

## **Sung-Yoon Huh (허성윤)**

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### **Office Contact Information:**

Department of Energy Policy

Graduate School of Energy & Environment

Seoul National University of Science & Technology (Changjo Hall, Rm 507)

232 Gongneung-ro, Nowon-gu, Seoul, 01811, South Korea

### **Personal Information:**

Gender: Male

Born: Seoul, South Korea

### **Experience & Employment:**

**Seoul National University of Science & Technology**, Graduate School of Energy & Environment, Department of Energy Policy, Assistant Professor, Aug 2017 - Current

**University of California Berkeley**, Haas School of Business, Postdoctoral Scholar, Sep 2015 - Aug 2017

**Seoul National University**, Technology Management Economics and Policy Program, Postdoctoral Researcher, Sep 2014 - Aug 2015

### **Education:**

#### **Ph.D., Seoul National University, Aug 2014**

Technology Management Economics and Policy Program

The dissertation title: "Quantifying Public Acceptance of Innovation Policy"

Committee: Tai-Yoo Kim (chair), Jongsu Lee (advisor), Jeong-Dong Lee, Yong-Gil Lee, Chul-Yong Lee

#### **M.S., Seoul National University, Feb 2009**

Chemical and Biological Engineering

The dissertation title: "Efficiency Improvement of Polymer Bulk-Heterojunction Solar Cells by Modified Buffer Layers" (Advisor: Hong H. Lee)

#### **B.S., Seoul National University, Feb 2007**

Chemical and Biological Engineering

**Research Interests:**

Energy and Environmental Market Analysis  
Energy and Environmental Economics  
Marketing of High-Tech Products and Innovations  
Innovation Diffusion & Technological Forecasting  
Valuation of Energy and Environmental Technology

**Publications:****Journal Articles (International)**

1. Lim, S., **Huh, S.Y.**, Shin, J., Lee, J., Lee, Y.G.\* , (Forthcoming). Enhancing public acceptance of renewable heat obligation policies in South Korea: Consumer preferences and policy implications. Accepted in *Energy Economics*.
2. Kim, J., Lee, H.J., **Huh, S.Y.**, Yoo, S.H.\* , (Forthcoming). Households' willingness to pay for developing marine bio-hydrogen technology: The case of South Korea. *International Journal of Hydrogen Energy*, 44, 12907–12917.
3. **Huh, S.Y.**, Jo, M., Shin, J., Yoo, S.H.\* , 2019. Impact of rebate program for energy-efficient household appliances on consumer purchasing decisions: The case of electric rice cookers in South Korea. *Energy Policy*, 129, 1394–1403.
4. **Huh, S.Y.**, Woo, J., Lee, C.Y.\* , 2019. What do potential residents really want when hosting a nuclear power plant? An empirical study of economic incentives in South Korea. *Energies*, 12, 1199.
5. Woo, J., Lim, S., Lee, Y.G., **Huh, S.Y.**\* , 2018. Financial feasibility and social acceptance for reducing nuclear power plants: A contingent valuation study. *Sustainability*, 10(11), 3833.
6. Lee, H.J., **Huh, S.Y.**, Yoo, S.H.\* , 2018. Social Preferences for Small-Scale Solar Photovoltaic Power Plants in South Korea: A Choice Experiment Study. *Sustainability*, 10(10), 3589.
7. **Huh, S.Y.**, Shin, J.\* , 2018. Economic valuation of noise pollution control policy: Does the type of noise matter? *Environmental Science and Pollution Research*, 25, 30647–30658.

