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**Day 2: Sunday, February 5, 2023**  
**Concurrent Session Block 1**  
**11:15 – 12:45**

**Concurrent Session 1A: Geopolitical Risk and Energy Security**

**The Security of Energy Demand**

Author & Presenter: Michael C Lynch, Energy Policy Research Foundation, Inc. (EPRINC)

**Energy Security in Mexico**

Author & Presenter: Emily Medina, Asia Pacific Energy Research Centre (APERC)

**Quantifying Energy Security Risks in Southeast Asia**

Author & Presenter: Glen E Sweetnam, Asia Pacific Energy Research Centre (APERC)

**Competing Interests: Energy Transition, Energy Security and Energy Justice**

Presenter: Slawomir Raszewski, University of East London  
Authors: Slawomir Raszewski<sup>1</sup>, Eduardo G. Pereira<sup>2</sup>, Ngozi Chinwa Ole<sup>3</sup>

<sup>1</sup>University of East London, <sup>2</sup>University of West Indies, <sup>3</sup>African Centre of Excellence for Water and Environmental Research

**Russia's invasion of Ukraine: medium-term implications for European and global gas markets**

Author & Presenter: Chi Kong Chyong, Center on Global Energy Policy, School of International and Public Affairs, Columbia University

**Moderator: TBA**

**Concurrent Session 1B: Disruptions in Natural Gas Markets**

**On the Geopolitical Disruption of the EU Natural Gas Market: A Correction Model**

Author & Presenter: Pierluigi Nichilo, Colorado School of Mines and IFP School

**Market integration in the global natural gas market - Empirical evidence on asymmetric price transmission**

Author & Presenter: Markos M Farag, University of Cologne

**Short-term actions to address the current oil and gas crisis in the APEC region.**

Author & Presenter: Christopher J Doleman, Asia Pacific Energy Research Centre (APERC)

**Natural Gas Consumption in Azerbaijan: Is there Room to Export More?**

Presenter: Sarvar Gurbanov, ADA University  
Authors: Sarvar Gurbanov<sup>1</sup>, Jeyhun Mikayilov<sup>2</sup>, Shahin Maharramli<sup>3</sup>

<sup>1</sup>School of Public and International Affairs, ADA University, <sup>2</sup>King Abdullah Petroleum Studies and Research Center (KAPSARC), <sup>3</sup>Azerbaijan Energy Regulatory Agency

**Natural gas export capacity and domestic consumers: A tale of two Australia's**

Author & Presenter: Mathew C Horne, Asia Pacific Energy Research Centre (APERC)

**Moderator: TBA**

**Concurrent Session 1C: Energy, Risk and Electricity Markets**

**Gas Games with Electricity**

Author & Presenter: Kelly Neill, University of Sydney

**Occupational Choice and Energy Access – Electricity for More and Better Jobs**

Author & Presenter: Ulrike G Lehr, World Bank Group

**Tail-based Risk Network in Energy Sectors**

Presenter: Layla H Khoja, Dar Al-Hekma University  
Authors: Gazi Salah Uddin<sup>1</sup>, Axel Hedström<sup>2</sup>, Muhammad Yahya<sup>3</sup>, Layla Khoja<sup>4</sup>

<sup>1,2</sup>Linköping University, <sup>3</sup>Inland Norway University of Applied Sciences, <sup>4</sup>Dar Al-Hekma University

**Impacts of the COVID-19 Pandemic on Natural Gas Use in the APEC Region Based on the Joint Organizations Data Initiative (JODI) Data**

Author & Presenter: Nobuhiro Sawamura, Asia Pacific Energy Research Centre (APERC)

**Roadmap for Smart Energy Solutions to Reach a Sustainability to Reach a Sustainable and Secure Electricity Supply in Europe**

Author & Presenter: Philipp Riegebauer, Centre of Innovative Energy Systems, University of Applied Sciences, Dusseldorf and BABLE GmbH

**Moderator: TBA**

**Concurrent Session 1D: Modeling Volatility and Risk in Energy Markets**

**Strategic commodities' price risk and financial contagion in oil importing and oil exporting countries.**

Presenter: Khaled Guesmi, Paris School of Business  
Authors: Ilyes Abid<sup>1</sup>, Saad Alshammari<sup>2</sup>, Khaled Guesmi<sup>3</sup>, Ramzi Benkariem<sup>4</sup>, Christian Urom<sup>3</sup>

<sup>1</sup>ISC Paris, <sup>2</sup>University of Rhodes Island, <sup>3</sup>Paris School of Business, <sup>4</sup>Audencia Business School

**Global Oil Inventory Responses to Geopolitical Shocks**

Presenter: Philipp Galkin, King Abdullah Petroleum Studies and Research Center (KAPSARC)  
Authors: Philipp Galkin<sup>1</sup>, Jennifer Considine<sup>1</sup>, Emre Hatipoglu<sup>1</sup>  
<sup>1</sup>King Abdullah Petroleum Studies and Research Center (KAPSARC)

**Oil Price Cycles and The Choice of Private vs Public Schools**  
*Author & Presenter:* Abdullah Almansur, KFUPM Business School

**The cost-effectiveness of physical versus financial risk mitigation for hydropower suppliers**

*Presenter:* Rui Shan, University of North Carolina at Chapel Hill

*Authors:* Rui Shan<sup>1</sup>, Rosa I. Cuppari<sup>1</sup>

<sup>1</sup> University of North Carolina at Chapel Hill

**Moderator:** TBA

**Concurrent Session 1E: Balancing Resiliency and Volatility**

**Minimizing Oil Revenue Volatility for Saudi Arabia: Statistical Analysis and Impact Overview**

*Presenter:* Khalid Aldubayyan, Ministry of Energy, Saudi Arabia

*Authors:* Khalid Aldubayyan<sup>1</sup>, Abdulkarim Alfalaj<sup>2</sup>, Ali Alsaeed<sup>3</sup>, Abdullah Alayed<sup>4</sup>

<sup>1</sup>Oil Sustainability Program, Ministry of Energy, <sup>2</sup> Saudi Aramco, <sup>3</sup> Accenture, <sup>4</sup>King Abdullah City for Atomic and Renewable Energy (KA CARE)

**Resilience of Saudi Arabia's economy to oil shocks: effects of economic reforms**

*Presenter:* Hossa Al Mutairi, King Abdullah Petroleum Studies and Research Center (KAPSARC)

*Authors:* Hossa Al Mutairi<sup>1</sup>, Marzio Galeotti<sup>2</sup>, Baltasar Manzano<sup>3</sup>, Axel Pierru<sup>1</sup>

<sup>1</sup> King Abdullah Petroleum Studies and Research Center (KAPSARC), <sup>2</sup> KAPSARC and University of Milan, <sup>3</sup> KASPARC and Universidade de Vigo

**Economic Impacts of Investment in Renewables for Energy Exporters with Oil Price Uncertainty: A Diversification Strategy?**

*Author & Presenter:* Christopher M Hannum, University of Central Asia

**The Russian Invasion of Ukraine and the Interests of the GCC Oil Producers**

*Author & Presenter:* Nikolay Kozhanov, Gulf Studies Center, Qatar University

**Establishing Dialogue in the International LNG Market: A Decade of LNG Producer-Consumer Conferences**

*Author & Presenter:* Kazutomo Irie, Asia Pacific Energy Research Centre (APEREC)

**Moderator:** TBA

**Concurrent Session 1F: Integrating Energy Efficiency and Renewables**

**What Role Does Energy Efficiency Play in Climate Mitigation in Saudi Arabia? Time Series Quantile and Out-of-Sample Forecast Approaches**

*Presenter:* Fateh Belaid, King Abdullah Petroleum Studies and Research Center (KAPSARC)

*Authors:* Fateh Belaid<sup>1</sup>, Camille Massié<sup>2</sup>

<sup>1</sup> King Abdullah Petroleum Studies and Research Center (KAPSARC), <sup>2</sup> FGES, Lille Catholic University

**Emissions pricing instruments with intermittent renewables: second-best policy**

*Author & Presenter:* Nandeeta Neerunjun, Aix Marseille School of Economics

**Causal Relationships between Renewable Energy Patents and Renewable Electricity Generation Among 18 OECD countries**

*Presenter:* Eunnyeong Heo, Seoul National University

*Authors:* Eunnyeong Heo<sup>1</sup>, Yeongju Yun<sup>1</sup>

<sup>1</sup> Seoul National University

**What Do We Know About Electricity Demand Elasticities for the Future?**

*Author & Presenter:* Carol A Dahl, Colorado School of Mines

**Renewable resource rents, taxation and the effects of wind power on rural economies**

*Presenter:* Nhu Nguyen, Purdue University

*Authors:* Russell Hillberry<sup>1</sup>, Nhu Nguyen<sup>1</sup>

<sup>1</sup> Department of Agricultural Economics, Purdue University

**Moderator:** TBA

**Concurrent Session 1G: Energy and the Economy (conducted in Arabic)**

الاستثمار المستدام: بحث حول دور الصناديق السيادية في دعم وتمويل مشاريع الطاقة النظيفة بين فرص النجاح وكوابحه

*Presenter:* Salwa Al Mulla, Hamad bin Khalifa University

*Authors:* Salwa Al Mulla<sup>1</sup>, Mohammed Elmahdi Chenine

<sup>1</sup>Hamad Bin Khalifa University, <sup>2</sup> University Kasdi Merbah-Ouargla

الاقتصاد الأخضر وأثره على التنمية المستدامة في المملكة العربية السعودية مقارنة بتجارب دولية

*Presenter:* Nada Alsaif, King Saud University (KSU)

*Authors:* Nada Alsaif<sup>1</sup>, Nashwa Mustafa Ali Muhammad<sup>1</sup>

<sup>1</sup> King Saudi University (KSU)

تحديات إنتاج الطاقة البحرية في الدول العربية: دراسة مقارنة

*Presenter:* Nawal Ali, King Saud University (KSU)

*Authors:* Sarah Almogbel<sup>1</sup>, Nawal Ali<sup>1</sup>

<sup>1</sup> King Saudi University (KSU)

**An experiment on Plastic waste Distillation and Plastic waste oil**

*Author & Presenter:* Kamal Hamid, University of Nyala

**Moderator:** TBA



**Day 2: Sunday, February 5, 2023**  
**Poster Session 1A**  
**10:45 – 11:15 (During Coffee Break)**

دراسة تحليلية لواقع استهلاك الطاقات المتجددة في الدول العربية

*Presenter:* Benlahbib Taha, University of Ouargla

*Authors:* Benlahbib Taha<sup>1</sup>, Ben Seghiér Fatima Zohra<sup>2</sup>

<sup>1</sup>University of Ouargla, <sup>2</sup> Université Larbi Tebessi - Tébessa

**Tracking Innovation Networks in Electricity Using Twitter**

*Presenter:* Rolando Fuentes, Tec De Monterrey

*Authors:* Rolando Fuentes<sup>1</sup>, Frank Felder<sup>2</sup>

<sup>1</sup>Tec de Monterrey and KAPSARC, <sup>2</sup> King Abdullah Petroleum Studies and Research Center (KAPSARC)

**A Micro-Spatial economic model for Riyadh energy use**

*Presenter:* John Edward Abraham, HBA Specto Incorporated

*Authors:* Abdelrahman Muhsen<sup>1</sup>, John Edward Abraham<sup>2</sup>,

Amila Sandaradura<sup>2</sup>, Geraldine Fuenmayor<sup>2</sup>, Kevin Stefan<sup>2</sup>

<sup>1</sup> King Abdullah Petroleum Studies and Research Center, <sup>2</sup> HBA Specto Incorporated

