

Contact Details

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Employment History

2018-present	<i>Assistant Professor, Faculty of Engineering</i>	Maharakham University, THAILAND
2013-2018	<i>Assistant Professor, Department of Electrical and Computer Engineering</i>	Naresuan University, THAILAND
2003-2013	<i>Lecturer, Department of Electrical and Computer Engineering</i>	Naresuan University, THAILAND
2007-2010	<i>Teaching Assistant and Research Assistant</i>	Faculty of engineering, University of Technology, Sydney (UTS), AUSTRALIA
2004	<i>Assistant Head of the Department of Electrical and Computer Engineering</i>	Faculty of Engineering, Naresuan University, THAILAND

Qualifications

2010	<i>Doctor of Philosophy (Engineering),</i> University of Technology, Sydney (UTS), New South Wales, AUSTRALIA
2002	<i>Master of Engineering (Electrical Engineering),</i> master degree by research (thesis), Khon Kaen University, Khon Kaen, THAILAND
1998	<i>Bachelor of Engineering (Electrical Engineering),</i> Khon Kaen University, Khon Kaen, THAILAND

Grants and Awards

2010	<i>International Research Scholarship (IRS),</i> University of Technology, Sydney (UTS)
2007	<i>Dean's award for Outstanding Academic Performance,</i> Faculty of Engineering, University of Technology, Sydney (UTS)
2006	<i>Membership of the Dean's list for Outstanding Academic Performance</i>
2006-2009	<i>Thai Government Scholarship (Energy Conservation Promotion Fund-ENCON Fund)</i> for doctoral degree
2000-2002	<i>Naresuan University Scholarship</i> for master degree

Field of Expertise

Research Field Energy Planning and Policy

Research Interest

- Integrated Climate-Land-Energy-Water Modeling;
- Energy-Economic-Environmental Modeling;
- Electric Vehicle;
- Biofuels;
- Electricity Sector Reform;
- Energy Efficiency and Conservation;
- Energy and Environmental Economics.

Research Projects

Implications of Electric Vehicle Promotion Policy on the Road Transport and Electricity Sectors for Thailand, funded by Mahasarakham University, Mahasarakham, Thailand: 2021-2022.

Impacts of Palm Oil-based Biofuel Utilization Promotion Policy in the Thai Transport Sector, funded by Faculty of Engineering, Mahasarakham University, Mahasarakham, Thailand: 2021-2022.

An Assessment of the Impacts of Renewable Energy Policies on the Thai Electricity Generation Sector, funded by Faculty of Engineering, Mahasarakham University, Mahasarakham, Thailand: 2020-2021.

The Impacts of Solar PV Rooftop on the Operation of the Provincial Electricity Authority (PEA), funded by the Provincial Electricity Authority (PEA), Bangkok, Thailand: 2016-2017.

Climate-Energy-Water-Land Linkages for Thailand, funded by the International Atomic Energy Agency (IAEA), Vienna, Austria: 2012-2014.

Impacts of Electricity Market Reform on Nuclear and other Generation Technologies: Thailand Case Study, funded by the International Atomic Energy Agency (IAEA), Vienna, Austria: 2010-2012.

Publications

Refereed Journals:

Wattana, B. and **Wattana, S.** (2022), *Implications of Electric Vehicle Promotion Policy on the Road Transport and Electricity Sectors for Thailand*, *Energy Strategy Reviews*, 42, 100901.

Wattana, S., Purathanung, T. and Wattana, B. (2022), *Impacts of Palm Oil-based Biofuel Utilization Promotion Policy in the Thai Transport Sector*, *Environmental Research, Engineering and Management*, 78(2), p.7-18.

Wattana, B. and **Wattana, S.** (2021), *An Assessment of the Impacts of Biodiesel Production on Agriculture, Water, Energy and Environment in Thailand*, *GMSARN International Journal*, 15 (1), p.1-14.

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- Wattana, S.** and Wattana, B. (2020), *An Assessment of the Impacts of Renewable Energy Policies on the Thai Electricity Generation Sector*, *International Energy Journal*, 20(2), p.101-114.
- Wattana, B., Malakorn, T., Rachapradit, N. and **Wattana, S.** (2017), *Implications of Ethanol Production on Agriculture, Water, Energy and Environment in Thailand*, *Naresuan University Engineering Journal*, Vol. 12 No. 2, p. 1-14.
- Sowe, S., Somkun, S., Pachanapan, P. and **Wattana, S.** (2017), *Impacts of SCIG and DFIG on Voltage Stability in Greater Banjul Area Utility, The Gambia*, *Journal of Telecommunication, Electronic and Computer Engineering*, Vol. 9 No. 2-5, p.59-63.
- Wattana, S.** (2014), *Bioenergy Development in Thailand: Challenges and Strategies*, *Energy Procedia*, Vol. 52, p.505-516.
- Wattana, S.** and Sharma, D. (2011), *Electricity Industry Reforms in Thailand: An Analysis of Productivity*, *International Journal of Energy Sector Management*, Vol. 5 No. 4, p.494-521.
- Wattana, S.**, Sharma D. & Vaiyavuth, R. (2008), *Electricity Industry Reforms in Thailand: A Historical Review*, *GMSARN International Journal*, Vol. 2 No. 2, p. 41-52.

