

Wei-Ming Chen Associate Policy Scientist

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Personal Profile

Dr. Chen's expertise is in energy research, especially energy transition, energy policy, and electricity markets. Her research career began in Taiwan working on a carbon trading project and national energy program. In August 2016, she joined the Center for Applied Demography & Survey Research at the University of Delaware. Her current research focuses on household energy affordability, social perspectives on energy transition, and Delaware health survey data examinations. In addition to research, she teaches Environmental Economics at the Villanova University in Pennsylvania.

Education

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|------|---|
| 2014 | PhD, Energy and Environmental Policy
<i>University of Delaware – Newark, Delaware</i> |
| 2005 | MS, Geography
<i>National Taiwan University – Taipei, Taiwan</i> |
| 2002 | BS, Geography (major), Economics (minor)
<i>National Taiwan University - Taipei, Taiwan</i> |

Professional Appointments

- | | |
|----------------|---|
| 2018 - Current | Associate Policy Scientist
Center for Applied Demography & Survey Research
Joseph R. Biden, Jr. School of Public Policy & Administration
<i>University of Delaware, Newark, Delaware, USA</i> <ul style="list-style-type: none">• <i>Implement Energy Affordability Project with funding of \$25,000 from the Division of the Public Advocate, State of Delaware</i>• <i>Conduct Delaware health survey data statistical analysis</i>• <i>Apply external research funding</i> |
| 2019 - Current | Adjunct Professor
Department of Geography and the Environment
<i>Villanova University, Villanova, Pennsylvania, USA</i> <ul style="list-style-type: none">• <i>Teach Environmental Economics GEV 4330_100 & GEV 8003_001 within Department of Geography and the Environment since 2019</i>• <i>Teach Energy Analysis GEV_4300_003 & GEV_8300_003 within Department of Geography and the Environment since 2021</i> |
| 2016 - 2018 | Post-doc Researcher
Center for Applied Demography & Survey Research
Joseph R. Biden, Jr. School of Public Policy & Administration
<i>University of Delaware, Newark, Delaware, USA</i> <ul style="list-style-type: none">• <i>Researched on Delaware environment, energy, and electricity rate projects</i>• <i>Established international cooperation on circular economy research</i>• <i>Applied external research funding</i> |

- 2014 - 2016 **Deputy Secretary General & Post-doc Researcher**
 Law and Technology Innovation Center
 College of Intellectual Property Studies
 National Taiwan University of Science and Technology, Taipei, Taiwan
- Conducted National Energy Project
 - Organized renewable energy conferences to promote public participation and communication
 - Managed the research center with five research assistants and mentored two graduate students to publish in peer-reviewed journals
- 2014 - 2014 **Associate Researcher**
 Institute of Environment and Resources, Taipei, Taiwan
- Analyzed the carbon trading platform proposed in Taiwan and coordinated the International Sustainable Materials Management Conference
- 2009 - 2011 **Research Associate**
 Center for Energy and Environmental Policy
 Joseph R. Biden, Jr. School of Public Policy & Administration
 University of Delaware, Newark, Delaware, USA
- Established an energy planning framework and applied to Jeju Island's renewable roadmap
- 2006 - 2007 **Assistant Research Fellow**
 Chung-Hua Institution for Economic Research, Taipei, Taiwan
- Investigated international environmental products
 - Prepared analytical reports to support Taiwanese government's negotiation in the World Trade Organization

Awards & Honors

- 2019 **Leaders in Future Trends Fellowship**
 Ministry of Science and Technology, Taiwan
- 2018 **Young Scholar Award**
 North America Taiwanese Professors' Association, USA
- 2018 **Best Presentation Award**
 The 2nd International Conference on Bioresources, Energy, Environment, and Materials Technology, South Korea
- 2010 - 2011 **Graduate Fellowship**
 University of Delaware, USA
- 2007 - 2009 **Fulbright Scholarship**
 U.S. Department of State, USA
- 2005 **College of Science Dean's Honors**
 National Taiwan University, Taiwan
- 2003 **The Archilife Research Foundation Scholarship for Master's Thesis**
 The Archilife Research Foundation, Taiwan

Publications

- Yang, Seihun, **Wei-Ming Chen**, and Hana Kim. 2021. "Building Energy Commons: Three Mini-PV Installation Cases in Apartment Complexes in Seoul." *Energies* 14(1): 249. <https://doi.org/10.3390/en14010249>.