**Towards Sustainable Transportation: The Development of Hydrogen Train in Saudi Arabia**

*Author & Presenter:* Hamad Almujiabah, Taif University

**Energy Transition and Regulatory Actions**

*Presenter:* Amani Mustafa, King Abdulaziz University

*Authors:* Wejdan Asiri<sup>1</sup>, Amani Mustafa<sup>2</sup>, Sarah Alsaadi<sup>3</sup>

<sup>1</sup> The General Authority for Survey and Geospatial Information, <sup>2</sup> King Abdulaziz University, <sup>3</sup> Naft AlSafi Company

**The Relationship Between Financial Development and Renewable Energy Consumption On CO2 Emissions and Economic Growth In The G20 Countries**

*Author & Presenter:* Fatimah Saad Al-kaboor, JATCO

**Day 2: Sunday, February 5, 2023**  
**Poster Session 1B**  
**15:45 – 16:15 (During Coffee Break)**

**Cash-Flow-at-Risk**

*Author & Presenter:* Shamsul Anuar, Saudi Aramco

**Hydrogen Production Utilizing Concentrated Solar Power (CSP) in Saudi Arabia**

*Author & Presenter:* Abdullah Ayed Alrwili, Northern Border University

**Incorporating ESG indicators into financial models for hydrogen assets**

*Presenter:* Georgia Giannakidou, Hellenic Association for Energy Economics and Audencia Business School

*Authors:* Georgia Giannakidou<sup>1</sup>, Nikolaos Georgiadis<sup>1</sup>, Andriosopoulos Konstantinos<sup>2</sup>

<sup>1</sup> Hellenic Association for Energy Economics, <sup>2</sup> Audencia Business School

**An Exploratory Study of Hydrogen Production by Natural Gas with and Without Carbon Sequestration**

*Presenter:* Jameel Jamhar, National Institute of Technology, Agartala

*Authors:* Jameel Jamhar<sup>1</sup>, Sukriti Sharma<sup>2</sup>, Asad Sahir<sup>2</sup>

<sup>1</sup> National Institute of Technology, Agartala <sup>2</sup> Indian Institute of Technology, Ropar

**Position of Petroleum Resources in the Africa's Gulf of Guinea Region: Environment, Economy and Development**

*Author & Presenter:* Babagana Abubakar, K Computers

**Day 2: Sunday, February 5, 2023**  
**Concurrent Session Block 2**  
**16:15 – 17:45**

**Concurrent Session 2A: Commodities, Wealth Funds and Bonds – Instruments to Manage Energy Markets**

**Opportunity costs and discount rates for public assessment of oil-related projects and policies in oil-exporting countries**

*Presenter:* Axel Pierru, King Abdullah Petroleum Studies and Research Center (KAPSARC)

*Authors:* Fatih Karanfil<sup>1</sup>, Axel Pierru<sup>1</sup>

<sup>1</sup> King Abdullah Petroleum Studies and Research Center (KAPSARC)

**Sovereign wealth funds and natural resources links to shock responses: evidence from the covid-19 pandemic**

*Presenter:* Stella Tsani, University of Ioannina

*Authors:* Stella Tsani<sup>1</sup>, Wee Chian Koh<sup>2</sup>

<sup>1</sup> University of Ioannina, <sup>2</sup> Centre for Strategic and Policy Studies, Bandar Seri Begawan

**Structural and policy drivers of the EU energy crisis: Exploring their nexus beyond current exogenous shocks.**

*Author & Presenter:* Roberto Cardinale, The American University in Cairo

**A first assessment of the EU taxonomy and its impact**

*Presenter:* Lucia Visconti Parisio, Università di Milano – Bicocca

*Authors:* Susanna Dorigoni<sup>1,2</sup>, Lucia Visconti Parisio<sup>2</sup>, Paola Galfrascoli<sup>2</sup>

<sup>1</sup> Bocconi University, Milan, <sup>2</sup> Università di Milano – Bicocca

**Time Frequency Connectedness Between Green Bond and the Energy Commodities**

*Presenter:* Fuzuli Aliyev, ADA University

*Authors:* Ayşe Nur Şahinler<sup>1</sup>, Fuzuli Aliyev<sup>2</sup>, Elsevar Ibadov<sup>3</sup>

<sup>1</sup> Ankara Yıldırım Beyazıt University, <sup>2</sup> ADA University, <sup>3</sup> Baku Engineering University

**Moderator: TBA**

**Concurrent Session 2B: Full Disclosure- ESG and Green Finance**

**Closing the Investment Gap to Achieve the Paris Agreement Goals**

*Presenter:* Fatih Yilmaz, King Abdullah Petroleum Studies and Research Center (KAPSARC)

*Authors:* Fatih Yilmaz<sup>1</sup>, Fahad Alswaina<sup>1</sup>, Fateh Belaid<sup>1</sup>, Mohamad Hejazi<sup>1</sup>, Mari Luomi<sup>1</sup>, Salahaddine Soummane<sup>1</sup>  
<sup>1</sup> King Abdullah Petroleum Studies and Research Center (KAPSARC)

**ESG and its impact on oil & gas investments**

*Author & Presenter:* Julio Arboleda Larrea, King Abdullah Petroleum Studies and Research Center (KAPSARC)

**ESG And CFP In Emerging Markets – A U-Shaped Relationship?**

*Author & Presenter:* Alexander Schult, Technical University of Munich

**Corporate Disclosure and Green Finance Market: A Legal Perspective**

*Author & Presenter:* Wejdan Asiri, The General Authority for Survey and Geospatial Information

**Moderator: TBA**

**Concurrent Session 2C: Pricing Electricity Markets – Challenges?**

**Ex-post assessment of energy price reforms in Saudi Arabia**

*Author & Presenter:* Salaheddine Soummane, King Abdullah Petroleum Studies and Research Center (KAPSARC)

**Privatization and electricity sector performance: a case of electricity distribution companies in Nigeria**

*Author & Presenter:* Iyabo A Olanrele, Nigerian Institute of Social and Economic Research

**Competition and greening of the French retail electricity market: the effects on household electricity prices**

*Presenter:* Sandra Moreno, Universite de Perpignan Via Domitia

*Authors:* Sandra Moreno<sup>1</sup>, Sophie Masson<sup>1</sup>

<sup>1</sup> Universite de Perpignan Via Domitia

**Pricing Schemes for Solar Energy Matter in Residential Electricity Use**

*Presenter:* Hideki Shimada, National Institute of Advanced Industrial Science and Technology

*Authors:* Hideki Shimada<sup>1</sup>, Tomonori Honda<sup>1</sup>

<sup>1</sup> National Institute of Advanced Industrial Science and Technology

**Forecasting of Korean Electricity Market Price Using Seasonal Decomposition Methods**

*Presenter:* Arim Jin, Konkuk University

*Authors:* Arim Jin<sup>1</sup>, DaHan Lee<sup>1</sup>, JaeHyung Roh<sup>1</sup>, Jong-Bae Park<sup>1</sup>

<sup>1</sup>Konkuk University

**Moderator: TBA**

**Concurrent Session 2D: Modelling Energy Futures**

**Modelling Energy Price Reform Outcomes and Understanding the Determinants of Success**

*Presenter:* Anwar Gasim, King Abdullah Petroleum Studies and Research Center (KAPSARC)

*Authors:* Anwar Gassim<sup>1</sup>, Lama Yaseen<sup>1</sup>, Paolo Agnolucci<sup>2</sup>, Paul Ekins<sup>2</sup>

<sup>1</sup> King Abdullah Petroleum Studies and Research Center (KAPSARC), <sup>2</sup> University College London

**The effects of opportunity-based and necessity-based entrepreneurship on environmental performance: a cross-country analysis**

*Presenter:* Boumediene Ramdani, Qatar University

*Authors:* Boumediene Ramdani<sup>1</sup>, Fateh Belaid<sup>2</sup>, Mahmoud Abdellatif<sup>1</sup>

<sup>1</sup>College of Business and Economics, Qatar University, <sup>2</sup> King Abdullah Petroleum Studies and Research Center (KAPSARC)

**Public utilities' corporate growth and environmental conservation: evidence from Japan**

*Author & Presenter:* Masao Tsujimoto, Japan University of Economics

**Modelling climate change impact on hydroelectric power plant energy production**

*Presenter:* Cem Avci, Bogazici University

*Authors:* Cem Avci<sup>1</sup>, Cem Tiranlar<sup>1</sup>, Irem Akcan<sup>1</sup>, Masume Atam<sup>1</sup>

<sup>1</sup> Bogazici University

**Modelling the future of energy: What are the present tools missing?**

*Presenter:* Afsal Mr. Najeeb, IIT Bombay

*Authors:* Afsal Najeeb<sup>1</sup>, Anand B Rao<sup>1</sup>, Satish Agnihotri<sup>1</sup>, Vinod Mishra<sup>2</sup>, Srinivas Sridharan<sup>2</sup>

<sup>1</sup>IIT Bombay, <sup>2</sup>Monash University.

**Moderator: TBA**

**Concurrent Session 2E: Carbon Neutrality and Hydrocarbons**

**Carbon-neutral LNG and Oil: The Future of Hydrocarbons in the World of Energy Transition?**

*Presenter:* Zlata Sergeeva, King Abdullah Petroleum Studies and Research Center (KAPSARC)

*Authors:* Zlata Sergeeva<sup>1</sup>, Colin Ward<sup>1</sup>, Rami Shabaneh<sup>1</sup>, Hamid Al Sadoon<sup>1</sup>

<sup>1</sup> King Abdullah Petroleum Studies and Research Center (KAPSARC)



### Towards carbon neutrality and energy independence in Europe: Can new storage and renewables push fossil fuels out?

*Presenter:* Milien Dhorne, Université Paris Nanterre

*Authors:* Milien Dhorne<sup>1</sup>, Marc Baudry<sup>1</sup>

<sup>1</sup> Université Paris Nanterre

### Carbon Neutrality of Oil Majors – Current Status, Targets, and Economic Rationale

*Author & Presenter:* Matthias Pickl, Saudi Aramco

### How CCS works for future power market in Japan and its impact on the demand of fossil fuels especially coal

*Author & Presenter:* Hisanori Nei, National Graduate Institute for Policy Studies

### What changed in the IPCC report before and after the Paris Agreement?

*Author & Presenter:* Jinmi Kim, Korea University

**Moderator:** TBA

### Concurrent Session 2F: Comparing Investment Strategies in Renewables

#### The economic and financial impact of reforms to the electricity supply industry in Saudi Arabia

*Author & Presenter:* Jeremy Rothfield, King Abdullah Petroleum Studies and Research Center (KAPSARC)

#### Economic and Energy Impacts of Saudi's Giga Tourism Projects

*Presenter:* David Omom, Saudi Aramco

*Authors:* David Omom<sup>1</sup>, Sijesh Aravindhakshan<sup>1</sup>, Laila Alabdrabalnabi<sup>1</sup>

<sup>1</sup>Saudi Aramco

#### Firm investment in renewable energy: an empirical evidence from the People's Republic of China

*Presenter:* Dina Azhgaliyeva, Asian Development Bank Institute

*Authors:* Dina Azhgaliyeva<sup>1</sup>, Hai Le<sup>1</sup>

<sup>1</sup> Asian Development Bank Institute

#### Analytical and prospective study of the Turkish experience in the field of renewable energy investments

*Presenter:* Abdelmalek Mahri, Larbi Tebessi University – Tebessa

*Authors:* Abdelmalek Mahri<sup>1</sup>, Abdelmalek Meriem, Laib Sana

<sup>1</sup>Larbi Tebessi University – Tebessa

#### Long term energy policy vs. dynamic public preferences? A review of German energy policy 2008-2023

*Presenter:* Christina Kockel, RWTH Aachen University

*Authors:* Christina Kockel<sup>1</sup>, Aaron Praktikno<sup>1</sup>

<sup>1</sup> Institute for Future Energy Consumer Needs and Behavior (FCN), RWTH Aachen University

