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## I. EARNED DEGREES

- PhD      **Stanford University**, Environment and Resources, 2017  
Dissertation: *Improving Life Cycle Assessment as a Decision Support Tool Using Empirical Data for Multicriteria Prioritization*  
Co-advisors: Adam Brandt, Mark Algee-Hewitt
- MS      **The University of Texas at Austin**, Environmental and Water Resources Engineering, 2011  
Thesis: *Freshwater on the Island of Maui: System Interactions, Supply, and Demand*  
Advisor: Michael Webber
- MA      **The University of Texas at Austin**, Energy and Earth Resources, 2010  
Thesis: *Maui's Freshwater: Status, Allocation, and Management for Sustainability*  
Advisor: Michael Webber
- BS      **Stanford University**, Mathematics (Honors), Atmosphere/Energy Engineering (Honors), Biological Sciences (Minor), 2009

## II. EMPLOYMENT HISTORY

- 2022-      **University of Notre Dame**, Associate Professor of Sustainable Energy Policy, Keough School of Global Affairs  
Concurrent Associate Professor of Civil and Environmental Engineering and Earth Sciences
- 2022-23      **United States Department of Energy**, Senior Advisor for Energy Asset Transformation, Office of Fossil Energy and Carbon Management
- 2021-22      **United States Department of Energy**, Deputy Assistant Secretary, Office of Carbon Management
- 2019-22      **Georgia Institute of Technology**, Assistant Professor, Civil and Environmental Engineering  
2021-22: Olmsted Early-Career Professor of Civil and Environmental Engineering  
CEE Affinity Groups: Construction and Infrastructure Systems Engineering, Environmental Engineering  
Courtesy Appointment: Public Policy  
Program Faculty Member: Computational Science and Engineering
- 2018      **University of California, Berkeley**, Lecturer, Civil and Environmental Engineering
- 2017-18      **University of California, Berkeley**, Postdoctoral Scholar, Civil and Environmental Engineering  
Supervisor: Arpad Horvath
- 2011-13      **McKinsey & Company**, Business Analyst and Junior Engagement Manager

## III. HONORS AND AWARDS

### A. INTERNATIONAL OR NATIONAL AWARDS

- 2023      Leeson Lecturer, Metcalf Institute, University of Rhode Island

2022	Distinguished Lecturer, American Association of Petroleum Geologists (declined)
2021	Clean Energy Leadership Institute Fellow, National Cohort
2020	Trusted Reviewer (reflecting “exceptionally high level of peer review competency”), Institute of Physics
2017	Reviewer of the Year, <i>Environmental Research Letters</i>

#### B. UNIVERSITY OR SCHOOL AWARDS

2020-21	Outstanding Faculty/Staff Member, Association of Environmental Engineers and Scientists—Georgia Tech student chapter
2020-21	Diversity and Inclusion Fellow, Georgia Institute of Technology
2019-20	Class of 1969 Teaching Fellow, Georgia Institute of Technology

#### IV. RESEARCH, SCHOLARSHIP, AND CREATIVE ACTIVITIES

coauthors: \* indicates supervised undergraduate; @ indicates supervised graduate student; + indicates supervised postdoc

##### A. PUBLISHED BOOKS, BOOK CHAPTERS, AND EDITED VOLUMES

###### A1. Books

no data

###### A2. Refereed Book Chapters

- [2] Grubert, E. 2020. “Social Science and Energy Policymaking: The Need for Social Scientists in Developing Social Life Cycle Assessment.” In: *Energy Impacts: A Multidisciplinary Exploration of North American Energy Development*. Eds: J. Jacquet, J. Haggerty, and G. Theodori. Utah State University Press.
- [1] Haya, B., A. Strong, E. Grubert, and D. Cullenward. 2015. “Carbon Offsets in California: Science in the Policy Development Process.” In: *Communicating Climate Change and Natural Hazard Risk and Cultivating Resilience: Case Studies for a Multi-disciplinary Approach*. Eds: Yekaterina Kontar et al. Springer.

###### A3. Edited Volumes

no data

###### A4. Other Parts of Books

- [1] Lovins, A. and Rocky Mountain Institute. September 2011. *Reinventing Fire: Bold Business Solutions for the New Energy Era*. Chelsea Green Publishing Company, Vermont. (E. Grubert as research contributor, natural gas and coal systems)

##### B. REFEREED PUBLICATIONS AND SUBMITTED ARTICLES

###### B1. Published and Accepted Journal Articles

- [77] Giang, A., M. Edwards, S. Fletcher, R. Gardner-Frolick, R. Gryba, J-D. Mathias, C. Venier-Cambron, J. Anderies, E. Berglund, S. Carley, J. Erickson, E. Grubert, A. Hadjimichael, J. Hill, E. Mayfield, D. Nock, K. Pikok, R. Saari, M. Lezcano, A.

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Curriculum Vitae

- Siddiqi, J. Skerker, and C. Tessum. 2024. [Equity and modeling in sustainability science: examples and opportunities throughout the modeling process](#). *Proceedings of the National Academy of Sciences*. DOI: 10.1073/pnas.2215688121.
- [76] @Henao, Y., E. Grubert, M. Korey, L. Bank, and R. Gentry. 2024. [Life Cycle Assessment and Life Cycle Cost Analysis of Repurposing Decommissioned Wind Turbine Blades as High-Voltage Transmission Poles](#). *Journal of Construction Engineering and Management (ASCE)*. DOI: 10.1061/JCEMD4.COENG-13718. (Editor's Choice)
- [75] Grubert, E., and S. Talati. 2023. [The Distortionary Effects of Unconstrained For-Profit Carbon Dioxide Removal and the Need for Early Governance Intervention](#). *Carbon Management*. DOI: 10.1080/17583004.2023.2292111.
- [74] Grubert, E. and F. Sawyer. 2023. [Reply to 'A commentary on "US power sector carbon capture and storage under the Inflation Reduction Act could be costly with limited or negative abatement potential"'](#). *Environmental Research: Infrastructure and Sustainability*. DOI: 10.1088/2634-4505/ad0ff1.
- [73] @Maxim, A. and E Grubert. 2023. [Highly Energy Efficient Housing Can Reduce Peak Load and Increase Safety Under Beneficial Electrification](#). *Environmental Research Letters*. DOI: 10.1088/1748-9326/ad114d.
- [72] Visa, M., S. Camilleri, A. Montgomery, J. Schnell, M. Janssen, Z. Adelman, S. Anenberg, E. Grubert, and D. Horton. 2023. [Neighborhood-scale air quality, public health, and equity implications of multi-modal vehicle electrification](#). *Environmental Research: Infrastructure and Sustainability*. DOI: 10.1088/2634-4505/acf60d.
- [71] Camilleri, S., A. Montgomery, M. Visa, J. Schnell, Z. Adelman, M. Janssen, E. Grubert, S. Anenberg, and D. Horton. 2023. [Air quality, health, and equity implications of electrifying heavy-duty vehicles](#). *Nature Sustainability*. DOI: 10.1038/s41893-023-01219-0
- [70] \*Mulrow, J., J. Bozeman, S. Pai, E. Grubert, and S. Derrible. 2023. [Energy-Material Cycles: A materials-based perspective of vehicle energy systems](#). *Resources, Conservation & Recycling*. DOI: 10.1016/j.resconrec.2023.107039.
- [69] Tarroja, B., R. Peer, and E. Grubert. 2023. [Assessing how non-carbon co-priorities affect zero-carbon electricity system development in California under current policies](#). *Journal of Cleaner Production*. DOI: 10.1016/j.jclepro.2023.136833.
- [68] \*Mulrow, J. and E. Grubert. 2023. [Greenhouse gas emissions embodied in electric vehicle charging infrastructure: A method and case study of Georgia, United States, 2021-2050](#). *Environmental Research: Infrastructure and Sustainability*. DOI: 10.1088/2634-4505/acc548.
- [67] @Ha, S. and E. Grubert. 2023. [Hybridizing Qualitative Coding with Natural Language Processing and Deep Learning to Assess Public Comments: A Case Study of the Clean Power Plan](#). *Energy Research & Social Science*. DOI: 10.1016/j.erss.2023.103016.
- [66] Grubert, E. and F. Sawyer. 2023. [US power sector carbon capture and storage under the Inflation Reduction Act could be costly with limited or negative](#)

- abatement potential. *Environmental Research: Infrastructure and Sustainability*. DOI: 10.1088/2634-4505/acbed9.
- [65] Grubert, E. 2023. Results from a Survey of Life Cycle Assessment-Aligned Socioenvironmental Priorities in US and Australian Communities Hosting Oil, Natural Gas, Coal, and Solar Thermal Energy Production. *Environmental Research: Infrastructure and Sustainability*. DOI: 10.1088/2634-4505/acbeda.
- [64] Grubert, E. 2023. Water Consumption from Electrolytic Hydrogen in a Carbon-Neutral US Energy System. *Cleaner Production Letters*. DOI: 10.1016/j.cpl.2023.100037.
- [63] Moglen, R., K. Chawla, P. Levi, Y. Sun, O. Phillips, B. Leibowicz, J. Jenkins, and E. Grubert. 2023. The State of Macro-Energy Systems Research: Common Critiques, Current Progress, and Research Priorities. *iScience*. DOI: 10.1016/j.isci.2023.106325.
- [62] Raimi, D., E. Grubert, J. Higdon, G. Metcalf, S. Pesek, and D. Singh. 2023. The fiscal implications of the U.S. transition away from fossil fuels. *Review of Environmental Economics and Policy*. DOI: 10.1086/725250.
- [61] +Lolli, F., @R. Rios, K. Schoenrock, E. Grubert, and K. Kurtis. 2022. Policy-Making Framework for Performance-Based Concrete Specifications. *ACI Structural and Materials Journals*.
- [60] Siddik, A., E. Grubert, P. Caldwell, and L. Marston. 2022. Retirement of US Fossil Fuel-Fired Power Plants Will Increase Water Availability. *Journal of Hydrology*. DOI: 10.1016/j.jhydrol.2022.128984.
- [59] Grubert, E. 2022. Yellow, red, and brown energy: leveraging water footprinting concepts for decarbonizing energy systems. *Environment, Development and Sustainability*. DOI: 10.1007/s10668-022-02760-2.
- [58] Ravikumar, A.P., E. Baker, A. Bates, D. Nock, D. Venkataraman, T. Johnson, M. Ash, S.Z. Attari, K. Bowie, S. Carley, S. Castellanos, M. Cha, D.L. Clark, D. Deane-Ryan, D. Djokic, J.C. Ford, A. Goldstein, E. Grubert, L. Hu, D.M. Kammen, U. Kosar, C. Miller, M. Pastor, and M. Tuominen. 2022. Enabling an Equitable Energy Transition Through Inclusive Research. *Nature Energy*. DOI: 10.1038/s41560-022-01145-z.
- [57] Khan, Z., E. Abraham, S. Aggarwal, M. Ahmad, R. Arguellos, M. Babbar-Sebens, J. Bereslawski, J. Bielicki, P. Campana, M. Silva Carrazzone, H. Castanier, F. Chang, P. Collins, A. Conchado, K. Dagani, B. Daher, S. Dekker, R. Delgado, F. Diuana, J. Doelman, A. Elshorbagy, C. Fan, R. Gaudioso, S. Gebrechorkos, H. Geli, E. Grubert, D. Huang, T. Huang, A. Ilyas, A. Ivakhnenko, G. Jewitt, M. Ferrerira dos Santos, J. Jones, E. Kellner, E. Krueger, I. Kumar, J. Lamontagne, A. Lansu, S. Lee, R. Li, P. Linares, D. Marazza, M. Mascari, R. McManamay, M. Meng, S. Mereu, F. Miralles-Wilhelm, R. Mohtar, A. Muhammad, A. Opejin, S. Pande, S. Parkinson, R. Payet-Burin, M. Ramdas, E. Ramos, S. Ray, P. Roberts, J. Sampedro, K. Sanders, M. Saray, J. Schmidt, M. Shanafield, S. Siddiqui, M. Suriano, M. Taniguchi, A. Trabucco, M. Tuninetti, A. Vinca, B. Weeser, D. White, T. Wild, K. Yadav, N. Yogeswaran, T. Yokohata, and Q. Yue. 2022. Emerging themes and future directions of multi-sector nexus research and implementation. *Frontiers in Environmental Science*. DOI: 10.3389/fenvs.2022.918085.

