# THE JOINT GRADUATE SCHOOL OF ENERGY AND ENVIRONMENT













Consortium involving five leading institutions

#### CENTRE OF EXCELLENCE ON ENERGY TECHNOLOGY AND ENVIRONMENT



### **JGSEE Newsletter**

Volume 37, May-August 2020

#### **Contribution to Society**

JGSEE-NSTDA Integrative Biorefinery Laboratory Showcases Products at BCG Assembly



#### Contribution to Knowledge Platform

ASE2020 Webinar Series#1 - Impact of COVID-19 Pandemic on ASEAN Energy Sector

KMUTT Seminar - Policy and Mechanism for Micro-Credentials

AFPL Contributes to KMUTT Creativity and Technology Showcase Series#3

LCSAL Contributes to the Thailand Research Expo 2020

JGSEE Contributes to ASE2020 Webinar - ASEAN Energy Day



### **Contribution to Research Platform**

Professor Gheewala Delivers Presentation at Research Chair LCA Talks 2020



### Welcome New Comers

Dr Wanchat Sawaengsak

Dr Monorom Rith



Accreditation of JGSEE's Central Analytical Laboratory - ISO/IEC 17025:2017







## Contribution to Society

### JGSEE-NSTDA Integrative Biorefinery Laboratory Showcases Products at BCG Assembly



On 15 July 2020, the Office of the Permanent Secretary, Ministry of Higher Education, Science, Research and Innovation in collaboration with the Thailand Science Research and Innovation (TSRI), Office of the National Higher Education Science Research and Innovation Policy Council (NXPO) and the National Science and Technology Development Agency (NSTDA) organised an Assembly on "BCG: An Economic Model for Sustainable Development" at IMPACT Arena, Exhibition and Convention Center in Muang Thong Thani, Nonthaburi. The BCG assembly aimed at demonstrating the potential of the Bio-Circular-Green Economic Model (BCG) in leading Thailand towards the path of sustainable development and in engaging all stakeholders to set directions and requirements for the country to achieve the BCG's goal. An exhibition was also held on "BCG Economy - Biomass Conversion to High Value-added Products". In this regard, Dr khatiya Weerasai, a post-doctoral researcher at JGSEE-CEE, attended the event to present products on biorefinery research at the JGSEE-NSTDA Integrative Biorefinery Laboratory (IBL) booth.

## Contribution to Knowledge Platform

#### ASE2020 Webinar Series#1 - Impact of COVID-19 Pandemic on ASEAN Energy Sector

On 20 May 2020, JGSEE-CEE in collaboration with Informa Markets Company organised a Free ASE2020 Webinar Series#1 on "Impact of COVID-19 Pandemic on ASEAN Energy Sector". The event was sponsored by Delta Electronics (Thailand) PCL. The webinar aimed at sharing views on the implications of the pandemic for the energy sector, and clean energy transition in Thailand and ASEAN countries. Two speakers were involved in the webinar, including, Dr Twarath Sutabutr, Inspector General, Ministry of Energy, Thailand and Dr Peter du Pont, Managing Partner, Asia Clean Energy Partners Ltd. They both shared information and knowledge on "Energy Policy in the Post-Covid Era" and on "Challenges for the ASEAN's Energy Sector following COVID-19". The discussions were moderated by Dr Suneerat Fukuda, Director of JGSEE. The webinar was also broadcast live on Facebook on the ASEAN Sustainable Energy Week. The event was a success being viewed by over 800 participants from 24 countries. The presentations and the record of the webinar are available at the following link: https://www.asewexpo.com/2020/en/webinar.asp



# THE JOINT GRADUATE SCHOOL OF ENERGY AND ENVIRONMENT

#### KMUTT Seminar - Policy and Mechanism for Micro-Credentials

On 15 May 2020, JGSEE-CEE supporting staff attended an online seminar on "Policy and Mechanism for Micro-credentials (MC) with Supporting Staff". The online seminar was organised by the Student Services Hub under 6+1 Flagship Track 2 of KMUTT. The seminar aimed at sharing information on micro-credentials which is one of KMUTT's policies on Outcome-based Education (OBE) to support staff. Two speakers were involved in the training, including, Asst Prof Dr Panuthat Boonpramuk, Vice-President for Education Development of KMUTT and Dr Klangjai Sithitavorn, Assistant to the President for Education Development of KMUTT. They both shared information and knowledge on micro-credentials and status of KMUTT in this regard.

#### AFPL Contributes to KMUTT Creativity and Technology Showcase Series#3



On 10 July 2020, the Research, Innovation and Partnerships Office (RIPO) at KMUTT visited the Advanced Fuel Processing Laboratory (AFPL) of JGSEE-CEE to record a video on the research topic "High Quality Fuel Production from Biomass". On this occasion, Assoc Prof Dr Suneerat Fukuda, JGSEE director, was invited to provide an overview of the activities being carried out on this topic. She indicated that this research work aims at upgrading biomass materials into high grade fuels via heat treatment. This includes the production of rice husk briquettes, torrefied pellets from rubber wood, torrefied pellets from palm empty fruit bunch (EFB), and pellets from coconut waste. The video of this presentation will be showcased at the KMUTT Creativity and Technology Showcase Series 3: Smart Material.

