



Course and Examination Fact Sheet: Autumn Semester 2021

9,192: Clean Energy Finance and Investment

ECTS credits: 2

Overview examination/s

(binding regulations see below)

Decentral - Written examination (with defined exam duration) (60%, 60 mins.)

Examination time: term time

Decentral - Presentation (in groups - all given the same grades) (40%)

Examination time: term time

Attached courses

Timetable -- Language -- Lecturer

[9,192,1.00 Clean Energy Finance and Investment](#) -- Englisch -- [Wüstenhagen Rolf](#)

Course information

Course prerequisites

While there are no formal prerequisites, students are recommended to attend this course after having attended the compulsory courses in Financial Markets and Financial intermediation of the Master in Banking and Finance.

Learning objectives

Participants in this course will:

- * Understand why investing in clean energy is key to hedge against carbon risk
- * Appreciate the preferences of different investor types (corporate, institutional, retail) in the clean energy infrastructure space
- * Design and present a clean energy portfolio tailored to a particular investor group
- * Reflect on types of clean energy investment risk and adequate risk management strategies

Course content

ESG investing and climate finance have become buzzwords in the financial industry. But how can impactful investment strategies be designed that actually deliver substantial climate benefits? Shifting portfolios away from fossil fuels and accelerating the growth of cleaner energy sources is a key leverage on the road towards net zero emissions. Significant cost reductions in clean energy technologies, in combination with increasing investor awareness about carbon risk, have created new investment opportunities. To limit global warming to «well below 2 degrees, if possible 1.5 degrees» as mandated by the Paris Agreement, the International Energy Agency expects annual global energy investments to reach USD 5 trillion by 2030. This course will allow students to understand key market of the global energy transition and their implications for investors. We will review the preferences of different types of clean energy infrastructure investors (corporate, institutional and retail) and explore the range of investment vehicles that have been designed to cater their needs, including community financing, cleantech venture capital and other innovative solutions. Students who build competence in clean energy finance and investment are well positioned to prepare for career opportunities in this growing segment of the financial sector.

Course structure and indications of the learning and teaching design

The course will have six weekly sessions, including a guest lecture. As an additional element, student teams will design their own investment solution in the area of clean energy finance, which they will present in short investor pitches in the second half of the course.



Course literature

- Bloomberg New Energy Finance (2020): BNEF New Energy Outlook 2020. Executive Summary. <https://about.bnef.com/new-energy-outlook/>
- Carbon Tracker (2011): Unburnable Carbon- Are the world's financial markets carrying a carbon bubble?, <http://www.carbontracker.org/report/carbon-bubble/>
- Ebers Broughel, A., Wüstenhagen, R. (2021): The Influence of Policy Risk on Swiss Wind Power Investment; in: Hettich, P., Kachi, A.: Swiss Energy Governance: Political, Economic and Legal Challenges and Opportunities in the Energy Transition, Springer (forthcoming).
- Helms, T., Salm, S., Wüstenhagen, R. (2020): Investor-specific cost of capital and renewable energy investment decisions; in: Donovan, C. (ed.): Renewable Energy Finance, 2nd ed., World Scientific Publishing Europe Ltd., pp. 85-112.
- International Energy Agency (IEA, 2021): Net Zero by 2050 - A Roadmap for the Global Energy Sector. <https://www.iea.org/reports/net-zero-by-2050>
- Salm, S., Wüstenhagen, R. (2018): Dream team or strange bedfellows? Complementarities and differences between incumbent energy companies and institutional investors in Swiss hydropower. Energy Policy, 121, 476-487.
- Salm, S., Hille, S., Wüstenhagen, R. (2016): What are retail investors' risk-return preferences towards renewable energy projects? A choice experiment in Germany. Energy Policy 97, 310-320
- UNEP & Frankfurt School of Finance & BNEF (2020). Global Trends in Renewable Energy Investment 2020. <https://www.fs-unep-centre.org/global-trends-in-renewable-energy-investment-2020/>

Further readings will be available on the course platform.

Additional course information

In the case of the President's Board having to implement new directives due to the SARS-CoV-2 pandemic in HS21, the course information listed above will be changed as follows: -The course is conducted online via the platform CANVAS/Zoom. -The recordings of the course are available until the end of the semester; -The lecturer informs via email on the changed implementation modalities of the course; -Course content such as guest lectures will be conducted online; -In the event of moving to an online platform, we will follow the course content as planned on the original dates. The examination information listed below would be changed as follows:

-The group presentations are conducted online and are being recorded;

-The exam will be conducted online.

For further information, please contact the teaching assistant: sabrina.mili@unisg.ch

Examination information

Examination sub part/s

1. Examination sub part (1/2)

Examination time and form

Decentral - Written examination (with defined exam duration) (60%, 60 mins.)

Examination time: term time

Remark

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Examination-aid rule



Extended Closed Book

The use of aids is limited; any additional aids permitted are exhaustively listed under "Supplementary aids". Basically, the following is applicable:

- At such examinations, all the pocket calculators of the Texas Instruments TI-30 series and mono- or bilingual dictionaries (no subject-specific dictionaries) without hand-written notes are admissible. Any other pocket calculator models and any electronic dictionaries are inadmissible.
- In addition, any type of communication, as well as any electronic devices that can be programmed and are capable of communication such as notebooks, tablets, mobile telephones and others, are inadmissible.
- Students are themselves responsible for the procurement of examination aids.

Supplementary aids

None

Examination languages

Question language: English

Answer language: English

2. Examination sub part (2/2)

Examination time and form

Decentral - Presentation (in groups - all given the same grades) (40%)

Examination time: term time

Remark

Investor pitch for clean energy portfolio

Examination-aid rule

Practical examination

No examination-aid rule is necessary for such examination types. The rules and regulations of the University of St. Gallen apply in a subsidiary fashion.

Supplementary aids

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Examination languages

Question language: English

Answer language: English

Examination content

Global sustainability & climate challenges and their implications for finance; relationship between carbon risk and financial performance; clean energy finance and investment in different asset classes; clean energy finance applied to institutional investors, retail finance, venture finance; behavioral finance implications for sustainable finance.

Examination relevant literature

Literature and material provided on course platform.



Please note

Please note that only this fact sheet and the examination schedule published at the time of bidding are binding and takes precedence over other information, such as information on StudyNet (Canvas), on lecturers' websites and information in lectures etc.

Any references and links to third-party content within the fact sheet are only of a supplementary, informative nature and lie outside the area of responsibility of the University of St.Gallen.

Documents and materials are only relevant for central examinations if they are available by the end of the lecture period (CW51) at the latest. In the case of centrally organised mid-term examinations, the documents and materials up to CW 42 are relevant for testing.

Binding nature of the fact sheets:

- Course information as well as examination date (organised centrally/decentrally) and form of examination: from bidding start in CW 34 (Thursday, 26 August 2021);
- Examination information (regulations on aids, examination contents, examination literature) for decentralised examinations: in CW 42 (Monday, 18 October 2021);
- Examination information (regulations on aids, examination contents, examination literature) for centrally organised mid-term examinations: in CW 42 (Monday, 18 October 2021);

Examination information (regulations on aids, examination contents, examination literature) for centrally organised examinations: two weeks before the end of the registration period in CW 45 (Monday, 8 November 2021).