- [56] \*Marshall, A. and E. Grubert. 2022. Hydroelectricity modeling for low-carbon and no-carbon grids: Empirical operational parameters for optimization and dispatch models. *Earth's Future*. DOI: 10.1029/2021EF002503.
- [55] Grubert, E. and @M. Zacarias. 2022. Paradigm shifts for environmental assessment of decarbonizing energy systems: Emerging dominance of embodied impacts and design-oriented decision support needs. *Renewable and Sustainable Energy Reviews*. DOI: 10.1016/j.rser.2022.112208.
- [54] Grubert, E. and S. Hastings-Simon. 2022. Designing the mid-transition: A review of medium-term challenges for coordinated decarbonization in the United States. *WIREs Climate Change*. DOI: 10.1002/wcc.768. (invited review)
- [53] \*Reinhart, K. and E. Grubert. 2022. How Much New Forest Land Would It Take to Offset a Coal Plant's Greenhouse Gas Emissions? An Engineering Case Study of Georgia's Plant Scherer. *Case Studies in the Environment*. DOI: 10.1525/cse.2022.1552208. (Best environmental case study (2022), Case Studies in the Environment Prize Competition)
- [52] Gallo, E., K. Spahr, E. Grubert, and T. Hogue. 2022. Improving the Decision-making Process for Stormwater Management Using Life Cycle Costs and a Benefit Analysis. *Journal of Sustainable Water in the Built Environment (ASCE)*. DOI: 10.1061/JSWBAY.0000977.
- [51] Grubert, E. and \*A. Marshall. 2021. Water for Energy: Characterizing Co-evolving Energy and Water Systems under Twin Climate and Energy System Nonstationarities. *WIREs Water*. DOI:10.1002/wat2.1576. (invited review)
- [50] \*Mulrow, J., \*Gali, M., and E. Grubert. 2021. The Cyber-Consciousness of Environmental Assessment: A Review of Environmental Assessments of Digitalized Technologies. *Environmental Research Letters*. DOI:10.1088/1748-9326/ac413b. (invited review)
- [49] Glazer, Y., D. Tremaine, J. Banner, M. Cook, R. Mace, J. Nielsen-Gammon, E. Grubert, K. Kramer, A. Stoner, B. Wyatt, A. Mayer, T. Beach, R. Correll, M. Webber. 2021. Winter Storm Uri: A test of Texas' water infrastructure and water resource resilience to extreme winter weather events. *Journal of Extreme Events*. DOI: 10.1142/S2345737621500226.
- [48] @Cohen, A., G. Chen, E. Berger, S. Warrier, G. Lan, E. Grubert, F. Dellaert, and Y. Chen. 2021. Dynamically Controlled Environment Agriculture: Integrating Machine Learning and Mechanistic and Physiological Models for Sustainable Food Cultivation. *ACS ES&T Engineering*. DOI:10.1021/acsestengg.1c00269. (Editor's Choice)
- [47] @Maxim, A. and E. Grubert. 2021. Effects of Climate Migration on Town-to-City Transitions in the United States: Proactive Investments in Civil Infrastructure for Resilience and Sustainability. *Environmental Research: Infrastructure and Sustainability*. DOI: 10.1088/2634-4505/ac33ef.
- [46] Grubert, E. 2021. Beyond Carbon in Socioenvironmental Assessment: Life Cycle Assessment as a Decision Support Tool for Net-Zero Energy Systems. *Energy and Climate Change*. DOI: 10.1016/j.egycc.2021.100061.
- [45] @Maxim, A. and E. Grubert. 2021. Anticipating Climate-related Changes to Residential Energy Burden in the United States: Advance Planning for Equity and Resilience. *Environmental Justice*. DOI: 10.1089/env.2021.0056.



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- [43] @Burns, D. and E. Grubert. 2021. [Contribution of Regionalized Methane Emissions to Natural Gas-Fired Electricity and Carbon Capture in the United States](#). *Environmental Science & Technology Letters*. DOI: 10.1021/acs.estlett.1c00531.
- [42] Grubert, E. 2021. [Emissions Projections for US Utilities Through 2050](#). *Environmental Research Letters*. DOI: 10.1088/1748-9326/ac1628.
- [41] @Broesicke, O., J. Yan, V. Thomas, E. Grubert, S. Derrible, and J. Crittenden. 2021. [Combined Heat and Power May Conflict with Decarbonization Goals—Air Emissions of Natural Gas Combined Cycle Power versus Combined Heat and Power Systems for Commercial Buildings](#). *Environmental Science & Technology*. DOI: 10.1021/acs.est.1c00980.
- [40] \*Schmidt, I. and E. Grubert. 2021. [Effects of fuel cost and driving behaviors on operational costs of gasoline and electric vehicles in the US](#). *IOP SciNotes*. DOI: 10.1088/2633-1357/ac10bd.
- [39] Busby, J., K. Baker, M. Bazilian, A. Gilbert, E. Grubert, V. Rai, J. Rhodes, S. Shidore, C. Smith, and M. Webber. 2021. [Cascading Risks: Understanding the 2021 Winter Blackout in Texas](#). *Energy Research and Social Science*. DOI: 10.1016/j.erss.2021.102106. (reached the Reddit front page in r/science)
- [38] \*Zacarias, M. and E. Grubert. 2021. [Effects of implausible power plant lifetime assumptions on US federal energy system projected costs, greenhouse gas emissions, air pollution, and water use](#). *Environmental Research: Infrastructure and Sustainability*. DOI: 10.1088/2634-4505/abff0c.
- [37] Miller, S. and E. Grubert. 2021. [US industrial sector decoupling of energy use and greenhouse gas emissions under COVID: durability and decarbonization](#). *Environmental Research Communications*. DOI: 10.1088/2515-7620/abf0f2.
- [36] @Burns, D. and E. Grubert. 2021. [Attribution of Production-Stage Methane Leakage to Assess Spatial Variability in the Climate Intensity of US Natural Gas Consumption](#). *Environmental Research Letters*. DOI: 10.1088/1748-9326/abef33.
- [35] @Krieger, J. and E. Grubert. 2021. [Life cycle costing for distributed stormwater control measures on the gray-green continuum: A planning-level tool](#). *Journal of Sustainable Water in the Built Environment (ASCE)*. DOI: 10.1061/JSWBAY.0000933. (selected by ASCE as a promoted article)
- [34] Grubert, E. 2020. [Fossil electricity retirement deadlines for a just transition](#). *Science*. DOI: 10.1126/science.abe0375.
- [33] Grubert, E. 2020. [Same-plant trends in capacity factor and heat rate for US power plants, 2001-2018](#). *IOP SciNotes*. DOI: 10.1088/2633-1357/abb9f1.
- [32] Grubert, E., J. Stokes-Draut, A. Horvath, and W. Eisenstein. 2020. [Utility-specific projections of electricity sector greenhouse gas emissions: A committed emissions model-based case study of California through 2050](#). *Environmental Research Letters*. DOI: 10.1088/1748-9326/abb7ad.

- [31] Haya, B., D. Cullenward, A. Strong, E. Grubert, R. Heilmayr, D. Sivas, and M. Wara. 2020. [Managing Uncertainty in Carbon Offsets: Insights from California's Standardized Approach](#). *Climate Policy*. DOI: 10.1080/14693062.2020.1781035.
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- [23] Grubert, E. 2019. [Every Door Direct Mail in US survey research: An anonymous census approach to mail survey sampling](#). *Methodological Innovations*. DOI: 10.1177/2059799119862104.
- [22] \*Greer, F., \*J. Chittick, \*E. Jackson, \*J. Mack, \*M. Shortlidge, and E. Grubert. 2019. [Energy and Water Efficiency in LEED: How Well are LEED Points Linked to Climate Outcomes?](#) *Energy and Buildings*. DOI: 10.1016/j.enbuild.2019.05.010.
- [21] Grubert, E. and A. Brandt. 2019. [Three Considerations for Modeling Natural Gas System Methane Emissions in Life Cycle Assessment](#). *Journal of Cleaner Production*. DOI: 10.1016/j.jclepro.2019.03.096.
- [20] Bell, C., K. Spahr, E. Grubert, J. Stokes-Draut, E. Gallo, J. McCray, and T. Hogue. 2018. [Decision-making on the Grey-green Stormwater Infrastructure Continuum](#). *Journal of Sustainable Water in the Built Environment (ASCE)*. DOI: 10.1061/JSWBAY.0000871.
- [19] Grubert, E. 2018. [Relational Values in Environmental Assessment: The Social Context of Environmental Impact](#). *Current Opinion in Environmental Sustainability*. DOI: 10.1016/j.cosust.2018.10.020.



- [18] Grubert, E. 2018. [The Eagle Ford and Bakken Shale Regions of the United States: A Comparative Case Study](#). *The Extractive Industries and Society*. DOI: 10.1016/j.exis.2018.09.011.
- [17] Grubert, E. and K. Sanders. 2018. [Water Use in the United States Energy System: A National Assessment and Unit Process Inventory of Water Consumption and Withdrawals](#). *Environmental Science & Technology (ACS)*. DOI: 10.1021/acs.est.8b00139.
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- [10] Grubert, E. 2017. [Implicit prioritization in Life Cycle Assessment: Text mining and detecting metapatterns in the literature](#). *International Journal of Life Cycle Assessment*. DOI: 10.1007/s11367-016-1153-2.
- [9] Grubert, E. 2016. [Water Consumption from Hydroelectricity in the United States](#). *Advances in Water Resources*. DOI: 10.1016/j.advwatres.2016.07.004.
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## **B2. Conference Presentation with Proceedings (Refereed)**

- [14] Zerbe, E., A. Amekudzi-Kennedy, K. Haas, E. Grubert, S. Burns, A. Russell, I. Tien, K. Watkins, J. Koon, R. Simon, J. Taylor, D. Webster, and L. Rosenstein. June 2022. [Early Engagement and Vertically-Integrated Learning: Developing Holistic and Entrepreneurially-Minded Engineers](#). *American Society for Engineering Education 2022 Annual Conference and Exposition*.
- [13] @Burns, D., and E. Grubert. May 2020. [Attributing Natural Gas Production to Natural Gas Users: A Geospatial Approach](#). *Proceedings of the World Environmental and Water Resources Congress 2020*. DOI: 10.1061/9780784482964.030
- [12] Cook, M., and E. Grubert. April 2017. [Water Use in the Oil and Gas Industries: An Evaluation of Best Practices for Communicating with Scientists, Policymakers, and the Public](#). *Proceedings of the Society of Petroleum Engineers Health, Safety, Security, Environment, & Social Responsibility Conference-North America*. DOI: 10.2118/184431-MS
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- [3] Grubert, E. September 2010. [Mining-related Environmental Impacts of Carbon Mitigation: Coal-based Carbon Capture and Sequestration](#). *Proceedings of the World Energy Congress*.
- [2] Grubert, E. May 2010. [Centralized Transportation Fuel Planning: Leveraging Californian Refineries as Transportation Utilities](#). *Proceedings of the ASME 2010 4<sup>th</sup> International Conference on Energy Sustainability*. DOI: 10.1115/ES2010-90027
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### **B3. Other refereed material**

