

Global Energy Transition in a Fossil World: Challenges & Opportunities



SYLLABUS

VU Amsterdam Summer School

6-17 July 2026

Any general questions for the Summer School
support team? Contact
amsterdamsummerschool@vu.nl.



Course Details

Title	Global Energy Transition in a Fossil World: Challenges and Opportunities
Coordinator(s)	Dr. Mathieu Blondeel & Dr. Daniel Muth
Other lecturers	Guest lecturers include experts from VU Amsterdam, other academic institutions (in the Netherlands and beyond), policy makers, and key energy and climate stakeholder organisations
Form(s) of tuition	(Guest) lectures, interactive group exercises, excursions
Approximate contact hours	40

Teaching staff (in order of appearance)

- [Dr. Mathieu Blondeel](#) (course coordinator)
- [Dr. Daniel Muth](#) (course coordinator)
- Guest lecturers from VU Amsterdam and other Dutch or international academic institutions, as well as experts from key energy and climate stakeholder organisations based in the Netherlands and beyond.

Contact info

- For issues regarding course content, contact Mathieu Blondeel (m.c.blondeel@vu.nl or +32 494 29 16 06) or Daniel Muth (d.muth@vu.nl or +31 6 44469428)
- For general issues and administration regarding the summer school: amsterdamsummerschool@vu.nl (tel +31 20 59 84717).

Course description

In December 2023, at COP28 in the UAE, the world agreed that we need to transition away from fossil fuels in energy systems. Although this moment was heralded as the 'beginning of the end' for the fossil fuel era, that prospect now seems very far away. At the last COP, COP30 in Brazil, negotiating countries could not agree on a text reissuing support for such a fossil fuel phase-out.

The past 11 years have been the warmest on record and we have entered an era of geopolitical fragmentation, competition and confrontation. The war in Ukraine rages on, while the conflict in the Middle East, the world's largest oil exporting region, keeps escalating. Which impacts does this uncertainty and instability have on climate and energy policy? Will it accelerate or slow down the pace of the global energy transition? What do these new geopolitical realities mean for energy security all over the globe? And, which transition policies are more feasible than others in the context of rising populism and polarisation, both domestically and internationally?

This course primarily focusses on the socio-political dimensions of the energy transition, while considering the physical and technical limitations of the energy system, as well as the environmental boundaries we live within. The programme offers you a broad overview of the global energy transition's needs, challenges and solutions, including the trade-offs generated by different (policy) options. It introduces you to the leading theories, concepts, proposed solutions, and governance efforts for the energy transition. You study these challenges and opportunities at a global level, but will also learn from regional, national, and local approaches in the Netherlands and beyond.

Our guest speakers offer varying perspectives on the global energy transition, while the excursions (incl. field trip to the European Parliament in Brussels) provide practical insights into the challenges and opportunities of moving away from fossil fuels while adopting renewable and other low-carbon solutions. As such, the course helps you to challenge your own assumptions and preferences and supports you in developing a comprehensive understanding of the complexities of the global transition to a low-carbon energy system.

The course is designed for MA, MSc, and PhD students (and beyond) who want to deepen their expertise, as well as for professionals looking to strengthen their understanding of our energy system and how it is changing in the Netherlands, Europe and beyond.

Learning objectives

By the end of this course, you will be able to:

- Understand the main concepts and theories in energy transition research and be able to put them into the wider context of global sustainable development;
- Understand the technical and physical contexts in which this energy transition unfolds;
- Recognise what has been achieved on the road of the energy transition so far;
- Evaluate the most critical socio-political challenges and opportunities for the future of the energy transition;
- Critically assess their own preferred solutions for the energy transition, including the main advantages and disadvantages.
- Share practical insights into the 'transition on the ground' through excursions and guest lectures from experts, policymakers and practitioners with diverse backgrounds.

Assignments and Assessment

Assessment for this course is divided into two separate assignments:

- **Group presentation**, followed by Q&A on the last day of the course. Groups present an energy challenge (and potential solutions to it). Presentation and Q&A are linked to theories, concepts and analytical tools discussed throughout the programme (**40%**);
- **Individual, written essay** of 1,500 words (+/- 10%) that reflects on one or more of the excursions and links it to one or more theories and concepts discussed throughout the (guest) lectures in the programme (**60%**). Submission deadline is the Friday after the course has ended. Deadline extensions are possible provided this has been allowed by the course coordinators.