### LCSAL Contributes to the Thailand Research Expo 2020

On 20 July 2020, the Research, Innovation and Partnerships office (RIPO) in collaboration with Media Arts & Technology, School of Architecture and Design at KMUTT visited JGSEE-CEE to shoot a media on "Sustainability Assessment of Sugarcane Biorefineries to Enhance the Competitiveness of the Thai Sugarcane Industry". This research project is under the Life Cycle Sustainability Assessment Laboratory (LCSAL) of JGSEE. In this regard, Professor Shabbir H. Gheewala, Head of LCSAL, and Assoc Prof Dr Thapat Silalertruksa, KMUTT Lecturer, recorded a video presenting the various research activities performed under LCSAL. This information will be showcased at the Thailand Research Expo 2020 during 2-6 August 2020 at the Centara Grand & Bangkok Convention Centre at CentralWorld, Bangkok.



#### JGSEE Contributes to ASE2020 Webinar - ASEAN Energy Day





On 30 July 2020, JGSEE-CEE in collaboration with Informa Markets Company "ASEAN Energy Day".

The event sponsored by FIMER, aimed at sharing views on power businesses and digital transformation. At the start of given by Mr Sanchai Noombunnam, Deputy Managing Director, Informa Markets and Dr Nuki Agya Utama, Executive Director, ASEAN Centre for Energy. of Renewable Energy".

"Smart Renewable Energy Integration for Power System Resilience".

Three speakers contributed to the discussions, including, Dr Karel Nolles, Visiting organised a Free ASE2020 Webinar titled Professor of JGSEE-CEE, Mr Aman Modi, Partner, Boston Consulting Group, and Mr Jason Venning, Country Manager, FIMER Australia. They shared information and knowledge on a number of topics including, "Opportunities (and Difficulties) in the the webinar, welcome remarks were Energy Transition - New Technologies - New Investments", "Digital Transformation to Enhance Renewable Energy in Power Systems" and "Smart Energy Solutions". discussions were moderated by The Dr Utama also shared information on Dr Athikom Bangviwat of JGSEE. The the topic "ASEAN Energy Transition- webinar was also broadcast live on Facebook Energy Landscape of ASEAN and Targets on the ASEAN Sustainable Energy Week. It was viewed by over 200 participants from 20 countries. The presentations of the webinar A panel discussion was then held on are available at:www.asew-expo.com/2020/ en/webinar.asp.

Volume 37, May-August 2020 Page 3

## **Contribution to Research Platform**

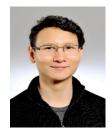
#### Professor Gheewala Delivers Presentation at Research Chair LCA Talks 2020



Professor Shabbir H. Gheewala leads an NSTDA Research Chair Grant project titled "Network for Research and Innovation for Trade and Production of Sustainable Food and Bioenergy". On 30 July 2020, as part of the Research Chair LCA Talks 2020, Professor Shabbir delivered an online presentation on "Life Cycle Thinking: Research and Applications for Sustainable Production and Circular Economy in Thailand". This talk aimed at highlighting the importance of life cycle thinking and the contribution of LCA for the provision of more sustainable good and services in line with the United Nations Sustainable Development Goals (SDGs).

### Welcome New Comers

#### Dr Wanchat Sawaengsak



In 2019, Dr Wanchat Sawaengsak earned a PhD degree from JGSEE-CEE in Environmental Technology on "Social Sustainability Assessment of Sugarcane, Sugar and Ethanol Production Systems in Thailand". The thesis work was supervised by Prof Shabbir H. Gheewala, Head of Life Cycle Sustainability Assessment Laboratory (LCSAL). Dr Wanchat received a scholarship from the Thailand Research Fund under the Royal Golden Jubilee PhD program (Grant PHD/0124/2559). He is now a post-doctoral researcher at JGSEE under the supervision of Professor Shabbir. He is working on the project entitled "Development and Integration of Sustainability Indicators for Urban Community" under the CEE's program on "Integrated Energy and Environment for Sustainable Green Urban Approach (SUD2)".

#### Dr Monorom Rith



In 2019, Dr Monorom Rith earned a PhD degree in two different engineering fields, i.e. Energy Engineering from Mechanical Engineering Department, De La Salle University, Philippines; and Transportation Engineering from Civil Engineering Department, Osaka University, Japan. His PhD thesis was on "Energy and Environmental Benefits and Implication of Various Fuel Economy Policies for Private Passenger Vehicles in Metro Manila". The research work was supervised by Professor Jose Bienvenido Manuel M. Biona, Professor Alexis M. Fillone, and Professor Kenji Doi. Dr Rith received an AUN/Seed-Net scholarship for his doctoral studies. He is now a post-doctoral researcher at JGSEE-CEE under the supervision of Assoc Prof Dr Mongkut Piantanakulchai. He is working on "Smart Carpooling and Ride-Sharing" which supports the project entitled "Smart Ride Sharing Program" under the CEE's program on "Smart Transportation for Urban Development (Transportation)".

## Accreditation

### Accreditation of JGSEE's Central Analytical Laboratory - ISO/IEC 17025:2017

The Central Analytic Laboratory (CAL) of JGSEE-CEE, Bangkhuntien Campus, has been accredited for complying with the ISO/IEC 17025:2017 in the petroleum field on coal and biomass by the Thai Industrial Standards Institute (TISI) with the accreditation number NSC-TISI-TISI17025. CAL offers analytical services to students as well as the private and public sectors. The data quality and reliability are assured and recognised both nationally and internationally. The major analytical services include solid fuel characterisation, biomass combustion characterisation, materials characterisation, greenhouse gas measurement and aerosol sampling and analysis.

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