

# ENERGY DECARBONIZATION & DEGROWTH

DEEP DIVE COURSE

## SYLLABUS

by Marula Tsagkari and Christos Vrettos



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# DEEP DIVES

## ONLINE COURSES

The Deep Dive Online Courses offered by Research & Degrowth (R&Di) are an educational initiative designed to explore focused themes through the lens of Degrowth.

These high-intensity courses are created for those who seek more than an introduction: researchers, activists, professionals, and curious minds ready to engage critically with the challenges and possibilities of social-ecological transformation.

To join this course, you should have already attended a previous course on degrowth (such as “Intro to Degrowth” or the master course), or have read a full book on the subject, for example, *Less Is More* by Jason Hickel.

Each Deep Dive consists of five live online sessions of 2.5 hours each, totaling 12.5 hours with no more than 25 students.

We have been working hard to create this online course and are excited to be launching it to you.

**We are looking forward to this educational journey together!**



# COURSE DESCRIPTION

Energy lies at the heart of the degrowth debate. A rapid transition away from fossil fuels is essential to address the climate crisis, yet replacing energy sources without questioning how much energy we use, who has access to it, and who controls its production risks reproducing existing inequalities.

Degrowth therefore raises a more fundamental question: **what could energy production and consumption look like in a society that prioritises sufficiency, equity, ecological limits and wellbeing over continuous economic growth?**

This course explores the relationship between energy and degrowth from both critical and practical perspectives. We will examine the challenges of the energy transition, including energy inequalities, unequal patterns of consumption, rebound and spillover effects, and the material and ecological implications of different energy systems.

We will also explore concepts of energy justice and energy democracy in practice, looking at alternative forms of organising energy production and distribution, including energy communities. Alongside these approaches, we will discuss competing visions of a post-carbon future, from decentralised and sufficiency-oriented alternatives to technological imaginaries such as green growth, high-tech transition pathways, and solarpunk. Rather than treating energy transition as a purely technical challenge, **the course approaches it as a question of politics, power, justice, and social organisation.**



# COURSE DETAILS

**DATES:** November 4<sup>th</sup> to December 2<sup>nd</sup>

**TIME:** 15:30h to 18:00h (CET)

## TIMELINE

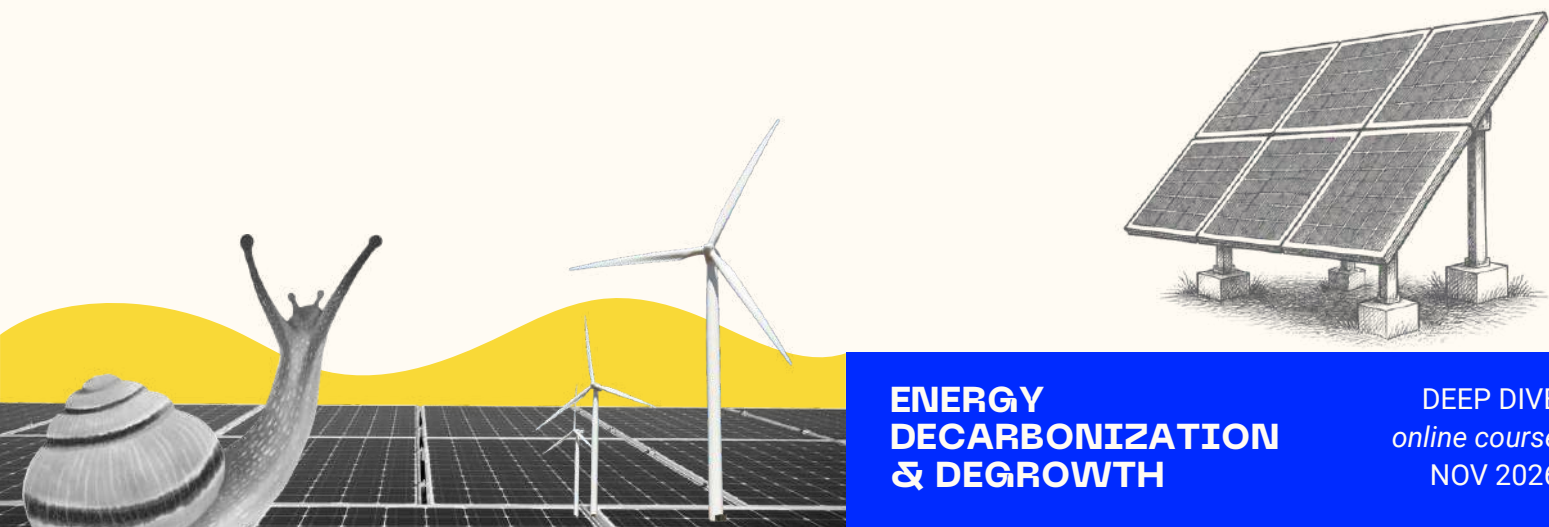
**Nov 4<sup>th</sup>:** Introduction “Establishing the central relationship between energy, economic growth, resource use, and Degrowth”

