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Master Energy for Society
Hanze University of Applied Sciences

Report of the limited programme assessment
28 June 2023

Utrecht, The Netherlands
October 2023
www.AeQui.nl
Assessment Agency for Higher Education

Colophon

Programme
Hanze University of Applied Sciences
Master Energy for Society
Location: Groningen
Mode of study: fulltime
Croho: 49396
Result of institutional assessment: positive

Panel
drs. R.R. (Raoul) van Aalst, chair
dr. E.M. (Esther) Parigger, domain expert
dr. ir. Ing. S. (Sander) Mertens, domain expert
prof. dr. J. (Johannes) Gulden, domain expert
J. (Joris) Hahn, BSc, student
drs. L. (Linda) van der Grijspaarde, secretary

The panel was presented to the NVAO for approval.

The assessment was conducted under responsibility of
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This document is best printed in duplex

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Summary

On 28 June 2023 an assessment committee of AeQui visited the Master Energy for Society of Hanze University of Applied Sciences. The committee judges that the programme meets each standard; the overall quality of the programme **meets the standard**. This full-time programme of 90 ECTS is of professional orientation and focuses on the societal aspects of the energy transition.

Intended learning outcomes
The assessment committee assesses that the intended learning outcomes **meet the standard.** The master's programme focuses on the social and societal aspects of the energy transition from a transdisciplinary perspective. The original professional profile for the master from 2018 has been updated in 2021 and again in February 2023. In its first years of existence, the programme has shown its ability to adapt quickly to the rapidly changing world around it. The adjustments to the profile are an example of this. The profile has been translated into nine intended learning outcomes for the master's programme. These intended learning out-comes are well described in terms of level and orientation and are logically derived from the profile.

Teaching-learning environment
The assessment committee assesses that the teaching-learning environment **meets the standard.** The contents of the programme enable students to achieve the intended learning outcomes. The master is a 90 EC programme divided into three semesters of 30 EC each. The courses in the first semester provide students with a background in the different aspects of the energy transition system. During the second semester, students apply the knowledge and insights from the first semester in three concrete projects. Semester three is the Graduation Programme. A strong feature of the programme is its small scale, which encourages collaboration and provides ample opportunities for feedback between students and staff. The staff team is qualified for the realisation of the programme in terms of content and educational expertise.

Student assessment
The assessment committee assesses that the student assessment **meets the standard.** The courses are usually assessed with professional products like advice and interventions. The assessment is summative and formative. The assessments are valid, reliable, and sufficiently independent. The requirements are transparent to the students. The assessment procedures are sufficiently implemented in the programme. The assessments are aligned with the learning outcomes. The Examination Board performs thoroughly and pro-actively its tasks to control the quality of the assessments, the assessment procedures and achieved learning outcomes. The Examination Board shows good knowledge of the programme and its assessment.

Achieved learning outcomes
The assessment committee assesses that the achieved learning outcomes **meet the standard.** The programme focusses on training transdisciplinary professional skills that are necessary to become an energy transition professional. The programme succeeds in achieving this aim. The achievement of the intended learning outcomes is among others demonstrated by the results of the graduation projects.

Recommendations
In order to bring the programme to an even higher level of quality in the future, the committee provides the following recommendations:

- The committee believes a more coherent vision on research is needed. The committee welcomes the intention to focus the programme more on design and action research. This will provide students with a clearer research framework to analyse, design, implement and monitor energy transition interventions.
- The committee suggests adding voluntary summer courses for international students and students lacking e.g., research or language skills. This way, students will be better prepared and have the same level at the start.
- Though throughout the programme the quality and amount of feedback is good, the feedback

in the assessment forms of the theses specifically can be improved in terms of feed up and feed forward.
- The committee sees limited reflection of transdisciplinarity in the projects. The committee advises the study programme to determine together what the theoretical concept of transdisciplinarity is, what is expected regarding this concept and in which student's works this is to be seen.

All standards of the NVAO assessment framework (2018) are assessed positively; the assessment committee therefore awards a **positive** recommendation for the accreditation of the programme.

