interdisciplinary expertise (spanning renewable energy engineering, power systems and energy market integration, stochastic multi-objective optimization, and data-driven control methodologies) the project will establish a robust framework for coordinating electricity, heat, cooling, and hydrogen flows in distributed energy networks.

While the primary focus is on developing a scalable and economically viable energy management solution, potential case studies may include maritime contexts such as port environments to illustrate real-world applicability in a close collaboration with our national and international partners. In alignment with Energi21 as national strategic objectives for sustainable energy as well as international commitments to the UN Sustainable Development Goals, this PhD project aims to advance cutting-edge smart microgrid technologies by enhancing system flexibility and reliability, thereby making a significant contribution to the transition toward cleaner, more resilient, and sustainable energy infrastructures

### Qualifications

Applicants to the PhD position must have a master's degree (120 ECTS) equivalent higher education qualifications in Mechanical Engineering, Electrical Engineering, Energy Systems Engineering, Chemical Engineering, or a closely related field. The degree must be accomplished before application deadline.

The candidate must have the ability to work independently and at the same time have the motivation to share knowledge and take part in teamwork. Personal suitability for the post will be emphasised.

It is a requirement that the successful applicant is granted admission to the university's doctoral programme in Technology within three months of accession in the position. For admission to the Programme the weighted average grade is B or higher is usually required.

Co-operation between staff members is an integrated part of the working atmosphere at the University of South-Eastern Norway. The candidate must be motivated and demonstrate a proven ability to work effectively within a team and in a collegiate manner to formulate and realize common objectives.

The applicant must document fluency in both spoken and written English. Proficiency in a Scandinavian language is considered an advantage.

Other qualification:

- Solid background in at least one of the following areas: renewable energy sources, power systems integration, energy technology management, or smart grids.
- Experience in development of mathematical meta-models, control strategies, optimization methods and algorithms, data analysis and machine learning techniques, techno-economic study, design and analysis of integrated systems.
- Experience with energy system modeling/simulation tools (e.g., MATLAB/Simulink, Modelica, and COMSOL Multiphysics), energy systems analysis/optimization/programming software (e.g., HOMER, GAMS, and Python).
- Evidence of previous scientific writing or academic publications (e.g., peer-reviewed journals), industrial collaboration, knowledge transfer activities, or participation in international projects.
- Previous involvement in research proposal writing-up, innovation projects, or startup initiatives.

- Interest in energy informatics and the role of digital technologies and ICT (e.g., blockchain, IoT, data analytics) in future energy systems.
- Willingness to contribute to academic dissemination (e.g., publications, conferences) and collaborative project tasks, internationally.
- Strong motivation for interdisciplinary and applied research in the energy transition, with the ability to work across disciplinary boundaries (including engineering, management, economics, and policy).
- Ability to work structured and handle a heavy workload.
- Strong analytical, problem-solving, and critical thinking skills.

## License or security clearance requirements

Employment in the position requires a license under the Export Control Act and Export Control Regulations. Applicants must therefore state their citizenship and the citizenship of any spouse/partner in the application. Citizenship must also be documented, for example by attaching a copy of the passport. Applicants who have citizenship in countries where it is likely that a license will not be granted may be excluded from the further application process. The same applies to applicants who have a spouse/partner with citizenship in such countries, or where it is likely for other reasons that a license will not be granted.

## We offer

- A stimulating and growing research environment, with good opportunities to develop your career and your academic skills
- A good social environment
- Attractive welfare benefits in the State Pension Plan
- Opportunity for physical activities within working hours

## Salary

Salary PhD Research Fellow (code 1017): NOK 550 800 a year. Further promotion will be based on time served in the position. In special cases, employment in code 1378 (NOK 546 569 - 685 728 a year) may be considered.

A statutory contribution to the state pension plan will be deducted from the employee's salary.

## Additional information

The Academic Appointments Board for PhD Research Fellowships is responsible for the appointment. An expert assessment of applicants will be carried out. The candidates deemed best qualified will be invited to an interview.

The person appointed must comply with the laws, regulations and agreements that apply at any given time to the post. Please note that approved work permit is a prerequisite for the employment.