**Moderator:** TBA

### Concurrent Session 2G: Reduced Investments and Energy Volatility

#### Flexibility requirements and incentives for storage investments in future European power systems

*Author & Presenter:* Derck Koolen, European Commission

#### Investment in Oil Industry and Renewable Energy: Crowding-in or Crowding-out effect?

*Author & Presenter:* Samar Mohamed, Alexandria University

#### A Tool for Measuring Countries' Circular Carbon Economy Potential and Progress: The Circular Carbon Economy Index

*Presenter:* Thamir Al Shehri, King Abdullah Petroleum Studies and Research Center (KAPSARC)

*Authors:* Fatih Yilmaz<sup>1</sup>, Mari Luomi<sup>1</sup>, Thamir Alshehri<sup>1</sup>

<sup>1</sup> King Abdullah Petroleum Studies and Research Center (KAPSARC)

#### Ukrainian crisis and market power in the Italian electricity market

*Author & Presenter:* Carlo Andrea Bollino, Università di Perugia

#### The state-led afforestation and socioeconomic wellbeing: Evidence from the Billion Trees Afforestation Project, Pakistan

*Author & Presenter:* Nasir Iqbal, Pakistan Institute of Development Economics (PIDE)

**Moderator:** TBA

**Day 3: Monday, February 6, 2023**

**Concurrent Session Block 3**

**11:00 – 12:30**

### Concurrent Session 3A: Economic Implications of Energy Transitions

#### Economic Growth and Convergence: Implications of Energy Transition Pathways

*Presenter:* Nader Alkathiri, King Abdullah Petroleum Studies and Research Center (KAPSARC)

*Authors:* Nader Alkathiri<sup>1</sup>, Abdulelah Darandary<sup>1</sup>

<sup>1</sup> King Abdullah Petroleum Studies and Research Center (KAPSARC)

#### The Economic Impact of Energy Poverty and Sustainable Development Goals (SDGs)

*Presenter:* Moodhi Alotaibi, Arab Open University

*Authors:* Moodhi Alotaibi<sup>1</sup>, Omaimh Ali<sup>1</sup>

<sup>1</sup> Arab Open University

**Is Small Powerful? An Evaluation of the Ecological, Economic, and Social Aspects of the Decentralized Energy Transformation**

*Presenter:* Jens Weibezahn, Copenhagen Business School (CBS)

*Authors:* Jens Weibezahn<sup>1</sup>, Raluca Dumitrescu<sup>2</sup>, Daniel Philipp<sup>2</sup>

<sup>1</sup>Copenhagen Business School, <sup>2</sup> Technische Universität Berlin

**Economic impacts of renewable energy in Egypt by using a CGE model**

*Presenter:* Tarek Safwat Kabel, University of Sadat City

*Authors:* Tarek Safwat Kabel<sup>1</sup>, Mohga Bassim<sup>2</sup>

<sup>1</sup>Department of Economics, University of Sadat City, <sup>2</sup> Department of Economics and International Studies, University of Buckingham

**Total Greenhouse Gas Emission Trends and Projections in the Egyptian Electricity Sector**

*Presenter:* Mostafa Mohamed Hasaneen, The Regional Center for Renewable Energy and Energy Efficiency

*Authors:* Mostafa Mohamed Hasaneen<sup>1</sup>, Jauad El Kharraz<sup>1</sup>, Mahmoud Mohieldin<sup>2</sup>

<sup>1</sup>The Regional Center for Renewable Energy and Energy Efficiency, <sup>2</sup> Cairo University

**Moderator: TBA**

**Concurrent Session 3B: Renewables, Emissions and Electricity**

**Saudi Arabia Net-Zero emissions by 2060: The transformation of the power sector**

*Presenter:* Puneet Kamboj, King Abdullah Petroleum Studies and Research Center (KAPSARC)

*Authors:* Puneet Kamboj<sup>1</sup>, Mohamad Hejazi<sup>1</sup>, Khalid Alhadhrami<sup>1</sup>, Gokul Iyer<sup>2</sup>, Page Kyle<sup>2</sup>, Silvia Regina Santos Da Silva<sup>3</sup>

<sup>1</sup> King Abdullah Petroleum Studies and Research Center (KAPSARC), <sup>2</sup> Pacific Northwest National Laboratory, <sup>3</sup> George Mason University

**Demand-Side Management and Economic Dispatch for Energy Transition in Karnataka, India**

*Presenter:* Yuan Xu, The Chinese University of Hong Kong

*Authors:* Balasubramanian Sambasivam<sup>1,2</sup>, Yuan Xu<sup>1</sup>

<sup>1</sup>Department of Geography and Resource Management, The Chinese University of Hong Kong, <sup>2</sup> Department of Mechanical Engineering, The University of Texas at Austin

**Determinants of urban household cooling electricity consumption- Evidence from India**

*Presenter:* Divya Jain, TERI School of Advanced Studies

*Authors:* Divya Jain<sup>1</sup>, Gopal K. Sarangi<sup>1</sup>, Sukanya Das<sup>1</sup>

<sup>1</sup> TERI School of Advanced Studies

**Six regions one sun one grid**

*Author & Presenter:* Xiaoming Kan, Department of Space, Earth and Environment, Chalmers University of Technology

**Long-term assessment of CSP entry into Saudi Arabia's power system using PLEXOS**

*Presenter:* Khalid Alhadhrami, King Abdullah Petroleum Studies and Research Center (KAPSARC)

*Authors:* Khalid Alhadhrami<sup>1</sup>, Ahmed Albalawi<sup>1</sup>

<sup>1</sup> King Abdullah Petroleum Studies and Research Center (KAPSARC)

**Moderator: TBA**

**Concurrent Session 3C: Renewables and the Environment**

**Forecasting Saudi Arabia's 2060 Carbon Dioxide Emission Pathways: A Multivariate Approach**

*Presenter:* Abdulelah Darandary, King Abdullah Petroleum Studies and Research Center (KAPSARC)

*Authors:* Abdulelah Darandary<sup>1</sup>, Anwar Gasim<sup>1</sup>, Lester C. Hunt<sup>1,2</sup>, Jeyhun Mikayilov<sup>1</sup>

<sup>1</sup> King Abdullah Petroleum Studies and Research Center (KAPSARC), <sup>2</sup>University of Portsmouth

**GCC Renewable Energy Development – Road to Meet 2030 Targets**

*Author & Presenter:* Salem Alhajraf, EdamaConsult

**Assessment of Price Policies in the Power Matrix of Saudi Arabia Under the Scope of Vision 2030**

*Presenter:* Harif Fontecha, King Abdullah University of Science and Technology (KAUST)

*Authors:* Harif Fontecha<sup>1</sup>, Shashank Nagaraja<sup>1</sup>, Mani Sarathy<sup>1</sup>

<sup>1</sup> King Abdullah University of Science and Technology (KAUST)

**The Effect of Green Hydrogen Production Growth to the Renewable Energy Sector**

*Author & Presenter:* Muhammad I Akimaya, King Fahd University of Petroleum and Minerals (KFUPM)

**Moderator: TBA**

**Concurrent Session 3D: The Role of Oil in Energy Transitions**

**The Contribution of National Oil Companies (NOCs) to the Energy Transition**

*Author & Presenter:* Cesar Baena, EM Normandie Business School

**The New Geopolitics of Energy Transition in the Middle East**

*Presenter:* Ahmed Alrashed, Columbia University

*Authors:* Kaushik Deb<sup>1</sup>, Ahmed Alrashed<sup>1</sup>

<sup>1</sup>Columbia University

**Global Oil Market in Constrained Energy Transition Scenarios**

*Presenter:* Abdullah A Aljarboua, King Abdullah Petroleum Studies and Research Center (KAPSARC)

*Authors:* Abdullah A Aljarboua<sup>1</sup>, Fatih Karanfil<sup>1</sup>, Axel Pierru<sup>1</sup>

<sup>1</sup> King Abdullah Petroleum Studies and Research Center (KAPSARC)

**Beyond clean energy technological fixes: A critical assessment on the hydrogen partnerships between Germany and Arab Gulf states**

*Author & Presenter:* Tobias Zumbraegel, University of Hamburg & Center for Applied Research in Partnership with the Orient (CARPO)

**Peak Demand vs. Declining Supply**

*Author & Presenter:* Evonne Tan, Saudi Aramco

**Moderator: TBA**

**Concurrent Session 3E: Just Transitions and the Environment**

**Evaluating Spatial Spillover Effects of Renewable and Non-Renewable Energy on Environmental Degradation**

*Presenter:* Amjad Naveed, Aarhus University  
*Authors:* Amjad Naveed<sup>1</sup>, Nisar Ahmed<sup>2</sup>, Reza Fathollahzadeh<sup>2</sup>  
<sup>1</sup> Aarhus University, <sup>2</sup> Sultan Qaboos University

**The Impact of Digital Financial Inclusion on Energy Consumption in Sub-Saharan Countries**

*Presenter:* Nancy Muvumbu Mukalayi, University of Pretoria  
*Authors:* Nancy Muvumbu Mukalayi<sup>1</sup>, Roula Inglesi-Lotz<sup>1</sup>  
<sup>1</sup> University of Pretoria

**CO2 Emissions, Financial Inclusiveness and Economic Governance**

*Presenter:* Jihan Bousrih, University of Princess Nourah Bint Abdulrahman  
*Authors:* Jihan Bousrih<sup>1</sup>, Fatma Mabrouk<sup>1</sup>, Hela Borgi<sup>1</sup>, Mohamed Mehdi Mekni<sup>2</sup>  
<sup>1</sup> Economics Department, College of Business and Administration, University of Princess Nourah Bint Abdulrahman, <sup>2</sup> Faculty of Law, Economics and Management Sciences, University of Jendouba

**Health Effects of Fuel Transitions in India: Evidence from Panel Data**

*Author & Presenter:* Mehtabul Azam, Department of Economics, Oklahoma State University

**The Four Dynamics (4Ds) of Energy Transition: Decarbonization, Decentralization, Decreasing Use, and Digitalization**

*Author & Presenter:* Muhammad Asif, King Fahd University of Petroleum and Minerals (KFUPM)

**Moderator: TBA**

**Concurrent Session 3F: Pathways for Hydrogen**

**Green Hydrogen: A Key Power for The Energy Transition**

*Author & Presenter:* Amal Ebrahiem Ismail, New & Renewable Energy Authority

**Assessing the Performance Dimensions of Hydrogen Supply Chain Pathways Using Life Cycle Sustainability Analysis (LCSA) and Network Analytics for the Hydrocarbon Industry's Energy Transition**

*Author & Presenter:* Camilo Fernando, University of Aberdeen

**Which way to choose? Technical, economic and environmental evaluation of different hydrogen production pathways**

*Presenter:* Jakob Kulawik, RWTH Aachen University  
*Authors:* Jakob Kulawik<sup>1</sup>, Christina Kockel<sup>1</sup>, Aaron Praktikno<sup>1</sup>,  
<sup>1</sup>Chair For Energy Systems Economics, RWTH Aachen University