**Nov 11<sup>th</sup>:** Energy (In)justices and Resistance

**Nov 18<sup>th</sup>:** Energy Communities: lived drivers of Degrowth?

**Nov 25<sup>th</sup>:** From the grassroots to the ivory towers: policy change for degrowth futures

**Dec 2<sup>nd</sup>:** Reimagining Energy Systems



# TEACHERS



**Marula Tsagkari** is a postdoctoral researcher at the Institute of Environmental Science and Technology (ICTA-UAB). She holds a PhD from the University of Barcelona and an MSc in Environmental Sciences, Policy and Management from Central European University and Lund University. She was a postdoctoral researcher at Delft University of Technology in the Netherlands and hold a Margarita Salas postdoctoral fellowship at the University of Barcelona. Her research interests lie at the intersection of energy, technology, and degrowth, with a focus on the social, political, and material dimensions of technological and energy transitions.

**Christos Vrettos** works for [REScoop.eu](https://rescoop.eu), the European Federation of Energy Cooperatives, and Electra Energy (Greece). Both organisations promote the active engagement of citizens in renewable energy production in Europe. His work focuses on advocacy around public financing, building strategies and campaigns to influence the Social Climate Fund and the multi-year EU budget.



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# INVESTMENT

## 250 EUROS

Payment via European Bank Transfer or Credit Card (2% fee).

**Upon successfully completing the online course, all participants will receive an official certificate issued by Research & Degrowth International.**

*R&Di offers two scholarships per course.  
Get in touch for more info.*



# SESSION 1

**DATE:** November 4<sup>th</sup>

**TIME:** 15:00h (CET)

## Introduction “Establishing the central relationship between energy, economic growth, resource use, and degrowth”

This introductory session establishes the central relationship between energy, economic growth, resource use, and degrowth. The session will introduce key concepts and empirical trends that will be used throughout the course, including energy consumption, energy intensity, carbon emissions, material throughput, economic growth, decoupling, rebound effects, and energy return on energy invested (EROI).

We will examine how global energy use has changed alongside industrialisation and economic growth, and how energy consumption is distributed unequally across countries and populations. The session will also introduce the debate between green growth and degrowth, asking whether technological change alone can deliver a sustainable energy transition.

### READINGS PRIOR TO CLASS:

- ! 1. Kuan, H.-P. (2023, September 13). The role of degrowth in the low carbon energy transition. Earth.Org. <https://earth.org/the-role-of-degrowth-in-the-low-carbon-energy-transition/>
- ! 2. Bernes, J. (2019, April 25). Between the devil and the Green New Deal. Commune. <https://communemag.com/between-the-devil-and-the-green-new-deal/>
- 3. Park, J. (2025). Rethinking resource scarcity: Towards ecofeminist decolonial degrowth. . <https://doi.org/10.1080/23311886.2025.2464017>
- 4. Tsagkari, M., Roca, J., & Kallis, G. (2021). From local island energy to degrowth? Exploring democracy, self-sufficiency, and renewable energy production in Greece and Spain.