- [5] Grubert, E. 2024. [Introducing Environmental Research: Energy – advancing interdisciplinary understanding of energy systems during decarbonization](#). *Environmental Research: Energy*. DOI: 10.1088/2753-3751/ad3967. (Editor-refereed)
- [4] Grubert, E., L. L. B. Lazaro, A. Popp, L. Merfort, T. Luo, V. Kati, P. Meshram, F. M. Dorn, and D. Hernández. 2024. [Making low-carbon energy sustainable](#). *One Earth*. DOI: 10.1016/j.oneear.2024.01.019. (Editor-refereed)
- [3] Grubert, E. 2018. [Civil engineering's internal skepticism on climate change](#). *Journal of Professional Issues in Engineering Education and Practice*. DOI: 10.1061/(ASCE)EI.1943-5541.0000370 (Editor-refereed)
- [2] Grubert, E. 2016. [Response to "Discourse over a contested technology on Twitter: A case study of hydraulic fracturing" – Word choice as political speech](#). *Public Understanding of Science*. DOI: 10.1177/0963662515626310 (Editor-refereed)
- [1] Emerging Leaders in Science and Society (ELISS) Fellows\*. December 2015. [Reimagining Epidemic Communications](#). *Domestic Preparedness Journal*. (\*equal contributions by R. Erion, E. Grubert, S. Mosbah, M. Munyikwa, B. Paul, and C. Tran) (Editor-refereed)

### **B4. Submitted Journal Articles**

- [3] Broesicke, O., V. Thomas, E. Grubert, and J. Crittenden. Water consumption from absorption chillers is not negligible: water-for-cooling consumption of chiller

systems for commercial buildings in the United States. In revision May 2024, *Sustainable Energy Technologies and Assessments*.

- [2] Cha, J.M., and E. Grubert. Public Control of Coal Resources of the United States' Powder River Basin for a Managed Decarbonization Transition. Submitted February 2024, *Progress in Energy*.
- [1] Gunda, T., A. Cantor, E. Grubert, A. Harris, and Y. McDonald. The Water-Climate Nexus: Toward an Integrated, Multi-Sectoral Approach. Submitted December 2023, *Wiley Interdisciplinary Reviews*.

## C. OTHER PUBLICATIONS AND CREATIVE PRODUCTS

### C1. Software

- [4] Grubert, E. December 2020. "The future of United States fossil fuel-fired electricity: Environmental and labor implications of retiring generators at the end of their typical lifespans." Web map.
- [3] @Krieger, J. and E. Grubert. May 2020. "Integrated Decision Support Tool (iDST) Life Cycle Costing Module for Distributed Stormwater Control Measures (SCMs)." Life cycle cost model.
- [2] Grubert, E. January 2019. "US power plants by capacity, age, and fuel." Web map.
- [1] Grubert, E. (contributor). October 2015. *Energy Policy Simulator*. Web model.

### C2. Other Creative Products

- [16] Grubert, E. "Biden's 'hard look' at liquefied natural gas exports raises a critical question: How does natural gas fit with US climate goals?" 7 February 2024. *The Conversation*.
- [15] Grubert, E. "DOE's error-ridden analysis on coal CCS project threatens climate and engagement goals." 5 September 2023. *Utility Dive*.
- [14] Ash, M., E. Baker, M. Tuominen, D. Venkataraman, M. Burke, S. Castellanos, M. Cha, G. Chan, D. Djokić, J. Ford, A. Goldstein, D. Hsu, M. Lackner, C. Miller, D. Nock, A. Ravikumar, A. Bates, A. Stefanopoulou, E. Grubert, D. Kammen, M. Pastor, S. Attari, S. Carley, D. Clark, D. Deane-Ryan, U. Kosar, K. Bowie, and T. Johnson. 2023. "White Paper: Research Challenges at the Intersection of Energy and Equity in the Energy Transition." Energy Transition Institute (ETI) Reports.
- [13] Raimi, D., E. Grubert, J. Higdon, G. Metcalf, S. Pesek, and D. Singh. January 2022. "The Fiscal Implications of the US Transition away from Fossil Fuels." Resources for the Future.
- [12] Raimi, D. (editor and contributor), with A. Barone, S. Carley, D. Foster, E. Grubert, J. Haggerty, J. Higdon, M. Kearney, D. Konisky, J. Michael, G. Michaud, S. Nabahe, N. Peluso, M. Robertson, and T. Reames (contributors). April 2021. "Policy Options to Enable an Equitable Energy Transition." Resources for the Future.
- [11] Davis, S. and C. Bataille (leads) with Bazilian, M., Brouwer, J., Doig, S., Fennell, P., Gielen, D., Grubert, E., and D. Tong (contributors). "5.3 Accelerating Net-Zero

- Emissions Industry in the U.S.” In: SDSN 2020. *Zero Carbon Action Plan*. New York: Sustainable Development Solutions Network (SDSN).
- [10] Grubert, E. July 2020. ‘Renewable’ natural gas may sound green, but it’s not an antidote for climate change. *The Conversation*.
  - [9] Amekudzi-Kennedy, A., S. Labi, B. Woodall, G. Marsden, and E. Grubert. April 2020. *Role of Socially-Equitable Economic Development in Creating Resilient and Sustainable Systems: COVID-19-Related Reflections*. Preprint (preprints.org).
  - [8] Haya, B., D. Cullenward, A. Strong, E. Grubert, R. Heilmayr, D. Sivas, and M. Wara. August 2019. *Managing Uncertainty in Carbon Offsets: Insights from California’s Standardized Approach*. Stanford Law School Environmental & Natural Resources Law and Policy Program Working Paper. Stanford, CA.
  - [7] Grubert, E. 2018. *Analyzing the Energy Sector for California Climate Investments: Literature Review of Energy Documents and GHG Electricity Emission Factors*. California Air Resources Board. Berkeley, CA.
  - [6] Rogers, L. and E. Grubert. 2017. *Terraforming: Art and Engineering in the Sacramento Watershed*. Green Library, Stanford University, Stanford, CA. (Co-curator, library exhibition)
  - [5] Grubert, E., C. King, and M. E. Webber. August 2013. “Maui’s Complicated Relationship With Water.” *Earth Magazine*.
  - [4] Grubert, E. August 2011. “Why Business-as-Usual Coal Consumption Could Mean Dramatic Changes.” *Scientific American Guest Blog: Commentary invited by editors of Scientific American*.
  - [3] Grubert, E. and S. Kitasei. December 2010. *How Energy Choices Affect Fresh Water Supplies: A Comparison of U.S. Coal and Natural Gas*. Worldwatch Institute Briefing Paper. Worldwatch Institute: Washington, D.C.
  - [2] Grubert, E. January 2010. “Beat a Dead Horse or Breed Immortal Ones.” *Solutions*. National Council for Science and the Environment.
  - [1] Grubert, E. Over 60 published print columns, *The Stanford Daily* (January – June 2009), *The Daily Texan* (August 2009 – December 2010). Additional web columns for Americans for Energy Leadership and Elmrox (2010 – 2011).

#### **D. PRESENTATIONS**

##### **D1. Keynote Addresses and Plenary Lectures**

- [5] Leeson Lecture. June 2023. “How We Move On: Planning for a Future Without Fossil Fuels.” Narragansett, Rhode Island. (*Individual*)
- [4] Energy Policy Research Conference. September 2018. “Water-Energy Nexus in the West, Plenary Session & Lunch.” Boise, Idaho. (*Plenary moderator*)
- [3] Resources for Future Generations. June 2018. “Keynote: Estimating water usage for the US energy system: Suggestions for improving data collection and reporting.” Vancouver, British Columbia. (*Co-author with R. Peer, K. Sanders*)
- [2] Convent of the Sacred Heart. June 2017. Commencement Address. Greenwich, Connecticut. (*Individual*)
- [1] Texas Leadership Society Luncheon. April 2010. Keynote Address. Austin, Texas. (*Individual*)



## D2. Invited Conference and Workshop Presentations

- [18] MultiSector Dynamics Urban Systems Working Group. April 2024. "Planning for Failure: Can Energy Systems be Reliable Even When the Power Goes Out?" Online. (*Individual; remote*)
- [17] The University of Texas at Austin. Austin Electricity Conference. February 2024. "Domestic Content and Clean Energy Prices." Austin, TX. (*Panel*)
- [16] National Academies of Sciences, Engineering, and Medicine. Atmospheric Methane Removal: Needs, Challenges, and Opportunities Workshop. October 2023. "Potential Social Impacts of Atmospheric Methane Removal Technologies." Washington, DC. (*Individual; remote*)
- [15] National Renewable Energy Laboratory Workshop, Flexible Demand in 100% Clean Grids. September 2023. "Role of Deep Building Efficiency for Electricity Grids." Golden, CO. (*Individual*)
- [14] TED Countdown Dilemma Series. October 2022. "[Planning Fossil Infrastructure Closures for a Just Transition.](#)" London, UK. (*Individual*)
- [13] Environmental Protection Agency, California Air Resources Board, and Stanford Doerr School of Sustainability Carbon Capture and Storage Symposium. September 2022. "Real World Implications of a CCS Project." Stockton, CA. (*Panel*)
- [12] New York University Institute for Policy Integrity Annual Conference. September 2022. "Implementing the Inflation Reduction Act." New York, NY. (*Panel*)
- [11] National Renewable Energy Laboratory Human Dimension of Energy Systems Workshop. September 2022. "Community-oriented decision support for a just transition." Golden, CO. (*Individual*)
- [10] International Association for Society and Natural Resources Conference. June 2021. "Natural Resource Social Science & the US Energy Transition ca. 2021." Online due to COVID-19. (*Panel*)
- [9] MIT Energy Conference. March 2021. "Stranded Assets." Online due to COVID-19. (*Panel*)
- [8] American Geophysical Union Fall Meeting. December 2019. "Conventional Hydroelectricity and Near-zero Emission Energy Systems." San Francisco, CA. (*Individual*)
- [7] INFORMS Annual Meeting 2019. October 2019. "How do we reconcile priorities during the energy transition?" Seattle, Washington. (*Individual*)
- [6] Solar Power and Energy Storage Mountain West. April 2019. "The Energy System is Changing." Aurora, Colorado. (*Individual*)
- [5] Southeastern Energy Conference. March 2019. "Global Electrification." Atlanta, Georgia. (*Panel*)
- [4] Data Science for Sustainability Meetup. October 2018. "The Water-Energy Nexus: Water Use for Energy Systems." San Francisco, CA. (*Individual*)
- [3] South by Southwest Eco. October 2013. "New Global Models: Real-Time and Local." Austin, Texas. (*Panel*)

- [2] Society of Women Engineers 12<sup>th</sup> Annual Conference for Women Engineers. November 2012. “Understanding the Water Implications of our Energy Choices.” Houston, Texas. (*Panel*)
- [1] International Student Energy Summit. June 2011. “Global Energy Dynamics: The Nexus between Energy and Water.” Vancouver, Canada. (*Panel*)