On behalf of the entire assessment committee,
Utrecht, October 2023

Raoul van Aalst
Chair

Linda van der Grijspaarde
Secretary

Introduction

This report describes the limited programme assessment of the master's programme Energy for Society offered by the Hanze University of Applied Sciences (Hanze UAS).

The institute

Hanze UAS is based in Groningen with locations in Groningen, Assen, Amsterdam and Leeuwarden. Hanze UAS consists of three Centres of Expertise, four knowledge centres, sixteen institutes, five staff bureaus and the Facilities Department. Hanze UAS is a multidisciplinary university of applied sciences. To reach the goal of increasing the strength of the region in conjunction with developing the individual, the Hanze University has formulated four societal missions, which converge in the motto "Share Your Talent. Move the World."

The master Energy for Society is situated in the Institute for Engineering.

The programme

The master Energy for Society is one of three energy masters of the educational portfolio of the School of Engineering and focuses on the societal aspects of the energy transition. The other programmes are the European Master in Renewable Energy which focuses on technological innovation aspect of the energy transition and the European Master in Sustainable Energy System Management which focuses on the techno-economic and management aspects of the energy transition, while understanding the impact of technological aspects and focusing on the system aspect of the transition.

The programme is a full-time master's programme of professional orientation, amounting to 90 EC. The degree awarded is a Master of Science. Hanze UAS is the only provider of this specific CROHO registration.

The programme aims to attract students from around the world. The language in the master's programme is English.

The assessment

Hanze UAS assigned AeQui to perform a quality assessment of its master's programme Energy for Society. In close co-operation with the programme management, AeQui convened an independent and competent assessment committee. A preparatory meeting with representatives of the programme was held to exchange information and plan the date and programme of the site-visit.

In the run-up to the site visit, the assessment committee has studied the self-evaluation report on the programme and reviewed a sample of student work. The findings were input for discussions during the site visit.

The site visit was carried out on 28 June 2023 according to the programme presented in attachment 2.

The committee has assessed the programme in an independent manner; at the end of the visit, the chair of the assessment committee presented the initial findings of the committee to representatives of the programme and the institution.

In this document, the committee is reporting on its findings, considerations, and conclusions according to the 2018 NVAO framework for limited programme assessment. A draft version of the report was sent to the programme management; its reactions have led to this final version of the report.

Initiated by the programme, a development dialogue will be planned in the course of 2023. The results of this development dialogue have no influence on the assessment presented in this report.

1. Intended learning outcomes

The assessment committee assesses that the intended learning outcomes **meet the standard.** The master's programme focuses on the social and societal aspects of the energy transition from a transdisciplinary perspective. The original professional profile for the master from 2018 has been updated in 2021 and again in February 2023. In its first years of existence, the programme has shown its ability to adapt quickly to the rapidly changing world around it. The adjustments to the profile are an example of this. The profile has been translated into nine intended learning outcomes for the master's programme. These intended learning out-comes are well described in terms of level and orientation and are logically derived from the profile. In case of further tightening, the programme may consider whether containment is possible.

Findings

The master's programme focuses on the social and societal aspects of the energy transition from a transdisciplinary perspective. Not the discipline is central, but the problem is and interaction with stakeholders and other disciplines will help to find a solution for the (wicked) problem. Graduates can understand policies on local, national, and international level, thereby considering micro, meso- and macro level dynamics. The master's programme educates energy transition professionals who can accelerate change from different perspectives by connecting people and innovative ideas. They do this in the broad context of societal, political, and economic realities, technological possibilities, legal frameworks, governance, and environmental factors, using a research-based systems approach.

The original professional profile for the master from 2018 has been updated in 2021 and again in February 2023. These updates were induced by the fast developments in the energy transition as well as discussions with the professional field. Also, the publication of the professional master standard in 2019 by the Netherlands Association of Universities of Applied Sciences (Vereniging Hogescholen, 2019) has provided input for the updates.

At the start of the master's programme, the ambition was for graduates to become energy transition strategists. The experience in the last five years has shown that recent master's programme graduates often do not immediately fill positions at the strategic level. Rather, they start their career within implementation frameworks. The programme therefore now addresses the graduates as "energy transition professionals" rather than the originally used qualification "energy transition strategists".

