

Curriculum Vitae

Gerald Kalt

Academic degrees: Dipl.-Ing.; Dr. techn.
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Research interests	<ul style="list-style-type: none">▪ Socioeconomic material stocks and flows▪ Energy economics and policy with focus on renewable energy technologies▪ Nature-society interactions with focus on biomass metabolism▪ Climate change mitigation and carbon accounting▪ Integrated modelling of energy systems, land use and biomass utilization
Academic qualifications	<p>2011: Doctorate in Energy Economics, Vienna University of Technology; Thesis title: "An assessment of the implications, costs and benefits of bioenergy use based on techno-economic approaches"</p> <p>2006: Master in Electrical Engineering, Vienna University of Technology; Concentration in Power Engineering and Electrical Drives; Thesis title: "Cost-Resource Curves of Biomass Potentials in Austria and Other Central European Countries"</p>
Professional history	<p>2018- Senior researcher at the Institute of Social Ecology, University of Natural Resources and Life Sciences, Vienna</p> <p>2012-2017: Expert in the Division of Energy Economy and Policy, Austrian Energy Agency</p> <p>2006-2012: Researcher at the Energy Economics Group, Vienna University of Technology, Institute of Energy Systems and Electrical Drives</p>
Language skills	<p>German: Mother tongue English: Proficient user French: Basic user</p>
Review activity	<p>Scientific journals: Resources, Conservation & Recycling; Energy Policy; Energy; Bioresource Technology; Applied Energy; Biomass Conversion and Biorefinery; Journal of Industrial Ecology; Sustainability; Biofuels, Bioproducts & Biorefining; Ecological Economics</p>
Digital competence	<ul style="list-style-type: none">▪ Excellent command of MS Office tools and other standard office applications▪ Expertise in energy system modelling based on linear optimisation (TIMES-VEDA) and other modelling environments▪ Proficiency in programming languages and mathematical software (e.g. Matlab, R, Java, VBA)▪ Experience with geographic information systems

<p>Selected articles in peer-reviewed journals</p>	<p>Kalt G., Lauk C., Mayer A., Theurl M.C., Kaltenegger K., Winiwarter W., Erb K.-H., Matej S., Haberl H., "Greenhouse Gas Implications of Mobilizing Agricultural Biomass for Energy: A Re-Assessment of Global Potentials in 2050 under Different Food-System Pathways". <i>Environmental Research Letters</i>, 2020. In press.</p> <p>Kalt G., Mayer A., Theurl M.C., Lauk C., Erb K.-H., Haberl H., "Natural Climate Solutions versus Bioenergy: Can Carbon Benefits of Natural Succession Compete with Bioenergy from Short Rotation Coppice?" <i>GCB Bioenergy</i> 11 (2019) 1283–97.</p> <p>Kalt G., Wiedenhofer D., Görg C., Haberl H., "Conceptualizing Energy Services: A Review of Energy and Well-Being along the Energy Service Cascade". <i>Energy Research & Social Science</i> 53 (2019): 47–58.</p> <p>Kalt G., "Carbon dynamics and GHG implications of increasing wood construction: long-term scenarios for residential buildings in Austria", <i>Carbon Management</i> 9 (2018) 265–275.</p> <p>Kalt G., Baumann M., Lauk C., Kastner T., Kranzl L., Schipfer F., Lexer M., Rammer W., Schaumberger A., Schriefl E., "Transformation scenarios towards a low-carbon bioeconomy in Austria", <i>Energy Strategy Reviews</i> 13-14 (2016) 125-133</p> <p>Hausknost D., Schriefl E., Lauk C., Kalt G., "A Transition to Which Bioeconomy? An Exploration of Diverging Techno-Political Choices", <i>Sustainability</i> 9 (2017)</p> <p>Kalt G., Höher M., Lauk C., Schipfer F., Kranzl L., "Carbon accounting of material substitution with biomass: Case studies for Austria investigated with IPCC default and alternative approaches", <i>Environmental Science & Policy</i> 64 (2016) 155–163</p> <p>Kalt G., "Biomass streams in Austria: Drawing a complete picture of biogenic material flows within the national economy", <i>Resources, Conservation and Recycling</i> 95 (2015) 100–111.</p> <p>Kalt G., Kranzl L., "An assessment of international trade related to bioenergy use in Austria - Methodological aspects, recent developments and the relevance of indirect trade", <i>Energy Policy</i> 46 (2012) 537 – 549</p> <p>Kalt G., Kranzl L., "Assessing the economic efficiency of bioenergy technologies in climate mitigation and fossil fuel replacement in Austria using a techno-economic approach", <i>Applied Energy</i> 88 (2011) 3665 – 3684</p> <p>Kalt G., Kranzl L., Haas R., "Long-term strategies for an efficient use of domestic biomass resources in Austria", <i>Biomass and Bioenergy</i> 34 (2010) 449 – 466</p>
<p>Selected contributions at scientific conferences</p>	<p>Kalt G.; Mayer A.; Theurl M.C.; Lauk C.; Erb K.-H.; Kaltenegger K.; Winiwarter W.; Haberl H. "A critical appraisal of the global potentials and greenhouse gas implications of agricultural bioenergy", 13th International Conference of European Society of Ecological Economics, 18 - 21 June 2019, Turku, Finland</p> <p>Kalt G., Erb K.-H., Theurl M.C., Lauk C., Mayer A., Haberl H., "Second generation biofuels from short rotation plantations are less efficient in climate-change mitigation than reforestation within reasonable timeframes", 11. Internationale Energiewirtschaftstagung, 13 – 15 Feb. 2019, Vienna</p> <p>Kalt G., Baumann M., Höher M., Kranzl L. et al., "Transformation paths to a low-carbon bioeconomy in Austria", 23rd European Biomass Conference and Exhibition, 1-4 June 2015, Vienna.</p> <p>Kalt G., Baumann M., Höher M., "Simulating the transformation to a low-carbon bioeconomy with an integrated model of the energy system and the forest sector", 9. Internationale Energiewirtschaftstagung an der TU Wien, 2015, Vienna.</p>