**A Techno-Economic Analysis Perspective on Hydrogen Production and Utilization for India**

*Presenter:* Sukriti Sharma, Indian Institute of Technology, Ropar  
*Authors:* Sukriti Sharma<sup>1</sup>, Asad Sahir<sup>1</sup>  
<sup>1</sup> Indian Institute of Technology, Ropar

**Towards Developing a Green Hydrogen Potential Map for the Kingdom of Saudi Arabia**

*Presenter:* Mohammed Alquhays, Saudi Aramco  
*Authors:* Mohammed Alquhays<sup>1</sup>, Abdulaziz Almohammadi<sup>2</sup>, Ali Al Awami<sup>2</sup>  
<sup>1</sup> Saudi Aramco  
<sup>2</sup> King Fahd University of Petroleum and Minerals (KFUPM)

**Moderator: TBA**

**Concurrent Session 3G: Assessing Solar PV in the Energy Mix**

**Solar Photovoltaic End of Life Disposal Policy Assessment for the Kingdom of Saudi Arabia**

*Presenter:* Amjad Ali, King Fahad University of Petroleum and Minerals (KFUPM)  
*Authors:* Amjad Ali<sup>1</sup>, Fahad A. Alsulaiman<sup>1</sup>, Kashif Irshad<sup>1</sup>, Md Shafiullah<sup>1</sup>, Sheraz Alam Malik<sup>2</sup>, Muhammad Zeeshan Malik<sup>3</sup>, Md. Hasan Zahir<sup>1</sup>

<sup>1</sup> Interdisciplinary Research Center in Renewable Energy and Power Systems, King Fahd University of Petroleum and Minerals (KFUPM)

<sup>2</sup> College of Business, Al Faisal University, <sup>3</sup> School of Electronics and Information Engineering, Taizhou University

**Forecasting Solar Irradiance in Saudi Regions Via Machine Learning & Artificial Neural Networks**

*Author & Presenter:* Subah M Alkhaldi, Saudi Aramco

**Overcoming Weather Data Scarcity to Aid Policymakers in Effective Renewables Deployment for Saudi Arabia**

*Presenter:* Marie Petitot, King Abdullah Petroleum Studies and Research Center (KAPSARC)

Authors: Marie Petit<sup>1</sup>, Amro ElShurafa<sup>1</sup>, Frank Felder<sup>1</sup>  
<sup>1</sup> King Abdullah Petroleum Studies and Research Center  
(KAPSARC)

**Optimal Site Selection for a Solar PV Plants In Saudi Arabia**  
Author & Presenter: Hassan Z. Al Garni, Royal Commission of  
Jubail and Yanbu - Jubail Industrial College

**Net Billing Tariff Assessment in the Kingdom of Saudi Arabia  
for a Feasible Integration of Distributed On-Grid Residential  
Roof-Tops Solar PV**

Presenter: Fahad A Alsulaiman, King Fahad University of  
Petroleum and Minerals (KFUPM)  
Authors: Abdul Hafiz AlHariri<sup>1</sup>, Fahad Al Sulaiman<sup>2</sup>, Nasser Al  
Kaabi<sup>3</sup>, Shafiqur Rehman<sup>2</sup>  
<sup>1</sup>Mechanical Engineering Department, King Fahd University of  
Petroleum and Minerals (KFUPM), <sup>2</sup> Interdisciplinary Research  
Center in Renewable Energy and Power Systems, King Fahd  
University of Petroleum and Minerals (KFUPM), <sup>3</sup> Saudi Iron  
and Steel Company (HADEED -SABIC)

**Moderator:** TBA

**Day 3: Monday, February 6, 2023**  
**Poster Session 2A**  
10:30 – 11:00 (During Coffee Break)

**Sustainable Energy Development in Saudi Arabia: Multi-  
Level Perspective**

Author & Presenter: Sarah Alotaibi, King Faisal Center for  
Research and Islamic Studies (KFCRIS)

**Present and Future Trend in Saudi Seaborne Trade and Oil  
Demand: Could BAU Scenario Meet NTL's Maritime Target?**

Presenter: AHM Mehbub Anwar, King Abdullah Petroleum  
Studies and Research Center (KAPSARC)

Authors: AHM Mehbub Anwar<sup>1</sup>, Rubal Dua<sup>1</sup>, Nora  
Nezamuddin<sup>1</sup>, Abdulrahman Alwosheel<sup>1</sup>

<sup>1</sup> King Abdullah Petroleum Studies and Research Center  
(KAPSARC)

**Grid-Connected Renewable Power System with Electric  
Vehicle Charging Stations for Car Parks on Academic  
Campuses**

Presenter: Shafiqur Rehman, King Fahad University of  
Petroleum and Minerals (KFUPM)

Authors: Shafiqur Rehman<sup>1</sup>, Abdul Baseer Mohammed<sup>2</sup>,  
Fahad Al Sulaiman<sup>1</sup>

<sup>1</sup> Interdisciplinary Research Center in Renewable Energy and  
Power Systems, King Fahd University of Petroleum and  
Minerals (KFUPM), <sup>2</sup>Mechanical and Manufacturing  
Engineering Technology Department, Jubail Industrial College

**Techno-Economic Study of Lighting Street and Residential  
Buildings Using Renewable Energy Resources: A Case Study  
of Riyadh City**

Presenter: Ahmad F Tazay, Al Baha University  
Authors: Megren Awad Alharthy<sup>1</sup>, Ahmed F Tazay<sup>1</sup>  
<sup>1</sup>Al Baha University

**Performance assessment of air conditioning system assisted  
by photovoltaic cold thermal storage.**

Presenter: Kashif Irshad, Interdisciplinary Research Center in  
Renewable Energy and Power Systems, King Fahd University  
of Petroleum and Minerals (KFUPM)

Authors: Kashif Irshad<sup>1,2</sup>, Firoz Khan<sup>1</sup>, Md. Hasan Zahir<sup>1</sup>,  
Amjad Ali<sup>1</sup>

<sup>1</sup> Interdisciplinary Research Center in Renewable Energy and  
Power Systems, King Fahd University of Petroleum and  
Minerals (KFUPM), <sup>2</sup> KA CARE Energy Research and  
Innovation Center

**Day 3: Monday, February 6, 2023**  
**Poster Session 2B**  
15:30 – 16:00 (During Coffee Break)

**Energy transition is no longer the same idea it used to be.**

Author & Presenter: Sami A Alnuaim, Society of Petroleum  
Engineers

**The relationship between economic growth and CO2  
emissions in Saudi Arabia: An empirical analysis of the  
environmental Kuznets curve**

Presenter: Rawaa Ahmed Alafari, King Faisal University

Authors: Rawaa Ahmed Alafari<sup>1</sup>, Oussama Zaghdoud<sup>1</sup>  
<sup>1</sup>Department of Economics, School of Business  
Administration, King Faisal University

**The Impact of World Population Growth on Global Energy  
Consumption: A Probabilistic Analysis**

Author & Presenter: Peter Pflaumer, Department of Statistics,  
Technical University of Dortmund

**Unexpectedly very low percentage of thermally-insulated  
apartment buildings in Amman, Jordan, and investigation of  
stakeholders' responsibilities**

Presenter: Sudki Sameer Hamdan, Department of Statistics,  
Jordan

Authors: A.N. Abdel Fattah<sup>1</sup>, Sudki Sameer Hamdan<sup>2</sup>, O.  
Ayadi<sup>3</sup>

<sup>1</sup> Water, Food and Energy For Environmental Resource  
Management, <sup>2</sup> Department of Statistics, Ministry of Planning  
and International Cooperation, Jordan, <sup>3</sup> Mechanical  
Engineering Department, The University of Jordan

**Households' Willingness to Adopt Solar Energy for Business  
Use in Uganda**

Presenter: Jennifer Nabaweesi, Makerere University Business  
School

Authors: Jennifer Nabaweesi<sup>1</sup>, Kabuye Frank<sup>1</sup>, Muyiwa  
Samuel Adaramola<sup>2</sup>



<sup>1</sup> Makerere University Business School, <sup>2</sup> University of Life Sciences, Norway

**Day 3: Monday, February 6, 2023**  
**Concurrent Session Block 4**  
**16:00 – 17:30**

**Concurrent Session 4A: Decarbonizing Hard to Abate Sectors**

**Alternative Fuels for Saudi Cement Manufacturing with Time-Varying Carbon Pricing**

Presenter: Walid Matar, King Abdullah Petroleum Studies and Research Center (KAPSARC)

Authors: Walid Matar<sup>1</sup>, Doaa K. Filali<sup>2</sup>

<sup>1</sup> King Abdullah Petroleum Studies and Research Center (KAPSARC), <sup>2</sup> Princess Nourah Bint Abdulrahman University

**Decarbonization Policies and Energy Price Reforms in Bangladesh**

Presenter: Sakib Amin, North South University

Authors: Sakib Amin<sup>1</sup>, Tooraj Jamasb<sup>2</sup>, Manuel Llorca<sup>2</sup>, Laura Marsilian<sup>3</sup>, Thomas I Renström<sup>4</sup>

<sup>1</sup>School of Business and Economics, North South University, <sup>2</sup>Copenhagen School of Energy Infrastructure, Copenhagen Business School, <sup>3</sup> Durham University Business School and Durham Energy Institute, <sup>4</sup> Durham University Business School

**Biogas as clean energy alternative for rural poor at West Kordofan-Sudan**

Presenter: Muna Ahmed, Sudan University of Science and Technology

Authors: Abdel-Mahmoud Banazeer<sup>1</sup>, Muna Ahmed<sup>2</sup>

<sup>1</sup>Agriculture Technological Transfer Society, <sup>2</sup> Sudan University of Science and Technology

**Rolling-Out Biogas Production to Empowering Rural Women in Sudan**

Presenter: Hazir Farouk, Sudan University of Science and Technology

Authors: Hazir Farouk<sup>1</sup>, Andrew Lang<sup>2</sup>

<sup>1</sup> Sudan University of Science and Technology, <sup>2</sup> World Bioenergy Association

**Potential Fly Ash Utilization For Concrete Admixture And Carbon Capture Technology From Biomass-Coal Co-Firing Power Plant In Indonesia**

Presenter: Rachmat Hermawan, PT PLN (Persero)

Authors: Rachmat Hermawan<sup>1</sup>, Muhammad Idris<sup>1</sup>

<sup>1</sup> Perusahaan Listrik Negara (PLN)

**Moderator: TBA**

**Concurrent Session 4B: Air Quality, Emissions and Innovations**

**Impact Of Financial Development on Carbon Dioxide Emissions: Empirical Evidence from Azerbaijan, Russia, And Kazakhstan**

Presenter: Samra Talishinskaya, Central Bank of the Republic of Azerbaijan

Authors: Samra Talishinskaya<sup>1</sup>, Jeyhun Mikayilov<sup>2</sup>

<sup>1</sup> Central Bank of the Republic of Azerbaijan, <sup>2</sup> King Abdullah Petroleum Studies and Research Center (KAPSARC)

**Analyzing the impacts of technological innovation on CO2 emission "Innovation Claudia Curve Theory (ICC)" in MENA Countries**

Presenter: Nouf Al-Nafisa, Princess Nourah Bint Abdulrahman University and King Saud University

Authors: Nouf Alnafisah<sup>1</sup>, Eman Alsmari<sup>2</sup>, Amal Alshehri<sup>2</sup>

<sup>1</sup>Princess Nourah Bint Abdulrahman University and King Saudi University, <sup>2</sup> Princess Nourah Bint Abdulrahman University

