KYUNGMIN LEE

111 Academy Street,   Email: kmlee@udel.edu
Newark, DE 19716   Webpage: https://sites.google.com/udel.edu/klee
                                       GitHub: https://github.com/kleeresearch

EDUCATION

PhD   Univesity of Delaware, Energy and Environmental Policy   (Expected) 2025

Dissertation: The Impact of Human Behaviors and the Built Environment on Energy Use and Heat in Cities.

MCP   Seoul National University, Environmental Studies   2018

BA   Sungshin Women's University, Economics   2014

RESEARCH FOCUS

Environmental Policy, Eergy Policy, Climate Policy, Urban Planning, Economic & Community Development, Data Science, Machine Learning, Computer Vision, Remote Sensing

PUBLICATIONS

* -Indicate lead author/mentor Publicatoin

Peer Reviewed Journal Articles

2.   Arjunan, P., Dobler, G., **Lee, K.**, Miller, C., Biljecki, F., & Poolla, K. (2021, November). "Operational characteristics of residential air conditioners with temporally granular remote thermographic imaging". In *Proceedings of the 8th ACM international conference on systems for energy-efficient buildings, cities, and transportation* (pp. 184-187).

1.   *** Lee, K.**, & Yun, S. (2018). Positive Effects and Problematic Conditions of Adopting the Benefit Sharing Mechanism in Renewable Energy Projects: Focusing on the Case of Onshore Wind Farms in Jeju Island. *Space & Environment*: Vol.65. (pp.227~270). doi: 10.19097/kaser.2018.28.3.227
     - Featured in the *Monthly Electrical Technology & Information* 2019 January

Papers Under Review

1.   *** Lee, K.**, Yun, S.J., & Park, S., Drivers of CO2 Emissions Trends in Countries That Have Legislated Carbon Neutrality Targets. (Under Review)

Policy Reports

4. Cho, H., Lim, Y., Kim, S., Jeong, H., & **Lee, K.** (2019) Technical Assistance for the Development of an Urban Adaptation Plan for Kurunegala Project, D4.1 Report on the Results of Climate Change Risk and Vulnerability Asssessment. CTCN Requests No. 2018000009 Vol 3. (UN Climate Technology Centre and Network, & Korea Environment Institute)

3. Cho, H., Rubio, C., Jeong, H., **Lee, K.**, & Odawa, S. (2019) Technical Assistance for the Development of an Urban Adaptation Plan for Kurunegala Project, D4.2 Climate Change Risk Assessment Guidelines. CTCN Requests No. 2018000009 Vol 4. (UN Climate Technology Centre and Network, & Korea Environment Institute)

2. Kim, G., & **Lee, K.** (2016). A Comparative Study of Humanitarian Programs for Climate Refugees. *Enerzine Focus*: Vol.69 (Energy Climate Policy Institute; Republic of Korea)

1. Kim, T., Maeng, J., Park, J., & **Lee, K.** (2014). A Study on Environmental Assessment Guideline for Site Selection of Offshore Wind Farm Project. (Korea Environment Institute)

Work in Progress

3. *** Lee, K.**, & Dobler, G. A Novel Approach to Assessing the Efficacy of Policy-driven Urban Energy Demand Reduction via Proximal Infrared Remote Sensing.

2. *** Lee, K.**, Dobler, G, & Powers, T. Privacy-preserving Spatio-temporal Data Aggregation for Energy-End Use in City.

1. *** Lee, K.**, Yun, S.J., & Myeong, J.Y. Enhancing Local Acceptance and Environmental Awareness Through Benefit Sharing Mechanisms: A Framework and Empirical Analysis of Wind Farm Projects in South Korea.

PRESENTATIONS AND INVITED LECTURES

Conference Panel Paper / Poster Presentations

Analyzing Benefit-Sharing Mechanisms for Wind Farms in Jeju Island: A Framework and Survey. *Association for Research on Nonprofit Organizations and Voluntary Action (ARNOVA)-Asia*. Seoul, South Korea. June 2024.

Privacy-Preserving Spatio-Temporal Data Aggregation for Energy End Use in City. *International Conference on Urban Affairs (ICUA)*. New York City, USA. April 2024.

A Novel Approach to Assessing the Efficacy of Policy-driven Urban Energy Demand Reduction via Proximal Infrared Remote Sensing. *Association for Public Policy Analysis & Management (APPAM).* Atlanta, Georgia, USA. November 2023.

Drivers of CO2 Emissions Trends in Countries That Have Legislated Carbon Neutrality Targets. *Northeast Conference on Public Administration (NECoPA).* Virtual Presentation. November 2023.

An Exploratory Study on Carbon Neutrality Monitoring Models and Scenarios for the Establishment of a Sustainability Assessment System: A Comparison of Korea and Countries Enacted Legally Binding Agreements. *Korea Safety, Health, and Environment Foundation*, Virtual Presentation. November 2022.

An Influence of the Benefit Sharing Mechanism to the Local Acceptance and Environmental Awareness: Focusing on the Case of Onshore Wind Farms in Jeju Island. *Bio-resources, Energy, Environment, and Materials Technology International Conference*. Hongcheon, South Korea. June 2018.

An Exploratory Study on Positive Effects of and Problematic Conditions of Adopting the Benefit Sharing Mechanism: Focusing on the Case of Onshore Wind Farms in Jeju Island. *Korea Environmental Policy and Administration Society*. Seoul, South Korea. February 2018.

A Study on Impacts from Price Subsidy and Tax Policy of EVs in South Korea. *Korea Environmental Economics Association International Conference*. Seoul, South Korea. June 2016.