### **D3. Conference and Workshop Presentations**

- [74] Davis, S., and others (*including E. Grubert*). December 2023. “Chapter 32 – Mitigation – The Fifth National Climate Assessment.” American Geophysical Union Fall Meeting. San Francisco, CA. (*Poster*)
- [73] Tarroja, B., D. Mulvaney, R. Peer, and E. Grubert. December 2023. “Maximizing the Life Cycle Greenhouse Gas Reductions from Electricity Resource Portfolios.” American Geophysical Union Fall Meeting. San Francisco, CA. (*Oral*)
- [72] Grubert, E. December 2023. “How Planning for Failure Increases Urban Resilience.” American Geophysical Union Fall Meeting. San Francisco, CA. (*Oral*)
- [71] Sanders, K., E. Grubert, M. Craig, and M. Peplinski. December 2023. “Energy Consumption in a Changing Climate: Patterns, Drivers, and Feedbacks.” American Geophysical Union Fall Meeting. San Francisco, CA. (*Session Chair; Oral*)
- [70] Tarroja, B., R. Peer, and E. Grubert. October 2023. “Exploring Zero-Carbon Electricity System Planning Under Different Non-Carbon Co-Priorities in California.” INFORMS Annual Meeting 2023. Phoenix, AZ. (*Oral*)
- [69] Camilleri, S., A. Montgomery, M. Visa, J. Schnell, Z. Adelman, M. Janssen, E. Grubert, S. Anenberg, M. Harris, and D. Horton. August 2023. “Neighborhood-Scale Air Quality and Health Impacts Associated with Electrifying Heavy-Duty Vehicles in the U.S. Midwest.” International Society of Exposure Science Annual Meeting. Chicago, IL. (*Oral*)
- [68] Grubert, E. January 2023. “The Mid-transition: Planning Just and Sustainable Decarbonization.” Massachusetts Institute of Technology Environmental Justice & Energy Sustainability Mini-Symposium. Hybrid Cambridge, MA / online. (*Oral*)
- [67] Mulrow, J., J. Bozeman, S. Pai, E. Grubert, and S. Derrible. January 2023. “All Cars Run on Materials: Comparing Vehicle Energy Systems in a Post-Fossil Fuel World.” Transportation Research Board Annual Meeting. Washington, DC. (*Poster*)
- [66] Mulrow, J. and E. Grubert. January 2023. “Greenhouse Gas Emissions Embodied in Electric Vehicle Charging Infrastructure: A Method and Case Study of Georgia, 2021–2050.” Transportation Research Board Annual Meeting. Washington, DC. (*Poster*)
- [65] Camilleri, S., A. Montgomery, M. Visa, J. Schnell, Z. Adelman, M. Janssen, E. Grubert, S. Anenberg, and D. Horton. December 2022. “Neighborhood-Scale Air Quality and Health Impacts Associated with Electrifying Heavy-Duty Vehicles in the US Midwest.” American Geophysical Union Fall Meeting. Chicago, IL. (*Oral*)
- [64] Horton, D., S. Camilleri, A. Montgomery, M. Visa, Z. Adelman, E. Grubert, and S. Anenberg. December 2022. “Air Quality, Public Health, and Equity Implications of

- Electric Vehicle Adoption in Chicago, IL.” American Geophysical Union Fall Meeting. Chicago, IL. *(Poster)*
- [63] Tarroja, B., R. Peer, and E. Grubert. December 2022. “Comparing the Development of Decarbonized Electricity Systems under Different Environmental Co-Priorities: A California Case Study.” American Geophysical Union Fall Meeting. Chicago, IL. *(Oral)*
  - [62] Visa, M., A. Montgomery, S. Camilleri, J. Schnell, M. Janssen, Z. Adelman, S. Anenberg, E. Grubert, and D. Horton. December 2022. “Neighborhood-Scale Air Quality and Health Impacts from EV Adoption in the US Midwest.” American Geophysical Union Fall Meeting. Chicago, IL. *(Poster)*
  - [61] Marston, L., A.B. Siddik, E. Grubert, and P. Caldwell. December 2022. “Retirement of US Fossil Fuel-Fired Power Plants Increases Water Availability.” American Geophysical Union Fall Meeting. Chicago, IL. *(Oral)*
  - [60] You, J., A. Marshall, and E. Grubert. December 2022. “Introducing a Typology for Hydroelectric Dams.” American Geophysical Union Fall Meeting. Chicago, IL. *(Poster)*
  - [59] Grubert, E. November 2022. “Maintaining Energy System Safety and Reliability During the Mid-Transition.” United States Association for Energy Economics 39<sup>th</sup> North American Conference. Houston, TX. *(Oral)*
  - [58] \*Marshall, A. and E. Grubert. December 2021. “Hydroelectricity Modeling for Low-Carbon and No-Carbon Grids: Empirical Constraints for Optimization and Dispatch Models.” American Geophysical Union Fall Meeting. New Orleans, LA. *(Oral)*
  - [57] @Ha, S. and E. Grubert. June 2021. “Understanding the Public Attitudes towards the Clean Power Plan Using Natural Language Processing and Deep Learning.” International Association for Society and Natural Resources Conference. Online due to COVID-19. *(Oral)*
  - [56] Grubert, E. June 2021. “The Climate Implications of Renewable Natural Gas.” World Environmental and Water Resources Congress. Online due to COVID-19. *(Oral)*
  - [55] Grubert, E. June 2021. “Decarbonization and facility closures: planning for a just transition away from fossil fuels.” World Environmental and Water Resources Congress. Online due to COVID-19. *(Oral)*
  - [54] Grubert, E. May 2021. “Fossil fuel retirement deadlines for a just transition: Implications for the Western US.” Pacific Northwest Regional Economic Conference. Online due to COVID-19. *(Oral, invited)*
  - [53] Grubert, E. February 2021. “Sustainability Assessment Beyond Carbon.” Second Food-Energy-Water Nexus Conference. Online due to COVID-19. *(Oral, invited)*
  - [52] Gallo, E., K. Spahr, E. Grubert, and T. Hogue. December 2020. “Optimizing between green and grey stormwater infrastructure using hydrologic modeling, life cycle costs, and a benefit analysis.” American Geophysical Union Fall Meeting. Online due to COVID-19. *(Oral)*
  - [51] Tarroja, B., R. Peer, K. Sanders, and E. Grubert. December 2020. “Assessing the influence of freshwater consumption priorities on zero-carbon electricity

- planning: A case of Senate Bill 100 compliance in California.” American Geophysical Union Fall Meeting. Online due to COVID-19. *(Poster)*
- [50] @Maxim, A. and E. Grubert. December 2020. “Assessing Impacts of Climate Change and Climate Migration on Urban Infrastructure Resilience.” American Geophysical Union Fall Meeting. Online due to COVID-19. *(Oral)*
  - [49] \*Mulrow, J. and E. Grubert. December 2020. “Environmental Implications of the EV Cyber-Physical System.” American Geophysical Union Fall Meeting. Online due to COVID-19. *(Poster)*
  - [48] Grubert, E. December 2020. “[Beyond Carbon in Socioenvironmental Assessment for Zero Carbon Systems](#).” American Geophysical Union Fall Meeting. Online due to COVID-19. *(Poster)*
  - [47] Grubert, E. August 2020. “Conventional Hydroelectricity and the Grid.” American Water Resources Association Spring Conference. Austin, TX. *(Virtual due to COVID-19)*
  - [46] Grubert, E. July 2020. “Life Cycle Cost and Environmental Assessment: Distributed Stormwater Control Measures.” Integrated Decision Support Tool Beta Testing for Stormwater Practitioners Workshop. International Low Impact Development Conference. Web. *(Virtual due to COVID-19)*
  - [45] Grubert, E. July 2020. “Socioenvironmental priorities in resource-producing communities: Case studies from US and Australian communities hosting fossil fuel and solar production.” International Symposium on Society and Resource Management. Cairns, Queensland, Australia. *(Virtual due to COVID-19)*
  - [44] @Maxim, A. and E. Grubert. June 2020. “How could open data standards affect energy and water sustainability in agriculture?” International Symposium for Sustainable Systems and Technology. Pittsburgh, PA. *(Virtual due to COVID-19)*
  - [43] @Ha, S. and E. Grubert. May 2020. “Understanding the Public Attitudes towards the Clean Power Plan Using Natural Language Processing and Deep Learning.” Duke University Energy Data Analytics Symposium. Durham, NC. *(Postponed due to COVID-19)*
  - [42] Kirkman, R. and E. Grubert. February 2020. “Rethinking Relational Values for Environmental Assessment.” 2020 Annual International Conference of the Association for Practical and Professional Ethics. Atlanta, GA. *(Oral)*
  - [41] Kirkman, R. and E. Grubert. January 2020. “Rethinking Relational Values for Environmental Assessment.” Workshops on Original Policy Research (WOPR). Georgia Institute of Technology. Atlanta, Georgia.
  - [40] Grubert, E. December 2019. “Phasing Out Fossil Fuels: Socioenvironmental Priorities and Just Transitions for Extraction Communities.” American Geophysical Union Fall Meeting. San Francisco, CA. *(Oral)*
  - [39] Meng, M., K. Sanders, and E. Grubert. December 2019. “Resolving the life cycle water consequences of U.S. coal-fired electricity: A challenge of data availability, spatial attribution, and consumer accountability.” American Geophysical Union Fall Meeting. San Francisco, CA. *(Oral)*
  - [38] Gallo, E., C. Bell, A. Beziou, K. Spahr, E. Grubert, and T. Hogue. December 2019. “Development of a new integrated decision support tool (i-DST) for optimizing the benefits and tradeoffs of greener to greyer stormwater

- infrastructure.” American Geophysical Union Fall Meeting. San Francisco, CA. (*Poster*)
- [37] Ravikumar, A., E. Grubert, and D. Sanchez. December 2019. “An Introduction to the Green New Deal and its Implications for Climate Policy.” American Geophysical Union Fall Meeting. San Francisco, CA. (*Oral—Session Chair, The Green New Deal: From Resolution to Reality*)
  - [36] Grubert, E. September 2019. “Conventional Hydroelectricity and the Future of the Grid.” Energy Policy Research Conference. Boise, ID. (*Oral*)
  - [35] Grubert, E. August 2019. “Modeling Regionalized Life Cycle Cost Ranges for Stormwater Infrastructure.” Operation & Maintenance of Stormwater Control Measures. Minneapolis, MN. (*Oral*)
  - [34] Grubert, E. June 2019. “What can public comments on the Clean Power Plan tell us about public attitudes toward climate-oriented regulation of the electricity system? A computational analysis.” International Symposium on Society and Resource Management. Oshkosh, WI. (*Oral*)
  - [33] Peer, R., E. Grubert, and K. Sanders. May 2019. “A High-resolution Geospatial Assessment of Water for the US Energy System.” World Environmental and Water Resources Congress. Pittsburgh, PA. (*Oral*)
  - [32] Grubert, E. May 2019. “A Life Cycle Cost Model of United States Green Stormwater Infrastructure Including Monetized Environmental Costs.” World Environmental and Water Resources Congress. Pittsburgh, PA. (*Oral*)
  - [31] Grubert, E. April 2019. “Energy in Atlanta: Regional Priorities and Governance.” Atlanta Studies Symposium. Atlanta, Georgia. (*Oral*)
  - [30] Sanders, K. and E. Grubert. December 2018. “Estimating the water usage of the US energy system within the context of change.” American Geophysical Union Fall Meeting. Washington, D.C. (*Oral*)
  - [29] Stokes-Draut, J., and E. Grubert. December 2018. “Unraveling the Water-Energy-Carbon Nexus for California’s Urban Water Future.” American Geophysical Union Fall Meeting. Washington, D.C. (*Oral*)
  - [28] Hogue, T., C. Bell, E. Gallo, K. Spahr, E. Grubert, J. Stokes-Draut, and J. McCray. December 2018. “Advancing tools for holistic management of water resources: Development of an integrated decision support tool (i-DST) for grey and green infrastructure implementation.” American Geophysical Union Fall Meeting. Washington, D.C. (*Oral*)
  - [27] Peer, R., E. Grubert, and K. Sanders. December 2018. “A Geospatial Assessment of the Water Consumed and Withdrawn for US Fossil Fuel Production.” American Geophysical Union Fall Meeting. Washington, D.C. (*Poster*)
  - [26] Gallo, E., T. Hogue, C. Bell, K. Spahr, E. Grubert, and J. Stokes-Draut. December 2018. “Application of a new integrated decision support tool (i-DST) for urban water infrastructure: Analyzing water quality compliance pathways in Ballona Creek Watershed in Los Angeles, California.” American Geophysical Union Fall Meeting. Washington, D.C. (*Poster*)
  - [25] Grubert, E. June 2018. “Socioenvironmental priorities and experiences in the Eagle Ford and Bakken Shale regions of the United States: A comparative case