**Effective options for addressing air quality-related environmental public health burdens in Saudi Arabia**

Presenter: Mashael AlOmran, Public Health Authority of Saudi Arabia,

Authors: Jared Woollacott<sup>1</sup>, Wael AlSufyani<sup>2</sup>, Robert H. Beach<sup>1</sup>, Laura T.R. Morrison<sup>1</sup>, Alison Bean de Hernandez<sup>1</sup>, Severin Rakic, Mashael AlOmran<sup>2</sup>, Reem Alsukait<sup>3</sup>, Christopher Herbst<sup>3</sup>, Salem AlBalawi<sup>2</sup>

<sup>1</sup>RTI International, <sup>2</sup>Public Health Authority of Saudi Arabia, <sup>3</sup> World Bank Group

**The Effect of Greenhouse Gas Emissions and Green Innovation on Corporate Investors' Financial Performance: Toward Net Zero Emissions**

Presenter: Fatima Shuwaikh, Léonard de Vinci Pôle Universitaire, Research Center

Authors: Fatima Shuwaikh<sup>1</sup>, Thomas Chemmanur<sup>2</sup>

<sup>1</sup> Léonard de Vinci Pôle Universitaire, Research Center, <sup>2</sup> Boston College, Carroll School of Management

**Moderator: TBA**

**Concurrent Session 4C: Valuing Risk in Developing Energy Markets**

**Quantifying the value of reduced investment risk under different green energy support policies**

Presenter: Peio Alcorta, University of the Basque Country

Authors: Peio Alcorta<sup>1</sup>, Maria Paz Espinosa<sup>1</sup>, Cristina Pizarro-Irizar<sup>1,2</sup>

<sup>1</sup>Department of Economics, University of the Basque Country <sup>2</sup>Basque Centre for Climate Change



**Renewable Energy and Job Creation: An Automation Risk Assessment**

*Author & Presenter:* Cian Mulligan, King Abdullah Petroleum Studies and Research Center (KAPSARC)

**Performance of Power Generation in the pre-&-post-COVID-19 Oman: A Dynamic Productivity and Efficiency Analysis**

*Presenter:* Reza Fathollahzadeh Aghdam, Sultan Qaboos University

*Authors:* Reza Fathollahzadeh Aghdam<sup>1</sup>, Sami Al Kharusi<sup>1</sup>, Nisar Ahmad<sup>1</sup>, Adham Al Said<sup>1</sup>, Bahareh Berenjforoush Azar<sup>2</sup>  
<sup>1</sup> Sultan Qaboos University, <sup>2</sup>University of Technology Sydney

**Financial Sector Development and Energy Poverty: Empirical Evidence from Developing Countries**

*Author & Presenter:* Muhammad Khan, IQRA University, Islamabad

**Moderator: TBA**

**Concurrent Session 4D: Role of Hydrogen in Decarbonization**

**Economic Analysis of Sustainable Hydrogen Production from Thermolysis and Electrolysis Relying on Nuclear Power**

*Presenter:* Ahmed Eslam Salman, Egyptian Atomic Energy Authority

*Authors:* Ahmed Eslam Salman<sup>1</sup>, Ashraf Aboshosha<sup>1</sup>  
<sup>1</sup> Radiation Eng. Department, NCRRT, Egyptian Atomic Energy Authority

**Hydrogen Economy Development in South Korea: Lessons to Learn**

*Presenter:* Jinsok Sung, Hankuk University of Foreign Studies

*Authors:* Jinsok Sung<sup>1</sup>, Zlata Sergeeva<sup>2</sup>  
<sup>1</sup> Hankuk University of Foreign Studies, <sup>2</sup> King Abdullah Petroleum Studies and Research Center (KAPSARC)

**Decarbonizing The German Power Sector – A Case Study on the Integration of Power-to-Hydrogen and H2-Imports**

*Presenter:* Marco Sebastian Breder, University Duisburg-Essen

*Authors:* Marco Sebastian Breder<sup>1</sup>, Julian Radek<sup>1</sup>, Christoph Weber<sup>1</sup>  
<sup>1</sup> University Duisburg-Essen

**Potential Role of Hydrogen Storage Technology in the UK Electricity Grid**

*Author & Presenter:* Saheed L Bello, Loughborough University

**Support mechanisms for accelerating decarbonization using hydrogen**

*Presenter:* Alexander Hoogsteyn, KU Leuven & Energyville

*Authors:* Alexander Hoogsteyn<sup>1</sup>, Kenneth Bruninx<sup>2</sup>, Jelle Meus<sup>1</sup>, Erik Delarue<sup>1</sup>  
<sup>1</sup> KU Leuven & Energyville, <sup>2</sup> TU Delft

**Moderator: TBA**

**Concurrent Session 4E: Carbon Pricing and Emissions Trading**

**Baseline greenhouse gas forecasts for Saudi Arabia using the Structural Time Series Model and Autometrics**

*Presenter:* Lester C Hunt, University of Portsmouth

*Authors:* Anwar Gassim<sup>1</sup>, Lester C Hunt<sup>1,2</sup>, Jeyhun Mikayilov<sup>1</sup>  
<sup>1</sup> King Abdullah Petroleum Studies and Research Center (KAPSARC), <sup>2</sup>University of Portsmouth

**Emission Trading or Lower Energy Prices? Re-Assessing the Impact of the Greenhouse Gas Initiative on the Energy Transition**

*Presenter:* Daniel Gatscher, Technical University of Munich

*Authors:* Daniel Gatscher<sup>1</sup>, Svetlana A. Ikonnikova<sup>2</sup>  
<sup>1</sup>Center for Energy Markets, Technical University of Munich, <sup>2</sup>Technical University of Munich

**The Network Effects of Carbon Pricing**

*Author & Presenter:* Emanuele Campiglio, University of Bologna

**Determinants of Carbon Dioxide Emissions: Role of Renewable Energy, Governance, Urbanization and Economic Growth**

*Presenter:* Jacob Otim, Kyambogo University

*Authors:* Jacob Otim<sup>1</sup>, Susan Watundu<sup>2</sup>, John Mutenyo<sup>3</sup>, Vincent Bagire<sup>2</sup>

<sup>1</sup>Department of Economics, Kyambogo University, <sup>2</sup>Department of Management Science, Makerere University Business School, <sup>3</sup>College of Business and Management Sciences, Makerere University

**The Role of Renewable Energy and TFP In Reducing CO2 Emissions in RECAI Countries. Fresh Insights from a New Theoretical Framework Coupled with Advanced Panel Methods**

*Presenter:* Fakhri J. Hasanov, King Abdullah Petroleum Studies and Research Center (KAPSARC)

*Authors:* Fakhri Hasanov<sup>1</sup>, Shahriyar Mukhtarov<sup>2</sup>, Elchin Suleymanov<sup>3</sup>, Sa'd Shannak<sup>4</sup>

<sup>1</sup> King Abdullah Petroleum Studies and Research Center (KAPSARC), <sup>2</sup>Vistula University, <sup>3</sup>Baku Engineering University, <sup>4</sup>Qatar Environment and Energy Research Institute

**Moderator: TBA**

**Concurrent Session 4F: Extractive Risks and Geopolitics**

**Impact of the Global Energy Transition on Hydrocarbon Economies**

*Author & Presenter:* Osamah Alsayegh, Kuwait Institute for Scientific Research

### Technical Constraints, Cost Risks and Failure Modes of the Energy Transition (Implications for Energy Security and Guidance for Policymakers)

Presenter: Lucian Pugliaresi, Energy Policy Research Foundation Inc. (EPRINC)

Authors: Lucian Pugliaresi<sup>1</sup>, Batt Odgerel<sup>1</sup>

<sup>1</sup> Energy Policy Research Foundation Inc. (EPRINC)

### Extractives: Challenges and Opportunities for the South in the Energy Transition

Presenter: Ricardo Raineri, Pontificia Universidad Catolica de Chile and Associated Universities, Inc.

Authors: Ricardo Raineri<sup>1</sup>, Adam Cohen<sup>2</sup>

<sup>1</sup> Pontificia Universidad Catolica de Chile and Associated Universities, Inc. and Associated Universities Inc.

<sup>2</sup> Associated Universities Inc.

### Investment in Fossil Fuels and Environmental Degradation in Nigeria: Policy Options to Mitigate the Potential Trade-Off

Author & Presenter: Ladi Raulatu Balakeffi, Central Bank of Nigeria

### Preventive Approach in Optimizing Electricity Market Structure using Market Power Mitigation and Forward Contract

Author & Presenter: Dzikri Hakam, School of Business and Management, Institut Teknologi Bandung

**Moderator: TBA**

### Concurrent Session 4G: Minerals, Materials and Energy Transitions

#### Lithium & Battery Metals Refining – New Opportunities in the Refining Industry

Author & Presenter: Lukasz Bednarski, IHS Markit

#### Development of All-Solid-State Lithium Metal Batteries for High Temperature Applications

Presenter: Firoz Khan, King Fahd University of Petroleum and Minerals (KFUPM)

Authors: Firoz Khan<sup>1</sup>, Hasan Jamal<sup>2</sup>, M. Abdul Majid<sup>3</sup>, Jae Hyun Kim<sup>2</sup>

<sup>1</sup> Interdisciplinary Research Center in Renewable Energy and Power Systems, King Fahd University of Petroleum and Minerals (KFUPM), <sup>2</sup> Division of Energy Technology, Daegu Gyeonbuk Institute of Science and Technology, <sup>3</sup> Mathematical Sciences Department, Dammam Community College and Interdisciplinary Research Center in Renewable Energy and Power Systems, King Fahd University of Petroleum and Minerals (KFUPM)

### The dynamic fluctuations in oil prices: The role of precious metals, oil production, and uncertainty under the NARDL framework

Presenter: Amjad M Kisswani, University of Nevada-Las Vegas

Authors: Amjad M Kisswani<sup>1</sup>, Khalid M Kisswani<sup>2</sup>, Mohamed M. Moustafa<sup>3</sup>

<sup>1</sup> Department of Workforce Development and Organizational Leadership, University of Nevada-Las Vegas, <sup>2</sup> Department of Economics and Finance, Gulf University for Science and Technology, <sup>3</sup> Department of Business Administration, Gulf University for Science and Technology

### Material Transition in an Energy Transition World

Presenter: Samuel Liew, Saudi Aramco

Authors: Samuel Liew<sup>1</sup>, Mohammed A Abusham<sup>1</sup>

<sup>1</sup> Saudi Aramco

### Critical minerals in the 8th Energy Demand and Supply Outlook: A post hoc analysis

Presenter: Yu Hsuan Wu, Asia Pacific Energy Research Centre (APERC)

Authors: Mathew Horne<sup>1</sup>, Yu Hsuan Wu<sup>1</sup>

<sup>1</sup> Asia Pacific Energy Research Centre (APERC)

**Moderator: TBA**

**Day 4: Tuesday, February 7, 2023**  
**Concurrent Session Block 5**  
**11:00 – 12:30**

### Concurrent Session 5A: Plugging the Energy Transition

#### Choosing To Diet: The Impact and Cost-Effectiveness of China's Vehicle Ownership Restrictions

Presenter: Rubal Dua, King Abdullah Petroleum Studies and Research Center (KAPSARC)

Authors: Antung Liu<sup>1</sup>, Rubal Dua<sup>2</sup>, Wei-min Hu<sup>3</sup>, Arthur Lin Ku<sup>1</sup>  
<sup>1</sup> Indiana University O'Neill School of Public and Environmental Affairs, <sup>2</sup> King Abdullah Petroleum Studies and Research Center (KAPSARC), <sup>3</sup> National Chengchi University

