

Dr. Athikom Bangviwat

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EDUCATIONAL BACKGROUND

- Year A.D. 1987 Ph.D. (Mechanical Engineering), University of Houston, Houston, Texas, U.S.A.
- Year A.D.1980 M.Eng. (Civil Engineering), Chulalongkorn University, Thailand
(วศ.ม. (วิศวกรรมโยธา), จุฬาลงกรณ์มหาวิทยาลัย, ประเทศไทย, 2523)
- Year A.D.1977 B.Eng. (Civil Engineering), Chulalongkorn University, Thailand
(วศ.บ. (วิศวกรรมโยธา), จุฬาลงกรณ์มหาวิทยาลัย, ประเทศไทย, 2520)

RESEARCH INTEREST

Energy policy & management, Combined heat and power, Electricity from biomass and solid waste

PROFESSIONAL EXPERIENCES

- Jan 2007 – Present Assistant Director, External Affairs
The Joint Graduate School of Energy and Environment, King Mongkut's University of Technology Thonburi
- Feb 2005 – Dec 2006 Managing Director, Maxlife Assurance Co., Ltd.
- Feb 2003 – Feb 2005 Assistant Director, External Affairs Joint Graduate School of Energy and Environment, King Mongkut's University of Technology Thonburi
- Aug 1997 – Sep 2002 Sahacogen (Chonburi) Co., Ltd., Thailand
- General Manager (Jun 2000 – Sept. 2002)
 - Project Manager (Aug 1997 – May 2000)
- 1989 – Jul 1997 Esso Standard Thailand Ltd., Thailand
- Senior Project Control (Jul 1996 – Jul 1997)
 - Inspection Manager (Jan 1992 – Jun 1996)
 - Inspector (Oct 1991 – Dec 1991)
 - Project Engineer (1989 – Sept 1991)
- 1988 Plant Manager, Pai Poo Ba Bamboo Industry, Thailand
- 1987 Researcher, American Acoustics Corporation, USA

PUBLICATIONS

International Journals

- Pinyo, A. and Bangviwat, A. (2023) Smart Contracts-Based Demand Response Bidding Mechanism to Enhance the Load Aggregator Model in Thailand. *Energies*. 16(8): 3606, DOI:10.3390/en16083606. April 2023
- Pinyo, A., Bangviwat, A., Menke, C., and Monti, A. (2021) Decentralized p2p electricity trading model for Thailand. *Sensors*. 21(21), 7413; <https://doi.org/10.3390/s21217413>. November 2021
- Haputta, P., Puttanapong, N., Silalertruksa, T., Bangviwat, A., Prapasongsa, T., and Gheewala, S.H. (2020) Sustainability analysis of bioethanol promotion in Thailand using