8. Choi, G., **Huh, S.Y.**, Heo, E., Lee, C.Y.\* , 2018. Prices versus quantities: Comparing economic efficiency of feed-in tariff and renewable portfolio standard in promoting renewable electricity generation. *Energy Policy*, 113, 239–248.
9. **Huh, S.Y.**, Lee, H., Shin, J.\* , Lee, D., Jang, J., 2018. Inter-fuel substitution path analysis of the korea cement industry. *Renewable and Sustainable Energy Reviews*, 82, 4091–4099.
10. Lim, S., Woo, J., Lee, J., **Huh, S.Y.\***, 2018. Consumer valuation of personal information in the age of big data. *Journal of the Association for Information Science and Technology*, 69(1), 60–71.
11. Lee, C.Y., **Huh, S.Y.\***, 2017. A demand-side perspective on developing a future electricity generation mix: Identifying heterogeneity in social preferences. *Energies*, 10, 1127.
12. Lee, C.Y., **Huh, S.Y.\***, 2017. Forecasting the diffusion of renewable electricity considering the impact of policy and oil prices: The case of South Korea. *Applied Energy*, 197, 29–39.
13. Lee, C.Y., **Huh, S.Y.\***, 2017. Technology forecasting using a diffusion model incorporating replacement purchases. *Sustainability*, 9(6), 1038.
14. Lee, C.Y., **Huh, S.Y.\***, 2017. Forecasting new and renewable energy supply through a bottom-up approach: The case of South Korea. *Renewable & Sustainable Energy Reviews*, 69, 207–217.
15. Lee, C.Y., **Huh, S.Y.\***, 2017. Forecasting long-term crude oil prices using a Bayesian model with informative priors. *Sustainability*, 9(2), 190.
16. **Huh, S.Y.**, Woo, J., Lim, S., Lee, Y.G.\* , Kim, C.S., 2015. What do customers want from improved residential electricity services? Evidence from a choice experiment. *Energy Policy*, 85, 410–420.
17. **Huh, S.Y.**, Lee, J., Shin, J.\* , 2015. The economic value of South Korea’s renewable energy policies (RPS, RFS, and RHO): A contingent valuation study. *Renewable & Sustainable Energy Reviews*, 50, 64–72.
18. Cho, Y., Koo, Y., **Huh, S.Y.**, Lee, M.\* , 2015. Evaluation of a consumer incentive program for an energy-efficient product in South Korea. *Energy Efficiency*, 8(4), 745–757.

19. **Huh, S.Y.**, Kwak, D., Lee, J., Shin, J.\* , 2014. Quantifying drivers' acceptance of renewable fuel standard: Results from a choice experiment in South Korea. *Transportation Research Part D: Transport and Environment*, 32, 320–333.
20. **Huh, S.Y.**, Lee, C.Y.\* , 2014. Diffusion of renewable energy technologies in South Korea on incorporating their competitive interrelationships. *Energy Policy*, 69, 248–257.
21. Kim, J.-H., **Huh, S.Y.**, Seo, S.\* , 2014. Improvement in efficiency of polymer bulk-heterojunction solar cells using modified PEDOT:PSS buffer layers with alcohol derivatives. *Japanese Journal of Applied Physics*, 53(4), 04ER03.
22. Shin, J., Woo, J., **Huh, S.Y.**, Lee, J., Jeong, G.\* , 2014. Analyzing public preferences and increasing acceptability for the renewable portfolio standard in Korea. *Energy Economics*, 42, 17–26.
23. Choi, S.-J.\* , **Huh, S.Y.**, 2010. Direct structuring of a biomimetic anti-reflective, self-cleaning surface for light harvesting in organic solar cells. *Macromolecular Rapid Communications*, 31(6), 539–544.
24. Kim, K.-H., **Huh, S.Y.**, Seo, S.M., Lee, H.H.\* , 2008. Inverted top-emitting organic light-emitting diodes by whole device transfer. *Organic Electronics*, 9(6), 1118–1121.
25. Kim, J.-H., **Huh, S.Y.**, Kim, T.I., Lee, H.H.\* , 2008. Thin pentacene interlayer for polymer bulk-heterojunction solar cell. *Applied Physics Letters*, 93(14), 143305.
26. Kim, K.-H., **Huh, S.Y.**, Seo, S.M., Lee, H.H.\* , 2008. Solution-based formation of multilayers of small molecules for organic light emitting diodes. *Applied Physics Letters*, 92(9), 093307.