The programme focuses mostly on a Western European perspective on the energy transition. This sometimes leads to disappointment for the non-European students who expected more focus on the situation in their home country. The choice for the Western European perspective originates from the location in the Netherlands and the close relation to the Centre of Expertise Energy (EnTranCe), where research is done from a mostly Western European perspective. In the communication to prospective students the programme now communicates this focus specifically to manage expectations of students from outside the EU. However, the programme stimulates students to translate and transfer the knowledge and experience gained into the context of their home country.

The profile has been translated into nine intended learning outcomes for the master's programme. They describe what students must demonstrate and master in order to graduate. In doing so, they need to demonstrate that they can function as the transition professionals described in the professional profile. The programme learning outcomes are leading in the development of the structure of the curriculum in the various courses and for the

assessment of students' performance within the courses.

The intended learning outcomes were specified within the context of the energy transition and were related to the Dublin descriptors as well as to the Professional Master Standard, that was introduced in 2019. This has led to a further specification of the programme learning outcomes, making them more realistic for graduates from a professional advancement master. These new programme learning outcomes will be used as intended learning outcomes from 2023-2024 on.

Considerations
The programme has described an appropriate and clear profile that is recognised in the field and is needed. The committee agrees with the focus on Europe and recognises that international students do not always realise in advance the focus on the European angle. The committee supports the programme's intention to communicate this more clearly.
In its first years of existence, the programme has shown its ability to adapt quickly to the rapidly changing world around it. The adjustments to the profile are an example of this. The committee also approves the change from "energy transition strategists " to the qualification "energy transition professionals ".

According to the committee, the intended learning outcomes are well described in terms of level and orientation. The intended learning outcomes are logically derived from the profile. In case of further tightening, the programme may consider whether containment is possible. There now seems to be some overlap between the intended learning outcomes. In addition, the committee advises the programme to keep evaluating whether the scope of the intended learning outcomes fits the size of the 90 EC programme. The committee suspects that a lot is being asked for a programme of such a size.

Based on the interviews and examination of the underlying documentation, the assessment committee establishes that the intended learning outcomes **meet the standard**.

2. Teaching-learning environment

The assessment committee assesses that the teaching-learning environment **meets the standard.** The contents of the programme enable students to achieve the intended learning outcomes. The master is a 90 EC programme divided into three semesters of 30 EC each. The courses in the first semester provide students with a background in the different aspects of the energy transition system. During the second semester, students apply the knowledge and insights from the first semester in three concrete projects. Semester three is the Graduation Programme. A strong feature of the programme is its small scale, which encourages collaboration and provides ample opportunities for feedback between students and staff. The staff team is qualified for the realisation of the programme in terms of content and educational expertise.

Findings
The master is a 90 EC programme divided into three semesters of 30 EC each. For each course, course-specific learning outcomes have been formulated that are derived from the overarching programme learning outcomes.

Contents
The theme of the first semester is Investigating Energy Transition. It consists of six courses of 5 EC and an introduction to energy transition issues. The first semester starts with an overview of the complexity of energy transition. The courses in this semester provide students with a background in the different aspects of the energy transition system. Students learn about the energy transition from a societal, technical, economic, political, legal and environmental perspective.

The second semester is about 'Making Energy Transition happen'. There are three projects of 10 EC each. During this semester, students apply the knowledge and insights from the first semester to make the energy transition happen via three concrete projects. In all three courses students work on energy transition projects from an integrated system perspective.

Semester three is the Graduation Programme: Impact in the Energy Transition. It consists of a professional development track (5 EC) and a graduation project (25 EC). Students are responsible for finding a suitable energy transition project. In this project, they must demonstrate that they are able to act as energy transition professionals. Students are tasked with designing interventions from a transdisciplinary perspective for a 'real-life' complex problem within a (local) energy transition context.

Changes have been made in the setup of the first and second semester to create a more coherent programme. In the first semester, the PESTEL-model was chosen as a contextual framework to investigate the energy transition from different perspectives. The model considers political, economic, sociological, technological, environmental and legal factors. In this semester, courses are organized around these factors. For the second semester, the six courses from the former curriculum have been replaced by three larger integrated courses, each containing a large intervention project. The professional development track has been added to the programme to emphasise the importance of student agency and professional skills.