- study." International Symposium on Society and Resource Management. Salt Lake City, Utah. *(Oral)*
- [24] \*Groenke, A., E. Grubert, J. Stokes-Draut, and A. Horvath. May 2018. "Analysis of California water conservation programs for low-income communities: Decision support systems for utility planning." Re-Inventing the Nation's Urban Water Infrastructure (ReNUWIt) Spring Meeting. Stanford, California. *(Poster)*
  - [23] Grubert, E. May 2018. "Developing Social Elements of Life Cycle Assessment." World Environmental and Water Resources Congress. Minneapolis, Minnesota. *(Oral)*
  - [22] Webber, M. and E. Grubert. December 2017. "Thirst for Power: Energy, Water, and Human Survival." American Geophysical Union Fall Meeting. New Orleans, Louisiana. *(Oral)*
  - [21] Grubert, E. December 2017. "Water Use for Unconventional Energy Development: How Much, What Kind, and to What Reaction?" American Geophysical Union Fall Meeting. New Orleans, Louisiana. *(Poster, Invited)*
  - [20] Traer, M., R. Haupt, and E. Grubert. December 2017. "Stop saving the planet! Carbon accounting of superheroes and their impacts on climate change." American Geophysical Union Fall Meeting. New Orleans, Louisiana. *(Poster)*
  - [19] Wang, J. and E. Grubert. November 2017. "Perceived variability in attribute outcomes, moral attributes, and compromise." Society for Judgment and Decision Making Annual Meeting. Vancouver, British Columbia. *(Poster)*
  - [18] Grubert, E. November 2017. "Integrating Water Quantity to Life Cycle Assessment: A US-based Energy Water Nexus Case Study." American Water Resources Association Annual Conference. Portland, Oregon. *(Oral)*
  - [17] \*Suganuma, J. and E. Grubert. July 2017. "Community Response to Unconventional Oil and Gas Development in North America." Energy Impacts Symposium 2017. Columbus, Ohio. *(Oral)*
  - [16] Grubert, E. and K. Sanders. June 2017. "A National Assessment of the Water Withdrawn and Consumed for the US Energy Economy." 2017 Joint Conference of the International Society for Industrial Ecology and International Symposium on Sustainable Systems and Technology. Chicago, Illinois. *(Oral)*
  - [15] Grubert, E. and M. Cook. May 2017. "Communicating Controversial Scientific Issues: Water Use for Oil and Natural Gas." World Environmental and Water Resources Congress. Sacramento, California. *(Poster)*
  - [14] Grubert, E. and K. Sanders. December 2016. "Water for Energy: Quantifying Water Use in the United States Energy Economy as of 2014." American Geophysical Union Fall Meeting. San Francisco, California. *(Oral)*
  - [13] Jagdeo, J., A. Ravikumar, E. Grubert, and A. Brandt. December 2016. "A Holistic Assessment of Energy Production: Environmental, Economic, and Social Impacts of Hydraulic Fracturing in Williams County, North Dakota." American Geophysical Union Fall Meeting. San Francisco, California. *(Poster)*
  - [12] \*Melby, G., E. Grubert, and A. Brandt. December 2016. "Perceptions of Shale Gas Development: Differences in Urban and Rural Communities." American Geophysical Union Fall Meeting. San Francisco, California. *(Poster)*

- [11] \*Drummond, V., E. Grubert, and A. Brandt. December 2016. "Fault Lines: Seismicity and the Fracturing of Energy Narratives in Oklahoma." American Geophysical Union Fall Meeting. San Francisco, California. *(Poster)*
- [10] Grubert, E. May 2016. "The Dynamic Water Intensity of Hydroelectricity." World Environmental and Water Resources Congress. West Palm Beach, Florida. *(Oral)*
- [9] Cook, M. and E. Grubert. May 2016. "Water Use in the Oil and Gas Industries: Communicating with Scientists, Policymakers, and the Public." World Environmental and Water Resources Congress. West Palm Beach, Florida. *(Poster)*
- [8] Grubert, E. April 2016. "The Water Intensity of Coal Mining in the United States: A Basin Level Evaluation." American Water Resources Association Spring Specialty Conference. Anchorage, Alaska. *(Oral)*
- [7] Grubert, E. December 2015. "Social Priorities as Data." American Geophysical Union Fall Meeting. San Francisco, California. *(Poster)*
- [6] Grubert, E. December 2015. "Empowering Graduate Students to Lead on Interdisciplinary Societal Issues." American Geophysical Union Fall Meeting. San Francisco, California. *(Oral)*
- [5] Grubert, E. and A. Brandt. October 2015. "Methane Leakage in LCA: Quantifying the Effect of Fugitive Methane Emissions on Greenhouse Gas Inventories." American Center for Life Cycle Assessment LCA XV. Vancouver, Canada. *(Oral)*
- [4] Grubert, E. February 2015. "Hearing the Unspoken: Using Text Mining to Investigate Social and Environmental Priorities." American Association for the Advancement of Science Annual Meeting. San Jose, California. *(Poster)*
- [3] Grubert, E. March 2015. "Evaluating Produced Water as a New Source in the United States." American Water Resources Association Spring Specialty Conference. Los Angeles, California. *(Oral)*
- [2] Grubert, E. August 2011. "Modeling Water Supply and Demand on Maui: Forests as a Land Use Category." Hawaii Conservation Conference. Honolulu, Hawaii. *(Oral)*
- [1] Grubert, E. October 2010. "Air Impacting Water: How Carbon Emissions Standards Could Impact West Virginia Water." West Virginia Water Conference: West Virginia's Water Resources: Threats and Opportunities. Morgantown, West Virginia. *(Oral)*

#### **D4. Invited Seminar Presentations**

- [29] University of Calgary. NZERI (Net Zero Electricity Research Initiative) Learning Series. "U.S. Fossil Power CCS Under the Inflation Reduction Act." Calgary, AB. *(Individual; remote)*
- [28] Princeton University. Conversations on the Environment, Responsible Energy, And Life (CEREAL). "Justice in the Mid-Transition." Princeton, NJ. *(Individual)*
- [27] Princeton University. Bradford Seminar. November 2023. "[Planning the Mid-Transition for Just and Sustainable Decarbonization](#)." Princeton, NJ. *(Individual)*
- [26] The University of Texas at Austin. UT Energy Symposium. October 2023. "[Fossil Phase-out and the Just Energy Transition](#)." Austin, TX. *(Individual; remote)*

- [25] The University of Texas at Austin. DeFord Lecture. October 2023. [“Planning the Mid-Transition: Aligning Fossil Phase-out and Zero Carbon Phase-in for Just Decarbonization.”](#) Austin, TX. *(Individual)*
- [24] Council of Economic Advisers (United States White House). July 2023. “The Mid-transition: Planning and Implementation in the US.” Washington, DC. *(Individual; remote)*
- [23] North American Carbon Program and US Carbon Cycle Science Program. November 2022. The Carbon Dioxide Removal (CDR) Academy. [“CDR similarities and differences across earth systems.”](#) *(Panel; remote)*
- [22] North American Carbon Program and US Carbon Cycle Science Program. October 2022. The Carbon Dioxide Removal (CDR) Academy. [“Role of the atmosphere in deep decarbonization.”](#) *(Individual; remote)*
- [21] University of California, Los Angeles. Joint Seminar: UCLA Institute of the Environment & Sustainability and UCLA Department of Civil and Environmental Engineering. May 2021. “Fossil electricity retirement deadlines for a just transition.” Los Angeles, CA. *(Individual; remote)*
- [20] Stanford University. Energy Resources Engineering Spring Seminar. March 2021. “Fossil electricity retirement deadlines for a just transition.” Stanford, CA. *(Individual; remote)*
- [19] Lawrence Berkeley National Lab. Electricity Markets & Policy Department Seminar. March 2021. “Fossil electricity retirement deadlines for a just transition.” Berkeley, CA. *(Individual; remote)*
- [18] MSE Village Conversations. March 2021. “Fossil electricity retirement deadlines for a just transition.” Atlanta, GA. *(Individual; remote)*
- [17] Lawrence Berkeley National Lab. Energy Analysis & Environmental Impacts (EAEI) Happy Hour Seminar. February 2021. “Fossil electricity retirement deadlines for a just transition.” Berkeley, CA. *(Individual; remote)*
- [16] Human-Water Systems Monthly. January 2021. “Conventional Hydroelectricity and the Energy Transition.” Online seminar series (session hosted by Virginia Tech). *(Individual; remote)*
- [15] Georgia Institute of Technology. GeoSeminar. October 2020. “Decarbonization and a Just Transition in the United States Energy Sector.” Atlanta, GA. *(Individual; remote)*
- [14] University of California, Santa Barbara. October 2020. “Energy, Water, and Facilitating Infrastructure Decisions Under Climate Change.” Santa Barbara, CA. *(Individual; remote)*
- [13] Stanford University. September 2020. “Macro-Energy Systems: Toward a New Discipline.” Stanford, CA. *(Panel; remote)*
- [12] Stanford University. May 2020. “Renewable natural gas and climate: The influence of feedstock and methane leakage.” Stanford, CA. *(Individual; remote)*
- [11] University of Southern California. February 2020. “Conventional Hydroelectricity and the Energy Transition.” Los Angeles, CA. *(Individual)*
- [10] University of Illinois Urbana-Champaign. February 2020. “Conventional Hydroelectricity and the Energy Transition.” Urbana, IL. *(Individual)*

- [9] North Carolina State University. November 2019. "Conventional Hydroelectricity and the Grid." Raleigh, NC. *(Individual)*
- [8] North Carolina State University. November 2019. "Power Shift: The Future of Energy and the Women Shaping It." Raleigh, NC. *(Panel)*
- [7] Carnegie Institution for Science Department of Global Ecology. October 2019. "The Energy System is Changing: Industrialization, Deindustrialization, and Adapting What We Have." Stanford, CA. *(Individual)*
- [6] NextProf Nexus. October 2019. "Preparing for the Interview." Atlanta, Georgia. *(Panel)*
- [5] Georgia Institute of Technology. Environmental Engineering Seminar. October 2019. "The Energy System is Changing: Industrialization, Deindustrialization, and Adapting What We Have." Atlanta, Georgia. *(Individual)*
- [4] American Center for Life Cycle Assessment and the International Society for Industrial Ecology. February 2018. "The Need for a Preference-Based Multicriteria Prioritization Framework in Life Cycle Sustainability Assessment." LCSA Webinar Series. *(Individual)*
- [3] Energy Impacts Research Coordination Network. February 2017. "New Voices in Energy Impacts Research: Graduate Research Highlights." Webinar. *(Panel)*
- [2] Yale Climate and Energy Institute, Yale University. February 2013. "[Fuel Switching Can Save Water: Freshwater Use for Coal Versus Natural Gas Extraction and Power Generation in Texas](#)." New Haven, Connecticut. *(Individual)*
- [1] Rocky Mountain Institute. January 2011. "The Role of Coal in the United States: Reserves and Externalities." Boulder, Colorado. *(Individual)*