- **Chen, Wei-Ming**, and Hana Kim. 2020. "Energy, Economic, and Social Impacts of a Clean Energy Economic Policy: Fuel Cells Deployment in Delaware." *Energy Policy* 144: 111617. <https://doi.org/10.1016/j.enpol.2020.111617>.
- Shah, Kalim U., Sashwat Roy, **Wei-Ming Chen**, Keron Niles, and Dinesh Surroop. 2020. "Application of an Institutional Assessment and Design (IAD)-Enhanced Integrated Regional Energy Policy and Planning (IREPP) Framework to Island States." *Sustainability* 12 (7): 1–20. <https://doi.org/10.3390/su12072765>.
- **Chen, Wei-Ming**. 2019. "The U.S. Electricity Market Twenty Years after Restructuring: A Review Experience in the State of Delaware." *Utilities Policy* 57 (April): 24–32. <https://doi.org/10.1016/j.jup.2019.02.002>.
- **Chen, Wei-Ming**, and Hana Kim. 2019. "Circular Economy and Energy Transition: A Nexus Focusing on the Non-Energy Use of Fuels." *Energy & Environment* 30 (4): 586–600. <https://doi.org/10.1177/0958305X19845759>.
- Kim, Hana, and **Wei-Ming Chen**. 2018. "Changes in Energy and Carbon Intensity in Seoul's Water Sector." *Sustainable Cities and Society* 41 (August): 749–59. <https://doi.org/10.1016/j.scs.2018.06.001>.
- **Chen, Wei-Ming**. 2018. "Delmarva Power and Light Company Electric Rate Cases in Delaware: Accounting Concepts and Empirical Data." http://128.175.63.72/projects/DOCUMENTS/Delmarva_2018.pdf.
- Lin, Jui-Chu, **Wei-Ming Chen**, and Ding-Jang Chen. 2017. "Responding to NAMAs and Preparing for INDCs/NDCs: The Role of Emissions Trading in Greenhouse Gas Reduction for Taiwan's Electricity Sector." *International Journal of Climate Change Strategies and Management* 9 (1): 2–20. <https://doi.org/10.1108/IJCCSM-12-2015-0174>.
- Lin, Jui-Ch, **Wei-Ming Chen**, and Cheng-Hsiung Shen. 2016. "The Legal Framework and Inter-Agency Coordination Analysis of Renewable Energy Development: An Example of Offshore Wind Facilities Construction Application." *Journal of Taiwan Energy* 3 (1): 25–39.
- Lin, Jui-Chu, and **Wei-Ming Chen***. 2016. "Harvesting Green Energy from Blue Ocean in Taiwan: Patent Mapping and Regulation Analyzing." In *Sustainable Energy*. IntechOpen. <https://www.intechopen.com/books/sustainable-energy-technological-issues-applications-and-case-studies/harvesting-green-energy-from-blue-ocean-in-taiwan-patent-mapping-and-regulation-analyzing>. Page: 33-51.
- Chen, Hao-Yun, Jui-Chu Lin, **Wei-Ming Chen**, and Cheng-Hsiung Shen. 2015. "An Analysis of Current Status and Legal Issues of Geothermal Power Plant Construction in Taiwan." *Science and Technology Law Review* 27 (8): 56–72.
- **Chen, Wei-Ming***, Young-Doo Wang, Jong Chul Huh, and Youn Cheol Park. 2015. "A Regional Energy Planning Approach: An Integrated Framework and Its Application to Jeju Island's Renewable Roadmap." In *Handbook of Research on Sustainable Development and Economics*. USA: Business Science Reference. <https://www.igi-global.com/gateway/chapter/130930>. Page: 194-220.
- **Chen, Wei-Ming**. 2014. *Mapping Alternative Energy Paths for Taiwan to Reach a Sustainable Future: An Application of the LEAP Model*. USA: University of Delaware (PhD Dissertation).
- **Chen, Wei-Ming***, Hana Kim, and Hideka Yamaguchi. 2014. "Renewable Energy in Eastern Asia: Renewable Energy Policy Review and Comparative SWOT Analysis for Promoting Renewable Energy in Japan, South Korea, and Taiwan." *Energy Policy* 74 (November): 319–29. <https://doi.org/10.1016/j.enpol.2014.08.019>.
- Wang, Young-Doo, **Wei-Ming Chen**, and Yong-Kyu Park. 2011. "Integrated Regional Energy Policy and Planning Framework: Its Application to the Evaluation of the Renewable Roadmap of Carbon Free Jeju Island in South Korea." In *Sustainable Systems and Energy Management at the Regional Level: Comparative Approaches*. PA: IGI Global.
- **Chen, Wei-Ming***, and Chang-Yi Chang. 2005. "The Cost-Benefit Analysis of 'Garbage Pricing by the Bag' Policy in Taipei City." *Journal of the Land Bank of Taiwan* 42 (1): 115–29.
- **Chen, Wei-Ming**. 2005. *The Accomplishment Evaluation of General Solid Waste Policy – a Case of "Pays for Garbage Disposal by the Bag" in Taipei City*. Taipei: National Taiwan University (MS Thesis).

