

Institute for Advanced Sustainability Studies
Energy Transitions and Public Policy
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Date of birth: 01. November 1980
Nationality: Swedish

Updated as of 10 March 2022

WORK EXPERIENCE

April 2019- University of Potsdam, Germany.

Professor of Energy Policy, Faculty of Economics and Social Science, Section Political and Administrative Sciences.

April 2019-

Institute for Advanced Sustainability Studies (IASS), Potsdam, Germany.

Research group leader, Energy Transitions and Public Policy, Research area Energy Systems and Societal Change.

August 2017-March 2019

Federal Swiss Institute for Technology (ETH) Zürich, Switzerland

Assistant Professor of Renewable Energy Policy, Head of the Renewable Energy Policy Group, Institute for Environmental Decisions, Department for Environmental Systems Science.

December 2013-July 2017

Federal Swiss Institute for Technology (ETH) Zürich, Switzerland.

Senior researcher (Oberassistent), Climate Policy Group, Institute for Environmental Decisions, Department for Environmental Systems Science.

November 2007-November 2013

Potsdam Institute for Climate Impact Research (PIK), Potsdam, Germany.

Researcher (Wissenschaftlicher Mitarbeiter), Research Domain IV: Transdisciplinary Concepts and Methods.

November 2009-September 2013

International Institute for Applied Systems Analysis (IIASA), Laxenburg, Austria.

Research assistant, Risk, policy and vulnerability program.

SCHOLARSHIPS and AWARDS

- Oct. 2013** **Desertec best paper award**, for “outstanding academic work in the field of renewable energy in North African and Middle Eastern deserts”, Desertec University Network, Dii, Rabat, Morocco.
- Jan. 2013** **Award for advanced doctoral students** for “outstanding student research”, 800€, Central European University, Budapest, Hungary.
- Dec. 2011** **Academic achievement award** for first year doctoral students, for “outstanding coursework and performance during the comprehensive exam”, 500€, Central European University, Budapest, Hungary.
- Nov. 2011** **Desertec thesis award, 1st prize**, for “outstanding academic work in the field of renewable energy in North African and Middle Eastern deserts”, Desertec Foundation, Desertec University Network, DII, Cairo, Egypt.
- 2010-2013** **Full tuition waiver scholarship** for studies in the Doctoral program in Environmental sciences and policy at the Central European University (11.000€ first year, 5.500€ second and third year), CEU, Budapest, Hungary.
- 2006-2007** **German academic exchange service (DAAD) full time scholarship** (10x700€) for studies at the Masters programme “Public and private environmental management” at Freie Universität Berlin, Germany.

EDUCATION

Nov. 2010-Sept. 2013

PhD, Environmental Public Policy, Department for Environmental sciences and policy, Central European University, Budapest, Hungary. Dissertation: *Energy security in a European-North African renewables-based electricity Supergrid*. Supervisor: Prof. Aleh Cherp. Defence date: 11 Sept. 2013.

Oct. 2005-Oct. 2007

Master of Arts, “Public and private environmental management”, Environmental Policy Research Centre, Freie Universität Berlin, Germany. **Final grade: 1.3**, October 2007. Master thesis: *The creation of the pan-Nordic electricity market*. **Master thesis grade: 1.1**.

Sept. 2000-June 2005

Master of Science, “Problem solving in science”, Department of Physics, Göteborgs Universitet, Sweden, June 2005. Master thesis: *Expected profitability of wind power projects in Sweden and Germany*. **Master thesis grade: High pass** (out of Pass and High pass). Final grades not given.

Jan.-Apr. 2003 **Rhetoric**, Department of humanities, Göteborgs Universitet, Sweden. 15 ECTS. Grade: High pass.

Oct. 2001-Sept. 2002

Exchange year, Institute for Physics (Winter semester 2001/02) and Institute for History (Summer semester 2002), Humboldt-Universität zu Berlin, Berlin, Germany.

1996-1999 **Upper secondary school** at Burgårdens Utbildningscentrum, Göteborg, Sweden. Programme of natural sciences. **Final grade 17.3** (out of 20 points possible).

POSITIONS OF TRUST

- 2022** **Ombudsman for good scientific practice**, Institute for Advanced Sustainability Studies, Potsdam, Germany. 21.12.01-22.12.31.
- 2021** **Project proposal evaluator**, German Federal Ministry for Education and Research & Moroccan Ministry for education and scientific research, PMARS programme for German-Moroccan cooperation in R&D and innovation.
- 03.19-09.20** **Editor**, *PLOS ONE Responding to climate change channel*.
<https://channels.plos.org/rtcc>.
- 2020** **Member of the Scientific Committee**, SolarPACES, Albuquerque, USA.
- 2020** **Guest editor**, Special issue “*Policy interactions in socio-technical transitions towards zero-carbon energy systems*”, Energies, MDPI.
- 2020** **Policy Associate**, Energy-SHIFTS, Anglia Ruskin University.
- 2020-2021** **Working Group member (WG1 Renewables)**, Energy-SHIFTS, Erasmus University Rotterdam.
- 2011-current** **Ad-hoc manuscript peer reviewer** for among others *Nature Climate Change; Nature Energy; Joule; Energy Policy; Energy Research & Social Science; Environmental innovation & societal transitions; Climatic Change; Applied Energy; Politics and Governance; Energy Sources, part B: Economics, Planning, and Policy; Energy for Sustainable Development; Environment, Development and Sustainability*.
- 2017-current** **Moderator of www.csp.guru**, an open data initiative for concentrating solar power.
- 2019** **Member of the Scientific Committee**, SolarPACES, Daegu, South Korea.
- Sept. 18** **Mentor**, *ETH week: Energy Matters*, Energy Science Centre, ETH Zürich, Switzerland.
- 2017** **Member of the Scientific Committee**, SolarPACES, Santiago de Chile.
- 2015-2017** **Member of the Teaching Commission** Environmental Science, Department for Environmental Systems Science (D-USYS), ETH Zürich.
- 2013-2015** **Advisory board member**, *BETTER project*, European Commission: Intelligent Energy Europe.
- 2007-2011** **The Compensators***, an NGO which offers households and individuals the possibility to offset their CO₂ emissions by buying and deleting EUAs from the EU Emissions Trading Scheme. Responsible for climate change, climate policy and protection lectures. See www.thecompensators.org.

LANGUAGES

- Swedish** Native language.
- German** Fluent (C2).
- English** Fluent (C2).

PUBLICATIONS

Citation metrics (updated 2022-03-10)

Scopus: 56 indexed articles, 1412 citations, h-index: 21.

Google Scholar: 158 indexed articles, 2510 citations, h-index: 28, i10 index: 42.

Peer-reviewed articles

- Schäppi, R., Rutz, D., Dähler, F., Muroyama, A., Haueter, P., **Lilliestam, J.**, Patt, A., Furler, P., Steinfeld, A. (2022): Drop-in fuels from sunlight and air, in *Nature* 601, pp.63-68. <https://www.nature.com/articles/s41586-021-04174-y>.
- Süsser, D., Gaschnig, H., Ceglarz, A., Stavrakas, V., Flamos, A., **Lilliestam, J.** (2022): Better suited or just more complex? On the fit between user needs and modeller-driven improvements of energy system models, in: *Energy* 239, p. 121909. <https://doi.org/10.1016/j.energy.2021.121909>.
- Krupnik, S., Wagner, A., Koretskaya, O., Rudek, T., Wade, R., Misik, M., **Lilliestam, J.**, von Wirth, T. et al. (2022): Quo vadis renewables? A research agenda for social sciences and humanities research on renewable energy, in: *Energy Research & Social Science* 89, p. 102536.
- McKenna, R., Pfenninger, S., Heinrichs, H., Schmidt, J., Staffell, I., Bauer, C., Gruber, K., Hahmann, A., Jansen, M., Klingler, M., Landwehr, N., Guo Larsén, X., **Lilliestam, J.**, Pickering, B., Robinius, M., Tröndle, T., Turkovska, O., Wehrle, S., Weinand, J., Wohland, J. (2022): High-resolution large-scale onshore wind energy assessments: a review of potential definitions, methodologies and future research needs, in: *Renewable Energy* 182, pp. 659-684. <https://doi.org/10.1016/j.renene.2021.10.027>. (Open access)
- Gamarra, A., Lechón, Y., Escribano, G., **Lilliestam, J.**, Lázaro, L., Caldés, N. (2022): Measuring dependence and governance in the value chain of energy investments: Natural gas versus solar power plants in Mexico, in: *Environmental Impact Assessment Review* 93, p. 106708. <https://doi.org/10.1016/j.eiar.2021.106708>.
- Ollier, L., **Lilliestam, J.**, Nuñez-Jimenez, A., Späth, L., Metz, F. (2022, in press): Policy change in the European 2030 climate and energy package: do domestic strategy adaptations precede EU policy change? in: *Policy Sciences*.
- Thonig, R., Gilmanova, A., Zhan, J., **Lilliestam, J.** (2022 in press): Chinese CSP for the world? Accepted for publication in *AIP Press* in May 2021. (Open access)
- Thonig, R., **Lilliestam, J.** (2022, in press): Concentrating solar technology policy should encourage high temperatures and modularity to enable spillovers. Accepted for publication in *AIP Press* in December 2021.
- Lilliestam, J.**, Du, F., Gilmanova, A., Mehos, M., Wang, Z., Thonig, R. (2022, in press): Scaling up CSP: how long will it take? Accepted for publication in *AIP Press* in December 2021.
- Resch, G., Schöniger, F., Kleinschmitt, C., Franke, K., Thonig, R., **Lilliestam, J.** (2022 in press): Deep decarbonization of the European power sector calls for dispatchable CSP. Accepted for publication in *AIP Press* in May 2021. (Open access)
- Süsser, D., Ceglarz, A., Stavrakas, V., **Lilliestam, J.** (2021): COVID-19 vs. stakeholder engagement: the impact of the first wave of the pandemic on stakeholder involvement in European energy research projects, in: *Open Research Europe* 1 (57). <https://doi.org/10.12688/openreseurope.13683.3>. (Open access)