#### Evaluation of the impact of public policy measures on California's fuel cell electric vehicle market development

Author & Presenter: Pawel Brusilo, Wroclaw University of Economic and Business / University of California San Diego

#### Electric Vehicles and Electricity Consumption: Honey, Did I Plug in The Car?

Presenter: Jacobus A Nel, University of Pretoria

Authors: Jacobus A Nel<sup>1</sup>, Roula Inglesi-Lotz<sup>1</sup>

<sup>1</sup> University of Pretoria

#### What do people think about the wireless roadway charging systems for electric vehicles?

Presenter: Mingyue Selena Sheng, The University of Auckland

Authors: Mira Simunic<sup>1</sup>, Mingyue Selena Sheng<sup>1</sup>, Le Wen<sup>1</sup>

<sup>1</sup> The University of Auckland

**Equitable Ridepooling with Community-Driven Stops Using a Fleet of Autonomous Electric Vehicles**

*Presenter:* Rami S Ariss, Carnegie Mellon University  
*Authors:* Rami Ariss<sup>1</sup>, Jeremy Michalek<sup>1</sup>, Matteo Pozzi<sup>1</sup>  
<sup>1</sup> Carnegie Mellon University

**Moderator:** TBA

**Concurrent Session 5B: Decarbonizing Transport**

**Analyzing The Impact of Online Freight Platform Using Data from Chinese Cities**

*Presenter:* Xun Xu, King Abdullah Petroleum Studies and Research Center (KAPSARC)  
*Authors:* Xun Xu<sup>1</sup>, Tianduo Peng<sup>2</sup>  
<sup>1</sup> King Abdullah Petroleum Studies and Research Center (KAPSARC), <sup>2</sup> Institute of Climate Change and Sustainable Development, Tsinghua University

**Transport Infrastructure and Manufacturing Sector: An Energy perspective from India**

*Author & Presenter:* Mohammed Shameem, University of Hyderabad

**Decarbonizing Medium and Heavy-Duty On-Road Vehicles**

*Presenter:* Matteo Muratori, National Renewable Energy Laboratory (NREL)  
*Authors:* Matteo Muratori<sup>1</sup>, Catherine Leda<sup>1</sup>  
<sup>1</sup> National Renewable Energy Laboratory (NREL)

**Impact of sustainable energy transition in transportation sector on the national oil companies of emerging economies - A case study of ONGC of India**

*Presenter:* Athreya Cheppela, University of Groningen  
*Authors:* Athreya Cheppela<sup>1</sup>, M. Mulder<sup>1</sup>  
<sup>1</sup> University of Groningen

**Impact of non-tailpipe emissions on local air pollution: Evidence from New Zealand**

*Presenter:* Le Wen, The University of Auckland  
*Authors:* Mingyue Selen Sheng<sup>1</sup>, Le Wen<sup>1</sup>, Quan Truong<sup>2</sup>, Perry Davy<sup>3</sup>  
<sup>1</sup>Energy Centre, The University of Auckland, <sup>2</sup>Department of Property, The University of Auckland, <sup>3</sup> GNS Science

**Moderator:** TBA

**Concurrent Session 5C: Energy Transition on land and in air**

**Unveiling the factors influencing energy consumption in the aviation Sector of Saudi Arabia (2010-2019)**

*Presenter:* Andres F Guzman, King Abdullah Petroleum Studies and Research Center (KAPSARC)  
*Authors:* Andres F Guzman<sup>1</sup>, Abdulrahman Alwosheel<sup>1</sup>  
<sup>1</sup> King Abdullah Petroleum Studies and Research Center (KAPSARC)

**Techno-Economic Analysis: Charging Airport's Electrical Baggage Tractors with Hydrogen Fuel Cell**

*Presenter:* Sadeq A Alfatesh, King Saud University  
*Authors:* Sadeq A Alfatesh<sup>1</sup>, Musab Fahad Alsalamah<sup>1</sup>, Mansour Alhoshan<sup>1</sup>, Abdulaziz Bentalib<sup>1</sup>  
<sup>1</sup> King Saud University

**Saudi Arabia's Aviation Sector Ambitions and Potential Pathways for Decarbonizing the Sector**

*Presenter:* Muhammad Akmal, Saudi Aramco  
*Authors:* David Omom<sup>1</sup>, Muhammad Akmal<sup>1</sup>  
<sup>1</sup> Saudi Aramco

**Electric Vehicles, Tax Policy and Business Fleet in Australia: The Total Cost of Ownership Approach**

*Presenter:* Alexandr Akimov, Griffith University  
*Authors:* Alexandr Akimov<sup>1</sup>, Anna Mortimore<sup>1</sup>  
<sup>1</sup> Griffith University

**Impact of E-Mobility on Distribution Systems: The Role of Smart Tariffs for Vehicle Grid Integration**

*Presenter:* Pierluigi Vicini, CESI FZE  
*Authors:* Marco Cabano<sup>1</sup>, Bruno Cova<sup>1</sup>, David Dresco<sup>1</sup>, Luca Migliorini<sup>1</sup>, Pierluigi Vicini<sup>2</sup>  
<sup>1</sup> CESI S.p.A., <sup>2</sup> CESI FZE

**Moderator:** TBA

**Concurrent Session 5D: Vehicle Fleet Electrification and the Power Sector**

**Modelling the Determinants of Electrical Vehicles Adoption: A Saudi Perspective**

*Presenter:* Ryan Alyamani, King Abdullah Petroleum Studies and Research Center (KAPSARC)  
*Authors:* Ryan Alyamani<sup>1</sup>, Dimitrios Pappelis<sup>2</sup>, Maria Kamargianni<sup>2</sup>  
<sup>1</sup> King Abdullah Petroleum Studies and Research Center (KAPSARC), <sup>2</sup> University College London

**Investigating the Economic Granularity Gap in the Modelling of Battery Electric Vehicles: An Analysis from a Power-System and a User-Centric Perspective**

*Presenter:* Fabia Miorelli, German Aerospace Center (DLR), Institute of Networked Energy Systems  
*Authors:* Fabia Miorelli<sup>1</sup>, Hans Christian Gils<sup>1</sup>, Patrick Jochem<sup>1</sup>  
<sup>1</sup> German Aerospace Center (DLR), Institute of Networked Energy Systems

**Comparative Assessment of LCA for PEM Fuel Cell Bus with Diesel and Electric Bus: A Case Study in Saudi Arabia**

*Presenter:* Chengcheng Zhao, King Abdullah University of Science and Technology (KAUST)  
*Authors:* Chengcheng Zhao<sup>1</sup>, Leiliang Zheng Kobayashi<sup>1</sup>, Awal Alqaity<sup>2</sup>, S. Mani Sarathy<sup>1</sup>  
<sup>1</sup> King Abdullah University of Science and Technology (KAUST)  
<sup>2</sup> King Fahd University of Petroleum and Minerals (KFUPM)

**Investigating Mass Transit Effects on Energy Demand & Emissions in Kuwait**

*Presenter:* Norah H Alsafi, Kuwait Institute for Scientific Research

*Authors:* Norah H Alsafi<sup>1</sup>, Rawan AlKandari<sup>1</sup>, Yousef M. Al-Abdullah<sup>1</sup>, Sreekanth K. J. <sup>1</sup>, Fotouh Al-Ragom<sup>1</sup>  
<sup>1</sup> Kuwait Institute for Scientific Research

### The Consequence of Electrification of Road Vehicles Faster than the Transition in the Power Sector

*Author & Presenter:* Mohd Rahman, Saudi Aramco

**Moderator: TBA**

### Concurrent Session 5E: Tactical Innovations to Reduce Emissions

#### Aero-Thermal Performance Investigation of Refrigerated Truck Equipped with Phase Change Materials Encapsulated in Rectangular Rods

*Presenter:* Mustapha Mahdaoui, Abdelmalek Essaadi University

*Authors:* M.A. Ben Taher<sup>1</sup>, M. Mahdaoui<sup>1</sup>, T. Kousksou<sup>2</sup>, M. Ahachad<sup>1</sup>

<sup>1</sup> Abdelmalek Essaadi University, <sup>2</sup> Université de Pau et des Pays de l'Adour (UPPA)

#### Functionalized Fullerenes Cages (C59m) As Promising Materials for Capturing Environmental Pollutions CO<sub>2</sub>, NO<sub>2</sub> and SO<sub>2</sub> Gases

*Presenter:* Iman Aldosari, Jazan University

*Authors:* Iman Aldosari<sup>1</sup>, Ahlam El Barbary<sup>1</sup>

<sup>1</sup> Physics Department, Jazan University

#### Optimal Design and Scheduling Of A Grid-Connected PV/CHP Hybrid System With Incentive-Based Demand Response And Electric Vehicles: A Case Study of a Multi-Residential Complex Building

*Presenter:* Mohamed Elkadeem, Tanta University

*Authors:* Mohamed Elkadeem<sup>1</sup>, Mohamed Abido<sup>2</sup>, Fahad Al Sulaiman<sup>2</sup>

<sup>1</sup>Tanta University, <sup>2</sup> Interdisciplinary Research Center in Renewable Energy and Power Systems, King Fahd University of Petroleum and Minerals (KFUPM),

#### Improved Coordinated Protection Scheme for DFIG Based Wind Turbines

*Presenter:* Arshad Arshad, Glasgow Caledonian University

*Authors:* Arshad Arshad<sup>1</sup>, Wahab Ali Shah<sup>2</sup>, Sali Issa<sup>3</sup>

<sup>1</sup>School of Computing, Engineering and Built Environment, Glasgow Caledonian University, <sup>2</sup> Namal University, <sup>3</sup> Department of Physics, Mechanical and Electrical Engineering, Hubei University of Education

#### Optimal Planning and Operation of Isolated Micro-Grid for Sustainable Development

*Presenter:* Mohammed M Mishref, National Graduate Institute for Policy Studies (GRIPS)

*Authors:* Mohammed Mishref<sup>1</sup>, Makoto Tanaka<sup>1</sup>

<sup>1</sup>Graduate School of Policy Studies, National Graduate Institute for Policy Studies (GRIPS)

**Moderator: TBA**

### Concurrent Session 5F: Geospatial Analysis of Energy

#### Assessing the development of KSA as a sustainable logistics hub – A geospatial multi-criteria analysis

*Presenter:* Nourah Alhosain, King Abdullah Petroleum Studies and Research Center (KAPSARC)

*Authors:* Nourah Alhosain<sup>1</sup>, Lama Yaseen<sup>1</sup>, Nora Nezamuddin<sup>1</sup>

<sup>1</sup> King Abdullah Petroleum Studies and Research Center (KAPSARC)

#### Geospatial agent-based modelling of household long-term energy transition in the MEA region using high-resolution gridded data and the MUSE-RASA model.