- **Chen, Wei-Ming***, and Chang-Yi Chang. 2004. "The Spatial Analysis of the Effectiveness of Environmental Policy Implementation – A Case of Pays for Garbage Disposal by the Bag in Taipei City." *Hwa Kang Geographical Journal* 17: 155–78.

* corresponding author

Conferences & Talks

- The Introduction of Electricity Industry Restructuring, 2020, *Employee Education and Training on the Neutrality of Power Dispatching*, Taiwan Power Company. Taiwan: Taipei.
- Incentive-based Environmental Policy, 2020, *Lecture on Environmental Economics*, National Taipei University. Taiwan: Taipei.
- The U.S. Energy Policy, 2019, *Lecture on Introduction on Sustainability Study*, Villanova University. USA: Villanova.
- Circular Economy and Energy Transition Nexus with Focus on Non-Energy Use of Fuels, 2018, *Second International Conference on Bioresources, Energy, Environment, and Materials Technology*, South Korea: Hongcheon.
Received Best Presentation Award
- Electricity Market Restructuring: What can Taiwan Learn from the 20-year Experience in the US? 2018 *North America Taiwanese Professors' Association Annual Conference*. USA: Washington DC. **Received Young Scholar Award**
- Delaware's 20-year Experience of Electricity Market Restructuring, 2017, *40th Annual Fulbright Association Conference, Fulbright: Now More Than Ever*. USA: Washington DC.
- Stealing Fleece from a Sheep: Economic and Social Impacts for Ratepayers in a Deregulated Electricity Market, 2017, *Association of American Geographers 2017 Annual Meeting Conference*. USA: Boston.
- The Challenges of Developing Renewable Energy in Taiwan, 2016, *Lecture on Technology and Law*. National Taiwan University of Science and Technology. Taiwan: Taipei.
- An Introduction of the National Energy Program-Phase II, Intergovernmental Communication and Coordination Mechanism, 2016, *Archilife Public Policy Communion*. Taiwan: Taipei.
- New/Renewable Energy and Environmental Policies in US and EU and Their Implications for the Development of Carbon-Free Jeju Special Self-Governing Province, 2010, *Association of American Geographers 2010 Annual Meeting Conference*. USA: Washington DC.
- The Reaction of Taiwan's Government When Facing the Environmental Negotiation in WTO, 2007, *Association of American Geographers 2007 Annual Meeting Conference*. USA: San Francisco.

Research Projects

2021	Delaware 2019 Behavioral Risk Factor Survey (PI)
2021	Early Childhood Education Options for Low-Income Families in Delaware (CO-PI)
2020	Delaware Residential Energy Affordability Data Compilation (PI)
2020	Delaware 2018 Behavioral Risk Factor Survey (PI)
2019	Delaware 2017 Behavioral Risk Factor Survey (PI)
2019	New Energy Deployment: Fuel Cell Policy and its Energy-Environment-Economic-Equity Impact in Delaware (PI)
2019	Building energy commons: Three mini PV installation cases in apartment complex in Seoul (CO-PI)
2018	Delmarva Power and Light Co. Electric Rate Cases in Delaware: Accounting Concepts and Empirical Data (PI)
2017	A Review of PJM's Artificial Island Project Cost-Allocation Dispute (PI)
2017	Drinking Water in Delaware (PI)

2016 See the Pollution and Find the Solution: Air Quality Analysis for Delaware (PI)
2014 - 2016 National Energy Project II (Post-doc)

Organizational and Community Activities

2007 - Current **Journal Paper Reviewer**
International Journal of Climate Change Strategies and Management, International Journal of Energy Sector Management, Renewable and Sustainable Energy Reviews, Energy Policy, Journal of Cleaner Production, Energy and Environment, Development and Society.

2020 - Current **Diversity, Equity, and Inclusion (DEI) Work Group**
Joseph R. Biden, Jr. School of Public Policy & Administration, University of Delaware, USA.

2018 - Current **Foreign Language Chair**
Parent Teacher Organization (PTO), Unionville Elementary School, Pennsylvania, USA.

2009 **International Delegate of Energy Policy**
Conference on US Affairs, United States Military Academy, West Point, USA.

2009 - 2010 **Special Event Chair**
Student Organization of Center for Energy and Environmental Policy, University of Delaware, USA.

2009 - 2010 **President**
Taiwanese Student Association, University of Delaware, USA.

Skills and Certifications

- **Languages**
Native Mandarin
Fluent English
- **Teacher Certification**
Issued by the Ministry of Education, Taiwan
- **Statistics**
SPSS/R

References

Please email katty@udel.edu for reference list.

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