Conference Proceedings:

- Purathanang, T. and **Wattana, S.** (2021), *An Assessment of the Implications of Biodiesel Consumption Promotion in the Transportation Sector for Thailand*, *IOP Conference Series: Material Science and Engineering*, 1163 012015.
- Wattana, B. and **Wattana, S.** (2018), *An Assessment of the Impacts of Biodiesel Production on Agriculture, Water, Energy and Environment in Thailand*, In *Proceedings of the GMSARN International Conference on Energy, Environment, and Development in GMS, Nanning, China*, 28-30 November.
- Jiraprasertwong, J., Sriboon, T., Weerasathien, C. and **Wattana, S.** (2017), *An Analysis of the Economy-wide Impacts of Solar Rooftop in Thailand*, In *Proceedings of the PEACON & INNOVATION 2017 "Moving toward the Electric Utility of the Future: The Challenges of 4.0 Era"*, Bangkok, Thailand, 13-14 December, (In Thai).
- Sowe, S., Somkun, S., Pachanapan, P. and **Wattana, S.** (2016), *Impacts of SCIG and DFIG on Voltage Stability in Greater Banjul Area Utility, The Gambia*, In *Proceedings of 2016 Advanced Research on Circuits and Systems International Conference (ARONCAS'16) and 2016 Advancement on Informatics, Business and Management International Conference (ADIBUM'16)*, Hradec Kralove, Czech Republic, 20-22 September.
- Wattana, S.** (2014), *An Assessment of the Implications of Bio-ethanol Policies on Land-use, Water, Energy and Environment in Thailand*, In *Proceedings of the Second Symposium on "Food-Energy-Water Security Challenges: A Multi-dimensional Perspective"* Khon Kaen, Thailand, 8-10 December.
- Wattana, B., Chonbordeechalermrung, Y., **Wattana, S.** and Thanarak, P. (2014), *An Assessment of Impacts of Biodiesel Production on Climate, Land-use, Water, and Energy for Thailand*, In *Proceedings of the 10th Naresuan Research Conference*, Phitsanulok, Thailand, 22-23 July. (In Thai)
- Wattana, S.** (2013), *Bioenergy Development in Thailand: Challenges and Strategies*, In *Proceedings of the 2nd International Conference on Alternative Energy in Developing Countries and Emerging Economies (AEDCEE)*, Bangkok, Thailand, 30-31 May.

Wattana, S. and Sharma, D. (2008), *Electricity Industry Reforms in Thailand: An Analysis of Productivity*, In Proceedings of the ESCC International Conference, Bangkok, Thailand, 06-08 August.

Wattana, S., Sharma D. & Vaiyavuth, R. (2007), *Electricity Industry Reforms in Thailand: A Historical Review*, In Proceedings of the Second GMSARN International Conference, Pattaya, Thailand, 12-14 December.

Youngyou, S., Triyangkulsri, J. and Hungsasutra, S. (2001), *The Prediction of System Loss Contribution Caused by Generators in the System of EGAT Region 2 by Linear Least Square Method*, In Proceedings of the 24th Electrical Engineering Conference (EECON-24), Bangkok, Thailand, 22-23 November, (In Thai).

Conferences and Seminars

Wattana, S. (2015), *Climate-Energy-Water-Land Linkages for Thailand: Final Results*, presented at Technical Meeting on Review and Finalization of the Synthesis Report for the Climate, Land Use, Energy and Water Initiatives by International Atomic Energy Agency (IAEA), Vienna, Austria, 19-21 October.

Wattana, S. (2013), *Analysis of Energy-Food-Water Security Challenge for Thailand*, presented at the First Symposium on 'Food-Energy-Water Security Challenges: A Multi-dimensional Perspective' by University of Technology, Sydney (UTS), Sydney, Australia, 16-19 July.

Wattana, S. (2013), *An Assessment of Implications of Future Possible Development of Bioenergy, Land and Water Resources in Thailand: Preliminary Results*, presented at the Second Research Coordination Meeting (RCM) on 'Assessing Interdependencies among Energy, Water, Land-use and Climate Change' by International Atomic Energy Agency (IAEA), Vienna, Austria, 15-17 April.

Wattana, S. (2012), *Climate-Energy-Water-Land Linkages for Thailand: A Review*, presented at the Technical Meeting/Workshop on 'Integrated Assessment of Climate, Land-use, Energy and Water Systems (CLEWS)' by Royal Institute of Technology, Stockholm, Sweden, 29 October-2 November.

Wattana, S. (2012), *Climate-Energy-Water-Land Linkages for Thailand: An Overview*, presented at the First Research Coordination Meeting (RCM) on 'Assessing Interdependencies among Energy, Water, Land-use and Climate Change' by International Atomic Energy Agency (IAEA), Vienna, Austria, 16-19 April.

Wattana, S. (2011), *Generation Technology Choice under the Thai Electricity Market Regulation*, presented at Second Technical Meeting on 'Prospects for Nuclear Power under Alternative Electricity Market Regulation Schemes' by International Atomic Energy Agency (IAEA), Vienna, Austria, 17-19 October.

Wattana, S. (2010), *Electricity Market Regulation, Investment Decision and Technology Choice: A Thai Perspective*, presented at Technical Meeting on 'Prospects for Nuclear Power under Alternative Electricity Market Regulation Schemes' by International Atomic Energy Agency (IAEA), Vienna, Austria, 11-13 October.

Wattana, S. (2008), *Electricity Industry Reform in Thailand: A Comprehensive Review*, UTS: Engineering Research Showcase, 4th June, Sydney, Australia.