According to its human resources policy, the University of South-Eastern Norway targets a balanced gender composition and aims to recruit persons with a background as an immigrant.

The Department has few women appointed in scientific positions, and women are therefore particularly encouraged to apply!

The University contributes to the Inkluderingsdugnaden (a voluntary scheme to promote inclusion), and it is our aim that our employees, to the fullest extent possible, shall reflect the diversity of the general population. We therefore encourage qualified applicants with disabilities to apply for the post. The University will facilitate the workplace for employees with disabilities. Pursuant to section 25, 2nd paragraph of the Freedom of Information Act, information on the applicant may be disclosed even if the applicant has requested not be included on the list of applicants. Applicants will be notified if such requests are not allowed.

## Contact information

**For more information about the position, please contact:**

Professor Amir Safari, Email. [amir.safari@usn.no](mailto:amir.safari@usn.no), phone +47 90361081

Head of Department, Dr. Aida Omerovic, Email. [aida.omerovic@usn.no](mailto:aida.omerovic@usn.no), phone +47 35952653

**For questions regarding the recruitment process, please contact:**

Advisor Tonje Holt Vøllestad, Email: [tonje.h.vollestad@usn.no](mailto:tonje.h.vollestad@usn.no)

## How to apply

The University of South-Eastern Norway makes use of online application management. Applicants to the post must register their application and CV with enclosures online via the Jobbnorge recruitment portal by clicking on the link on the right-hand side - "Søk stillingen" (Apply for the post)

**The following documents shall be attached to the online application:**

- Current Curriculum Vitae with cover letter
- Transcripts and diplomas of bachelor's and master's degrees (120 ECTS)
- Any scientific publications and a list of these
- 2-3 pages research proposal outlining your preliminary ideas and approach
- Documentation of English proficiency
- Three references (contact information)
- Documentation of citizenship, for example a copy of the passport.
- Any additional documentation that you feel is relevant to your application

**If your higher education is from a university outside of Norway, we require it to be recognized by the Norwegian Directorate of Higher Education and Skills. You must apply for the recognition before the application deadline for this position expires. Add a receipt on your application or recognition when applying. The recognition must be sent to us and is a requirement for being hired.**

Please note that all documents must be in a Scandinavian language or in English. Any translations must be certified.

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Click here to read more about [the recruitment process for scientific posts](#) at the University of South-Eastern Norway.

**The application will be assessed on the basis of the attached documentation as requested above. Each applicant is responsible for ensuring that the required documentation has been uploaded with the application deadline.**

## About us

The University of Southeastern Norway (USN) ranks as the country's fourth largest higher education institution. We are a vibrant community of approximately 18,000 students and 1,900 employees.

Video: <https://vimeo.com/898549899/60305e2540>

## About USN

*At USN you'll contribute to a mission that matters. The University of Southeastern Norway was established in 2018, following the merger of several smaller university colleges, some with historical roots dating back to the 17th and 18th centuries. We are committed to collaborative problem-solving, aiming to provide solutions that benefit our communities - locally as well as globally.*

*Our diverse campuses are located from the beautiful fjords to the snow-covered mountains. USN spans three Norwegian counties, with campuses in Bø, Drammen, Horten, Kongsberg, Notodden, Porsgrunn, Ringerike, and Rauland.*

*Wherever you're located, you will engage in meaningful work amidst a thriving student culture and innovative research environments. Our university offers a wide range of high-quality and internationally recognized academic programs. With a strong emphasis on profession-oriented and socially relevant education, we prepare our students for the workforce and equip them with the necessary skills to make a positive impact on society.*

*At USN, we deeply value and cultivate our relationships with local communities. Our staff and students are actively engaged in a variety of projects that address societal challenges, driving change and innovation. We place a strong emphasis on diversity, inclusion, and equal opportunity, and we strive to shape future leaders, innovators, and change-makers.*

Read more about working for us: (link to) [Work for us - Universitetet i Sørøst-Norge](#)

## Additional information

### Contact person:

Amir Safari, Professor

Phone: +4790361081 | E-mail: [amir.safari@usn.no](mailto:amir.safari@usn.no)

### Place of service:

Hasbergs vei 36 3616 Kongsberg (Kongsberg Municipality)