- a cost-benefit approach. *Journal of Cleaner Production*, 251, 119756, DOI:10.1016/j.jclepro.2019.119756.Apr 1
- Chaianong, A., Bangviwat, A., Menke, C., Breitschopf, B., and Eichhammer, W. (2020) Customer economics of residential PV-battery systems in Thailand. *Renewable Energy*. 146: p. 297-308.Feb
 - Chaianong, A., Tongsopit, S., Bangviwat, A. and Menke, C. (2019) Bill saving analysis of rooftop PV customers and policy implications for Thailand. *Renewable Energy*. 131: pp. 422-434. February 2019
 - Chaianong, A., Bangviwat, A., Menke, C. and Darghouth, N.R. (2019) Cost-Benefit Analysis of Rooftop PV Systems on Utilities and Ratepayers in Thailand. *Energies*. 12(12): 2265; <https://doi.org/10.3390/en12122265>. June 2019
 - Bangviwat, A. and Sittikruear, S. (2018) Application of analytical hierarchy process (AHP) in evaluating measures for mitigation of emission impact on communities near lignite-fired power plant at MAE MOH, Thailand. *Environmental Engineering and Management Journal*. 17(6): pp. 1457-1466.
 - Punyasukhananda, P. and Bangviwat, A. (2017) Energy Efficiency Improvement through LNG Cold Energy Recovery in an Integrated Gas Separation Plant (GSP) and Liquefied Natural Gas (LNG) Receiving Terminal Setup. *Maejo International Journal of Science and Technology*, 2017. 11: p. In press
 - Punyasukhananda, P. and Bangviwat, A. (2017) Selection of Liquefied Natural Gas Cold Energy Utilisation Technologies in Map Ta Phut LNG Receiving Terminal, Thailand, by Application of the Analytical Hierarchy Process. *Maejo International Journal of Science and Technology*, 2017. 11: pp. In press
 - Gvozdenac, D., Urosevic, B.G., Menke, C., Urosevic, D. and Bangviwat, A. (2017) High efficiency cogeneration: CHP and non-CHP energy. *Energy*, 2017. 135: pp. 269-278.September 2017
 - Utomo, B., A.A. Prawoto, S. Bonnet, A. Bangviwat, and S.H. Gheewala. (2016) Environmental performance of cocoa production from monoculture and agroforestry systems in Indonesia. *Journal of Cleaner Production*, 2016. 134, Part B: pp. 583-591.October 2016
 - W Sawaengsak, T Silalertruksa, A Bangviwat and S. H Gheewala (2014) Life cycle cost of biodiesel production from microalgae in Thailand. *Energy for Sustainable Development*. 18(1): pp. 67–74. February 2014
 - Peetijade, C. and Bangviwat, A. (2012) The Role of Information Sharing and joint Transportation Process for Empty Run Reduction. *Advanced Materials Research*. 463-464: pp. 1030-1034. February, 2012

International Conference

- Pinyo, A. and Bangviwat, A. (2022) Compensation Rates of Demand Response Program in Thailand. in 8th International Conference on Sustainable Energy and Environment (SEE2022). Bangkok, Thailand. November 7-9, 2022.
- Pinyo, A. and Bangviwat, A. (2021) Possible Peer-to-Peer Pricing Mechanism in Micro-Grid Thailand. in International Conference on Recent Innovations in Engineering and Technology (ICRET2021). Paris, France. February 25-26, 2021.