Invited Lectures

Computational Social Science for Energy and Environmental Policy. *Department of Public Administration. Chungnam National University*. October 2023.

Data-Driven Policy Making For Disaster Management. *Department of Public Administration. Chungnam National University*. April 2023.

Overview of Data Science and Machine Learning Tools in the Energy and Environmental Policy Field. *Department of Public Administration. Chungnam National University*. November 2021.

A Case Study of Machine Learning Applications in Energy and Environmental Policy. *Department of Public Administration, Chungnam National University*. October 2020.

Symposiums

Detection of Building Energy End-Use Via Proximal Infrared Remote Sensing and Computer Vision. *UD Data Science Symposium*. September 2023.

Extraction of Air Conditioner Unit Indicators from Proximal Infrared Remote Sensing of Buildings. *UD Data Science Symposium*. November 2021.

Keynote Address

Data-Driven Policymaking for Energy and Environmental Policy. *Harvard Data Science Initative*. December 2023.

An Exploratory Study on Carbon Neutrality Monitoring and Scenario Evaluation: Comparative Analysis of Korea and Countries that Enacted Carbon Neutrality. *Naioth Debriefing Conference*. November 2022.

HONORS AND AWARDS

Research Fellowships

2023	University of Delaware, Doctoral Fellowship for Excellence 2023–2024 (~$30,000)
2022	University of Delaware, Summer Doctoral Fellowship ($4,500)

Research Grants/Awards

2023	Northeast Conference on Public Administration (NECoPA) 2023, Best Student Paper Award ($140)
2022	Korea Safety Health and Environment Foundation, Environmental Research Forum, Excellence Research Award ($250)
2015	Korea Energy Climate Policy Institute, Research Grant Program Competition, Grant Award ($1,550)

Honors

2022	Aspen Institute, Future Leaders Climate Summit Cohort (Travel Award)
2016	Korea Meteorological Administration, International Meteorological Expert Program, UN Internship Fellowship Award (~$3,600)
2015	Ministry of Environment of Korea & Korea Environment Corporation, Global Environmental Leaders Program, UN Internship Fellowship Award (~$6,000)
2014	Korea National Assembly Climate Change Forum, Climate Change Academy, Excellence Award (Travel Award, UNFCCC COP20 Observer)

Academic Distinctions / Scholarships

2019-23   University of Delaware, Tuition & Assistantships,

2015-16   Seoul National University, Merit-based & Work-Study Scholarships

2011-13   Sungshin Women's University, Merit-based Scholarships

RESEARCH EXPERIENCE

University of Delaware, Research Assistant   Feb. 2023 – Present
Korea Environment Institute, Researcher   May 2019 – Jun. 2019
Seoul National University, Research Assistant   Sep. 2015 – Aug. 2016
Korea Environment Institute, Research Intern   Apr. 2014 – Dec. 2014

TEACHING EXPERIENCE

University of Delaware, Teaching Assistant   Aug. 2019 – Dec. 2022
Undergraduate Level Courses (2019-2022)

> **Crafting Public Policy (UAPP225)**
> > Non-Governmental Actors: Interest Groups   Spring 2022
> > Environmental and Energy Policy   Spring 2021
> > Policy Implementation and Regulatory Rule-Making   Spring 2020

> **Introduction to Energy and Environmental Policy (ENEP250)**
> > Global Environmental Law and Policy/Climate Policy/Seminar   Fall 2022
> > Study Team Workshop   Spring 2022
> > Environmental Law and Policy   Fall 2020

> **Political Economy of the Environment (ENEP410)**
> > Global Capitalism and the Environment   Fall 2021

> **Environmental Sustainability: Political and Economic Analysis (ENEP410)**
> > Global Financing: Climate Change and the Least Developed Countries   Fall 2019

RELEVANT WORK EXPERIENCE

Korea Marine Environment Management Corporation   Jun. 2018 – Sep. 2018
International Affairs Specialist, *International Cooperation Team*

United Nations Environment Program (UNEP)   Mar. 2017-Aug. 2017
Intern, *Green Growth Knowledge Platform*

United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP)-East and North-East Asia Office (ENEA)
Intern, *Environmental Affairs*   Sep. 2016 – Feb. 2017

SERVICE ACTIVITIES

Journal Review
Policy Studies Journal (PSJ), 2023

Conference Service
APPAM Data Science Community, Steering Committee Member, 2023-2024

Department and University Service
UD Climate Change Hub, Climate Fellows, 2023-2024
UD Computational Social Science Association, Acting President, 2022-2023
UD Data Science Institute, Graduate Fellow, 2021-2023
UD Biden School Student Association, Secretary, 2021-2022
UD Korean Graduate Student Association, Officer, 2021-2022
UD Energy and Environmental Policy Student Association, Alumni Chair, 2020-2021

Community Service
NAIOTH, Research & Thesis Writing Training Program Mentor, 2023-Present
Korean Youth Climate Change Network BIGWAVE, Steering Committee Member, 2016-2019

PROFESSIONAL & ACADEMIC AFFILIATIONS

Association for Public Policy Analysis and Management (APPAM) Member, **Public Management Research Association (PMRA)** Member, **Urban Affairs Association (UAA),** Member, **American Society for Public Administration (ASPA)** Member, **Association for Research on Nonprofit Organizations and Voluntary Action (ARNOVA)** Member, **American Planning Association (APA)** Member, **Society of Policy Scientists** Member

LANGUAGES

Korean (Native), **English** (Proficient), **French, Chinese** (Beginner)

COMPUTER SKILLS

Python (Main), R, LaTeX, STATA, SPSS, ArcGIS