## **D5. Other Presentations**

- [44] Grubert, E. February 2024. "Subnational governments and the just energy and climate transition." Cities, States, & Global Governance. University of Notre Dame. Notre Dame, IN. *(Individual)*
- [43] Grubert, E. December 2023. "Methane." Zero Emissions by 2040 Technical Conference. New York Department of Public Service. *(Panel; remote)*
- [42] Grubert, E. December 2023. "What role does direct air capture (DAC) play in achieving net zero?" Direct Air Capture Webinar. The Transition Accelerator. *(Panel; remote)*
- [41] Grubert, E. November 2023. "[Clearing the Air: Progress and Pitfalls of Carbon Dioxide Removal](#)." Forward in Energy Forum, Wisconsin Energy Institute. *(Panel; remote)*
- [40] Grubert, E. October 2023. "The taxonomy of carbon capture for climate action." CURE Convening: Carbon Capture & Minnesota's "Carbon Free" Future. *(Individual; remote)*
- [39] Grubert, E. October 2023. "Panel 1: Failing Forward." Funder Collaborative on Oil and Gas. Carbon Capture: A Deep Dive for Journalists. Houston, TX. *(Panel; remote)*

- [38] Grubert, E. October 2023. "Justice-centering decarbonization and equitable energy transitions." Environmental Policy. University of Notre Dame. Notre Dame, IN. *(Individual)*
- [37] Grubert, E. September 2023. "Planning the Mid-Transition: Aligning Fossil Phase-out and Zero Carbon Phase-in for Just Decarbonization." ND Energy Faculty Lunch. University of Notre Dame. Notre Dame, IN. *(Individual)*
- [36] Grubert, E. September 2023. "Confronting the Climate Crisis Across the Disciplines." Cushwa Center and ND Energy. University of Notre Dame. Notre Dame, IN. *(Panel)*
- [35] Grubert, E. January 2023. "Planning for the Mid-transition." Pacific Northwest Utilities Conference Committee Board of Directors Meeting. *(Individual; remote)*
- [34] Grubert, E. December 2022. "Navigating the Energy Transition – Growing Pains and Path Forward." Illinois Power Agency. Power Hour 11. *(Individual; remote)*
- [33] Grubert, E. December 2022. "Life cycle assessment for decision support in the building sector." US Department of Energy. Advanced Building Construction Initiative Coffee Chats. *(Individual; remote)*
- [32] Grubert, E. November 2022. "Planning for a just decarbonization transition." Exploring Civil and Environmental Engineering. Georgia Institute of Technology. Atlanta, Georgia. *(Remote)*
- [31] Grubert, E. March 2022. "Fossil electricity retirement deadlines for a just transition." Climate Adaptation Policy. University of Delaware. Newark, Delaware. *(Remote)*
- [30] Grubert, E. June 2021. "Pitfalls of Assuming Low-Use, Low-Cost Natural Gas Electricity in Decarbonized Grid Planning." RMI Electricity Office Hours. *(Remote)*
- [29] Grubert, E. April 2021. "What Went Wrong in Texas? The February 2021 Texas Freeze." IEEE Kansas City Section Chapter. *(Remote)*
- [28] Chen, Y., E. Grubert, and G. Lan. April 2021. "Machine Learning-assisted Design of Sustainable Nanofiltration Membranes for Wastewater Resource Recovery." School of Civil and Environmental Engineering, Executive Advisory Board Meeting. Atlanta, Georgia. *(Presenter; Remote)*
- [27] Grubert, E. April 2021. "ITE & WTS 2021 Faculty Chat." Georgia Institute of Technology, School of Civil and Environmental Engineering. *(Panel; Remote)*
- [26] Grubert, E. March 2021. "Resilient Energy Infrastructure." Georgia Institute of Technology #SMARTer Together Webinar Series. *(Panel; Remote)*
- [25] Grubert, E. March 2021. "Out with the Old, in with the New: How to Build a Net-Zero America While Ensuring a Just Transition." Columbia Center on Global Energy Policy. Online seminar. *(Panel; Remote)*
- [24] Grubert, E. March 2021. "Renewable Natural Gas Regulatory Considerations." Building Decarbonization Regulatory Working Group. Online seminar. *(Remote)*
- [23] Grubert, E. February 2021, March 2021. "Just Transition for Power Plant Retirements." NYSERDA Just Transition Working Group. *(Remote)*
- [22] Grubert, E. January 2021. "Fossil electricity retirements for a just transition." CHEM 3700. Georgia Institute of Technology. Atlanta, Georgia. *(Remote)*



- [21] Grubert, E. December 2020. "[Working with Industry](#)." Strategic Energy Institute. Georgia Institute of Technology. Atlanta, Georgia. (*Remote; panel*)
- [20] Grubert, E. November 2020. "[Transforming Industry in America's Zero-Carbon Action Plan](#)." Online Zero Carbon Action Plan seminar. (*Panel*)
- [19] Grubert, E. October 2020. "Exploring Civil and Environmental Engineering." School of Civil and Environmental Engineering, Executive Advisory Board Meeting. Atlanta, Georgia. (*Remote*)
- [18] Grubert, E. September 2020. "Life Cycle Assessment." ENVE 555. San Diego State University. San Diego, California. (*Remote*)
- [17] Grubert, E. June 2020. "Beyond CO<sub>2</sub>: Water and Methane as Relevant Indicators in a Decarbonizing World." ZERO Lab. Princeton University. Princeton, New Jersey. (*Remote*)
- [16] Grubert, E. May 2020. "Life Cycle Assessment: Sustainability Assessment for Decision Making." Envres 240. Stanford University. Stanford, California. (*Remote*)
- [15] Grubert, E. May 2020. "The Powder River Basin Story." Ad hoc online seminar. Web.
- [14] Grubert, E. May 2020. "Conventional Hydroelectricity and the Energy Transition." Emmett Interdisciplinary Program in Environment and Resources Alumni Seminar. Web.
- [13] Grubert, E. April 2020, July 2020, September 2020. "Coal." CEE 107A/207A/Earthsys 103. Stanford University. Stanford, California. (*Remote, 3x*)
- [12] Grubert, E. April 2020. "How Environmental Policy Opened a Coal District." EH 590R. Emory University. Atlanta, Georgia. (*Remote*)
- [11] Grubert, E. March 2020. "Exploring Civil and Environmental Engineering: Engaging Freshmen Early" (*Poster*). Celebrating Teaching Day. Georgia Institute of Technology. Atlanta, Georgia.
- [10] Grubert, E. January 2020. "Life Cycle Assessment: Sustainability Assessment for Decision Making." ME 4801. Georgia Institute of Technology. Atlanta, Georgia.
- [9] Grubert, E. October 2019. "Studying Energy Transitions with Geographic Information Systems." CP 6541. Georgia Institute of Technology. Atlanta, Georgia.
- [8] Grubert, E. March 2019. "Social Life Cycle Assessment." ISyE 8803-THO. Georgia Institute of Technology. Atlanta, Georgia.
- [7] Grubert, E. March 2016. "Water Intensity of Energy Systems: A Major Emerging Policy Issue." MAP. Palo Alto, California.
- [6] Grubert, E. February 2016. "Triple Bottom Line Policy Making: How Do We Balance Priorities?" United World College USA. Montezuma, New Mexico.
- [5] Grubert, E. February 2016. "Implementation and Activism: Being Effective While Advocating." United World College USA. Montezuma, New Mexico.
- [4] Grubert, E. March 2015. "The Future of the Energy Industry." MAP. Palo Alto, California. (*Panel*)

- [3] Grubert, E. June 2013. "Natural gas, coal, and water in Texas." Texas Natural Gas Regulatory Modernization Initiative. Austin, Texas.
- [2] Grubert, E., A. Fraser, and E. Holland. September 2012. "Thermal Coal Vision 2030: United States Coal." McKinsey Basic Materials Knowledge Day. Las Vegas, Nevada.
- [1] Grubert, E. April 2010. "Energy and Water." Amarillo Area Foundation and Texas Energy Forum. Amarillo, Texas.

## **E. GRANTS AND CONTRACTS**

### **E1. As Principal Investigator**

- [7] Title of Project: IPA Assignment with the Department of Energy  
Sponsor: US Department of Energy  
Total Dollar Amount: \$267,586  
Role: IPA; Specialized Service Agreement  
Collaborators: n/a  
Period of Contract: 12/3/2022 – 8/31/2023  
Candidate's Share: \$267,586 (100%)
- [6] Title of Project: IPA Assignment with the Department of Energy  
Sponsor: US Department of Energy  
Total Dollar Amount: \$187,860  
Role: IPA; Specialized Service Agreement  
Collaborators: n/a  
Period of Contract: 7/19/2021 – 7/18/2022  
Candidate's Share: \$187,860 (100%)
- [5] Title of Project: Integrating End Use and Supply Side Decarbonization Strategies in the Southeast  
Sponsor: Georgia Institute of Technology  
Total Dollar Amount: \$6,489  
Role: PI  
Collaborators: n/a  
Period of Contract: 5/15/2021 – 6/30/2021  
Candidate's Share: \$6,489 (100%)
- [4] Title of Project: Review of Multicriteria Environmental Impacts of Zero and Low Greenhouse Gas Energy Resources and Carriers  
Sponsor: Clean Air Task Force  
Total Dollar Amount: \$8,010  
Role: PI  
Collaborators: n/a  
Period of Contract: 4/1/2021 – 12/31/2021  
Candidate's Share: \$8,010 (100%)
- [3] Title of Project: What Can Grids Expect from Conventional Hydroelectricity?  
Sponsor: Carnegie Institution of Washington  
Total Dollar Amount: \$200,301  
Role: PI  
Collaborators: n/a  
Period of Contract: 1/1/2020 – 12/31/2022

Candidate's Share: \$200,301 (100%)

- [2] Title of Project: CPS: Medium: Dynamic Pricing for Optimal Design of Sustainable Transportation Systems  
Agency/Company: National Science Foundation  
Total Dollar Amount: \$1,018,602  
Role: PI  
Collaborators: Samuel Coogan (Co-PI), Omar Asensio (Co-PI)  
Period of Contract: 10/1/2019 – 9/30/2022  
Candidate's Share: \$335,449 (~33%)
- [1] Title of Project: What do public comments on environmental regulations reveal about social inequality? A computational analysis  
Agency/Company: Russell Sage Foundation  
Total Dollar Amount: \$7,668  
Role: PI  
Collaborators: none  
Period of Contract: 8/1/2019 – 7/31/2020  
Candidate's Share: \$7,668 (100%)

## **E2. As Co-Principal Investigator**

- [8] Title of Project: NSF Engines Development Award: Developing innovative Climate-Resilient Built Environments (Green CRiBs)  
Agency/Company: National Science Foundation  
Total Dollar Amount: \$1,000,000  
Role: Co-PI  
Collaborators: James Braun (PI), Panagiota Karava (Co-PI), W. Travis Horton (Co-PI), Arash Adel (Co-PI)  
Period of Contract: 3/01/2024-8/31/2025  
Candidate's Share: not available
- [7] Title of Project: Planning Grant: Engineering Research Center for Green and Climate-Resilient Built Environments (Green CRiBs)  
Agency/Company: National Science Foundation  
Total Dollar Amount: \$150,000  
Role: Co-PI  
Collaborators: Aram Amassian (PI), Natalie Stingelin (Co-PI), Terri Long (Co-PI), Michael McGehee (Co-PI)  
Period of Contract: 9/01/2021-4/30/2022  
Candidate's Share: not available
- [6] Title of Project: CEE Cross-Cutting Research: Machine learning-assisted design of sustainable nanofiltration membranes for wastewater resource recovery  
Agency/Company: Georgia Institute of Technology  
Total Dollar Amount: \$15,000  
Role: Co-PI  
Collaborators: Yongsheng Chen (PI), Guanghui Lan (Co-PI)  
Period of Contract: 05/01/2021-12/31/2021  
Candidate's Share: not available
- [5] Title of Project: Estimating the costs of the coal-targeted retirement deadline policies to local communities in the West  
Agency/Company: Western Resource Advocates