Throughout the programme, students work on their research competence, stimulating analysing and critical thinking. In the different courses, students learn various theoretical models and frameworks and how to apply several research methods from relevant disciplines. There is a specific course on Science, Research methodology and Statistics in the first semester.

Structure
From the beginning of the master's programme, students are expected to take the lead in their own development and contribute to the development of others. In addition to the programme and course learning outcomes, students formulate their own professional and personal learning goals as part of their professional development during the master. In most courses, students can choose specific topics to add context to their assignments. During classes, students are encouraged to discuss and take initiative and students get extra opportunities to practice their professional skills in the extracurricular programme of activities and excursions.

The programme is seen as a learning community in which students and teachers work together as senior and junior professionals to accelerate the energy transition. In the courses, students work in groups that function as communities of learners (COL's). In these COL's they cooperate in projects, making use of the different backgrounds of all group members. The master, together with the other two energy masters, is embedded in the EnTranCe community. At EnTranCe, the professors, lecturers/researchers, the network in the professional field and the students are part of a learning community that thrives on collaboration and learning together about the challenges of the energy transition. For the master this means that, where possible, students connect to ongoing research projects of the professorships. For instance, for their graduation project, students can participate in one of these research projects.

In the international student population, cultural differences and very different former educational experiences sometimes cause friction in the cooperation within CoL's. Not in all countries taking initiative during education is encouraged, which makes it more difficult for students from these countries to adjust to the expectations within the CoL's. The programme is considering designing an extra introduction programme for non-EU students at the beginning of the master in which they are trained for the course work in CoL's.

Incoming students
Students are eligible to enrol in the programme if they have a bachelor's degree in Economics, Business Administration, Communication, Social Sciences, Environmental Science, Laws, Engineering or equivalent, if they can demonstrate they have social or work experience with the energy transition. Applicants should also have a strong interest in the social and societal aspects of energy transition which they demonstrate via an authentic and convincing motivation letter. Most students graduate within 20 months with a few exceptions.

Staff
The Head of Education for the master's programmes carries responsibility for the quality of education, the connection between education and research, budgeting, and HRM. The programme manager oversees daily programme management, including programme evaluations, programme development and overall planning. The Core Committee consists of one professor (lector), three core lecturers and the programme manager, who is the Chair of the committee. The Core Committee regularly evaluates the content of the curriculum and safeguards the coherence between content, didactics and feasibility, keeping in mind the learning outcomes, the stakeholders and the intended end level of the master. The master's programme is represented in the Examination Board, Assessment Committee and Board of Studies of the Institute of Engineering.

The team consists mostly of staff with PhD degrees. All are BKE qualified. They come from different disciplinary backgrounds and most have extensive work experience, in line with the transdisciplinary character of the programme. Most of them are involved in research within EnTranCe or within other Centres of Expertise at Hanze UAS on energy related topics.

Language
The programme runs in English because of its international orientation and the desired influx of international students. The teachers have the desired command of the English language to teach.

Tutoring and student information
In the professional development track, students have a coach who monitors their professional development. Also, personal issues can be addressed in one-on-one confidential coaching sessions. As for more specific personal welfare issues, students are referred to the facilities at Hanze UAS, which involve the International Student Office as well as facilities regarding study planning and psychological welfare.

Considerations
The committee has established that the contents of the programme enable students to achieve the intended learning outcomes: the programme provides training of transdisciplinary professional skills that are necessary to become an energy transition professional.

The translation of the intended learning outcomes into learning objectives for the various courses and the graduation programme was not fully transparent in recent years, the committee notes. The committee sees that with the adoption of the new set of intended learning outcomes, a clearer translation to the courses has also emerged. The committee recommends further clarifying the division of intended learning outcomes across the programme.

The committee notes that the programme is flexible and has been developed in recent years based on feedback from students and industry. The programme has become more coherent based on the contextual framework of PESTEL. However, the committee believes that the PESTEL framework is deployed in a rather descriptive way. To get to interventions, the committee expects a broader use of the framework. The committee welcomes the programme's intention to make the programme more coherent by linking projects.