- Lilliestam, J.**, Patt, A., Bersalli, G. (2021): The effect of carbon pricing on the technological change necessary for full energy decarbonisation: a review of empirical ex-post evidence, in: *WIREs Climate Change* 12 (Jan./Feb.), p. e681. <https://www.doi.org/10.1002/wcc.681>. (Open access)
- Gilmanova, A., Wang, Z., Gosens, J., **Lilliestam, J.** (2021): Building an internationally competitive concentrating solar power industry in China: lessons from wind power and photovoltaics, in: *Energy Sources, Part B* 16 (6) pp. 515-541. <https://doi.org/10.1080/15567249.2021.1931563>.
- Süsser, D., Ceglaz, A., Gaschnig, H., Stavrakas, V., Flamos, A., Giannakidis, G., **Lilliestam, J.** (2021): Model-based policymaking or policy-based modelling? How energy models and energy policy interact, in: *Energy Research & Social Science* 75, p. 101984. <https://doi.org/10.1016/j.erss.2021.101984>. (Open access)
- Gosens, J., Gilmanova, A., **Lilliestam, J.** (2021): Windows of opportunity for catching up in formative clean-tech sectors and the rise of China in concentrated solar power, in: *Environmental Innovation and Societal Transformation* 39, pp. 86-106. <https://doi.org/10.1016/j.eist.2021.03.005>.
- Quitow, R., Bersalli, G., Eicke, L., **Lilliestam, J.**, Lira, F., Marian, A., Thapar, S., Süsser, D., Weko, S., Williams, S., Xue, B. (2021): COVID-19 deepens the gulf between leaders and laggards in the global energy transition, in: *Energy Research & Social Science* 74, p. 101981. <https://doi.org/10.1016/j.erss.2021.101981>. (Open access)
- Melliger, M., **Lilliestam, J.** (2021): Effects of coordinating support policy changes on renewable power investor choices in Europe, in *Energy Policy* 148, p. 111993. <https://doi.org/10.1016/j.enpol.2020.111993>. (Open access)
- Lilliestam, J.**, Ollier, L., Labordena, M., Pfenninger, S., Thonig, R. (2021): The near- to mid-term outlook for CSP: mostly cloudy, chance of sun, in *Energy Sources, Part B: Economics, Planning, and Policy* 16 (1), pp. 23-41. <https://doi.org/10.1080/15567249.2020.1773580>. (Open access)
- Thonig, R., del Río, P., Kiefer, C., Lázaro Touza, L., Escribano, G., Lechón, Y., Späth, L., Wolf, I., **Lilliestam, J.** (2021): Does ideology influence the ambition level in climate and renewables policy? Insights from four European countries, in: *Energy Sources, Part B: Economics, Planning, and Policy* 16 (1), pp. 4-22. <http://dx.doi.org/10.1080/15567249.2020.1811806>. (Open access).
- Schöniger, F., Thonig, R., Resch, G., **Lilliestam, J.** (2021): Making the sun shine at night: comparing the cost of dispatchable concentrating solar power and photovoltaic with storage, in: *Energy Sources, Part B* 16 (1), pp. 55-74. <https://doi.org/10.1080/15567249.2020.1843565>. (Open Access)
- Ollier, L., Melliger, M., **Lilliestam, J.** (2020): Friends or foes? Political synergy or competition between renewable energy and energy efficiency policy, in: *Energies* (13), p. 6339. <https://doi.org/10.3390/en13236339> (Open Access)
- Tröndle, T., **Lilliestam, J.**, Marelli, S., Pfenninger, S. (2020): Trade-offs between geographic scale, cost, and system design for fully renewable electricity in Europe, in: *Joule* 4, pp. 1929-1948. <https://doi.org/10.1016/j.joule.2020.07.018>. (Open access)
- Lilliestam, J.**, Melliger, M., Ollier, L., Schmidt, T., Steffen, B. (2020): Understanding and accounting for the effect of exchange rate fluctuations on global learning rates, in: *Nature Energy* 5, pp. 71-78. <https://doi.org/10.1038/s41560-019-0531-y>. (preprint: https://publications.iass-potsdam.de/rest/items/item_6000159_3/component/file_6001201/content).

- McKenna, R., Ryberg, S., Staffell, I., Hahmann, A., Schmidt, J., Heinrichs, H., Höltinger, S., **Lilliestam, J.**, Pfenninger, S., Robinius, M., Stolten, D., Tröndle, T., Wehrle, S., Weinand, J. (2020): On the socio-technical potential for onshore wind in Europe: a response to Enevoldsen et al. (2019), in: *Energy Policy* 145, p. 111693. <https://doi.org/10.1016/j.enpol.2020.111693>.
- Tröndle, T., Pfenninger, S., **Lilliestam, J.** (2019): Home-made or imported: on the possibility for renewable electricity autarky on all scales in Europe, in: *Energy Strategy Reviews* 26, p. 100388. <https://doi.org/10.1016/j.esr.2019.100388>. (Open access)
- Lilliestam, J.**, Ollier, L., Pfenninger, S. (2019): The Dragon awakens: is China saving or conquering concentrated solar power?, in: *AIP conference proceedings* 2126 (1), p. 130006. <https://doi.org/10.1063/1.5117648>. (Open access)
- Ellenbeck, S., **Lilliestam, J.** (2019): How modelers construct energy costs: discursive elements in Energy System and Integrated Assessment Models, in: *Energy Research & Social Science* 47, pp. 69-77. <https://doi.org/10.1016/j.erss.2018.08.021>. (Open access)
- Patt, A., van Vliet, O., **Lilliestam, J.**, Pfenninger, S. (2019): Will policies to promote energy efficiency help or hinder achieving a 1.5°C climate target? in: *Energy Efficiency* 12 (2), pp. 551-565. <https://doi.org/10.1007/s12053-018-9715-8>. Preprint: <https://mfr.osf.io/render?url=https%3A%2F%2Fosf.io%2Fz78vh%2Fdownload>.
- Patt, A., **Lilliestam, J.** (2018): The case against carbon prices, in *Joule* 2 (12), pp. 2494-2498. <https://doi.org/10.1016/j.joule.2018.11.018>. (Open access)
- Labordena, M., Neubauer, D., Folini, D., Patt, A., **Lilliestam, J.** (2018): Blue skies over China: the effect of pollution-control on solar power generation and revenues, in: *PLOS ONE* 13 (11), e0207028. <https://doi.org/10.1371/journal.pone.0207028>. (Open access)
- Lilliestam, J.**, Pitz-Paal, R. (2018): Concentrating solar power for less than USD 0.07 per kWh: finally the breakthrough?, in: *Renewable Energy Focus* 26, pp. 17-21. <https://doi.org/10.1016/j.ref.2018.06.002>. (Open access)
- Lilliestam, J.**, Barradi, T., Caldés, N., Gomez, M., Hanger, S., Kern, J., Komendantova, N., Mehos, M., Hong, W.M., Wang, Z., Patt, A. (2018): Policies to keep and expand the option of concentrating solar power for dispatchable renewable electricity, in: *Energy Policy* 116, pp.193-197. <https://doi.org/10.1016/j.enpol.2018.02.014>.
- Lilliestam, J.**, Labordena, M., Patt, A., Pfenninger, S. (2017): Empirically observed learning rates for concentrating solar power and their responses to regime change, in *Nature Energy* 2, p. 17094. <http://dx.doi.org/10.1038/nenergy.2017.94>.
- Aryandoust, A., **Lilliestam, J.** (2017): The potential and usefulness of demand response to provide electricity system services, in *Applied Energy* 204, pp. 749-766. <http://dx.doi.org/10.1016/j.apenergy.2017.07.034>.
- Labordena, M., Bazilian, M., Howells, M., Patt, A., **Lilliestam, J.** (2017): Impact of political and economic barriers for concentrating solar power in Sub-Saharan Africa, in *Energy Policy* 102, pp. 52-72. <https://doi.org/10.1016/j.enpol.2016.12.008>. (Open Access)
- Robledo-Abad, C., Althaus, H.J., Berndes, G., Bolwig, S., Corbera, E., Creutzig, F., Garcia-Ulloa, J., Geddes, A., Gregg, J., Haberl, H., Hanger, S., Harper, R.J., Hunsberger, Larsen, R.K., Lauk, C., Leitner, S., **Lilliestam, J.**, Lotze-Campen, H., Muys, B., Nordborg, M., Ölund, M., Orlowsky, B., Popp, A., Portugal-Pereira, J., Reinhard, J., Scheffle, L., Smith, P. (2017): Bioenergy production and sustainable development: the science base for policymaking remains limited, in: *Global Change Biology Bioenergy* 9 (3), pp. 541-556. <http://dx.doi.org/10.1111/gcbb.12338>. (Open Access)
- Scolobig, A., **Lilliestam, J.** (2016): Comparing approaches for the integration of stakeholder perspectives in environmental decision making, in *Resources* 5 (4), 37. <http://dx.doi.org/10.3390/resources5040037>. (Open Access)