Total Dollar Amount: \$25,000  
Role: Co-PI  
Collaborators: Robert Godby (PI), Roger Coupal (Co-PI)  
Period of Contract: 01/01/2021-12/31/2021  
Candidate's Share: \$7,000 (~28%)

- [4] Title of Project: Life Cycle Comparative Study of Pavements from Modified Sulfur Binder  
Agency/Company: Uberbinder  
Total Dollar Amount: \$114,259  
Role: Co-PI  
Collaborators: Kimberly Kurtis (PI), Francesca Lolli (Co-PI)  
Period of Contract: 6/15/2020 – 12/15/2021  
Candidate's Share: \$12,062 (~10%)
- [3] Title of Project: Recommendations for Future Specifications to Ensure Durable Next Generation Concrete  
Agency/Company: Georgia Department of Transportation  
Total Dollar Amount: \$325,000  
Role: Co-PI  
Collaborators: Kimberly Kurtis (PI)  
Period of Contract: 8/15/2020 – 8/14/2023  
Candidate's Share: \$196,500 (60%)
- [2] Title of Project: FW-HTF-RL: Cultivating Capacities for Responsible Hacking, Creating, and Making the Future of Work in Agriculture  
Agency/Company: National Science Foundation  
Total Dollar Amount: \$1,996,465  
Role: Co-PI  
Collaborators: Jacqueline Tidwell (PI), Don Edgar (Co-PI)  
Period of Contract: 10/1/2019 – 9/30/2023  
Candidate's Share: \$426,144 (~20%)
- [1] Title of Project: Designing "Introduction to Civil and Environmental Engineering"  
Agency/Company: Georgia Institute of Technology (Serve-Learn-Sustain Course Development Funds)  
Total Dollar Amount: \$4,000  
Role: Co-PI  
Collaborators: Kevin Haas (Co-PI)  
Period of Contract: 4/1/2019 – 6/30/2019  
Candidate's Share: 100% (\$4,000)

### **E3. As Senior Personnel or Contributor**

- [1] Title of Project: An Integrated Decision Support Tool (i-DST) for Life-Cycle Cost Assessment and Optimization of Green, Grey, and Hybrid Stormwater Infrastructure  
Agency/Company: Environmental Protection Agency  
Total Dollar Amount: \$1,949,462  
Role: subawardee  
Collaborators: Terri Hogue (PI), Mengistu Geza (co-PI), Christopher Higgins (co-PI), Arpad Horvath (co-PI), John McCray (co-PI), Rob McDonald (co-PI), Jennifer Stokes-Draut (co-PI)  
Period of Contract: 1/1/2019 – 3/31/2020

Candidate's Share: \$110,000 (~6%)

## **F. OTHER SCHOLARLY AND CREATIVE ACCOMPLISHMENTS**

- [16] The Energy Gang, 6 February 2024. [A pause in US gas export approvals: a big win for the climate?](#) *(Podcast guest)*
- [15] Zero (Bloomberg Green), 8 November 2023. [Big Promise, Little Success: The Precarious State of Carbon Capture.](#) *(Podcast guest)*
- [14] The Energy Gang, 8 September 2023. [The US government is rolling the dice on direct air capture.](#) *(Podcast guest)*
- [13] Catalyst with Shayle Kann, 20 July 2023. [Taking a closer look at carbon capture.](#) *(Podcast guest)*
- [12] The Energy Gang, 30 June 2023. [Controversy over COP28.](#) *(Podcast guest)*
- [11] Public Power Underground, 27 April 2023. [A conversation about a just mid-transition.](#) *(Podcast guest)*
- [10] The Energy Gang, 10 March 2023. [Clearing the red tape around renewables.](#) *(Podcast guest)*
- [9] Resources Radio, 29 November 2022. [Overcoming Obstacles in the Mid-transition to Clean Energy.](#) *(Podcast guest)*
- [8] The Energy Transition Show, Episode 185: [Designing the Mid-transition.](#) *(Podcast guest)*
- [7] The Energy Gang, 23 September 2022. [Managing Mid-Transition.](#) *(Podcast guest)*
- [6] The Big Switch, Season 1, Episode 1: [The Zero-Carbon Backbone.](#) *(Podcast guest)*
- [5] The Energy Transition Show, Episode 145: [A Slow Take on the Texas Blackout.](#) *(Podcast guest)*
- [4] The Energy Transition Show, Episode 140: [Methane Leakage.](#) *(Podcast guest)*
- [3] ASCE *Plot Points*, Season 4, Episode 8: [Are Civil Engineers Doing Enough to Combat Climate Change?](#) *(Podcast guest)*
- [2] Resources Radio, 17 December 2019. [Understanding Water Use in the US Energy System.](#) *(Podcast guest)*
- [1] Hames, Mat (Director). 2018. *Thirst for Power*. Documentary. <http://www.imdb.com/title/tt9032352/>. *(Featured interviewee)*

## **G. SOCIETAL AND POLICY IMPACTS**

### **G1. Selected Public Comments and Testimony**

- [9] Grubert, E. August 2023. Expert Rebuttal Report of Dr. Emily Grubert Re: Direct Air Capture In the Matter Regarding Proposed Revisions to Regulation Number 27 before the Colorado Air Quality Control Commission. *(Written)*
- [8] Grubert, E. August 2023. Response to DOE/EA-2197D: Project Tundra, Environmental Assessment. Comment on Draft Environmental Assessment. *(Written)*



- [7] Grubert, E., J. Buonocore, and E. Polka. August 2023. Response to docket # EPA-HQ-OAR-2023-0072. Comment on EPA's 111 (power plant greenhouse gas) proposed rule. *(Written)*
- [6] Grubert, E. November 2022. [Direct Testimony of Emily Grubert, PhD, on behalf of Sierra Club](#). Testimony before the Washington, D.C. Public Service Commission. *(Written)*
- [5] Grubert, E. October 2022. Concerns about Refinery Carbon Capture and Storage Action in Scoping Plan. Comment to the California Air Resources Board. *(Written)*
- [4] Grubert, E. September 2022. [Direct Testimony of Emily Grubert](#). Testimony before the Vermont Public Utility Commission. *(Written)*
- [3] Grubert, E. November 2020. [Direct Testimony of Emily Grubert on Behalf of PACE Energy and Climate Center and Alliance for a Green Economy](#). Testimony before the New York State Public Service Commission. *(Written)*
- [2] Cullenward, D., M. Mastrandrea, E. Grubert, and A. Strong. March 2016. [Use of 20-year GWPs in the Draft Aliso Canyon Methane Leak Climate Impacts Mitigation Program](#). Comment to the California Air Resources Board. *(Written)*
- [1] Grubert, E. April 2014. [Testimony Regarding the Mine Methane Capture Carbon Offset Protocol](#). Meeting of the State of California Air Resources Board. *(Oral)*

## **G2. Selected Press Coverage**

*New York Times, The New Yorker, Los Angeles Times, Boston Globe, Chicago Tribune, Houston Chronicle, Forbes, Grist, Quartz, Gizmodo, Mother Jones, Columbus Dispatch, CleanTechnica, Inside Climate News, Texas Climate News, ClimateNexus, The Climate Pod, Huffington Post, Resources Radio (Resources for the Future), KQED, MIT Technology Review, New Project Media, Platts, Natural Gas Intel, Scientific American, Environmental Research Web, Eos, Montgomery Herald, Mountain West News Bureau, Tonopah Times-Bonanza, We Are Engineers, The Alcalde, Texas Clean Energy Coalition, Washington Post*

## **G3. Selected Press Quotes**

*Los Angeles Times, New York Times, NPR, AP, Wall Street Journal, National Geographic, E&E News, The New Republic, S&P Global, TechCrunch, The Atlantic ("The Weekly Planet"), Business Insider, Bloomberg, Univision, DeSmog Blog, Gizmodo, Salon, Indy Star, WSBTV (Channel 2), WJCT, Mashable, Casper Star-Tribune*

## **G4. Selected Use of Research in Policy**

- [2] [Grubert and Sawyer 2022](#) submitted to the Internal Revenue Service as a comment on 45Q (carbon oxide sequestration tax credit) implementation
- [1] [Comment Re: Formal Case No. 1142 by the Apartment and Office Building Association of Metropolitan Washington](#); [Grubert 2020](#) entered into California Energy Commission Public Docket, 20-IEPR-02-Transportation

## **H. OTHER PROFESSIONAL ACTIVITIES**

- 2024 **Expert**, EarthJustice (NY)
- 2024 **Expert**, CURE

2023-pres **Project Consultant**, Carbon Advocacy Project  
 2023 **Expert**, Environmental Defense Fund (Colorado)  
 2022, 23 **Expert Reviewer**, Frontier Climate  
 2022 **Expert**, EarthJustice (Washington, DC)  
 2022 **Expert**, Vermonters for a Clean Environment (Vermont)  
 2022-pres **Professional Engineer** (Georgia, PE049118)  
 2021 **Expert**, Sierra Club (Nevada)  
 2021 **Project Consultant**, Clark Fork Coalition  
 2020-pres **Envision Sustainability Professional (ENV SP)** (#35373)  
 2020-2021 **Expert**, EarthJustice (New York)  
 2020-2021 **Project Advisor**, [The Gas Index](#) (Global Energy Monitor), San Francisco, California  
 2020 **Project Consultant**, CarbonPlan, San Francisco, California  
 2016, 18 **Project Consultant**, Lineage Logistics, Irvine, California  
 2014-15 **Project Consultant**, SandRidge Energy, Oklahoma City, Oklahoma  
 2013-14 **Project Consultant**, Energy Innovation, San Francisco, California  
 2013 **Project Analyst**, Pacific Gas and Electric  
 2011-2022 **Engineer-in-Training**, Environmental Engineering (#45743)  
 2009-pres **Leadership in Energy and Environmental Design (LEED) Accredited Professional**, Building Design and Construction

## V. EDUCATION

### A. COURSES TAUGHT

#### A1. Notre Dame

Spring, 2024	GLAF 60221	Life Cycle Assessment	7
Spring, 2024	GLAF 40113	Climate and Environmental Justice	19
Fall, 2023	GLAF 30131	Energy Systems for Decarbonization	31

#### A2. Georgia Tech

Spring, 2021	CEE 8813	Sustainable Buildings	18
Fall, 2020	CEE 2803	Exploring CEE	48
Spring, 2020	CEE 8813	Sustainable Buildings	14
Fall, 2019	CEE 2803	Exploring CEE	24

#### A3. Berkeley

Spring, 2018	CE 268s	Buildings and Sustainability	25
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#### A4. Stanford

Fall, Spring, 2015-18	CEE 107a/207a	Understanding Energy	30-150
Summer, 2014-17	CEE 107s	Energy Resources: Fuels and Tools	20-40
Winter, 2017	Envres 340	E-IPER PhD Writing Seminar	8
Fall, 2016	Envres 276	Water Resources: Culture and Context	6
Winter, 2015	Envres 275	The Practice of Mining and its Social and Environmental Context	10

## B. INDIVIDUAL STUDENT GUIDANCE

### B1. Ph.D. Students

- [5] Glass, Joshua. Fall 2023-present. Graduation date: Spring 2026 (expected). Project: TBD.
- [4] Henao, Yulizza. Fall 2022-present. Graduation date: Spring 2024 (expected). Project: Repurposing Decommissioned Wind Turbine Blades. Co-advisor: Russell Gentry.
- [3] Cohen, Abigail. Spring 2020-present. Graduation date: Spring 2024 (expected). Project: The New Greenbelt: Seeding Regional Self-Sufficiency Through the Circular Bioeconomy. Co-advisor: Yongsheng Chen.
- [2] Maxim, Alexandra. Fall 2019-Spring 2023. Graduation date: Spring 2023. Project: Housing for Resilience and Equity: Accounting for the Effects of Electrification and Climate-induced Human Mobility in Decision Support Tools. Recipient: [Robert Wood Johnson Foundation Health Policy Research Scholar Fellowship](#), [Sloan Foundation Fellowship](#). (*placement: Stantec*)
- [1] Ha, Sooji. Spring 2019-Summer 2021. Graduation date: Summer 2021. Project: Natural Language Processing and Deep Learning Approaches for Sustainability and Infrastructure Policy Analyses. Co-advisor: Omar Asensio. (*placement: Wells Fargo*)

### B2. M.S. Students

- [8] Doran, Alexandra. Fall 2023-present. Project: Decarbonization in the United States: A Review of Power Generation Contributions to National Decarbonization Goals. Thesis: yes. (*as Thesis Director, Harvard University Extension School*)
- [7] Drouhard, Bernadette. Summer 2021-present. Project: Methane Availability from Wastewater Reclamation Facilities as Fuel for Low Capacity Factor Gas Plants Under Deep Decarbonization. Thesis: yes.
- [6] Zacarias, Mathias. Fall 2021-Fall 2022. Project: Assessing the Residential Sector Decarbonization Potential of Demand-Side Management Resources: A Case Study of Georgia and the Atlanta Metro Area. Thesis: yes.
- [5] Burns, Diana. Fall 2019-Spring 2021. Project: How Different are US Natural Gas Basins? Spatially Resolved Life Cycle Greenhouse Gas Emissions from Natural Gas. Thesis: yes. Recipient: Georgia Power Fellowship.
- [4] Lyford, Kelsey. Fall 2019-Spring 2021. Thesis: no.
- [3] Descartes, Jamen. Fall 2019-Spring 2021. Thesis: no.