Students must pass *both* assignments (a minimum of 5.5/10) in order to receive a certification of passing this course.

Reading list

The reading list will be released closer to the starting date of the course via the Canvas page of the programme. Participants can expect two or more readings per lecture for preparation (depending on lecture format and lecturer). Note that additional (preparatory) materials can be shared in the form of podcasts, documentaries, etc.

Course schedule

This is the **provisional schedule**, so please note that this schedule remains subject to changes due to shifting availabilities. Any such changes will be communicated in an updated syllabus as well as on the digital learning platform (Canvas), in class and via the (optional) Whatsapp group.

Week 1 (6 July – 10 July)

Day	Hours	Teacher	Topic
Sunday (5/7)	18:00 – ...		Welcome drinks for course participants (optional).
Monday (6/7)	9:00 – 10:00	VU Summer School	Social programme
	10:15 – 12:15	Mathieu Blondeel & Daniel Muth	Introduction: A systems approach to the global energy transition
	13:00 – 14:45	Mathieu Blondeel	Ideas, interests and institutions shaping the energy transition
	15:00 - ...	VU Summer School	Social programme
Tuesday (7/7)	10:00 – 11:30	Dr. Rebeka Beres (TNO)	Technological solutions and integrated energy systems for energy transition
	13:00 – 14:30	Prof. Joyeeta Gupta (UvA)	Climate justice, phasing out fossil fuels, and stranded assets
	15:30 – 17:30	Mathieu Blondeel & Daniel Muth	EXCURSION: Renewable energy cooperative, Zuidericht (Amsterdam)
Wednesday (8/7)	10:00 – 11:30	Dr. Stephan Slingerland (TNO)	Beyond Growth? Futures for Welfare and Sustainability in Europe

	12:30 - ...	VU Summer School	Social Programme
Thursday (9/7)	10:00 - 11:30	Prof. Michael Bradshaw (Warwick Business School)	A conceptual introduction to the geopolitics of energy system transformation
	12:30 - 14:00	Prof. Michael Bradshaw	Geopolitics of fossil fuel phase-outs
	15:00 - 17:00	Mathieu Blondeel & Prof. Michael Bradshaw	Managing dependencies on critical minerals during the global energy transition
Friday (10/7)	10:00 - 12:00	Mathieu Blondeel & Daniel Muth	EXCURSION: Milieudefensie/Friends of the Earth Netherlands (Amsterdam)
	14:00 - 16:30	Mathieu Blondeel & Daniel Muth	Individual/group feedback sessions

Week 2 (13 July – 17 July)

Day	Hours	Teacher / Moderator	Class number, subject
Monday (13/7)	All day	Mathieu Blondeel & Daniel Muth	EXCURSION: One-day field trip to Brussels. Morning: roundtable at FEPS on EU green industrial policy Afternoon: visit and tour of the European Parliament, hosted by MEP, Bruno Tobback .
Tuesday (14/7)	10:00 - 12:00	Marvin Tiemessen (Dutch Ministry of Economic Affairs and Climate)	Dutch national climate and energy politics in an international context
	13:00 - 14:30	Guest lecturer (TBC)	Trust dynamics & barriers to greening the Dutch industry.
Wednesday (15/7)	09:00 - 10:30	Daniel Muth	Global Carbon Pricing
	10:45 - 11:45	Daniel Muth	Scenario Building Exercise
	12:30 - ...	VU Summer School	Social Programme
Thursday (16/7)	10:00 - 11:30	Mathieu Blondeel	Energy poverty and developmentalism through an energy justice lens
	13:00 - 15:00	Mathieu Blondeel & Daniel Muth	Interactive exercise: negotiating a global fossil fuel non-proliferation treaty OR Excursion (TBC)
Friday (17/7)	10:00 - 12:00	Mathieu Blondeel & Daniel Muth	Group presentations
	12:30 - 13:00	Mathieu Blondeel & Daniel Muth	Wrap-up & feedback
	15:00 - ...	VU Summer School	Social programme