- Lilliestam, J.**, Ellenbeck, S., Karakosta, C., Caldés, N. (2016): Understanding the absence of renewable electricity imports to the European Union, in: *International Journal of Energy Sector Management* 10 (3), pp. 291-311. <http://dx.doi.org/10.1108/IJESM-10-2014-0002>.
- Frieden, D., Tuerk, A., Đukan, M., Ortner, A., **Lilliestam, J.** (2016). Sharing the gains from EU-Western Balkan renewable electricity cooperation, in: *Climate Policy* 16 (5), pp 606-621. <http://dx.doi.org/10.1080/14693062.2016.1155041>.
- Eid, C., Bollinger, A., Koirala, B., Scholten, D., Facchinetti, E., **Lilliestam, J.**, Hakvoort, R. (2016): Market integration of local energy systems: is local energy management compatible with European regulation for retail competition?, in: *Energy* 114, pp. 913-922. <http://dx.doi.org/10.1016/j.energy.2016.08.072>. (Open Access)
- Lilliestam, J.**, Hanger, S. (2016): Shades of green: centralisation, decentralisation and controversy among European renewable electricity visions, in: *Energy Research & Social Science* 17, pp. 20-29. <http://dx.doi.org/10.1016/j.erss.2016.03.011>.
- Schmidt, P., **Lilliestam, J.** (2015): Reducing or fostering acceptance? A critical reflection on the neutrality of cost-benefit analysis in European transmission planning, in: *Energy Research & Social Science* 10, pp. 114-122. <http://dx.doi.org/10.1016/j.erss.2015.07.003>.
- Labordena, M., **Lilliestam, J.**: Cost and transmission requirements for reliable solar electricity from deserts in China and the United States, in: *Energy Procedia* 76, pp. 77-86. <http://dx.doi.org/10.1016/j.egypro.2015.07.850>. (Open Access)
- Lilliestam, J.**, Patt, A. (2015): Barriers, risks and policies for renewables in the Gulf, in *Energies* 8 (8), pp. 8263-8285. <http://dx.doi.org/10.3390/en8088263>. (Open Access)
- Lilliestam, J.**, Pfenninger, S., Gauché, P., Damerau, K., Wagner, F., Patt, A. (2014): On the limits to solar thermal power: a reply to Trainer, in: *Energy Policy* 75, pp. 424-425. <http://dx.doi.org/10.1016/j.enpol.2014.09.020>.
- Pfenninger, S., Gauché, P., **Lilliestam, J.**, Damerau, K., Wagner, F., Patt, A. (2014): The potential for concentrating solar power systems to provide baseload and dispatchable power, in: *Nature Climate Change* 4:8, pp. 689-692. <http://dx.doi.org/10.1038/nclimate2276>.
- Lilliestam, J.** (2014): Vulnerability to terrorist attacks in European electricity decarbonisation scenarios: comparing renewable electricity imports to gas imports, in: *Energy Policy* 66, pp. 234-248. <http://dx.doi.org/10.1016/j.enpol.2013.10.078>.
- Ellenbeck, S., Schmidt, P., Battaglini, A., **Lilliestam, J.** (2013): Der Strommarkt als soziale Institution: Eine erweiterte Perspektive auf die deutsche Diskussion um Kapazitätsmechanismen, in: *Vierteljahreshefte zur Wirtschaftsforschung* 03.2013, pp. 171-182. (Open Access)
- Patt, A., Pfenninger, S., **Lilliestam, J.** (2013): Vulnerability of solar energy infrastructure and output to climate change, in: *Climatic Change* 121, pp. 93-102. <http://dx.doi.org/10.1007/s10584-013-0887-0>.
- Schmidt, P., **Lilliestam, J.**, Battaglini, A. (2013): Electricity pathways for Tunisia: comparing the viability and impacts of the nuclear and renewable options, in: *Current politics and economics of Africa*, vol. 5:4.
- Lilliestam, J.**, Bielecki, J., Patt, A. (2012): Comparing carbon capture and storage (CCS) with concentrating solar power (CSP): potentials, costs, risks, and barriers, in: *Energy Policy* 47, pp. 447-455. <http://dx.doi.org/10.1016/j.enpol.2012.05.020>.
- Lilliestam, J.**, Ellenbeck, S. (2012): Fostering interdependence to reduce political risks in a European-North African renewable electricity Supergrid, in: *The international journal on sustainable energy conversion and storage / Green* 2:2-3, pp. 105-109. <http://dx.doi.org/10.1515/green-2012-0003>.

- Lilliestam, J.**, Battaglini, A., Finlay, C., Fürstenwerth, D., Patt, A., Schellekens, G., Schmidt, P. (2012): An alternative to a global climate deal may be unfolding before our eyes, in: *Climate and Development* 4:1, pp. 1-4. <http://dx.doi.org/10.1080/17565529.2012.658273>. (Open Access)
- Patt, A., Komendantova, N., Battaglini, A., **Lilliestam, J.** (2011): Regional integration to support full renewable power deployment for Europe by 2050, in: *Environmental Politics* 20 (5), pp.727-742. <http://dx.doi.org/10.1080/09644016.2011.608537>.
- Lilliestam, J.**, Ellenbeck, S. (2011): Energy security and renewable electricity trade – will Desertec make Europe vulnerable to the “energy weapon”?, in: *Energy Policy* 39, pp. 3380-3391. <http://dx.doi.org/10.1016/j.enpol.2011.03.035>.
- Förster, H., **Lilliestam, J.** (2011): Modeling thermoelectric power generation in view of climate change: A reply, in: *Regional environmental change* 11, pp. 211-212. <http://dx.doi.org/10.1007/s10113-010-0117-5>.
- Williges, K., **Lilliestam, J.**, Patt, A. (2010): Making concentrated solar power competitive with coal: the costs of a European feed-in tariff, in: *Energy Policy* 38, pp. 3089-3097. <http://dx.doi.org/10.1016/j.enpol.2010.01.049>
- Förster, H., **Lilliestam, J.** (2010): Modeling thermoelectric power generation in view of climate change, in: *Regional environmental change* 10, pp. 327-338. <http://dx.doi.org/10.1007/s10113-009-0104-x>.
- Battaglini, A, **Lilliestam, J.**, Haas, A., Patt, A. (2009): Development of SuperSmart Grids for a more efficient utilisation of electricity from renewable sources, in: *Journal of cleaner production* 17 (10), pp. 911-918. <http://dx.doi.org/10.1016/j.jclepro.2009.02.006>.

Open datasets

- Lilliestam, J.**, Thonig, R., Gilmanova, A., Zang, C. (2021), *CSP.guru*. Data version: July 2021. Open dataset. Project data for all concentrating solar power stations currently operational or under construction. Johan Lilliestam, IASS Potsdam. <http://doi.org/10.5281/zenodo.5094290>.
- Lilliestam, J.**, Thonig, R., Gilmanova, A., Zang, C. (2021), *CSP.guru*. Data version: January 2021. Open dataset. Project data for all concentrating solar power stations currently operational or under construction. Johan Lilliestam, IASS Potsdam. <http://doi.org/10.5281/zenodo.4613099>.
- Thonig, R., **Lilliestam, J.**, Gilmanova, A., Zang, C. (2020), *CSP.guru*. Data version: November 2020. Open dataset. Project data for all concentrating solar power stations currently operational or under construction. Johan Lilliestam, IASS Potsdam. <http://doi.org/10.5281/zenodo.4297966>.
- Thonig, R., **Lilliestam, J.**, Gilmanova, A., Zang, C. (2020), *CSP.guru*. Data version: January 2020. Open dataset. Project data for all concentrating solar power stations currently operational or under construction. Johan Lilliestam, IASS Potsdam. <http://doi.org/10.5281/zenodo.3909229>.
- Lilliestam, J.**, Thonig, R. (2019), *CSP.guru*. Data version: January 2019. Open dataset. Project data for all concentrating solar power stations currently operational or under construction. Johan Lilliestam, IASS Potsdam. <http://doi.org/10.5281/zenodo.3466625>.
- Hafner, S., **Lilliestam, J.** (2019). *The global renewable power support database*. Open dataset. Policy data on renewable power support schemes in all countries, 1990-2016. Sarah Hafner, Johan Lilliestam, IASS Potsdam. <https://www.doi.org/10.5281/zenodo.3371375>.

- Lilliestam, J.**, Labordena, M., Ollier, L., Pfenninger, S. (2018), *CSP.guru*. Data version: May 2018. Open dataset. Project data for all concentrating solar power stations currently operational or under construction. Johan Lilliestam, ETH Zürich. <http://doi.org/10.5281/zenodo.1342716>.
- Lilliestam, J.**, Labordena, M., Pfenninger, S. (2017), *CSP.guru*. Data version: August 2016. Open dataset. Project data for all concentrating solar power stations currently operational or under construction. Johan Lilliestam, ETH Zürich. <http://doi.org/10.5281/zenodo.1318152>.