Kalt G., "Biogenic material flows in Austria"; 13. Symposium Energieinnovation, 12-14 February 2014, Graz/Austria.

Kalt G., "Economics and potential of wood gasification CHP plants in the Austrian sawmill industry"; 4th Central European Biomass Conference, 2014, Graz/Austria.

Kalt G., Baumann M., "Modelling future developments in residential electricity consumption in the context of time-of-use tariffs, load shifting, e-mobility and energy efficiency", 8. Internationale Energiewirtschaftstagung an der TU Wien, 2013, Vienna.

Kalt G., Kranzl L., Matzenberger J., "Bioenergy in the Context of the EU 2020- and 2050-Policy Targets: Technology Priorities, Opportunities and Barriers"; 12th IAEE European Energy Conference, 2012, Venice.

Kalt G., Kranzl L., "Modeling of the Bioenergy Sector with the Simulation Tool SimBioSys", 11. Symposium Energieinnovation; in: Proceedings "Alte Ziele - Neue Wege", 2010, Graz.

Kalt G., Kranzl L., Haas R., "Perspectives for Bioenergy in Austria and other Central European Countries (with a special focus on the 2020-RES-targets)"; 17th European Biomass Conference and Exhibition, in: Proceedings "From Research to Industry and Markets", 2009, Hamburg.

Kalt G., Kranzl L., Haas R., "The contribution of bioenergy to the 2020-RES-targets in Austria and other Central European countries", 10th IAEE European Conference, 2009, Vienna.

Kalt G., Kranzl L., "Bioenergy chains: A dynamic assessment of efficiencies, economics and greenhouse gas mitigation"; 6. Internationale Energiewirtschaftstagung an der TU Wien, 11–13 February 2009, Vienna.

Kalt G., Kranzl L., Haas R., "Long-term bioenergy scenarios for Austria: Identifying efficient paths and a corresponding action plan", 16th European Biomass Conference & Exhibition; in: Proceedings of the International Conference, "From research to industry and markets", 2008, Valencia.

Kalt G., Kranzl L., Haas R., "Long-term perspectives for bioenergy in Austria", 10. Symposium Energieinnovation, 13–15 February 2008, Graz/Austria.

Kalt G., Kranzl L., Haas R., "Long-term strategies for the optimal use of biomass in Austria"; World Renewable Energy Congress X and Exhibition 19–25 July 2008, Glasgow.

Kalt G., "Perspectives for wood energy until 2050 under consideration of material uses", 5. Internationale Energiewirtschaftstagung an der TU Wien, 2007, Vienna.

Kalt G., Kranzl L., Haas R., "Efficient paths for biomass development up to 2050"; 3rd International Bioenergy Conference and Exhibition, 3–6 September 2007, Jyväskylä, Finland.

Kalt G., Kranzl L., "Optimal paths of biomass use in Austria until 2050"; 16. Symposium Bioenergie, 22/23 November 2007, Bad Staffelstein, Germany.