! MANDATORY



# SESSION 2

**DATE:** November 11<sup>th</sup>

**TIME:** 15:30h (CET)

## Energy (In)justices and Resistance

This session examines the social and spatial inequalities embedded in energy systems, from the extraction and production of energy to its distribution and consumption. Using examples of movements opposing energy and extractive projects, we will explore conflicts over land, resources, pollution, infrastructure, and access to energy and how these struggles challenge dominant visions of the energy transition.

We will also examine questions of distribution, recognition, participation, and procedural justice in the context of energy.

### READINGS PRIOR TO CLASS:

- ❗ 1. Avila-Calero, S. (2025). Solar capitalism: Accumulation strategies and socio-ecological futures. *Sustainability Science*, 20(4), 1541–1556.  
<https://doi.org/10.1007/s11625-025-01662-2>
- ❗ 2. Temper, L. (2020). Movements shaping climate futures: A systematic mapping of protests against fossil fuel and low-carbon energy projects. *Environmental Research Letters*, 15(12), Article 123004. <https://doi.org/10.1088/1748-9326/abc197>

❗ **MANDATORY**



# SESSION 3

**DATE:** November 18<sup>th</sup>

**TIME:** 15:30h (CET)

## Energy Communities: Lived drivers of Degrowth?

This session explores energy communities: using examples from across Europe, including Spain in particular, we will explore the social, economic, and environmental impact of such initiatives.

We will then critically discuss their potential to instigate a post-growth transformation of the energy system, as well as their limitations within the broader context of a capitalist energy system.

### READINGS PRIOR TO CLASS:

- ! 1. Zeiss, J. P.. (2025). Community energy initiatives as drivers for degrowth? An empirical investigation of their alignment with five imperatives of degrowth. *Journal of Cleaner Production*, 513, Article 145612.  
<https://doi.org/10.1016/j.jclepro.2025.145612>
- ! 2. Vrettos, C. (2024). Taking energy systems from profit-making to ensuring wellbeing. *Green European Journal*. <https://www.greeneuropeanjournal.eu/taking-energy-systems-from-profit-making-to-ensuring-wellbeing/>
- 3. Vrettos, C. (2021). Instigating a post-growth transformation of the energy sector: The case of Greek energy communities . [https://electraenergy.coop/wp-content/uploads/2024/01/Vrettos\\_Thesis\\_2021.pdf](https://electraenergy.coop/wp-content/uploads/2024/01/Vrettos_Thesis_2021.pdf)
- 4. Patagonia. (2021, April 15). We the Power: The future of energy is community-owned [Film]. Patagonia Films. <https://www.youtube.com/watch?v=75A9WGxoUn8>

! MANDATORY



# SESSION 4

**DATE:** November 25<sup>th</sup>

**TIME:** 15:30h (CET)

## From the Grassroots to the Ivory Towers: Policy Change for Degrowth Futures

The session will explore the inner workings of policy making, critically examining how the European Union works, but also national policy processes at Member State level (which are relevant beyond the EU context).

The aim of the session is to map out key policy files that are now on the horizon at EU level, but also of global significance (e.g., COP31). Finally, we will also reflect on different advocacy strategies, helping bridge degrowth initiatives, like energy communities, with higher level political processes

### READINGS PRIOR TO CLASS:

- ! 1. D'Alisa, G., & Kallis, G. (2020). Degrowth and the state. *Ecological Economics*, 169, Article 106486. Dengler C. Rereading the Wages for Housework Campaign: Feminist Degrowth Reflections on Social Reproduction, Commons, and a Care Income
- 2. Friends of the Earth Europe, & SOMO. (2025, February 20). Shareholders over solutions: How big industry favours payouts over the energy transition. <https://friendsoftheearth.eu/publication/shareholders-over-solutions/>
- 3. European Commission. (n.d.). Decision-making process in the Commission. [https://commission.europa.eu/strategy-and-policy/decision-making-process-commission\\_en](https://commission.europa.eu/strategy-and-policy/decision-making-process-commission_en)