Peer-reviewed publications currently in review

- Kleanthis, N., Stavrakas, V., Ceglarz, A., Süsser, D., Schibline, A., **Lilliestam, J.**, Flamos, A.: Stakeholder perspectives on the critical issues and challenges of the European to climate neutrality in different geographical contexts. Submitted to *Energy Research & Social Science* in January 2022.
- Lilliestam, J.**, Patt, A., Bersalli, G.: The observed effects of carbon pricing on zero-carbon investments, innovation, and emission reductions. A response to van den Bergh and Savin (2021). Submitted to *Environmental and Resource Economics* in December 2021, revised in March 2022.
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Books, book chapters, reports, non-peer-reviewed articles

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- Mey, F., **Lilliestam, J.** (2022, in press): Tipping points in transitions of socio-economic systems. Book chapter in: Velez Cuaratas, G. et al: *Tipping metrics*. University of Antioquia.
- Süsser, D., Pickering, B., Chatterjee, S., Orggioni, G., Stavrakas, V., Lilliestam, J. (2021): *Integration of socio-technological transition constraints into energy demand and system models*. Deliverable 2.5, Sustainable Energy Transitions Laboratory (SENTINEL) project, Institute for Advanced Sustainability Studies (IASS), Potsdam. Doi: <https://doi.org/10.48481/iass.2021.030>.
- Süsser, D., al Rakouki, H., **Lilliestam, J.** (2021): *The QTIDIAN modelling toolbox – quantification of social drivers and constraints of the diffusion of energy technologies*. Deliverable 2.3. Sustainable Energy Transitions Laboratory (SENTINEL) project, Institute for Advanced Sustainability Studies (IASS), Potsdam. <https://doi.org/10.48481/iass.2021.015>. Data available at: <http://doi.org/10.5281/zenodo.5834010>.
- Sierro, F., Ejderyan, O., Blumer, Y., **Lilliestam, J.** (2021): Erfolgreiche partizipative Projektentwicklung findet auf unterschiedlichen Ebenen der Zusammenarbeit statt, in: *Wasser, Energie, Luft* 113 (2), pp. 106-109.

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EXTERNALLY FUNDED RESEARCH PROJECTS

I have lead-authored or contributed WPs to **15 successful competitive research project proposals**, all of which were successfully finished or are currently ongoing. In total, these projects have generated **€4.1 million** for my institutions.

Ongoing third-party funded research projects

Aug.17-Jan.23 Principal investigator of *TRIPOD (The transition to a renewable electricity system and its interactions with other policy aims)*. Funded by the European Research Council. IASS budget €1,499,940.

May20-Apr.23 Work package leader of *TIPPING+ (Enabling positive tipping points towards clean-energy transitions in coal and carbon intensive regions)*. Funded by the European Commission (Horizon 2020). IASS budget €245,500. Total project budget €2,996,189.

Jun.19-May22 Work package leader of *SENTINEL (The Sustainable Energy Transitions Laboratory)*. Funded by the European Commission (Horizon 2020). IASS budget €421,875. Total project budget €4,898,340.

Finished research projects

Jan.20-Nov.21 Principal investigator of *OpenCSP (Open data for commercial CSP projects)*. Funded by SolarPACES. IASS budget: €57,682 Total budget €98,932 (with Chinese Academy of Science (China), National Renewable Energy Laboratory (USA)).

Oct.17-Mar.21 Work package leader of *MUSTEC (Market uptake of solar thermal electricity in Europe through cooperation)*. Funded by the European Commission (Horizon 2020). IASS budget: €262,875. Total project budget €2,405,706.

Jan. 17-Dec. 21 Work package leader, Policy scenarios for hydropower in Switzerland. WP4.3 of SCCER –SoE (*Swiss Competence Centre for Energy Research – Supply of Electricity*). Funded by the Federal Swiss Office of Energy. ETHZ budget CHF 240,000. Total budget CHF 4,000,000. (Involvement ended with move to IASS in April 2019, lead passed on to Anthony Patt)

Oct. 13-Oct. 16 Co-author of *INSPIRE GRID (Improved and enhanced stakeholder participation in reinforcement of the electricity grid)*. Funded by the European Commission (Horizon 2020). ETHZ Budget €257,011; PIK (for which I wrote the WP proposal): €439,724. Total project budget: € 2.6 million.

May 12-Apr. 15 Work package leader of *BETTER (Bringing Europe and third countries closer together through renewable energies)*. Carried out at Potsdam Institute for Climate Impact Research (PIK). Funded by the European Commission, Intelligent Energy Europe. PIK budget: €159,800. Total project budget: €2,002,389. (Ended with move to ETH in December 2013)

Jan. 11-Mar. 13 First author of the *Security of electricity supply project*. Carried out at PIK, International Institute for Applied Systems Analysis (IIASA). Funded by Smart energy for Europe platform (SEFEP). PIK budget: €54,700, IIASA budget €39,300.

Jan.-Dec. 11 Co-author of the project *100% renewable electricity – Analysis of recent European policies' consistency with 2050 decarbonization* (follow-up on the Roadmap study). Carried out at PIK & IIASA. Funded by Smart energy for Europe platform (SEFEP). PIK budget: €43,000.

Aug.-Nov. 10 Co-author of *A global renewable energy investment plan (GRIP)*. Carried out at PIK. Funded by the German federal ministry for the environment. PIK budget: €50,000.

- Jan.-Dec. 10** **Co-author** of *Roadmap for 100% renewable electricity in Europe and North Africa*. Carried out at PIK & IIASA. Funded by the European climate foundation (ECF). PIK & IIASA budget: €198,701.
- Sept. 09-Dec. 10** **Co-author** of the *SuperSmart Grid* project. Funded by the European climate foundation (ECF). PIK budget: €50,000.
- Nov. 09** **Organiser** of *Linking the MENA region's renewable resources to Europe: scientific workshop to advance policy-relevant knowledge*. Carried out at PIK. Funded by European Climate Foundation. Total budget: € 49,880.
- Sept. 08** **Co-organiser** *German-Italian cooperation for the development of renewable energies in the Mediterranean*. Carried out at PIK. Funded by the Italian Embassy in Germany. PIK budget: €50,000.

Participation in third-party funded projects

- Jan. 13-Dec. 18** **Co-author** of *DESERTECTION (Social challenges of trans-Mediterranean renewable power cooperation)*. Carried out at ETH Zürich. Funded by the European Research Council. PI: Anthony Patt. ETHZ budget € 1,470,698.
- Mar. 11-Feb.14** **Co-author** of *CLIM-RUN ("Climate local information in the Mediterranean region – responding to user needs")*, Funded by the European Commission (FP7). PIK budget: € 224,600. (Involvement ended with move to ETH in December 2013). Proposal written by Antonella Battaglini.
- Nov. 07-Dec. 09** **Co-author** of *CIRCE ("Climate change and impact research: the Mediterranean environment")*. Funded by the European Commission (FP6). PIK budget € 501,000. Proposal written by Antonella Battaglini.
- Sept. 07-Sept. 08** **Coordinating author** of *KLIMINVEST ("Investitionen für ein klimafreundliches Deutschland")*. Funded by the German federal ministry for the environment. Total budget: € 641,303. Proposal written by Eberhard Jochem and Carlo Jaeger (PIs).

TEACHING

- 2022.02.01** **University of Potsdam**, Lecture series Introduction to climate, earth, water, sustainability. <https://puls.uni-potsdam.de/qisserver/rds?state=verpublish&status=init&vmfile=no&publishid=90560&moduleCall=webInfo&publishConfFile=webInfo&publishSubDir=veranstaltung>.
- 2021.11.03** **Universidad Pontificia Boliviana & University of Potsdam**, Lecture series Societal Transformation Processes. *100% decarbonisation - policy and instruments*. <https://www.uni-potsdam.de/de/coilup/informationen-veranstaltungen/lecture-series-societal-transformation>.
- Oct.21-Feb. 22** **University of Potsdam**. *Climate and energy transition policy*. 15 weeks x 2 hours, 6 ECTS. <https://puls.uni-potsdam.de/qisserver/rds?state=verpublish&publishContainer=lectureContainer&publishid=89190>.
- April-July 21** **University of Potsdam**. *Energy policy: instruments for deep decarbonisation*. 7x4 hours, 6 ECTS. Online seminar. <https://puls.uni-potsdam.de/qisserver/rds?state=verpublish&status=init&vmfile=no&publishid=86758&moduleCall=webInfo&publishConfFile=webInfo&publishSubDir=veranstaltung>.
- 2021.06.29** **University of Potsdam**. Ringvorlesung zur Klimakrise. Vorlesung *Politik für ein CO₂-neutrales Energiesystem*. <https://www.uni-potsdam.de/de/umweltportal/ringvorlesung-zur-klimakrise>.