*Presenter:* Diego Moya, Imperial College London and Technical University of Ambato

*Authors:* Diego Moya<sup>1</sup>, Sara Giarola<sup>2</sup>, Adam Hawkes<sup>3</sup>

<sup>1</sup> Imperial College London and Technical University of Ambato, <sup>2</sup> Imperial College London and Polytechnic University of Milan, <sup>3</sup> Imperial College London

#### Energy Consumption, Urbanization, Economic Growth and Carbon dioxide Emissions: Evidence from Middle East and North Africa

*Presenter:* Geoffrey. S. Mutumba, Kyambogo University

*Authors:* Geoffrey. S. Mutumba<sup>1</sup>, Jacob Otim<sup>1</sup>

<sup>1</sup> Economics, Faculty of Science, Kyambogo University

#### Achieving sustainable freight movement in Saudi Arabia via transport policy

*Author & Presenter:* Nora Nezamuddin, King Abdullah Petroleum Studies and Research Center (KAPSARC)

**Moderator: TBA**

### Concurrent Session 5G: Sustainability, Resiliency and Smart Cities

#### Smart Cities Indicators, Human-Centric Development and the Impact on Energy Sustainability

*Presenter:* Lama Yaseen, King Abdullah Petroleum Studies and Research Center (KAPSARC)

*Authors:* Lama Yaseen<sup>1</sup>, Robert Marinescu-Muster<sup>2</sup>, Nourah Alhosain<sup>1</sup>

<sup>1</sup> King Abdullah Petroleum Studies and Research Center (KAPSARC), <sup>2</sup> University of Twente

#### Nuclear Power Reactors based Hydrogen Production for the Sustainable Development of Smart Cities

*Author and Presenter:* Ashraf Aboshosha, Radiation Eng. Department, NCRRT, Egyptian Atomic Energy Authority

#### Why Invest in Hydrogen? A Sustainable Path Forward

*Presenter:* John Ballantine, Brandeis University

*Authors:* John Ballantine<sup>1</sup>, Mohammed AlMehdar<sup>1</sup>

<sup>1</sup> Brandeis University

#### Heating in German City Quarters: How does the Regulatory Framework Influence Investments in Renewable Technologies?

**Presenter:** Frieder Borggreffe, RWTH Aachen University  
**Authors:** Frieder Borggreffe<sup>1</sup>, Marius Tillmanns<sup>1</sup>, Max Hoffmann<sup>2</sup>, Chuen-Fung Tang<sup>1</sup>, Lars Nolting<sup>3</sup>, Aaron Praktijn<sup>4</sup>

<sup>1</sup>Chair For Energy System Economics, RWTH Aachen University, <sup>2</sup> RWTH Aachen University, <sup>3</sup> Chair For Energy System Economics, RWTH Aachen University and Tennen GmbH, <sup>4</sup> E. ON Energy Research Center, RWTH Aachen University

**Solar Energy Access in Rural Off-Grid Areas of Bangladesh: Determinants and Impacts**

**Presenter:** Mainul I Chowdhury, North South University  
**Authors:** Sakib Bin Amin<sup>1</sup>, Mainul Islam Chowdhury<sup>1</sup>, S.M. Asif Ehsan<sup>1</sup>, S.M. Zahid Iqbal<sup>1</sup>

<sup>1</sup>North South University

**Moderator:** TBA

**Day 4: Tuesday, February 7, 2023**  
**Poster Session 3A**  
**10:30 – 11:00**

**Renewables Opportunities And Challenges**

**Presenter:** Sara Alalqam, Baker Hughes  
**Authors:** Sara Alalqam<sup>1</sup>, Ayidh Al Swidan  
<sup>1</sup>Baker Hughes

**Ground Source Ventilation and Solar PV towards Zero Carbon Houses in Riyadh**

**Author & Presenter:** Osamah Alanazi, King Saud University

**Linear and Factor Oil Price Forecasts**

**Presenter:** Abdullah S Al Shammre, King Faisal University  
**Authors:** Abdullah S Al Shammre<sup>1</sup>, Benaissa Chidmi<sup>2</sup>  
<sup>1</sup> King Faisal University, <sup>2</sup> Texas Tech University

**Techno-economic analysis of solar-assisted Integrated Energy Optimization System for Steel Making Plants Located in Ras Al-khair Industrial City**

**Presenter:** Faisal Bader Almutairi, Saudi Aramco  
**Authors:** Faisal Bader Almutairi<sup>1</sup>, Ali Abdulaziz Uglu<sup>1</sup>  
<sup>1</sup> Saudi Aramco

**Day 4: Tuesday, February 7, 2023**  
**Poster Session 3B**  
**15:30 – 16:00**

**Synthesis and Fabrication of MoS<sub>2</sub> QDS Thin Films for Novel Optoelectronic Devices with Cost-Efficient Technique**

**Presenter:** Maymunah Alwehaibi, Princess Nourah bint Abdulrahman University  
**Authors:** Maymunah Alwehaibi<sup>1</sup>, Yasmeen Khoja<sup>1</sup>, Reem Alghamdi<sup>1</sup>, Fahdah Alsuhaibani<sup>1</sup>, Norah Alwadi<sup>1</sup>, Manar

Alshatwi<sup>1</sup>

<sup>1</sup> Princess Nourah bint Abdulrahman University

**Energy Recovery and Cost Analysis for Conventional Vehicle and Hybrid Electric Vehicles**

**Presenter:** Abdulrhman Alghamdi, Al Baha University  
**Authors:** Abdulrhman Alghamdi<sup>1</sup>, Eid Mohamed<sup>1,2</sup>

<sup>1</sup>Faculty of Engineering, Mechanical Engineering Department, Al Baha University, <sup>2</sup> Department of Automotive Engineering, Helwan University

**Is Learning Curve on Solar Photovoltaic Installation Affected by Renewable Policy and Regional Characteristics?**

**Author & Presenter:** Saiful Arefeen, Graduate School of Economics, Ritsumeikan University

**Virtual Power Plant: A Smart Way of Managing Solar Systems**

**Presenter:** Muhammad Ali, University of Glasgow  
**Authors:** Zahid Ullah<sup>1</sup>, Arshad Arshad<sup>2</sup>, Muhammad Ali<sup>3</sup>  
<sup>1</sup> Institute for Globally Distributed Open Research and Education, <sup>2</sup> Glasgow Caledonian University, <sup>3</sup> University of Glasgow

**Contribution to improving the energy performance of a hotel in Tangier - Morocco**

**Presenter:** Mohammed Ahachad, Abdelmalek Essaadi University  
**Authors:** Mohammed Ahachad<sup>1</sup>, F Akzoun<sup>1</sup>, Z. Romani<sup>2</sup>, M. Mahadaoui<sup>1</sup>  
<sup>1</sup> Abdelmalek Essaadi University, <sup>2</sup> National School of Architecture

**Day 4: Tuesday, February 7, 2023**  
**Concurrent Session Block 6**  
**16:00 – 17:30**

**Concurrent Session 6A: Comparing the Economics of Energy Efficiency and Renewables**

**Demand Response Program Design: Environmental and Economic Perspectives**

**Presenter:** Mohammed Al-Sadig Al-Haj, Qassim University  
**Authors:** Mohammed Al-Sadig Al-Haj<sup>1</sup>, Azzam Hamad Alhumaidi<sup>1</sup>, Abdulaziz Saleh Al Harbi<sup>1</sup>, Mohammed Khalid Althunayyan<sup>1</sup>  
<sup>1</sup> Qassim University

**A Bayesian Approach to Analyse the Nexus Between the Environmental and Financial Factors to Affect Energy Efficiency in the GCC Region**

**Author & Presenter:** Rozina Shaheen, Finance Department, College of Business, Effat University

**Determinants Of Energy Efficiency and Renewable Energy Investments in Slovenian SMEs?**

*Presenter:* Nevenka Hrovatin, University of Ljubljana

*Authors:* Nevenka Hrovatin<sup>1</sup>, Janez Dolšak<sup>1</sup>, Jelena Zoric<sup>1</sup>

<sup>1</sup> School of Economics and Business, University of Ljubljana

**Renewable energy and employment in Saudi Arabia: Assessment and Prospects**

*Author and Presenter:* Sylvain Cote, Saudi Aramco

**Impact Of PV Distributed Generation on Loop Distribution Network in Riyadh City**

*Author and Presenter:* Mohammed Alruwaili, King Saud University-SASO

**Moderator: TBA**

**Concurrent Session 6B: Impact of Policies on Social and Industrial Societies**

**Inter-Fuel Substitution in Industrial Sector of Saudi Arabia**

*Presenter:* Muhammad Javid, King Abdullah Petroleum Studies and Research Center (KAPSARC)

*Authors:* Muhammad Javid<sup>1</sup>, Fakhri Hasanov<sup>1</sup>, Abdulelah Darandary<sup>1</sup>

<sup>1</sup> King Abdullah Petroleum Studies and Research Center (KAPSARC)

**Financial and Energetic Investigation of Saudi District Cooling System**

*Author and Presenter:* Mohammad Saleh Alobaid, Department of Mechanical Engineering, Majmaah University

**Energy Subsidies Reform and Homebuyer Choices: Evidence from Saudi Arabia**

*Presenter:* Hussain Alshammasi, King Fahd University of Petroleum and Minerals (KFUPM)

*Authors:* Hussain Alshammasi<sup>1</sup>, Abdullah Almansur<sup>1</sup>

<sup>1</sup> King Fahd University of Petroleum and Minerals (KFUPM)

**An Analysis of Power Outages Induced Electricity Backup Choice in Pakistan**

*Presenter:* Faisal Jamil, National University of Sciences and Technology (NUST)

*Authors:* Faisal Jamil<sup>1</sup>, Tanweer ul Islam<sup>1</sup>

<sup>1</sup> School of Social Sciences and Humanities, National University of Sciences and Technology (NUST)

**Moderator: TBA**

**Concurrent Session 6C: The Role of Sustainability in Building Energy Efficiency**

**Improving Energy Performance in Residential Buildings in Saudi Arabia**

*Author & Presenter:* Mana M Alyami, Najran University

**Energy Efficiency Initiatives towards Sustainability on University Campuses in Saudi Arabia**

*Presenter:* Saleh Albadaily, Imam Mohammad Ibn Saud Islamic University

*Authors:* Saleh Albadaily<sup>1</sup>, Abdullah Alhaqbani<sup>1</sup>, Walied Alfraidi<sup>1</sup>

<sup>1</sup> Department of Electrical Engineering, College of Engineering, Imam Mohammad Ibn Saud Islamic University

**The Role of Residential Energy Efficiency in Reducing Energy Demand and Reaching Saudi Arabia's 2060 Net Zero Target**

*Author & Presenter:* Mohammad H Aldubyan, King Abdullah Petroleum Studies and Research Center (KAPSARC)

**Regulations and Contract Design in Multi-Agent District Heating and Cooling Systems**

*Presenter:* Maximilian Hoffmann, RWTH Aachen University

*Authors:* Maximilian Hoffmann<sup>1</sup>, Frieder Borggrefe<sup>1</sup>, Aaron Praktijnjo<sup>1</sup>

<sup>1</sup> Chair For Energy System Economics, RWTH Aachen University,

**Impact of Energy Labels on Selecting Houses of Consumers: Validation by Logistic Regression Analysis**

*Author & Presenter:* Mieko Fujisawa, Kanazawa University

**Moderator: TBA**

**Concurrent Session 6D: Risks and Rewards from Downstream Investments**

**The Rise of the Refinery of the Future and Sustainable Fuels**

*Author & Presenter:* Vijay Mukherji, Saudi Aramco

**Cost-Benefit Analysis for Petrochemical Projects: The Case for Saudi Arabia**

*Presenter:* Dongmei Chen, King Abdullah Petroleum Studies and Research Center (KAPSARC)

*Authors:* Dongmei Chen<sup>1</sup>, Philipp Galkin<sup>1</sup>, Colin Ward<sup>1</sup>

<sup>1</sup> King Abdullah Petroleum Studies and Research Center (KAPSARC)

