

NEWSLETTER #21

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Editors: Alla Toktarova, Johan Rootzén and
Léonard Lefranc

Still much to do...

As Europe is coming to terms with the results of the continent-wide elections last Sunday, it is still too early to say what impact it could have on European climate policy and industrial policy. In the meantime, the world hasn't stopped spinning as this latest newsletter will show you. From the United States to China, many industrial policies are being implemented with an eye on a future climate-neutral world, striving to win favorable economic positions.

However, there is still much to do. Our featured researcher and PhD (*Congratulations!*) Ellen Palm warns us against over-simplifying our perspective of the path to decarbonise the plastics industry if we want to reach our objectives on time. The need for a holistic approach to decarbonising industry worldwide is again underscored by our latest installment of riveting publications on its many dimensions and sectors. You can read all about it in this newsletter.

Finally, a small announcement. Given the fast-moving world that is industry, we are planning on revamping our blog to showcase short analyses of the central role of industry in our path to decarbonisation and how events, such as policy announcements, are impacting it. Stay tuned!

Do you have content to share, ideas or other thoughts?

- Contact us: renew.industry@gmail.com
- Remind a colleague to join!
- Follow us on Twitter! [@RENEWIndustry](https://twitter.com/RENEWIndustry)
- Share our homepage! [LINK](#)
- Visit our [blog](#) for (intermittent) updates

Decarbonising plastics

Featured piece by Ellen Palm

My PhD thesis addresses the complex relationship between plastics production, which relies heavily on fossil fuels, and the urgent need to phase out fossil fuel use to combat climate change. The production and use of plastics thus conflict with the fossil fuel phase-out needed to mitigate climate change. Nevertheless,

plastics decarbonisation remains a relatively understudied issue. The thesis explores and discusses plastics decarbonisation through the technologies and framings that surround the mitigation option of carbon capture and utilisation and carbon circularity. It concludes that multiple plastics decarbonisations are needed and that narrowing down to one perspective or technology risks the decarbonisation efforts failing or being delayed.

The PhD thesis “Decarbonising plastics – On the technologies and framings of carbon capture and utilisation” can be read and downloaded [here](#).

A longer introduction to the PhD thesis can be found on the RENEW-industry [blog](#).

Projects and initiatives

[Climate Club]

The Climate Club set out to become a leading high-ambition intergovernmental forum for exchange on industry decarbonisation. [LINK](#)

[UNFCCC Technology Executive Committee]

Mapping of initiatives that promote low and near zero emission production and products in hard-to-abate sectors. [LINK](#)

ScienceForUkraine

#ScienceForUkraine is a community group of volunteer scholars and students around the world to help scholars and students affected by Russia's war in Ukraine. [LINK](#)

Events

Here, you can find tips about upcoming events and summaries from past events that might have skipped your attention.

UPCOMING EVENTS

[Conference]

2024 Joint ISIE Socio-Economic Metabolism and Asia-Pacific Conference

August 24-27, 2024, Beijing

More information: [LINK](#)

[Webinar, in German]

Industriewende-Dialog: thermische Energiespeicher

June 14, 2024, Online.

More information: [LINK](#)

PAST EVENTS

[Webinar]

UNECE: Group of Experts on Energy Efficiency, Task Force on Energy Efficiency in Industry
Bi-monthly open discussion forum,
April 16, 2024, online
More information: [LINK](#)

[Presentation and webinar]

Best practices on financing instruments for industry decarbonisation
See the PPT slides [here](#)
Recording from the webinar [LINK](#)

[Resource Management Week]

UNECE Resource Management Week 2024
April 22 – 26, 2024, Geneva, Switzerland
More information: [LINK](#)

[Roundtable debate]

Pathways towards Sustainable Transformation in the EU: The Role of Industry.
May 22, 2024, online
More information and recording: [LINK](#)

[Webinar]

UNECE Informal Task Force on Electric Mobility
Inaugural Meeting,
May 29, 2024, online
More information: [LINK](#)

[Webinar]

ACCESS Advancing Capacity for Climate and Environment Social Science
How can we decarbonise society in ways that are place-sensitive and fair?
May 9, 2024, online
More information: [LINK](#)

Please let us know if you want your event featured in this newsletter!