- Oct.20-Feb. 21 University of Potsdam.** *Climate and energy transition policy.* 13 weeks x 2 hours, 6 ECTS. Online seminar. <https://puls.uni-potsdam.de/qisserver/rds?state=verpublish&status=init&vmfile=no&moduleCall=webInfo&publishConfFile=webInfo&publishSubDir=veranstaltung&veranstaltung.veranstaltung.tid=83501>.
- 2020.06.30 University of Potsdam.** Ringvorlesung zur Klimakrise. Vorlesung *Politik für ein CO₂-neutrales Energiesystem.* <https://puls.uni-potsdam.de/qisserver/rds?state=verpublish&status=init&vmfile=no&publishid=81911&moduleCall=webInfo&publishConfFile=webInfo&publishSubDir=veranstaltung>.
- April-July 20 University of Potsdam.** *Energy policy: instruments for deep decarbonisation.* 7x4 hours, 6 ECTS. Online seminar. <https://puls.uni-potsdam.de/qisserver/rds?state=verpublish&status=init&vmfile=no&publishid=79755&moduleCall=webInfo&publishConfFile=webInfo&publishSubDir=veranstaltung>.
- Oct.19-Feb. 20 University of Potsdam.** *Climate and energy transition policy.* 15 weeks x 2 hours, 6 ECTS. <https://puls.uni-potsdam.de/qisserver/rds?state=verpublish&status=init&vmfile=no&publishid=78509&moduleCall=webInfo&publishConfFile=webInfo&publishSubDir=veranstaltung&language=en>.
- Sep.-Dec. 18 ETH, Zürich.** *Environmental sciences Master course: Climate Policy.* Theoretical foundations and differing perspectives on climate change mitigation policy. 14 weeks x 3 hours, 6 ECTS. <http://www.vvz.ethz.ch/lerneinheitPre.do?semkez=2018W&lerneinheitId=124201&language=en>. With Anthony Patt.
- 2018.06.14 University of Konstanz, Germany, Master course: Controversial and critical views on global environmental issues,** Zukunftskolleg. Lecture: *Climate policies that might actually work.*
- Feb.-June 18 ETH, Zürich.** *Environmental sciences Bachelor course: Praktikum Anthroposphäre.* Energy scenario building and multi-criteria analysis in stakeholder workshops. 14 weeks x 14 hours, 7 ECTS. <http://www.vvz.ethz.ch/lerneinheitPre.do?semkez=2017S&lerneinheitId=112847&language=de>. With Oscar van Vliet (course leader), Pius Krütli and Leonhard Späth.
- 2017.11.16 University of Konstanz, Germany, Master course: Controversial and critical views on global environmental issues,** Zukunftskolleg. Lecture: *Climate policies that might actually work.*
- Sep.-Dec. 17 ETH, Zürich.** *Environmental sciences Master course: Climate Policy.* Theoretical foundations and differing perspectives on climate change mitigation policy. 14 weeks x 3 lectures, 6 ECTS. <http://www.vvz.ethz.ch/Vorlesungsverzeichnis/lerneinheitPre.do?semkez=2017W&ansicht=ALLE&lerneinheitId=118739&language=en> With Anthony Patt.
- Feb.-June 17 ETH, Zürich, Course leader.** *Environmental sciences Bachelor course: Praktikum Anthroposphäre.* Energy scenario building and multi-criteria analysis in stakeholder workshops. 14 weeks x 14 hours, 7 ECTS. <http://www.vvz.ethz.ch/lerneinheitPre.do?semkez=2017S&lerneinheitId=112847&language=de>. With Oscar van Vliet and Pius Krütli.
- 2016.11.15 ETH, Zürich, Master Course "Introduction to sustainable development in the built environment",** Department for Civil, Environmental, and Geomatic Engineering: lecture on *Climate policy: The Paris agreement, renewables and difficult choices.*

- Feb.-June 16** ETH, Zürich, Course leader. *Environmental sciences Bachelor course: Praktikum Anthroposphäre*. Energy scenario building and multi-criteria analysis in stakeholder workshops. **14 weeks x 14 hours, 7 ECTS.** <http://www.vvz.ethz.ch/lerneinheitPre.do?semkez=2016S&lerneinheitId=104988&lang=en>. With Oscar van Vliet and Pius Krütli.
- 2015.12.07** ETH, Zürich, Masters Course "Introduction to sustainable development in the built environment", Department for Civil, Environmental, and Geomatic Engineering: lecture on *Renewables: centralisation and decentralisation*.
- Feb.-May 15** ETH, Zürich, Course leader. *Environmental sciences Bachelor course: Praktikum Anthroposphäre*. Energy scenario building and multi-criteria analysis in stakeholder workshops. **14 weeks x 14 hours, 7 ECTS.** <http://www.vvz.ethz.ch/Vorlesungsverzeichnis/lerneinheitPre.do?lerneinheitId=97261&semkez=2015S&lang=de>. With Oscar van Vliet.
- 2014.11.27** ETH, Zürich, Switzerland. Master of Advanced Studies, Masters course "Development and Cooperation": lecture on *Global, European and national climate policy*.
- Feb.-May 14** ETH, Zürich. *Environmental sciences Bachelor course: Praktikum Anthroposphäre*. Energy scenario building and multi-criteria analysis in stakeholder workshops. **14 weeks x 14 hours, 7 ECTS.** <http://www.vvz.ethz.ch/Vorlesungsverzeichnis/lerneinheitPre.do?semkez=2014S&lerneinheitId=90123&ansicht=ALLE&lang=en>. With Pius Krütli (course leader), Oscar van Vliet.
- 2012.12.03 & 12.10** Berlin School of Economics, Berlin, Germany, Masters course Political economy of European integration: 4 seminars (*European energy policy* (2 seminars), *Decarbonisation concepts and technologies* (2 seminars)).
- 2011.11.28 & 12.05** Berlin School of Economics, Berlin, Germany, Masters course Environment, sustainability, security: 4 seminars (*European energy policy: aims, measures, conflicts* (2 seminars), *Electricity generation technologies, transmission and storage* (1 seminar), *Scenarios for the European electricity system in 2050* (1 seminar)).
- 2010.11.29 & 12.06** Berlin School of Economics, Berlin, Germany, Masters course Environment, sustainability, security: 4 seminars (*European energy policy* (2 seminars), *Electricity technologies and concepts, Europe's electricity future*).

STUDENT SUPERVISION

Supervision of PhD students

Dec. 21-current

Co-supervision of Rabea Scholz, University of Potsdam, Faculty of Economics and Social Sciences. *Perceptions and effects of justice in the climate policy debate*. (working title). With Fabian Schuppert, University of Potsdam (co-supervisor).

Sept. 21-current

Co-supervision of Nicoletta Brazzola, ETH Zürich, Institute for Environmental Decisions. *Entering negative territories: economic outcomes and political feasibility of strategies to enable carbon removal* (working title). With Anthony Patt, ETH Zürich (main supervisor).

Apr. 18-current

Supervision of Richard Thonig, Universität Potsdam, Faculty of Economics and Social Sciences: *The political economy of socio-technical transitions* (working title).

Dec. 17-current

Supervision of Lana Ollier, Universität Potsdam, Faculty of Economics and Social Sciences: *Policy interactions in the transition to renewables: the effects of policy mixes on the strategic behaviour of energy system actors* (working title). With Florence Metz, University of Twente (co-supervisor).

Sept. 17-current

Supervision of Marc Melliger, Universität Potsdam, Faculty of Economics and Social Sciences: *The liberalisation of the power market and the transition to renewables in Europe: do they fit together?* (working title). With Emile Chappin, TU Delft (co-supervisor).

Apr. 19-current

Supervision of Saskia Ellenbeck, Universität Potsdam, Germany, Department of Economics and Social Science: *Wissensproduktionsprozesse in der Energiewende*.

Completed PhDs

Aug. 17-Mar. 20

Supervision of Tim Tröndle, ETH Zürich, Institute for Environmental Decisions: *Renewable electricity for all. Untangling conflicts about where to build Europe's future supply infrastructure*. Defense date: 2020.03.30. With Stefan Pfenninger, ETH Zürich (co-supervisor & co-examiner) and Anthony Patt, ETH Zürich (co-examiner).

Oct. 14-Dec.18

Supervision of Mercè Labordena, ETH Zürich, Institute for Environmental Decisions: *Accelerating the energy transition: assessing ambitious scenarios to make solar power a global solution*. Defense date: 2018.12.12. With Anthony Patt, ETH Zürich (co-supervisor).

Awards for PhD students

June 20 **ABB research award** for an excellent doctoral thesis in the field of energy systems research for Tim Tröndle.

PhD committees

Mar. 20 **External examiner** of the PhD thesis of Franziska Schütze, Department of Economics and Social Science, University of Potsdam: *Finance for a sustainable economy. Implications for policy and practice*. Defense date: 2020.04.15.

Sept. 19 **External examiner** of the PhD thesis of Frank Duvenhage, Faculty of Engineering, Stellenbosch University, South Africa: *Sustainable CSP fleet deployment in South Africa: a hydrological approach to strategic management*. Defense date: 2019.09.25.

RESEARCH GROUP

06.20-current **Research Associate** Dr. Franziska Mey, IASS Potsdam. TIPPING+ project.

11.19-current **Research Associate** Dr. Diana Süsler, IASS Potsdam. SENTINEL project.

10.19-current **Research Associate** Dr. Germán Bersalli, IASS Potsdam, TRIPOD & MUSTEC projects.

09.17-current **PhD student** Marc Melliger, ETH Zürich & IASS Potsdam. TRIPOD project.

- 04.18-current** **PhD student** Richard Thonig, ETH Zürich & IASS Potsdam. MUSTEC & OpenCSP projects.
- 12.17-03.21** **PhD student** Lana Ollier, ETH Zürich & IASS Potsdam. TRIPOD & MUSTEC projects.
- 04.20-12.20** **Research Associate** Dr. Tim Tröndle, IASS Potsdam, TRIPOD project.
- 08.17-03.20** **PhD student** Tim Tröndle, ETH Zürich & IASS Potsdam. TRIPOD project.
- 01-12.20** **Research Associate** Hannes Gaschnig, IASS Potsdam. SENTINEL project.
- 09-12.18** **Research Assistant** Ana Gamarra, ETH Zürich, TRIPOD & MUSTEC projects.

