

Yu Nagai

EDUCATION

Vienna University of Technology, Vienna, Austria

Doctorate, Energy Systems and Electrical Drives, 2017

Dissertation: “Access to clean cooking technologies in Uganda: Model analysis based on empirical data”

The University of Tokyo, Tokyo, Japan

M.S., Advanced Energy, 2009

Georgia Institute of Technology, Atlanta, USA

B.S., Mechanical Engineering, 2006

PROFESSIONAL EXPERIENCE

Central Research Institute of Electric Power Industry, Tokyo, Japan

Research Scientist, Socio-Economic Research Center 2013 - Present

International Institute for Applied Systems Analysis, Laxenburg, Austria

Research Scholar, Energy Program 2010 - 2013

The University of Tokyo, Tokyo, Japan

Predocctoral Fellow, Institute of Industrial Science 2009

The Institute of Energy Economics Japan, Tokyo, Japan

Research Assistant, New Energy Group 2008 - 2009

Robert Bosch Corporation, Schwieberdingen, Germany

Intern, Fuel Injection Analysis 2005

ADVISORY COMMITTEES

OECD/NEA, Nuclear Development Committee (NDC)

Delegate (Bureau Member) 2019 - Present

Ministry of Economy, Trade and Industry, Advanced Reactor Working Group

Committee member 2022 - 2023

PUBLICATIONS

Refereed Journal Articles

Shimada, H., K. Asano, **Y. Nagai**, and A. Ozawa, 2022. “Assessing the Impact of Offshore Wind Power Deployment on Fishery: A Synthetic Control Approach,” *Environmental and Resource Economics* Volume 83, 791–829.

Obane, H., **Y. Nagai**, and K. Asano, 2021. “Assessing the potential areas for developing offshore wind energy in Japanese territorial waters considering national zoning and possible social conflicts,” *Marine Policy*, Volume 129, 104514.

Sakamoto, S., **Y. Nagai**, M. Sugiyama, S. Fujimori, E. Kato, R. Komiyama, Y. Matsuo, K. Oshiro, and D. Silva Herran, 2021. “Demand-side decarbonization and electrification: EMF 35 JMIP study,” *Sustainability Science*, Vol. 16, 395-410.

Nakano K., S. Hamgata, **Y. Nagai**, K. Nishio, and N. Tagashira, 2020. “A Survey on Energy Usage and Electrification Potential in Industrial Sectors toward Shaping Future Socio-economic Visions,” *Journal of Japan Society of Energy and Resources*, Vol. 41, No. 3.

Obane, H., **Y. Nagai**, and K. Asano, 2020. “Assessing land use and potential conflict in solar and onshore wind energy in Japan,” *Renewable Energy*, Vol. 160, 842-851.

Lam, N. L., S. Pachauri, P. Purohit, **Y. Nagai**, M. N Bates, C. Cameron, and K. Smith, 2016. “Kerosene subsidies for household lighting in India: what are the impacts?,” *Environmental Research Letters*, Vol. 11, 044014.

- McCollum, D. L., **Y. Nagai**, K. Riahi, G. Marangoni, K. Calvin, R. Pietzcker, J. van Vliet, and B. van der Zwaan, 2014 "Energy investments under climate policy: a comparison of global models," *Climate Change Economics*, Vol. 4, No.4, 1340010.
- McCollum, D. L., V. Krey, P. Kolp, **Y. Nagai**, and K. Riahi, 2013 "Transport electrification: a key element for energy system transformation and climate stabilization," *Climatic Change*, Vol. 123, 651-664.
- Pachauri, S., B. J. van Ruijven, **Y. Nagai**, K. Riahi, D. P. van Vuuren, A. Brew-Hammond, and N. Nakicenovic, 2013. "Pathways to achieve universal household access to modern energy by 2030," *Environmental Research Letters*, Vol. 8, 024015.
- Mainali, B., S. Pachauri, and **Y. Nagai**, 2012, "Analyzing cooking fuel and stove choices in China till 2030," *Journal of Renewable and Sustainable Energy*, Vol. 4, 03180501-03180515.
- Narula, K., **Y. Nagai**, and S. Pachauri, 2012, "The role of Decentralized Distributed Generation in achieving universal rural electrification in South Asia by 2030," *Energy Policy*, Vol. 47, 345-357.
- Krey, V., B. C. O'Neill, B. van Ruijven, V. Chaturvedi, V. Daioglou, J. Eom, L. Jiang, **Y. Nagai**, S. Pachauri, and X. Ren, 2012, "Urban and rural energy use and carbon dioxide emissions in Asia," *Energy Economics* Vol. 34, 272-283.
- van Vliet, O., V. Krey, D. McCollum, S. Pachauri, **Y. Nagai**, S. Rao, and K. Riahi, 2012, "Synergies in the Asian energy system: Climate change, energy security, energy access and air pollution," *Energy Economics*, Vol. 34, 470-480.
- Nagai, Y.**, H. Yamamoto, and K. Yamaji, 2010, "Constructing low emitting power systems through grid extension in Papua New Guinea (PNG) with rural electrification," *Energy*, Vol. 35, 2309-2316.