! MANDATORY



# SESSION 5

**DATE:** December 2<sup>nd</sup>

**TIME:** 15:30h (CET)

## Reimagining Energy Systems

This session explores alternative visions for organising energy systems beyond the dominant model of centralised, growth-oriented energy production. We will discuss approaches ranging from green technology and renewable energy transitions to solarpunk, low-tech sufficiency-based systems and feminist and queer perspectives on energy and infrastructure.

The session will consider how these visions differ in terms of technology, scale, ownership, governance, and energy consumption. We will ask what an energy system designed around ecological limits, decentralisation, resilience, and social needs might look like, and what political and material challenges such a transition would face.

### READINGS PRIOR TO CLASS

- ! 1. Longhurst, N., & Chilvers, J. (2019). Mapping diverse visions of energy transitions: Co-producing sociotechnical imaginaries. *Sustainability Science*, 14, 973–990. <https://doi.org/10.1007/s11625-019-00702-y>
- ! 2. Solarpunk: utopian realism as a degrowth aesthetic or why degrowthers should be solarpunks. <https://www.elgaronline.com/edcollchap/book/9781035320776/book-part-9781035320776-24.xml>
3. Ourkiya, A. (2025, August 12). Why a just energy transition demands queer intersectional ecofeminism. The Ecofeminist Institute. <https://theecofeministinstitute.com/blog/why-a-just-energy-transition-demands-queer-intersectional-ecofeminism>
4. Smit, J. P., Biliškov, N., & Tsagkari, M. (2025). Electrochemical technologies for deep decarbonization?: A heterodox technology assessment. *In Theorie und Praxis*, 34(3), 33–38. <https://doi.org/10.14512/tatup.7218>
5. Bell, S. E., Daggett, C., & Labuski, C. (2020). Toward feminist energy systems: Why adding women and solar panels is not enough.. <https://doi.org/10.1016/j.erss.2020.101557>

! **MANDATORY**



# CONTACT

If you have questions about the “Deep Dives” Online Course feel free to contact us on:

Email: [project@degrowth.org](mailto:project@degrowth.org) / [fede.arcuri@degrowth.org](mailto:fede.arcuri@degrowth.org)

Phone Number: +39 3884236592

Discord: [lorenzol.\\_57084\\_23912](https://discord.com/users/lorenzol._57084_23912)

## COORDINATORS



**Lorenzo Lonardi** is a project coordinator at Research and Degrowth with a master's degree in Political Ecology, Degrowth, and Environmental Justice from ICTA-UAB. He is passionate about promoting degrowth ideas and creating accessible educational programs. As the coordinator of the “Introduction to Degrowth” online course and the “Deep Dives ” online courses, Lorenzo focuses on organizing and delivering a program that supports learning and collaboration around sustainable and just alternatives to growth-focused economics.



**Federico Arcuri** is a project coordinator at Research and Degrowth. He is also an alumnus of the master's in Political Ecology at ICTA-UAB, with a thesis on a “Post-growth deal for Italy”. He is interested in environmental conflicts, post-growth policy and geopolitics, especially with respect to EU-China relations. He co-organized the last two editions of the Degrowth Summer School, coordinating the bike caravan weeks and facilitating counter-cartography workshops.



WE ARE

# RESEARCH & DEGROWTH INTERNATIONAL

Research & Degrowth is a think-and-act-tank dedicated to the radical transformation of our economies and societies through research, advocacy, education, training and events around degrowth.

For more than fifteen years, R&Di has successfully organized summer schools and university master's programs focused on degrowth.

The online course represents a new educational format to reach out to a broader audience.

Upon successfully completing the online course, all participants will receive an official certificate issued by R&Di.



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NOV 2026