DIDACTIC COURSES & EDUCATIONAL DEVELOPMENT

- 2018.11.12** **Using rubrics to grade, assess and improve student learning**, ½ day, *Didactica* programme, Universität Zürich, ETH Zürich.
- 2018.11.08** **Diskussionen sinnvoll einsetzen und anregen**, 1 full day, *Didactica* programme, Universität Zürich, ETH Zürich.
- 2018.09.05** **Leadership for innovation**, 1 full day, ETH Human Resources Personnel and Organizational Development. ETH Zürich.
- 2017.08.24-28** **Teaching at ETH: committed and skilled**, Course 1 of the Educational Development
Oct 17-May 18 and Technology continuing education programme in university teaching for ETH
faculty members. 7 full days *Department of Education Development and Technology*,
ETH Zürich.
- 2017.10.27** **Supervising students – dealing with roles and relationships**, 6 hours course,
Didactica programme, Universität Zürich, ETH Zürich.
- 2017.10.05** **Improving presentations**, 1 full day, *Didactica* programme, Universität Zürich, ETH
Zürich.
- 2017.09.21-22** **Begleitung von Studierenden bei Bachelor- und Masterarbeiten** [Advising
Bachelor and Master theses], 2 days, *Didactica* programme, Universität Zürich.
- 2017.09.08-15** **Leadership in academia**, 2 days, *Department of Education Development and
Technology*, Association of Academic Staff at D-USYS, ETH Zürich
- 2017.02.14-15** **Rhetoric in higher education**, 2 days, *Didactica* programme, Universität Zürich.

ADVICE

- 2022.02.11** **European Academy of Sciences and Arts (EASA)**, The transition towards a
renewables-based European electricity system is technically feasible, economically
viable and socially sustainable. White paper written by Helgenberger, S.,
Lilliestam, J., Quitzow, R. Renn, O., Institute for Advanced Sustainability Studies
(IASS), Potsdam.
- 2021.02.16** **Bundesministerium für Wirtschaft und Energie**, *Über die Rolle von CO2-
Bepreisung für vollständige Dekarbonisierung*. Abteilungen II und III,
Bundeministerium für Wirtschaft und Energie (BMWi), Berlin.
- 2020.11.24** **Werkstattverfahren Energie- & Dekarbonisierungsstrategie der Energie und Wasser
Potsdam**, Stadtwerke Potsdam.

2019.02.28 Advice on restructuring the Swedish development policy in the energy sector; Swedish foreign ministry, Department "Global agenda". With Ambassador Thöresson, Magnus Lennartsson (Lead Global Agenda, Swedish Foreign Ministry), Inger Buxton (Deputy lead, Global Agenda). At Swedish Residence, Berlin.

MEDIA and OUTREACH (selection)

- Feb. 22** **Tyskland gasar på – för mer el** Interview in Vetenskapsradion Klotet, Sveriges Radio P1 [Germany speeds up – for more electricity, Swedish national radio P1]. <https://sverigesradio.se/avsnitt/tyskland-gasar-pa-for-mer-el>. (2022.02.09)
- Jan. 22** **Enorm potential i nygammal solteknologi** [Enormous potential in ‘new yet old’ solar technology]. Interview in Dagens Industri <https://www.di.se/hallbart-naringsliv/enorm-potential-i-nygammal-solteknologi/> (2022.01.22)
- Dec. 21** **Forscher aus Potsdam und Zürich entwickeln „Solar-Kerosin“ für Flugzeuge.** Interview in Welt TV, <https://www.welt.de/vermischtes/video235542084/Solar-Kerosin-Forscher-aus-Potsdam-und-Zuerich-entwickeln-aus-Luft-und-Licht-Treibstoff-fuer-Flugzeuge.html> (2021.12.08).
- Nov. 21** **Solares Kerosin: Treibstoff der Zukunft.** Interview in Rundfunk Berlin-Brandenburg, RBB Info. <https://www.inforadio.de/programm/schema/sendungen/wissenswertes/202111/22/638271.html> (2021.11.22).
- Nov. 21** **Making jet fuel of sunlight and air**, Interview in Optica, https://www.optica-opn.org/home/newsroom/2021/november/making_aircraft_fuel_from_sunlight_and_water/ (2021.11.11)
- Nov. 21** **Jet fuel from thin air**, Interview in BBC Science in Action, BBC world, <https://www.bbc.co.uk/sounds/play/w3ct114k>. (2021.11.04)
- Nov. 21** **Kerosin aus Luft und Sonnenlicht (English cc available)**, IASS video channel, (<https://www.youtube.com/watch?v=JQwGrG0fGIY>) (2021.11.03)
- Aug. 21** **Das EEG als zentrales Instrument der deutschen Klimapolitik**, IASS Blog (<https://www.iass-potsdam.de/de/blog/2021/08/das-eeg-als-zentrales-instrument-der-deutschen-klimapolitik>); in English: <https://www.iass-potsdam.de/en/blog/2021/08/eeg-core-instrument-german-climate-policy>).
- May 21** **Ask a scientist**, Potsdamer Tag der Wissenschaften (<https://ptdw.de/ask-a-scientist/>) (2021.05.08).
- January 21** **Der CO₂-Preis kann kein Leitinstrument sein.** Interview in Klimareporter, (2021.01.22) <https://www.klimareporter.de/gesellschaft/der-co-preis-kann-kein-leitinstrument-sein>
- November 20** **Ohne Masterplan.** Summary of Thonig et al. (2020), in *Forschung & Lehre* 11/2020, p. 924.
- October 20** **Was bringen CO₂-Preis und Emissionshandel wirklich?** Interview in Podcast KingKongKlima. (<https://www.kingkongklima.de/33-emissionshandel>) 2020.10.25.
- April 20** **Crises as climate catalysts**, Nature Behavioural & Social Sciences. (<https://socialsciences.nature.com/users/341377-johan-lilliestam/posts/66603-crises-as-climate-catalysts>). 2020.04.22.
- February 20** **Exploring the effects of exchange rate fluctuations on technological learning rates.** Interview with TechXplore. (<https://techxplore.com/news/2020-02-exploring-effects-exchange-fluctuations-technological.html>). 2020.02.04

- January 20** **Focusing on technological learning in learning rate assessments**, *Nature Behavioural & Social Sciences*, Behind the paper channel. <https://socialsciences.nature.com/users/341377-johan-lilliestam/posts/58259-focusing-on-technological-learning-in-learning-rate-assessments>. 2020.01.14.
- November 19** **Gegenwind: Die Union sucht nach Alternativen zu den unbeliebten Windkraftanlagen**. *Der Spiegel*, 48 (2019.11.23), p.29f.
- November 19** **Windkraft: Die Mark bleibt trotz neuer Regeln im Soll**. *Märkische Allgemeine* 2019.11.23, Title page.
- November 19** **Energie geht alle an**. Personal profile article in *Tagesspiegel* 2019.11.16.
- September 19** **Das Klimapaket der Bundesregierung: wie viel bringt die CO₂-Bepreisung?** Interview in *RadioEins*, Runkfunk Berlin-Brandenburg [The climate package of the German federal government – will the CO₂ price help?] (https://www.radioeins.de/programm/sendungen/die_schoene_woche/_/klimaschutzplan-der-bundesregierung-.html). 2019.09.20.
- September 19** **Wind und Sonne können Europa zu 100 Prozent versorgen**. *Mitteldeutscher Runkfunk MDR* (<https://www.mdr.de/wissen/umwelt/studie-iass-erneuerbare-energien-koennen-europa-versorgen-100.html>). 2019.09.03.
- April 19** **Konzentrierter Solarkraft – hur fungerar det?** Interview for *Vetandets värld*, *Sveriges Radio P1* (<https://sverigesradio.se/avsnitt/1270769>) [Concentrating solar power – how does it work?, Swedish National Radio]. First broadcast 2019.04.16.
- April 19** **Termisk solkraft spås bli nästa stora trend inom förnybar elproduktion**, Interview for *Vetenskapsradion*, *Sveriges Radio P1* (<https://sverigesradio.se/sida/artikel.aspx?programid=406&artikel=7199602>) [Solar thermal power may be the next big trend in renewable power production, Swedish National Radio]. First broadcast 2019.04.16.
- April 19** **Så skapas det Marockanska solenergiundret**, Interview for *Vetandets Värld*, *Sveriges Radio P1* (<https://sverigesradio.se/sida/avsnitt/1270729?programid=412>) [How the Moroccan solar energy miracle is made, Swedish National Radio]. First broadcast: 2019.04.15.
- April 19** **Die CO₂-Steuer ist das falsche Instrument**. *Tagesspiegel Background* (<https://background.tagesspiegel.de/die-co2-steuer-ist-das-falsche-instrument>).
- February 19** **Eine globale CO₂-Steuer ist nicht genug**. Interview für *Powernewz*, *Elektrizitätswerk der Stadt Zürich* (<https://powernewz.ch/2019/02/28/eine-globale-co2-steuer-ist-nicht-genug>).
- January 19** **Eine Alternative zu CO₂-Steuern**. *Neue Zürcher Zeitung*. Invited commentary. (<https://www.nzz.ch/meinung/eine-alternative-zu-co2-steuern-ld.1452625>). 2019.01.24. Republished by *Institute for Advanced Sustainability Studies* (<https://www.iass-potsdam.de/de/blog/2019/29/eine-alternative-zu-co2-steuern>) in January 2019.
- January 19** **China made solar PV cheap – is CSP next?** *SolarPACES news & analysis* (<https://www.solarpaces.org/china-made-solar-pv-cheap-is-csp-next/>). 2019.01.24
- January 19** **An alternative to carbon taxes**, *ETH Zukunftsblog*. (<https://www.ethz.ch/en/news-and-events/eth-news/news/2019/01/blog-patt-lilliestam-carbon-tax.html>). 2019.01.24. Republished by *Energy Post* (<https://energypost.eu/carbon-taxes-arent-working-any-more-only-ramping-up-policies-and-infrastructure-can-accelerate-the-transition/>) and by *Science X* (<https://phys.org/news/2019-01-alternative-carbon-taxes.html>) in January 2019.
- December 18** **Air pollution is choking solar energy around the world**, *Popular science*, <https://www.popsci.com/smog-reduces-solar-energy>.