- Chaianong, A., Bangviwat, A. and Menke, C. (2019) The implication of household PV-battery systems for utilities in Thailand in 8th International Conference on Clean and Green Energy (ICCGE2019). Milan, Italy. February 13-15, 2019
- Puapattanakul, A., Sujjakulnukit, B. and Bangviwat, A. (2018) Effect of forced outage rate (FOR) on loss of load expectation (LOLE) in the lower south of Thailand. in 7th International Conference on Sustainable Energy and Environment (SEE2018). Bangkok, Thailand. 28-30 November 2018
- Puapattanakul, A., Chontanawat, J., Sripruetkiat, K. and Bangviwat, A. (2018) Sensitivity of changing amount and price of crude palm oil on electricity generation cost in Krabi power plant. in 7th International Conference on Sustainable Energy and Environment (SEE2018). Bangkok, Thailand. 28-30 November 2018
- Jangjun, C., Chuangchote, S., Bangviwat, A. and Chenvidhya, D. (2018) Load Profiles of Buildings Equipped with Rooftop PV and Energy Storage Systems. in International Conference on Engineering, Technology, and Applied Science (ICETA2018). Sapporo, Japan. August 17-19, 2018
- Chaianong, A., Bangviwat, A. and Menke, C. (2018) Forecast of rooftop PV penetration in Bangkok, Thailand. in The 41st IAEE International Conference Groningen. Groningen, Netherlands. June 10-13, 2018
- Chaianong, A., Bangviwat, A. and Menke, C. (2017) A framework for evaluating economic impacts of rooftop PV systems with or without energy storage on Thai distribution utilities and ratepayers. in International Conference on Sustainable Energy Engineering (ICSEE2017). Perth, Australia. June 12-14, 2017
- Punyasukhananda, P. and Bangviwat, A. (2016) Views from Expert Groups on Criteria: A Case of AHP Application for LNG Cold Utilisation. in Sustainable Energy & Technology Asia 2016 (SETA2016). Bangkok, Thailand. 23-25 March 2016
- Puapattanakul, A. and Bangviwat, A. (2016) Electricity affordability of residents in Bangkok metropolitan. in 6th International Conference on Sustainable Energy and Environment (SEE2016). Bangkok, Thailand. 28-30 November 2016
- Tharana, W. and Bangviwat, A. (2015) Energy Efficiency Obligations for Electricity Utilities: Economics and Policy. in International Conference on Advances in Applied Science and Environmental Technology (ASET'15). Bangkok, Thailand. February 21-22, 2015
- Yin, K. and Bangviwat, A. (2014) Energy Efficiency Improvement and CO₂ Reduction in Power Sector in Cambodia. in 2014 Asia Symposium on Engineering and Information. Bangkok, Thailand. April 11-13, 2014
- Wanichwatanyu, N. and Bangviwat, A. (2014) Electricity Saving Potential and Carbon dioxide emission reduction in PVC Industry in Thailand. in The 5th International Conference on Sustainable Energy and Environment (SEE 2014): Science, Technology and Innovation for ASEAN Green Growth Bangkok, Thailand. November 19-21, 2014
- Lona, S. and Bangviwat, A. (2014) Energy Saving Potential in Non-metallic Industry in Thailand. in The 5th International Conference on Sustainable Energy and Environment (SEE 2014): Science, Technology and Innovation for ASEAN Green Growth Bangkok, Thailand. November 19-21, 2014
- Kyu, W.W., Sajjakulnukit, B., Bangviwat, A., Sorapipatana, C. and Beerepoo, W.M.C. (2014) A Study of Energy Consumption of the Household Sector in Myanmar. in 2014 The

International Conference on Energy, Environment and Sustainable Economy Bangkok, Thailand. 17-18 July 2014

- Sittikruear, S. and Bangviwat, A. (2013) Energy Efficiency Improvement in a Community-Scale Whisky Factory of Thailand by Various Multi-Criteria Decision Making Methods. in 2013 International Conference on Alternative Energy in Developing Countries and Emerging Economies (2013 AEDCEE). Bangkok, Thailand. 30-31 May 2013
- Sittikruear, S. and Bangviwat, A. (2012) Energy Efficiency Improvement in a Community-Scale Whisky Factory of Thailand. in 4th International Conference on Sustainable Energy & Environment (SEE 2011): A Paradigm Shift to Low Carbon Society. Bangkok, Thailand. 27-29 February 2012
- Punyasukhananda, P. and Bangviwat, A. (2012) Utilisation of LNG Cold Energy at Maptaput LNG Receiving Terminal. in 4th International Conference on Sustainable Energy & Environment (SEE 2011): A Paradigm Shift to Low Carbon Society. Bangkok, Thailand. 27-29 February 2012
- Peetijade, C. and Bangviwat, A. (2012) The Role of Information Sharing for Empty Miles Prevention. in International Conference on Innovation and Information Management (ICIIM 2012). Chengdu, China. 7-8 January 2012
- Peetijade, C. and Bangviwat, A. (2012) The Challenges of Manufacturers Empty Truck Runs in Bangkok. in International Conference on Economics, Business and Marketing Management (CEBMM 2012) Singapore. 26-28 February 2012
- Peetijade, C. and Bangviwat, A. (2012) Survey of Empty Backhaul and Inefficient Use of Energy in Transportation. in 4th International Conference on Sustainable Energy & Environment (SEE 2011): A Paradigm Shift to Low Carbon Society. Bangkok, Thailand. 27-29 February 2012
- Kongrahad, C., Bangviwat, A. and Menke, C. (2012) Possible Power Generation Mixes in Thailand for Least Cost and Least CO₂ in 2012. in 4th International Conference on Sustainable Energy & Environment (SEE 2011): A Paradigm Shift to Low Carbon Society. Bangkok, Thailand. 27-29 February 2012
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- Gitarisyana, E., Bangviwat, A. and Bustan, D. (2011) Future Natural Gas Price Prediction in Indonesia Using Netback Market Value Method. in The 2nd International Conference on Sustainable Future for Human Security-Sustain 2011. Kyoto, Japan. 8-10 October 2011
- Rozana, M. and Bangviwat, A. (2010) Clean Coal Technology Options for Power Plants in Indonesia. in The 5th GMSARN International Conference on "Sustainable Development and Climate Change: Challenges Opportunity in GMS" Luang Prabang City, Lao PDR. 17-19 November 2010
- Somcharoenwattana, W., Menke, C., Kamolpus, D., Gvozdenac, D. and Bangviwat, A. (2009) Comparison of System Improvement Alternatives for the "District Cooling System and Power Plant (DCAP)" at the Suvarnabhumi Airport of Thailand. in Sustainable Development to Save the Earth: Technologies and Strategies Vision 2050: (SDSE2008) Bangkok, Thailand. 7-9 April 2009