The programme identifies different types of research applicable to the energy transition. The committee believes a more coherent vision on research is needed. The committee welcomes the intention to focus the programme more on design and action research. This will provide students with a clearer research framework to analyse, design, implement and monitor energy transition interventions.

The committee believes that working with COLs supports student learning. A strong feature of the programme is its small scale, which encourages collaboration and provides ample opportunities for feedback between students and staff. There is a strong relationship with practice in learning communities. Unique is its embedding in EnTranCe, with strong research programmes.

The committee suggests keeping open spaces in the programme and adapting to content that arises during the programme.

According to the assessment committee, the curriculum ties in closely with the qualifications of the incoming students. The programme attracts a motivated and ambitious group of students. The programme brings together students with many different nationalities and a focus on intercultural collaboration, thereby ensuring a genuine 'international classroom'.

The assessment committee observes that the staff team is qualified for the realisation of the curriculum in terms of content and educational expertise. They are very motivated to work with this specific group of students. The students have ample personal contacts with the teaching staff, who are easily accessible. The student / staff ratio is good. Together, they have strong connections to a diverse and extensive network in the field of the energy transition. The committee sees the staff team growing towards interdisciplinary collaboration.

The tutoring of and provision of information to students are conducive to study progress and tie in with the needs of the (international) students.

The committee suggests adding voluntary summer courses for international students and students lacking research skills. This way, students will be better prepared and have the same level at the start. Research skills and Dutch have been mentioned as possible subjects by students.

Based on the interviews and examination of the underlying documentation, the assessment committee establishes that the programme **meets this standard**.

3. Student assessment

The assessment committee assesses that the student assessment **meets the standard.** The courses are usually assessed with professional products, like advice and interventions. The assessment is summative and formative. The assessments are valid, reliable, and sufficiently independent. The requirements are transparent to the students. The assessment procedures are sufficiently implemented in the programme. The assessments are aligned with the learning outcomes. The Examination Board performs thoroughly and proactively its tasks to control the quality of the assessment, the assessment procedures and achieved learning outcomes. The Examination Board shows good knowledge of the programme and its assessment.

Findings

Assessment takes place through assignments for every course. These assignments are usually in the form of professional products. Examples are essays, papers, designing an intervention, writing an advice or an analysis of a certain situation regarding the energy transition. The courses in the first and second semester contain both group assignments as well as individual assignments as part of the assessment of the courses. The graduation project is assessed completely individually as well as the professional development track.

Formative assessment plays an important role. Students receive feedback both from the lecturers as well as their peers on homework assignments and in-class presentations. For summative assessments, assessment forms are used. In these forms, the assessment criteria are formulated and assessed accordingly. The assessment forms that are used in the course are made available to students, so they know on which criteria they will be assessed.

The Master adheres to Hanze UAS programmes and policies on assessments and examinations, as laid down in the Teaching and Examination Regulations, which are published annually.

The Examination Board is responsible for guarding the quality of assessment and education at programme level. Examination Board members are trained by the Hanze UAS legal advisor and participate in national Examination board training sessions. All members of the assessment committee hold a Basic Qualification in Education Assessment and Examination (BKE), and the majority hold a Senior Qualification in Assessment and Examination (SKE).

To guarantee the quality of examinations, the Examination Board has drawn up criteria for examiners, specifically for master's programmes. At least one of the two graduation examiners must be in possession of a PhD. Each year, assessors and examiners are officially appointed by the Board to carry out examination assessments.

Assessment quality assurance by the Examination Board is delegated to the Assessment Committee. Each year, the Assessment Committee is given a mandate to screen parts of the curriculum, examinations, or procedures, including screening of graduation portfolios. It does so based on the intended learning outcomes, examination material and the use of assessment forms. Based on these screening, improvements have been made to specific assignments.

Considerations

The committee has established that the master's programme has an adequate assessment system and assessment procedures. The use of assignments for every course reflects the professional character of the programme and gives students the opportunity to practice working on realistic professional products. The committee welcomes

the intention of the programme to explore opportunities for a wider variety of professional products and interventions in collaboration with partners in the field in the near future.