- December 18** **Fighting smog supports solar power**, *ETH News*, <https://www.ethz.ch/en/news-and-events/eth-news/news/2018/12/blue-sky-over-china.html>.
- August 18** **How have CSP costs managed to decrease so much?** *HeliosCSP Solar Thermal Energy News* (<http://helioscsp.com/how-have-concentrated-solar-power-costs-managed-to-decrease-so-much/>). 2018.08.03.
- August 18** **How have CSP costs managed to decrease so much?** *Energy Storage Report* (<http://energystoragereport.info/csp-costs-decrease/#sthash.OoIUPEq.dpbs>). 2018.08.02.
- July 18** **What are the pros and cons of longer solar contracts?** *SolarPACES news & analysis* (<https://www.solarpaces.org/what-are-the-pros-and-cons-of-longer-solar-contracts/>). 2018.07.11.
- January 18** **#IstandwithCEU: in their own words**. *Central European University*. Statement on the struggle between the Central European University and the Hungarian government (<https://alumni.ceu.edu/article/2018-01-24/karl-johan-lilliestam-envs-14-phd>).
- September 17** **Another view on climate policy**. Interview for the *TREVE project* (<https://www.treveproject.com/single-post/Another-view-on-energy-policy-interview-Pr-Johan-LILLIESTAM>).
- August 17** **After the Desertec hype: is concentrating solar power still alive?** *ETH Zukunftsblog* (<https://www.ethz.ch/en/news-and-events/eth-news/news/2017/09/concentrating-solar-power.html>).
- June 14** **Solenergi – valet som formar framtiden**. [Solar energy – the decision that shapes the future]. Interview for the Swedish science magazine *Forskning & Framsteg*, issue 6 2014, pp. 64-68.
- May 14** **How resilient is renewable electricity generation?** *ETH Zukunftsblog* (<https://www.ethz.ch/de/news-und-veranstaltungen/zukunftsblog/archiv/2014/05/how-resilient-is-renewable-electricity-generation.html>).
- February 14** **50 shades of green: what determines our electricity future?** *ETH Zukunftsblog* (<https://www.ethz.ch/de/news-und-veranstaltungen/zukunftsblog/archiv/2014/02/50-shades-of-green.html>).
- April 12** **Is global climate protection possible without a global climate deal?** Public Service Europe. Invited opinion article. (<http://www.publicserviceeurope.com/article/1818/green-technologies-could-mean-global-climate-deal-is-not-needed>), 2012.04.20.
- October 09** **Saharastrom für Europa? Das Desertecprojekt und seine Kritiker**. [Sahara power for Europe? The Desertec project and its critics]. Interview for *Kultur, Forschung und Gesellschaft, Deutschlandradio*, First broadcast: 2009.10.15

INVITED TALKS AND PRESENTATIONS

- 2022.03.16** **Malaysian sustainable university network: national conference: Policies for complete decarbonisation of the energy system: lessons from Europe and past transitions** (Keynote)
- 2022.03.07** **KU Leuven, Carbon pricing policy making through a sectoral lens: Sequencing, spending and symbolism in national climate policy**.
- 2021.10.04** **LMET conference 2021: The modelling of the energy transition – cultures, visions, narratives: Where do model results come from? Models as social constructions**.

- 2021.09.29** **KU Leuven, Carbon pricing and net-zero:** *The role of carbon pricing in the policy mix for full decarbonisation.*
- 2021.09.28** **SolarPACES, Albuquerque, USA/online:** *Scaling up concentrating solar power: how, how far, how fast?*
- 2021.09.27** **SolarPACES, Albuquerque, USA/online:** *The global CSP market: state of play and outlook.* Keynote presentation.
- 2021.09.06** **Polis180 TeaTimeTalk, Berlin:** *CBAM: der CO₂-Grenzausgleichsmechanismus.*
- 2021.09.02** **European Consortium for Political Research (ECPR), General Conference, Innsbruck, Austria/online:** *Social tipping dynamics in a German coal phase-out region* (paper presented by Franziska Mey).
- 2021.09.02** **ECPR, General Conference Innsbruck, Austria/online:** *Why do governments implement low carbon prices? Sequencing and symbolism in climate policy.*
- 2021.08.31** **ECPR, General Conference, Innsbruck, Austria/online:** *Is renewable energy technology trade more or less conflictive than other trade?* (paper presented by Maria Apergi).
- 2021.07.02** **Wissensstadt Berlin, Echt oder Fake:** *Der CO₂-Preis: notwendig oder nicht?*
- 2020.08.26** **European Consortium for Political Research (ECPR), General Conference, Innsbruck (online), Austria:** *Adopt, innovate, or nothing? Confronting carbon pricing theory with empirical evidence* (paper presented by Germán Bersalli).
- 2020.03.05** **The future is now: science for achieving sustainable development.** (conference organised by the Welsh government and IASS): *The Energiewende: a tale of two stories.*
- 2020.02.26** **Agora Energiewende, Berlin.** *Warum CO₂-Preise nicht helfen werden.*
- 2019.11.08** **Bündnis Bürgerenergie, Friends of the Earth, Potsdam:** *Going off the grid: on the options for local renewable power autarky in Europe.* Talk and discussion in context of field trip of Czech Mayors to Germany.
- 2019.10.25** **Strommarkttreffen, Berlin:** *The case against carbon pricing.*
- 2019.10.02** **SolarPACES, Daegu, South Korea:** *The near- to mid-term outlook for CSP: mostly cloudy, chance of sun.*
- 2019.10.01** **SolarPACES, Daegu, South Korea:** *Policy and markets for CSP: darkness or glory?* Keynote presentation.
- 2019.09.04** **ECPR, General Conference, Wroclaw, Poland:** *Friends or foes? Competition among European decarbonisation strategies* (paper presented by Lana Ollier).
- 2018.11.29** **SusTec Seminar, ETH Zürich:** *The Guru, the Dragon, and Jean-Claude Juncker. Policy for 100% renewables.*
- 2018.10.16** **Energy Politics Seminar, ETH Zürich:** *The transition to 100% renewables – questioning conventional wisdom to generate useful policy insight.*
- 2018.10.03** **SolarPACES, Casablanca, Morocco:** *The Dragon awakens: is China saving or conquering concentrated solar power?*
- 2018.10.02** **SolarPACES, Casablanca, Morocco:** *Open data for concentrating solar power:* www.csp.guru.
- 2017.11.21** **École normale supérieure de Paris, France:** *To cooperate or not to cooperate: the Energy Union and the plurality of Europe.*
- 2017.11.21** **SimLab, Swiss Competence Centre for Research in Energy, Society and Transition (SCCER-CREST), Zürich:** *Policies and strategies for dispatchable renewable power.*

- 2017.09.26** **SolarPACES**, Santiago, Chile: *Policies to keep concentrating solar power as a renewable dispatchable option for decarbonisation.*
- 2017.09.26** **SolarPACES**, Santiago, Chile: *Open data for concentrating solar power: www.csp.guru.*
- 2016.10.12** **SolarPACES**, Abu Dhabi, United Arab Emirates: *Empirically observed learning curves for concentrating solar power and their response to changes in policy regime and economic context.*
- 2016.09.12** **National Renewable Energy Laboratory**, Golden CO, USA: *Learning curves for concentrating solar power and their response to changes in policy regime and economic context.*
- 2015.10.15** **SolarPACES**, Cape Town, South Africa: *Dispatchable renewable electricity for the large cities in Sub-Saharan Africa.*
- 2015.06.01** **Department for Environmental Systems Sciences**, General USYS Conference 2015, Davos, Switzerland. *How to produce solar power at night.*
- 2015.04.13** **European Geosciences Union (EGU)**, General Assembly 2015, Vienna, Austria. *Potential for deserts to supply reliable renewable electricity to China and the US.* Paper presented by Mercè Labordena.
- 2014.11.18** **Transdisciplinarity lab, ETHZ**, Zürich, Switzerland. Transdisciplinarity seminar: *Two and a half shades of green: values, conflict and the energy transition.*
- 2014.10.08** **Observatoire Méditerranéen de l’Energie**, Paris, France. Bringing Europe and third countries closer together through renewable energies: European stakeholder workshop: *Potential and perspectives of renewable electricity imports in a post-2020 policy framework.*
- 2014.09.22** **Technische Universität Berlin**, Berlin, Germany. Konferenz “Technik und Protest”, panel “Energiewende und Partizipation”: *Hinter dem Kuchendiagramm: Werte, Visionen und Konflikte um unsere Stromzukunft.*
- 2014.07.02** **Organization for security and co-operation in Europe (OSCE)**, Vienna, Austria. Sharing best practices to protect electricity networks from natural disasters: *Protecting the grid from natural hazards.* Paper presented by Oscar van Vliet.
- 2013.08.22** **Heinrich Böll Foundation**, Berlin, Germany. The German Energiewende: *50 shades of green – why renewables are not simply renewables.*
- 2013.04.13** **European fund for the Balkans**, Potsdam, Germany. Fellowship programme for young government officials from the Western Balkans: *Renewable electricity: visions, problems, techno-fixes and ideology.*
- 2013.02.22** **CIEMAT**, Madrid, Spain. CIEMAT industry dialogue meeting: *Areas of concern for the implementation of renewable electricity imports.*
- 2012.07.11** **European Parliament**, Brussels, Belgium. EU energy scenarios and roadmaps towards 2050: *Energy security in decarbonisation scenarios.*
- 2012.05.23** **Renewables Grid Initiative**, Berlin, Germany. Grid master class: Bürger verstehen: *Was haben Klimaschutz, die Energiewende und Stromnetze miteinander zu tun?*
- 2012.05.23** **Renewables Grid Initiative**, Berlin, Germany. Grid master class: Bürger verstehen: *Klimawandel und Klimaschutz – eine kurze Einführung.*
- 2012.05.09** **Renewables Grid Initiative**, Berlin, Germany. Grid master class: Netze verstehen: *Infrastruktur und die Energiewende.*
- 2012.05.07** **University of Bergen**, Norway. Energiforum i Bergen: *Framtidens infrastruktur: elnät och policy för förnybar el.*