Open positions

We aim to publish all open positions we receive via the network. Do you know of an open position in the field? Send us an email: renew.industry@gmail.com. Positions with short notice could be relevant to some of our members, and we can share them with the network between the newsletters.

[Campaign Database Manager]

The role is based with Steelwatch. This role focuses on creating and managing a comprehensive database that provides live information on CO₂ emissions, coal-based facility lifetime extensions, and local air pollution data to support effective campaigning. It will underpin the work of the European Fossil-Free Steel Network (EFFSN) and serve as the foundation for a future global database. Deadline: 26.06.2024 [LINK](#)

[Climate Policy Analyst]

NewClimate Institute is seeking a climate policy analyst in Cologne or Berlin to strengthen the team in the area of sector tracking & climate policy. Your work would focus on advancing qualitative and quantitative climate policy analysis with a focus on energy end-use sectors in the context of implementing the Paris Agreement goals. Deadline: 19.06.2024 [LINK](#)

[Project assistant]

Project assistant to Lund University Centre for Sustainability Studies (LUCSUS) for a period of 3 months, starting after the summer. The successful candidate will be employed on the project Changing Places of Work, which analyses how green transformations in the steel industry affect people and places. Responsibilities will include the organisation of stakeholder workshops and assisting with the writing of project reports. Candidates are required to have good knowledge of Swedish, and a social science or interdisciplinary background in subjects such as sustainability science, cultural geography, or sociology. Deadline to apply: 25 June 2024. Full job details here: [LINK](#)

Open calls

[Call for Papers: New Journal] DeCarbon is an open access journal dedicated to research on decarbonization progressing towards a net zero society. DeCarbon is published jointly by Elsevier and Chongqing University. Chongqing University has waived the Article Publishing Charge (APC) for select authors who submit their articles before 31 December 2024. [LINK](#)

Recent publications

This section combines peer-reviewed journal publications, project reports and other scientific work that has been published recently. We follow a sectoral classification for the publications listed below complemented by a General / cross-sectoral / circular category for publications spanning across several industrial sectors or even the entire economy. Please feel free to share any publication you would like to see listed here in the next newsletter, by sending an email to renew.industry@gmail.com.

General / cross-sectoral / circular

[Thesis] Kumar, T. R. (2024). Decarbonization in Carbon-Intensive Industries—An Assessment Framework for Enhanced Early-Stage Identification of Optimal Decarbonization Pathways [Licenciate thesis, Chalmers University of Technology]. [LINK](#)

[Report] SNAPFI (2024). International climate finance architecture - enabling sectoral transitions in emerging economies? SNAPFI Synthesis Report 2023. [LINK](#)

[Peer-reviewed] West, K., van Harmelen, T., Koning, V., Kramer, G. J., & Faaij, A. (2024). Detailed modelling of basic industry and material flows in a national energy system optimization model. Resources, Conservation and Recycling, 206, 107617. [LINK](#)

[Peer-reviewed] Verpoort, P. C., Gast, L., Hofmann, A., & Ueckerdt, F. (2024). Impact of global heterogeneity of renewable energy supply on heavy industrial production and green value chains. *Nature Energy*, 9(4), 491–503. [LINK](#)

[Report] ZOE Institute (2024). A Unified Industrial Transition for Europe (UnITE) Pact. [LINK](#)

[Report] Sandbag (2024). A Scrap Game: Impacts of the EU Carbon Border Adjustment Mechanism. [LINK](#)

[Report] Energetics for the U.S. Department of Energy, Office of Energy Efficiency and Renewable Energy, Industrial Efficiency and Decarbonization Office (2024). Pathways Analysis Summary: Decarbonization Potential for Industrial Subsectors. Preliminary Modeling Results. [LINK](#)

[Peer-reviewed] van den Bijgaart, I., Lindman, Å, Löfgren, Å., and Söderholm, P. (2024). Green Industrial Policy: Key Challenges and Policy Design in Decarbonizing the Basic Materials Industries. Forthcoming in *Encyclopedia of Resource, Energy, and Environmental Economics*, Second Edition, Elsevier. [LINK](#)

[Policy Brief] Lai, H. L., & Devine-Wright, P., Hamilton, J., Clery, D., Rattle, I., Martin, A., Taylor P., Mander S., & Ryder S. (2024). Delivering Place-sensitive and Fair Industrial Decarbonisation. [LINK](#)