- [2] Dean, Victoria. Summer 2019-Spring 2021. Thesis: no. Recipient: [Robert Wood Johnson Foundation Health Policy Research Scholar Fellowship](#).
- [1] Krieger, Jennifer. Spring 2019-Fall 2019. Project: Life Cycle Costing for Green Stormwater Infrastructure for the integrated Decision Support Tool (iDST). Thesis: yes.

### **B3. Undergraduate Students**

- [19] Bradshaw, Toby. Spring 2024-present. Undergraduate Research Assistant, University of Notre Dame.
- [18] Burns, Ella. Fall 2023. Undergraduate Research Assistant, University of Notre Dame.
- [17] Hill, Clarice. Summer 2021. Undergraduate Research Assistant, Georgia Institute of Technology.
- [16] Chen, Jeremy. Spring 2021-Summer 2021. Undergraduate Research Assistant, Georgia Institute of Technology.
- [15] Herrera, Talia. Spring 2021-Summer 2021. Undergraduate Research Assistant, Georgia Institute of Technology.
- [14] Molnar, Clara. Spring 2021-Summer 2021. Undergraduate Research Assistant, Georgia Institute of Technology.
- [13] Shreve, Christa. Spring 2021-Summer 2021. Undergraduate Research Assistant, Georgia Institute of Technology.
- [12] Reinhart, Trina. Spring 2021. Undergraduate Research Assistant, Georgia Institute of Technology.
- [11] Schmidt, Isaac. Spring 2021. Undergraduate Research Assistant, Georgia Institute of Technology.
- [10] Zacarias, Mathias. Summer 2020-Summer 2021. Undergraduate Research Assistant, Georgia Institute of Technology.
- [9] Gali, Manasi. Spring 2020; Fall 2020-Summer 2021. Undergraduate Research Assistant, Georgia Institute of Technology.
- [8] Gardner, Anna. Fall 2019. Undergraduate Research Assistant, Georgia Institute of Technology.
- [7] Brown, Robert. Spring/Summer 2019. Undergraduate Research Assistant, Georgia Institute of Technology.
- [6] Groenke, Alexa. Spring 2018. Undergraduate Research Assistant, University of California, Berkeley.
- [5] Drummond, Virginia. Summer 2016. Undergraduate Research Assistant, Stanford University.
- [4] Melby, Grayson. Summer 2016. Undergraduate Research Assistant, Stanford University.
- [3] Suganuma, Jade. Summer 2016. Undergraduate Research Assistant, Drake University.
- [2] Herring, Noelle. 2015-2016. Undergraduate Research Assistant, Stanford University.

- [1] Rey, Lindsey. 2010-2011. Undergraduate Research Assistant, The University of Texas at Austin.

#### **B4. Service on thesis or dissertation committees**

- [10] Chen, Xinhe. Degree: Ph.D. Graduation date: Spring 2025 (expected). Project: Optimal design and operation of integrated energy systems under market interactions and uncertainties. Advisor: Alexander Dowling.
- [9] Kopp, Tobias. Degree: M.S. Graduation date: Summer 2023. Project: Development of performance-based specifications and analysis of life cycle impacts for Portland cement concrete pavement and structural concrete. Advisor: Kimberly Kurtis.
- [8] Broesicke, Osvaldo. Degree: Ph.D. Graduation date: Fall 2022. Project: Multidisciplinary design optimization for energy systems design: Evaluating the trade-offs between a centralized and distributed energy infrastructure for cities in the United States. Advisor: John Crittenden.
- [7] Caceres Gonzalez, Rodrigo. Degree: Ph.D. Graduation date: Summer 2022. Project: Development and prediction of sustainable strategies for integrating solar energy with desalination. Advisor: Marta Hatzell.
- [6] Rios, Renee. Degree: Ph.D. Graduation date: Spring 2022. Project: Screening reactivity and predicting performance of supplementary cementitious materials using statistical analysis and machine learning. Advisor: Kimberly Kurtis.
- [5] Santoyo, Cesar. Degree: Ph.D. Graduation date: Spring 2022. Project: Probabilistic analysis and control methods for electric vehicle charging. Advisor: Samuel Coogan.
- [4] Kasturi, Abishek. Degree: M.S. Graduation date: Fall 2020. Project: Near-term and long-term CO<sub>2</sub> sequestration potential in the United States using Bio-Energy with Carbon Capture and Storage. Advisor: Sotira Yiacoumi.
- [3] Francisco, Abigail. Degree: Ph.D. Graduation date: Summer 2020. Project: Urban Energy Informatics: Improving the Usability of Building Energy Data for Community Energy Efficiency. Advisor: John Taylor.
- [2] Samuels, Rachel. Degree: Ph.D. Graduation date: Summer 2020. Project: Identifying, Defining, and Utilizing Sociospatial Variances in Social Media Usage to Improve Crisis Response and Urban Resilience. Advisor: John Taylor.
- [1] Jin, Qingxu. Degree: Ph.D. Graduation date: Fall 2019. Project: "Fundamental Understanding of NO<sub>x</sub> Sequestration Capacity and Pathways in Nano-TiO<sub>2</sub> Engineered Cementitious Materials." Advisor: Kimberly Kurtis.

#### **B5. Mentorship of postdoctoral fellows or visiting scholars**

- [2] Marshall, Adrienne. January 2021-August 2021. (*placement: Assistant Professor, Colorado School of Mines*)
- [1] Mulrow, John. July 2020-June 2022. (*placement: Visiting Assistant Professor, Purdue University*)

### **C. EDUCATIONAL INNOVATIONS AND OTHER CONTRIBUTIONS**

2021 Workshop Co-Lead, "[Peer review excellence: become an IOP trusted reviewer](#)." Institute of Physics Publishing.

## VI. SERVICE

### A. PROFESSIONAL CONTRIBUTIONS

2024 **Chair**, GREET Model Review Committee. Argonne National Laboratory.

2023-2024 **Workshop Committee Member**, National Academies of Science, Engineering, and Medicine, "Developing and Assessing Ideas for Social and Behavioral Research to Speed Efficient and Equitable Industrial Decarbonization"

2023 **Ad Hoc Reviewer**, National Science Foundation, Decision, Risk, and Management Sciences Program

2023-pres. **Editor in Chief**, *Environmental Research: Energy*

2022-pres. **Member**, [Climate and Community Project](#)

2022-2023 **Associate Editor**, *The Electricity Journal*

2022-2023 **Vice Chair**, [Committee on Sustainable Energy](#), United Nations Economic Commission for Europe (*elected as United States representative*)

2022-2023 **Committee Member**, [2023 German-American Frontiers of Engineering Symposium](#)

2022 **Ad Hoc Reviewer**, National Science Foundation, Human-Environment and Geographical Sciences Program

2022 **Panel Reviewer**, Environmental Protection Agency, Science to Achieve Results Program

2021-pres. **Fifth National Climate Assessment (NCA5) Chapter Author**, Mitigation

2021-2022 **Technical Co-Chair**, 2022 Environmental and Water Resources Institute (EWRI) Congress (ASCE), Atlanta, Georgia

2021 **Advisory Committee Member**, [Environmental Research 2021](#), IOP Publishing, Virtual Conference

2021, 2022 **External Reviewer**, University of Michigan Carbon Neutrality Acceleration Program

2020-pres. **Editorial Board Member**, *Environmental Research: Infrastructure and Sustainability*

2020-pres. **Associate Editor**, *Journal of Environmental Studies and Sciences*

2020 **Steering Committee Member**, [Macro-Energy Systems Workshop](#)

2020-2021 **Vice Chair**, [Sustainability Committee](#), Interdisciplinary Council, Environmental and Water Resources Institute of the American Society of Civil Engineers

2020 **Panel Reviewer**, National Science Foundation, Directorate for Computer and Information Science and Engineering (CISE)

2019-2023 **Editorial Board Member**, *IOP SciNotes* (IOPSN)



- 2019-2020 **Secretary**, Sustainability Committee, Interdisciplinary Council, Environmental and Water Resources Institute of the American Society of Civil Engineers
- 2018-pres. **Advisory Board Member**, *Environmental Research Letters*
- 2018-2019 **Program Committee Member**, International Conference on Sustainable Infrastructure (ICSI) 2019: Sustainable Cities for an Uncertain World, American Society of Civil Engineers
- 2016-2021 **Member**, Environmentally Responsible Energy Production (formerly Hydraulic Fracturing) Technical Committee, Interdisciplinary Council, Environmental and Water Resources Institute of the American Society of Civil Engineers
- ongoing **Journal Referee**, *Science*, *Proceedings of the National Academy of Sciences*, *Environmental Science & Technology*, *Environmental Research Letters*, *Water Resources Research*, *Journal of Industrial Ecology*, *Energy Research and Social Science*, *Society and Natural Resources*, *Journal of Water Resources Planning and Management*, others

## **B. PUBLIC AND COMMUNITY SERVICE**

- 2023-pres. Scientific Advisory Board Member, Watershed Technology, Inc.
- 2023-pres. Board Member, Carbon Removal Institute
- 2021-pres. Capital Deployment for Community Needs Task Force Member, Maui ESG Project, Maui, Hawaii

## **C. UNIVERSITY SERVICE**

### **C1. Notre Dame**

- 2023 Fulbright Campus Committee Reviewer

### **C2. Georgia Tech**

- 2021 Strategic Energy Institute Faculty Advisory Council Member (*Institute level*)
- 2021 Civil and Environmental Engineering Strategic Planning Core Team Member (*School level*)
- 2021 Strategic Energy Institute Director Search Committee Member (*Institute level*)
- 2020-21 Civil and Environmental Engineering Committee on Diversity and Inclusion Faculty Representative and Vice-Chair (*School level*)
- 2020 Environmental Engineering Faculty Search Sub-committee Member (*School level*)
- 2020 College of Engineering Dean Search Committee Member (*College level*)
- 2019-21 Construction and Infrastructure Systems Engineering Representative, Undergraduate Committee (*School level*)
- 2019 OceanVisions2019 Session Co-chair (*School level*)