**Journal Articles (Domestic, Most are written in Korean Text):**

1. **Huh, S.Y.\***, 2017. Social preferences for a policy category: An empirical analysis focusing on renewable energy policy. *Innovation Studies*, 12(4), 213–242.
2. Jo, M., **Huh, S.Y.**, Lee, Y.G.\* , 2016. Optimal construction of renewable energy portfolio in use of MDCEV model. *Korean Energy Economic Review*, 15(2), 55–88.
3. **Huh, S.Y.**, Jo, M., Lee, Y.G.\* , 2016. Multiple criteria decision making for setting priorities of renewable energy technology assessment. *Innovation Studies*, 11(2), 155–184.

4. **Huh, S.Y.**, Jo, M., Lee, Y.G.\* , 2016. Analysis of priorities of constructive factors of new and renewable energy policy in South Korea using Analytic Hierarchical Process. *Innovation Studies*, 11(1), 29–69.
5. **Huh, S.Y.**, Jo, M., Lee, Y.G.\* , 2015. Analysis of cognitive differences of new and renewable energy policy in Korean expert groups of triple helix. *Innovation Studies*, 10(1), 99–121.

### **Conference & Invited Talk (Oral Presentation):**

1. **Huh, S.Y.** Identifying the determinants of renewable energy growth in South Korea. *The Korean Society for Energy Conference: 2018 Fall*, Nov 8th 2018, Yeosu, South Korea.
2. **Huh, S.Y.** Social Acceptance of Reducing the Number of Nuclear Power Plants in South Korea. *The Korean Society for Energy Conference: 2018 Spring*, Apr 5th 2018, Jeju, South Korea.
3. **Huh, S.Y.** The Fourth Industrial Revolution and Energy Industry: Overview and Research Agenda. *2017 Joint Academic Conference of Korean Society of Innovation, BISTEP, and Pukyong National University*, Dec 11th 2017, Busan, South Korea.
4. **Huh, S.Y.**, Lee, C.Y., Park, S. Development of a Power Generation Mix Reflecting Social Preferences and Acceptance. *The Korean Society for Energy Conference: 2017 Fall*, Sep 7th 2017, Jeju, South Korea.

### **Grants & Research Project:**

1. Economic Analysis & Estimation of Demand and Benefits of Reusing Sewage Treatment Water at Yeosu. *Korea Development Institute*, Dec 2018 - Current (PI).
2. Estimation of Demand and Benefits of Making an Indoor Coal Storage Shed at Samchonpo Thermal Power Plant. *Korea Development Institute*, Oct 2018 - Current (PI).
3. Estimation of Demand and Benefits of Making an Indoor Coal Storage Shed at Taean Thermal Power Plant # 5~8. *Korea Development Institute*, May 2018 – Dec 2018 (PI).
4. A Theoretical and Empirical Study on the Diffusion of Renewable Energy Technologies: Comparison of Model Estimations through Interdisciplinary Approach. *National Research Foundation of Korea*, Mar 2018 - Current (PI).

5. Human Resources Program in Energy Technology: Advanced Track for Technology Financing for Energy Industry. *Korean Energy Technology Evaluation and Planning*, Feb 2018 - Current (Co-PI).
6. The Impact of Changing R&D Organization on Business Performance: An Interdisciplinary Approach. *National Research Foundation of Korea*, Sep 2016 - Aug 2017 (PI).

### **Professional Activities**

- **Ad-hoc Reviewer:** *Energy Policy, Heliyon, Innovation Studies, Environmental and Resource Economics Review, Legislation and Policy Studies.*
- **Editorial Boards**
  - ✓ *Innovation Studies*, Board member, 2018 - Current
- **Committee**
  - ✓ *The 4th Energy Technology Development Plan (Policy Division)*, Committee member, 2018-2019 [Ministry of Trade, Industry and Energy]
  - ✓ *KETEP Insight Review Committee*, Committee member, 2018 [Korea Institute of Energy Technology Evaluation and Planning]
  - ✓ *Policy R&D Demand Survey Review Committee*, Committee member, 2018 [Korea Institute of Energy Technology Evaluation and Planning]

### **Teaching**

- Graduate: Statistics for Economics, Management of Technology, Technology Economics, Microeconomics, Energy Economics, Energy Financing Theory, Energy & Environment Market Issues
- Undergraduate: Understanding Economy