Select CRIEPI Research Publications

- Mase, T., K. Asano, and **Y. Nagai**, 2022. "Quantitative Validation of the 6th Strategic Energy Plan," SERC Research Document, SE21502 (in Japanese).
- Mase, T., K. Asano, **Y. Nagai**, and Y. Hoshino, 2021. "Evaluation of Japan's Economic, Industrial and Energy Demand Structure Change until 2030," SERC Research Document, Y20506 (in Japanese).
- Obane, H., K. Kazama, H. Hashimoto, **Y. Nagai**, and K. Asano, 2020. "A Study of Potential Impacts on Seabirds by developing Offshore Wind Power Generation in Promotion Areas," SERC Research Document, Y19506 (in Japanese).
- Hamagata, S., **Y. Nagai**, T. Inamura, K. Asano, and N. Tagashira, 2019. "A study on Japan's energy demand and supply to achieve 80% reduction of CO2 emission in 2050," SERC Research Document, Y19501 (in Japanese).
- Obane, H., **Y. Nagai**, and K. Asano, 2019, "Evaluating technical potential of ground-mounted solar and on-shore wind energy in Japan" CRIEPI Report, Y18003 (in Japanese).
- Nishio, K., T. Mukai, **Y. Nagai**, and K. Ofuji, 2018, "Interpretive Issues on Decoupling between Economic Growth and Environmental Burden," CRIEPI Review of Electricity Economics, No. 65 (in Japanese).
- Nagai, Y.**, and K. Okada, 2017, "Resource Adequacy under the Electricity System Reform: Balance of payment analysis of thermal power generation based on the long-term energy supply and demand outlook," CRIEPI Review of Electricity Economics, No. 64 (in Japanese).
- Okada, K., and **Y. Nagai**, 2017, "Development of Regional Transmission Congestion Cost Evaluation Tool" CRIEPI Review of Electricity Economics, No. 64 (in Japanese).
- Hamagata, S., K. Asano, and **Y. Nagai**, 2017. "Assessment of the Economic Impact of Changing Nuclear Share in Power Generation," SERC Research Document, Y17502 (in Japanese).
- Obane, H., K. Asano, and **Y. Nagai**, 2017, "A study on the future cost of solar and wind power generation up to 2050" CRIEPI Report, Y17501 (in Japanese).
- Furusawa, K., K. Okada, M. Maruyama, K. Asano, and **Y. Nagai**, 2016, "Issues of the tariff design of distribution system usage charge in European countries," CRIEPI Report, Y15024 (in Japanese).
- Asano, K., K. Okada, **Y. Nagai**, and M. Maruyama, 2016, "An Analysis of Renewables Market Integration Policies in the European Liberalized Electricity Market," CRIEPI Report, Y15022 (in Japanese).
- Nagai, Y.**, H. Yamamoto, K. Okada, Y. Yabe, and Y. Nagata, 2016, "Development of a Power Generation Optimization Model with Bilateral Power Inter-trade," CRIEPI Report, Y15021 (in Japanese).
- Yamamoto, H., Y. Yabe, S. Bando, and **Y. Nagai**, 2014, "An Evaluation of Effects of Large-Scale Introduction of Renewable Power on Capacities and Operation Modes of Power Generation Systems in Japan," CRIEPI

Report, Y14002 (in Japanese).

SERVICE AND OUTREACH

Yoshioka, N., Y. Nagai, 2021, "Impact of Cannibalization Effect on Target Cost of Solar Photovoltaics," Energy and Resources, Vol. 42 No. 3.

Global Energy Assessment, 2012, Contributing Author for Chapter 1: Energy Primer, Chapter 17: Energy pathways for Sustainable Development, and Chapter 19: Energy Access for Development.

IPCC Special Report on Renewable Energy Sources and Climate Change Mitigation, 2011, Contributing Author for Chapter 9: Renewable Energy in the Context of Sustainable Development.

SELECT SCIENTIFIC CONFERENCES

Conference on Energy, Economy, and Environment, Japan Society of Energy and Resources, Tokyo, Japan, January 2018, "A Preliminary Consideration of Quantitative Assessments of Energy Security in Low-carbon Societies."

Conference on Energy, Economy, and Environment, Japan Society of Energy and Resources, Tokyo, Japan, February 2017, "A Study on Decoupling Economic Growth and Electricity Consumption."

International Energy Workshop, Cape Town, South Africa, June 2012, "Policies to achieve universal access to modern fuels for household cooking in sub-Saharan Africa by 2030."

IAEE International Conference, Stockholm, Sweden, June 2011, "Assessing factors responsible for differences in household energy access across Brazil, India, Indonesia and Kenya."

The Dubrovnik Conference on Sustainable Development of Energy, Water and Environment Systems, Dubrovnik, Croatia, September 2009, "Evaluation of Generation Planning and Rural Electrification in Tropical Region with Decentralized Generation."

Japan Institute of Energy Annual Meeting, Sapporo, Japan, July 2009, "An Economic Evaluation of Molten Carbonate Fuel Cell and Calculation of Its CO₂ Reduction Potential."

IAEE Asian Conference, Perth, Australia, November 2008, "Evaluation of the Potential for Distributed Generation and Effective Use of Sewage and Wastes in Kanto Region of Japan."

AWARDS AND HONOURS

Best poster award winner at the IIASA 40 th year anniversary conference	2012
Recipient of Monbu-Kagakusho Scholarship	2009 - 2011
Recipient of HOPE Scholarship at Georgia Institute of Technology	2001 - 2005

PROFESSIONAL AFFILIATIONS

The Institute of Electrical Engineers of Japan

Japan Society of Energy and Resources

Atomic Energy Society of Japan