The assessment procedures are sufficiently implemented in the programme. Multiple assessment types are implemented in the programme, and these are aligned with the learning outcomes. The assessments are planned in such a way that students have sufficient time to prepare.

The Examination Board performs thoroughly and pro-actively its tasks to control the quality of the assessments, the assessment procedures and achieved learning outcomes. The Examination Board shows good knowledge of the programme and its assessment.

The committee sees students receive a high amount of feedback. Students are also positive about the amount of feedback throughout the programme. However, feedback in the assessment forms of the theses was not always of high quality. For example, there is feedback on what should have been done, but students can no longer address it. Feed forward and feed up are missing in these cases: the link between performance, suggestions for improvement in the future and the intended learning outcomes. The committee suggests training teachers in providing feedback, feed forward and feed up. In doing so, the committee advises the programme to look for less intensive and less time-consuming forms that do support students optimally.

Although there is an individual component to each assessment, the relation between individual and group assignment towards the grade for a course varies between courses. The committee agrees with the programme that group assignments are important in this programme that focuses on working together to accelerate the energy transition, together with the value of individual assessment, because this gives better insight in individual performance and skills development. The committee notes that the programme is still searching for the optimal balance between group assessment and individual assessment. The committee recommends that the programme continues to monitor closely whether the current method adequately highlights individual student performance throughout the programme.

Based on the interviews and examination of the underlying documentation, the assessment committee establishes that the programme **meets this standard**.

4. Achieved learning outcomes

The assessment committee assesses that the achieved learning outcomes **meet the standard.** The programme focusses on training transdisciplinary professional skills that are necessary to become an energy transition professional. The programme succeeds in achieving this aim. The achievement of the intended learning outcomes is among others demonstrated by the results of the graduation projects.

Findings

The graduation programme of the master consists of two parts: the graduation project (25 ECTS) and the professional development track (5 ECTS). The graduation programme is scheduled in the third semester. In the graduation project, students work individually on an energy transition problem, provided by one of the professorships attached to EnTranCe or by an external organisation. Students are responsible to find a graduation project themselves. They present their proposed graduation project in a preliminary proposal. The Core Committee is actively involved in the graduation process by assessing preliminary proposals for graduation projects and by overseeing the graduation process. The assessment of the preliminary proposals is done by assessing the master level, coherence with the master profile and expected feasibility of the project within the time available.

The graduation project is intended to undertake an in-depth research project related to energy transition, to make a substantive contribution to innovation and knowledge in that area. The project includes a critical synthesis of the literature and an empirical investigation related to a subject in practice. During the graduation project, the CoL of the professional development track remains an important environment for students to share knowledge and experiences and improve the impact of their graduation research.

The graduation report is independently assessed by two assessors. They combine their findings in one final assessment form. When students have obtained a passing grade for their report, they are invited to the defence. In this event, students present their graduation report and answer questions from the first supervisor and the second assessor. When the student passes this part as well and if they have passed all other courses, they can graduate.

Although the programme works with a standardised assessment form, interpretation between assessors can be more varied. The programme scheduled team meetings with all assessors to discuss this. The programme also has annual calibration sessions after the graduating process to review the assessment of graduation projects. This calibration is attended by the Head of Education for the masters, the programme manager, a representative of the Examination Board and Assessment Committee, members of the Core Committee, and representatives of assessors.

After successful completion of the programme, students are awarded the title of 'Master of Science'. There are job opportunities for graduates at both profit and non-profit organisations. Most students found a position relatively quickly after graduation.

Considerations

The committee assessed fifteen recent graduation projects of the programme and established that they all met the requirements for graduation. These outcomes illustrate that the students have achieved the intended learning outcomes as formulated by the programme. The projects are graded similarly by the assessment committee compared to the programme. The committee notes a change in the products produced by the students: from advice and plans to designs and

interventions. This fits well with the changes in focus that the programme is undergoing: the programme is further developing the graduation project, focusing more on interventions in the energy transition. As a result of focussing more on interventions, the committee expects final projects to be more applied and, partly as a result, more in-depth. The analyses now sometimes remain somewhat superficial.