- Somcharoenwattana, W., Menke, C., Bangviwat, A. and Harahap, F. (2009) Potential of Decentralized Generation in Thailand: CHP in Hospitals. in POWER-GEN Asia 2009. Bangkok, Thailand. 7-9 October 2009

National Journal

- Inthapakdy, M. and Bangviwat, A., (Accepted) Greener Electricity Generation from Lao PDR in the Future. *Journal of Sustainable Energy & Environment*, 12, pp. 59-63.
- Farooq, A., Bangviwat, A., and Gheewala, S.H. (2020) Life cycle cost analysis of ethanol production from sugarcane molasses for gasoline substitution as transportation fuel in Pakistan. *Journal of Sustainable Energy & Environment*. 11(2): p. 49-59. April-June 2020
- Jangjun, C., Chuangchote, S., Bangviwat, A., and Chenvidhya, D. (2019) Load Profiles in Grid-Connected Residential Buildings: Experimental Studies with Rooftop PV and Battery Systems. *Suan Sunandha Science and Technology Journal* 6(1): p. 15-20. January 2019
- Chaianong, A., Bangviwat, A., and Menke, C. (2019) Forecast of Rooftop PV Adoption in Thailand. *Science & Technology Asia*. 24(4). Oct. - Dec. 2019
- Payakkamas, P. and Bangviwat, A., (2017) Price Determination of Electricity Supply in Thailand Based on Externalities, Wheeling Charges, and Losses. *Science & Technology Asia*. 22(3): p. 49-64.
- Bangviwat, A. and Sittikruear, S. (2014) Public Preferences and Random Utility Model for Pollution Impact Mitigation Measures in a Lignite-fired Power Plant at Mae Moh, Thailand. *Environment and Natural Resources Journal*. 12(1): p. 44-56. June 2014
- Sittikruear, S. and Bangviwat, A. (2013) Energy Efficiency Improvement in a Community-Scale Whisky Factory of Thailand. *KKU Research Journal*. 18(1): p. 9-16. January-February 2013
- Rozana, M., Bangviwat, A. and Menke, C. (2013) Assessment of CO₂ Reduction Potentials through Clean Coal Technologies for Future Power Plants in Indonesia. *Songklanakarin Journal of Science and Technology*. 35(4). Oct. - Dec. 2013
- Somcharoenwattana, W., Menke, C., Bangviwat, A. and Harahap, F. (2010) Potential of Decentralized Generation in Thailand and its Contribution. *Journal of Sustainable Energy & Environment*. 1(3): p. 121-127. July-September