- 2012.04.26** **Brandenburg Institute for Society and Security**, Potsdam, Germany. Potsdamer Konferenz für Gesellschaft und Sicherheit: *Renewable energy in Europe from complement to core: improving supply security?*
- 2011.09.22** **German Federal Foreign Office (Auswärtiges Amt)**, Berlin, Germany. International Diplomats Programme, Potsdam: *Progress towards 100% renewable electricity in Europe and North Africa: political and institutional issues.*
- 2011.09.09** **Eberswalde University for Sustainable Development**, Potsdam, Germany. 3rd ICRE Intensive Course on Renewable Energies: *Complete decarbonisation of the European power sector with only renewables.*
- 2011.06.01** **Universität Potsdam**, Potsdam, Germany. Unisolar Veranstaltungsreihe Großtechnische Lösungen für große Probleme – mit Erfolg?: *Macht Wüstenstrom Europa erneuerbar?*
- 2011.05.06** **Urania Wilhelm Foerster e.V.**, Potsdam, Germany: *Mit Atom oder Sonne in eine strahlende Zukunft?*
- 2010.11.20** **Evangelische Akademie Baden**, Bad Herrenalb, Germany. Tagung Erneuerbare Energien: Wege aus der Klimakrise mit zentraler und dezentraler Technik: *Infrastruktur für 100% erneuerbare Energien im Stromsektor.*
- 2010.11.17** **German Federal Foreign Office (Auswärtiges Amt), Europäische Akademie Berlin**, Potsdam, Germany. International visit on energy security and climate policy: *Smart grids.*
- 2010.11.08** **Justus-Liebig-Universität**, Gießen, Germany. Solar Energy Partnership with Africa (SEPA): *Policy issues for the decarbonisation of the European power sector.*
- 2010.10.06** **Institute for International Research**, Amsterdam, The Netherlands. European Energy Infrastructure Conference: *Policy for 100% renewable electricity in Europe and North Africa.*
- 2010.06.03** **Volkswagen, AutoUni**, Wolfsburg, Germany: *100% erneuerbarer Strom für Europa – Strom aus der Wüste und vom eigenen Dach.*
- 2010.03.26** **IQPC**, Stockholm, Sweden. Smarta Elnät: *En policy-gapanalys för 100% förnybar el i Europa och Nordafrika.*
- 2009.10.20** **Naturskyddsföreningen**, Stockholm, Sweden. Technology and climate – curse or promise?: *Technologies for 100% renewable electricity: dream or possibility?*
- 2009.09.16** **German Federal Ministry of Economics and Technology**, Department for energy, Berlin, Germany: *Strom aus der Wüste.*
- 2009.05.28** **Wuppertal-Institut**, Wuppertal, Germany. Treibende Kräfte und potenzielle Barrieren für den Ausbau erneuerbarer Energien aus integrativer Sichtweise: *5 Hypothesen zur zukünftigen Stromversorgung.*
- 2009.05.05** **Argusmilieu**, Bruges, Belgium. Vlaanderen 2050: Kiezen voor transitie, *SuperSmart Grid: 100 % renewable electricity for Europe and North Africa.*
- 2008.11.24** **International Institute for Applied Systems Analysis**, Laxenburg, Austria. Linking North Africa's renewable electricity potential to Europe: Policy challenges: *Technical background on achieving European energy objectives.*
- 2008.06.10** **Justus-Liebig-Universität**, Giessen, Germany. Giessener Workshop zur SolarEnergiePartnerschaft mit Afrika SEPA 08: *Chancen und Risiken eines SuperSmart Grids zwischen Afrika und Europa.*

ORGANISATION OF SCIENTIFIC MEETINGS

- Oct. 2021** **Section organiser** LMET Conference 2021: Modelling of the energy transition – culture, visions, narratives. Section: *Realities of modelling*. TRIPOD project. IASS, TU Delft.
- Sept. 2021** **Panel chair** *Politics of sustainable energy transitions: drivers and constraints*. ECPR conference, Innsbruck (online), Austria.
- April 2021** **Organiser** *Support or markets for mature renewables?* 2021.04.30. TRIPOD project. IASS (online workshop).
- April 2021** **Organiser** *Social Tipping Points in Coal- and Carbon-Intensive Regions – Perspectives from Multiple Disciplines*. 2021.04.19. TIPPING+ project. IASS, Sapienza Università di Roma, Nordland Research Institute (online workshop).
- March 2021** **Conference coorganiser** *MUSTEC final conference* (online workshop). 22.03.2021.
- Feb. 2021** **Workshop organiser** *Exploring social storylines and tipping points of the European energy transition*. Workshop at the Energy & Society Network of the European Sociological Association conference “5th Energy and Society Conference”, 10-12 February 2021, University Trento (online). Workshop date: 12.02.2021. SENTINEL and TIPPING+ projects.
- Jan.&Feb. 21** **Workshop organiser** *The role of carbon pricing in the mix of policies for complete decarbonisation*. TRIPOD project, IASS (online workshop, due to Covid19 contact restrictions) 2021.01.29 & 2021.02.25.
- Aug. 2020** **Section organiser** *The politics and policies of global energy transitions*. 7 panels at the General Conference of the European Consortium for Political Research (ECPR), Innsbruck, Austria. (online conference due to Covid19)
- Aug. 2020** **Panel co-chair & discussant** *Policy feedback in energy transitions*, ECPR conference, Innsbruck (online), Austria.
- Sept. 2019** **Section organiser** *Political economy of the global energy transition: a multi-scalar perspective*. 11 panels at the General Conference of the European Consortium for Political Research (ECPR), Wroclaw, Poland.
- Sept. 2019** **Panel chair** *Europeanisation of the clean energy transition: driver of or barrier to a carbon-free electricity system?* Political economy of the global energy transition: a multi-scalar perspective, ECPR conference, Wroclaw, Poland.
- Sept. 2019** **Panel co-chair & discussant** *Energy transition policies and their dynamics*. Political economy of the global energy transition: a multi-scalar perspective, ECPR conference, Wroclaw, Poland.
- Oct. 2016** **Workshop organiser** Policy needs and options for concentrating solar power development, Abu Dhabi, United Arab Emirates. Funded by European Research Council. Budget 30,000 €. 17 participants.
- May 2013** **Workshop organiser** *Social Challenges of Trans-Mediterranean Renewable Electricity Cooperation* workshop, IIASA, Laxenburg, Austria. 30 participants. Funded by: European Research Council. Budget 30,000 €. 25 participants.
- June 2010** **Workshop organiser** Renewable energy in North Africa: a policy road-map for 2050. Co-organised between IIASA and WWF Europe. Hammamet, Tunisia. Funded by European Climate Foundation. Budget 30,000 €. 20 participants.
- Nov. 2009** **Conference organiser** *Linking the MENA region's renewable resources to Europe: scientific workshop to advance policy-relevant knowledge*, IIASA, Laxenburg. Funded by: European Climate Foundation, 49,880 €. 30 participants.

Sept. 2008 **Conference organiser** *German-Italian cooperation for development of renewable energy in the Mediterranean*, PIK, Berlin. Funded by: Italian Embassy in Germany, 50,000 €. 80 participants.

OTHER COURSES

2019.12.03 **Media training course**, 1-day course, offered by IASS.

Sept. 2015 **Introduction to ArcGIS**, 2 days, offered by ETH Zürich (course led by Daniel Trüffer)

Jan.-Dec. 15 **Swiss German for German native speakers** (Züritüütsch), weekly course, Migros Klubschule, Zürich-Oerlikon.

12.02.28.-03.01 **Media training course**, 2 days, offered by PIK Potsdam (course led by Jonas Viering)

Sept. 2010 **First aid course**, 1-day course, Samariter, Potsdam.