The committee sees limited reflection of transdisciplinarity in the projects. The committee advises the study programme to determine together what the theoretical concept of transdisciplinarity is, what is expected regarding this concept and in which student's works this is to be seen.

In some projects, the summary in the graduation projects is brief and highlights only one angle. The committee recommends that students always opt for an inter- or multidisciplinary summary, appropriate to the profile of the programme.

Based on the list of employers where alumni have started to work, the committee concludes that students are finding suitable workplaces. The alumni and members of the field the committee spoke to are very positive about the opportunities for students and the input they have in the field.

The committee is positive about the professional development track, which is added to the graduation project since 2020. This gives a more balanced view on the achieved learning outcomes.

Based on the interviews and examination of the underlying documentation, the assessment committee establishes that the programme **meets this standard**.

Attachments

Attachment 1 Assessment committee

Raoul van Aalst
Raoul studied Business Economics at Groningen University. Since his student period he is involved in education quality as student representative and as part-time teaching staff. Raoul has extensive experience in chairing accreditation panels.

Esther Parigger
Esther is a senior lecturer in Sustainable Behavior at Amsterdam University of Applied Sciences (HvA) and programme manager and developer of the Master Climate Psychology and Behavior and the Master Sustainable Transitions. She is also the sustainability coordinator from the Green Office for the Faculty of Society and Law at Amsterdam UAS.

Johannes Gulden
Johannes is Professor Renewable energy systems and director of the board of Institute of Renewable Energy Systems (IRES) at the University of applied sciences Stralsund, Germany

Sander Mertens
Sander is leading lecturer/director of Center of Expertise Mission Zero at The Hague University of Applied Sciences. He also holds a KIVI chair, with the aim of establishing a connection between research at universities and colleges and the professional practice of engineers. As a lecturer and teacher, he is involved in the development of the minor Energy in Transition (EiT) and the Master Next Level Engineering (NLE).

Joris Hahn
Joris is a master's student in Spatial, Transport & Environmental Economics at VU Amsterdam.

The panel was supported by **Linda van der Grijspaarde**, external secretary and certified by NVAO.

All committee members and the secretary have signed a declaration of independence. The assessment committee has been submitted to, and validated by, NVAO prior to the site visit.

Attachment 2 Programme of the assessment

Date: June 28, 2023

Time	Group	Attendants
8.45-9.00	Welcome	Head of Education Masters Programme Manager Energy for Society
9.00-10.00	Management	Chair Executive Board Hanze University Dean Institute of Engineering Director EnTranCe Head of Education Masters Programme Manager Energy for Society Professor Sustainable Communication
10.15-11.15	Students and recent alumni	2 alumni cohort 2021 5 students cohort 2021-2022
11.30-12.30	Lecturers & researchers	6 lecturer-researchers
12.30-13.00	Educational Content-Market	Programme Manager 5 Lecturer-researchers 2 students
13.00-14.00	*Lunch*	
14.00-14.30	Professional Field	4 members professional field 2 alumni cohort 2019-2020
14.45-15.30	Board of studies, Examination Board & Assessment Committee	2 members Board of Studies 2 members Examination Board 1 member Assessment Committee
15.30-16.45	Break/Internal consultation/pending issues	
16.45-17.15	Final impressions and feedback	

Attachment 3 Documents

- Navigating the energy transition. Self-evaluation report Degree programme Master Energy for Society. School of Engineering. May 2023
- Teaching and Examination Regulation Master E4S 2022-2023
- Staf E4S 2022
- Strategisch jaarplan Hanzehogeschool 2021-2026 Betrokken en Wendbaar
- Jaarplan EnTranCe 2022-2023
- Annual Plan Engineering 2022-2023
- Meerjarenpersoneelsplan (MMP) Engineering 2021-2026
- Jaarverslag Examencommissie 2021-2022
- Examencommissie huishoudelijk regelement 2022-2023
- Leden commissies 2022-2023
- E4S Graduation Manual 2022-2023
- E4S Thesis Manual 2021-2022
- Professional Profile E4S 2023
- Professional Profile E4S 2021
- Toetsbeleid Engineering
- Graduation Projects of 15 students