[Peer-reviewed] Lai, H. L., & Devine-Wright, P. (2024). Imagining and emplacing net zero industrial clusters: A critical analysis of stakeholder discourses. *Geo: Geography and Environment*, 11(1), e00139. [LINK](#)

[Peer-reviewed] Eadson, W. and van Veelen, B. (2023) ‘Green and just regional path development’, *Regional Studies, Regional Science*, 10(1). [LINK](#)

[Peer-reviewed] Sovacool, B. K., AbdulRafiu, A., Hudson, M., McManus, M., Korre, A., Marr, I., & Maroto-Valer, M. M. (2024). Beyond the factory: Ten interdisciplinary lessons for industrial decarbonisation practice and policy. *Energy Reports*, 11, 5935-5946. [LINK](#)

[Policy Brief] Määtä, S., Fantini, M., Covarrubias, M., & de Gooyert, V. (2024) Will carbon management take off in Europe? How to get both industry and society on board? Insights from an analysis of the European Commission’s industrial carbon management strategy call for evidence submissions. [LINK](#)

[Book] Rissman, J. (2024). *Zero-Carbon Industry: Transformative Technologies and Policies to Achieve Sustainable Prosperity*. Columbia University Press. [LINK](#)

Steel

[Peer-reviewed] Maier, R., Gerres, T., Tuerk, A., & Mey, F. (2024). Finding tipping points in the global steel sector: A comparison of companies in Australia, Austria, South Korea and the USA. *Global Environmental Change*, 86, 102846. [LINK](#)

[Thesis] Kde Leeuw, G. (2024). The comfort of alignment: Mining, green steel, and killjoy desires in Sweden/Såpmi. [Doctoral Thesis, Lund University]. [LINK](#)

[Thesis] Merholz, N. (2024). The challenges to waste heat recovery in the German steel industry. Dealing with Costs, Requirements and Incentive Systems. [Master Thesis, Centre International de Formation Européenne]. [LINK](#)

[Peer-reviewed] Algers, J., & Åhman, M. (2024). Phase-in and phase-out policies in the global steel transition. Climate Policy, 1-14. [LINK](#)

[Peer-reviewed] Devlin, A., Mykhnenko, V., Zagoruichyk, A., Salmon, N., & Soldak, M. (2024). Techno-economic optimisation of steel supply chains in the clean energy transition: a case study of post-war Ukraine. Journal of Cleaner Production, 142675. [LINK](#)

[Peer-reviewed] Hüttel, A., & Lehner, J. (2024). Revisiting Investment Costs for Green Steel: Capital Expenditures, Firm Level Impacts, and Policy Implications. [LINK](#)

Chemicals / plastics

[Peer-reviewed] Heck, J., von Delft, S., & Leker, J. (2024). Greenhouse gas neutrality: A qualitative analysis of perceived sustainability tensions in the German chemical industry. Energy Research & Social Science, 112, 103525. [LINK](#)

[Peer-reviewed] Cullen, L., Meng, F., Lupton, R., & Cullen, J. M. (2024). Reducing uncertainties in greenhouse gas emissions from chemical production. Nature Chemical Engineering, 1(4), 311–322. [LINK](#)

[Report] Karali, N., Khanna, N., & Shah, N. (2024). Climate Impact of Primary Plastic Production (LBNL-2001585). Lawrence Berkeley National Lab. (LBNL). [LINK](#)

[Peer-reviewed] Guillén-Gosálbez, G., & Francisco dos Santos, L. (2024). Integrating industrial sectors in the transition to more sustainable chemicals. Nature Chemical Engineering, 1(5), 336–337. [LINK](#)

[White paper] Johnson, A., Fraser, A., Elliott, N., & Hart, R. (2024). Decarbonize and Defossilize: Transformative Policies to Reduce Chemical Industry Carbon Emissions. [LINK](#)

[Peer-reviewed] Musonda, F., Millinger, M., & Thrän, D. (2024). Modelling assessment of resource competition for renewable basic chemicals and the effect of recycling. GCB Bioenergy, 16(4), e13133. [LINK](#)

[Peer-reviewed] Tonelli, D., Rosa, L., Gabrielli, P., Parente, A., & Contino, F. (2024). Cost-competitive decentralized ammonia fertilizer production can increase food security. Nature Food, 1-11. [LINK](#)

[Peer-reviewed] Li, Z., Åhman, M., Nilsson, L. J., & Bauer, F. (2024). Towards carbon neutrality: Transition pathways for the Chinese ethylene industry. Renewable and Sustainable Energy Reviews, 199, 114540. [LINK](#)

[Peer-reviewed] Gonella, S., & de Gooyert, V. (2024). What are sustainable plastics? A review of interrelated problems and solutions to help avoid unintended consequences. Environmental Research Letters. [LINK](#)

Cement / ceramics / glass

[Peer-reviewed] Cavalett, O., Watanabe, M. D. B., Voldsund, M., Roussanaly, S., & Cherubini, F. (2024). Paving the way for sustainable decarbonization of the European cement industry. Nature Sustainability. [LINK](#)

[Peer-reviewed] Priya, G. K., Gundre, R., Bandyopadhyay, S., & Seethamraju, S. (2024). Analysis of decarbonization measures for the Indian Cement Sector. Journal of Environmental Management, 358, 120860. [LINK](#)

[Peer-reviewed] Clark, G., Davis, M., & Kumar, A. (2024). Assessment of fuel switching as a decarbonization strategy in the cement sector. Energy Conversion and Management, 312, 118585. [LINK](#)

Out of the scientific box

In this section, we keep track of news, op-eds, blog posts, videos and other content on industrial decarbonisation that has gained attention beyond the research community. Have you spotted something? Contact us: renew.industry@gmail.com!

[Podcast] [@drvolt](#)s explores the newly-announced U.S. industrial policy to finance early-stage emission abatement projects in the heavy industry in this conversation with [Rebecca Dell](#) from the ClimateWorks Foundation and [Evan Gillespie](#) from Industrious Labs. [LINK](#)

[Long Read] The Financial Times on China's new industrial policy to reignite its economic growth with high-value innovation-driven manufacturing activities [LINK](#)

[Ecological reconstruction] A science-based initiative on the ecological reconstruction of Finland [LINK](#)

[Podcast] Deep dive with Henrik Stiesdal one of the pioneers of the Danish wind industry [LINK](#)

[Podcast] Making carbon-free steel with clean electricity [LINK](#)

[Article] On the road to industrial decarbonization: How Morocco is setting a clear path to net zero [LINK](#)

[Article] Realising a sustainability transition through the “new” industrial policy [LINK](#)

From the social media feed (#industrydecarbonisation)

Why do we not see more investments in green hydrogen projects, when there is broad political support and big hype? asks [@BuggeHunt](#) and [@JPTilsted](#) [LINK](#)

‘We can either build our way to net zero, and get the economic benefits, or buy our way to net zero, while others prosper’ [@IPPR](#), the Institute for Public Policy Research [LINK](#)

New Zealand has a surprising tool to boost its grid: an aluminum plant [@CanaryMediaInc](#) [LINK](#)

Getting to know the Network

The RENEW Industry Network aims to connect researchers and strategists focused on industrial decarbonisation. We continue to grow with more than **750 members** working in organisations located in

20 different countries, including many European countries but also the U.S., Canada, India, Australia and beyond.

From time to time, we include a short interview with a network member on their research topic and ongoing work on industrial decarbonisation. **Do you want to introduce yourself in this section, or share your latest research with the network?** Contact us: renew.industry@gmail.com

Get involved!

The RENEW Industry Network is constantly looking for interested researchers who want to share their work, organise events or in other ways interact with other researchers in the field. Any ideas are welcome, regardless of whether you want to be involved in our activities on a regular basis, or do a short one-off stunt.

We are looking forward to hearing from you!

Contact us via email at renew.industry@gmail.com or drop us a direct message via Twitter at [@RENEWIndustry!](https://twitter.com/RENEWIndustry)

/The RENEW-Industry coordinators

Léonard Lefranc, *Institute for Research in Technology, Comillas Pontifical University, Madrid, Spain*

Alla Toktarova, *Energy Technology division, Chalmers University of Technology, Sweden*

Johan Rootzén, *IVL Swedish Environmental Research Institute, Gothenburg, Sweden*

Caitlin Swalec, *Global Steel Plant Tracker, Global Energy Monitor, California, United States*

Max Åhman, *Environmental and Energy Systems Studies, Lund University, Sweden*

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