**Sustainable Energy Efficiency improvements through methodology of prioritizing selections**

*Presenter:* Abdulrahman Hazazi, Saudi Aramco

*Authors:* Abdulrahman Hazazi<sup>1</sup>, Zeeshan Farooq<sup>1</sup>

<sup>1</sup> Saudi Aramco

**Virtual Gas Pipeline as Prudent Solution in Gas Infrastructure Investment in Saudi Arabia**

*Author & Presenter:* Dicky Suriakusumah, Saudi Aramco

**Financial Liabilities and Environmental Implications of Unplugged Wells for Gulf of Mexico and Coastal Waters**

*Presenter:* Greg B. Upton, Louisiana State University  
*Authors:* Mark Agerton<sup>1</sup>, Siddhartha Narra<sup>2</sup>, Brian Snyder<sup>3</sup>, Gregory B. Upton<sup>2</sup>

<sup>1</sup>Department of Agricultural and Resource Economics, University of California Davis, <sup>2</sup>Center for Energy Studies, Louisiana State University, <sup>3</sup>Department of Environmental Studies, Louisiana State University

**Moderator: TBA**

**Concurrent Session 6E: Petrochemicals and the Energy Transition**

**Plastics To Oil: Saudi and Global Perspectives**

*Presenter:* Evar Umeozor, King Abdullah Petroleum Studies and Research Center (KAPSARC)

*Authors:* Julio Arboleda<sup>1</sup>, Evar Umeozor<sup>1</sup>, Jitendra Roychoudhury<sup>1</sup>

<sup>1</sup> King Abdullah Petroleum Studies and Research Center (KAPSARC)

**Unlocking Industrial Demand-Side Flexibility for The Power System Through Local Green Hydrogen Production: A Case Study In Germany**

*Presenter:* Marius Tillmanns, RWTH Aachen University

*Authors:* Marius Tillmanns<sup>1</sup>, Jan Priesmann<sup>1</sup>, Aaron Praktijnjo<sup>1</sup>

<sup>1</sup> Institute for Future Energy Consumer Needs and Behavior, Chair for Energy Systems Economics, RWTH Aachen University

**The Role of the Petrochemical Sector in Economic Diversification in Saudi Arabia**

*Presenter:* Heyran Aliyeva, King Abdullah Petroleum Studies and Research Center (KAPSARC)

*Authors:* Fakhri Hasanov<sup>1</sup>, Muhammad Javid<sup>1</sup>, Heyran Aliyeva<sup>1</sup>

<sup>1</sup> King Abdullah Petroleum Studies and Research Center (KAPSARC)

**Models of the Demand for petrochemical feedstocks worldwide**

*Presenter:* Raed Al Mestneer, King Abdullah Petroleum Studies and Research Center (KAPSARC)

*Authors:* Raed Al Mestneer<sup>1</sup>, Carlo Andrea Bollino<sup>1</sup>

<sup>1</sup> King Abdullah Petroleum Studies and Research Center (KAPSARC)

**Attracting investments to the Petroleum industry by using Distributed Ledger Technology**

*Presenter:* Khaled Omar Hantosh, University of Dundee

*Authors:* Khaled Omar Hantosh<sup>1</sup>, Sayed Mehdi Alizadeh<sup>2</sup>, Mohammed Saleh Al Ali<sup>3</sup>

<sup>1</sup> Centre for Energy, Petroleum & Mineral Law and Policy, University of Dundee, <sup>2</sup>Australian University of Kuwait, <sup>3</sup>Kuwait Institute for Scientific Research

**Moderator: TBA**

**Concurrent Session 6F: Managing Volatility Through Technical Innovations and Price Signals**

**The Evolution of Electricity Prices and its Impacts on Consumption in Saudi Arabia**

*Presenter:* Abeer Alghamdi, King Abdullah Petroleum Studies and Research Center (KAPSARC)

*Authors:* Abeer Alghamdi<sup>1</sup>, Jeyhun Mikayilov<sup>1</sup>

<sup>1</sup> King Abdullah Petroleum Studies and Research Center (KAPSARC)

**Energy Storage Economics and Future Market Potentials in Saudi Arabia**

*Author & Presenter:* Khaled A Alusaimi, Saudi Aramco

**Techno-Economic Analysis of Green Hydrogen Storage Systems Based on Photovoltaic Energy to Guarantee Electricity Feeding in Off-Grid Environment - Case Study**

*Presenter:* Younes Faydi, Moroccan Agency for Sustainable Energy (MASEN)

*Authors:* Younes Faydi<sup>1</sup>, Hichame Laabassi<sup>1</sup>, Hicham Bouzekri<sup>1</sup>

<sup>1</sup> Moroccan Agency for Sustainable Energy (MASEN)

**On The Role of Residential Battery Storage and Photovoltaic Systems in Shaping Behavioural Changes and General Welfare**

*Author & Presenter:* Liliana Nowakowska, Imperial College Business School

**Forecasting the Rate of Cost Reductions in Blue and Green Hydrogen**

*Author & Presenter:* Anders Norlen, Saudi Aramco

**Moderator: TBA**

**Concurrent Session 6G: Pathways for Low-Carbon Energy Transition**

**A Panel Var Analysis Of Oil Supply And Demand Shocks And Macroeconomic Performance: The Case Of Gulf Cooperation Council Countries**

*Presenter:* Youssef Saidi, Gulf Monetary Council

*Authors:* Youssef Saidi<sup>1</sup>, Atef Saleh Alrashidi<sup>1</sup>

<sup>1</sup> Gulf Monetary Council

**Energy Efficiency for Sustainable Development In Nigeria**

*Presenter:* Humphrey Oruwari, Nigerian National Petroleum Corporation

*Authors:* Humphrey Oruwari<sup>1</sup>, Lucky Itsekor<sup>2</sup>

<sup>1</sup>NNPC Upstream Investment Management Services, Nigerian National Petroleum Corporation, <sup>2</sup>Valourteyn Nigeria Limited

**Non-linear effects of environmental policies on low-carbon technical change: The case of the French buildings sector**

*Author & Presenter:* Valentin Laprie, Université Paris Nanterre

**Is Institutional Quality the Missing Piece Between Economic Growth and Co2 Emissions?**



*Presenter:* Alanda Venter, Department of Economics,  
University of Pretoria

*Authors:* Alanda Venter<sup>1</sup>, Roula Inglesi-Lotz<sup>1</sup>

<sup>1</sup> Department of Economics, University of Pretoria

**Advancing Environmental Stewardship through Circular Economy in Oil & Gas Facility**

*Author & Presenter:* Mubarak Al-Rashid, Saudi Aramco

**Moderator: TBA**

**Day 5: Wednesday, February 8, 2023**

**Concurrent Session Block 7**

**11:00 – 12:30**

**Concurrent Session 7A: Trading Energy on the Path to Energy Transition**

**Energy transition and export diversification in oil-dependent countries: the role of structural factors**

*Presenter:* Fatih Karanfil, King Abdullah Petroleum Studies and Research Center (KAPSARC)

*Authors:* Fatih Karanfil<sup>1</sup>, Luc Désiré Omgba<sup>2</sup>

<sup>1</sup> King Abdullah Petroleum Studies and Research Center (KAPSARC), <sup>2</sup> University of Lorraine

**Asymmetric effects of energy dependence on interstate relations**

*Presenter:* Mehmet Soytaş, King Fahd University of Petroleum and Minerals (KFUPM)

*Authors:* Mehmet Soytaş<sup>1</sup>, Emre Hatipoglu<sup>2</sup>

<sup>1</sup> King Fahd University of Petroleum and Minerals (KFUPM)

<sup>2</sup> King Abdullah Petroleum Studies and Research Center (KAPSARC)

**The Role of the Circular Economy in Fostering Sustainable Economic Growth in the GCC**

*Presenter:* Jawaher Ali Binsuwadan, Princess Nourah Bint Abdulrahman University

*Authors:* Jawaher Ali Binsuwadan<sup>1</sup>, Ghadda Mohamed Yousif<sup>1</sup>, Hiyam Ahmed Abdulrahman<sup>1</sup>

<sup>1</sup> Department of Economics, Princess Nourah Bint Abdulrahman University

**Lighting the path: challenges and opportunities in MENA power sectors**

*Author & Presenter:* Jessica Obeid, Middle East Institute

**Linking electrical grids between Europe and the MENA region: potentials and opportunities**

*Presenter:* Menna Elsobki, RWTH Aachen University

*Authors:* Menna Elsobki<sup>1</sup>, Aaron Praktiknjo<sup>1</sup>

<sup>1</sup> Institute for Future Energy Consumer Needs and Behavior (FCN), Chair for Energy Systems Economics, RWTH Aachen University

**Moderator: TBA**

**Concurrent Session 7B: Volatility, Geopolitics and Energy Transition**

**Enhancing Decarbonization of Power Generation Through Electricity Trade: Eastern Mediterranean and the Middle East Region**

*Presenter:* Constantinos Taliotis, The Cyprus Institute

*Authors:* Constantinos Taliotis<sup>1</sup>, Marios Karmellos<sup>1</sup>, Nestor Fylaktos<sup>1</sup>, Theodoros Zachariadis<sup>1</sup>

<sup>1</sup>The Cyprus Institute

**The Eastern Mediterranean energy geopolitics: a "Cyprus-centric" analysis of the current and future challenges**

*Author & Presenter:* Savvas Papasavvas, Strategy International

**Cross-border power trade and renewable energy development in southeast Asia: economic and environmental implications**

*Author & Presenter:* Youngho Chang, Singapore University of Social Sciences

**The Korean REC Spot Market Price Forecasting**

*Presenter:* Jong-Bae Park, Konkuk University

*Authors:* Jong-Bae Park<sup>1</sup>, Sung-Hee Lee<sup>2</sup>, Woo-Nam Lee<sup>3</sup>, Manho Joung<sup>4</sup>, Da-Han Lee<sup>1</sup>

<sup>1</sup>Konkuk University, <sup>2</sup>BRFrame Inc., <sup>3</sup>Korea Electrotechnology Research Institute, <sup>4</sup>Sempra Energy

**Time-varying price elasticity of electricity demand**

*Presenter:* Jieyang Chong, University of Reading

*Authors:* Jieyang Chong<sup>1</sup>, Jacopo Torriti<sup>1</sup>

<sup>1</sup> University of Reading

**Moderator: TBA**

**Concurrent Session 7C: Powering Nuclear towards Energy Transition**

**Nuclear Energy in Emerging Markets, MENA and the impact of Energy Transition**

*Presenter:* Yagyavalk Bhatt, King Abdullah Petroleum Studies and Research Center (KAPSARC)

*Authors:* Yagyavalk Bhatt<sup>1</sup>, Jitendra Roychoudhury<sup>1</sup>

<sup>1</sup> King Abdullah Petroleum Studies and Research Center (KAPSARC)

**Fourth IV Generation Nuclear Reactors as Sustainable and Safe Energy Resources**

*Author & Presenter:* Moustafa Aziz Ibrahim, Atomic Energy Authority - Nuclear Safety Research Center

**Impact of replacement coal and fossil energy by nuclear energy on global greenhouse gases emission**

*Presenter:* Mohamed Abdelaziz, Egyptian Atomic Energy Authority

*Authors:* Mohamed Abdelaziz<sup>1</sup>, Hesham Elkhatib<sup>1</sup>, Abdelfatah

Abdelmaksoud<sup>1</sup>, Mohamed Esawy<sup>1</sup>

<sup>1</sup> Egyptian Atomic Energy Authority

### Peaceful uses of nuclear energy in less industrialized countries: challenges, opportunities, and acceptance

Presenter: Adam Cohen, Associated Universities, Inc.

Authors: Jeffrey Binder<sup>1</sup>, Adam Cohen<sup>2</sup>, Antonio Muller<sup>3</sup>, Ricardo Raineri<sup>4</sup>

<sup>1</sup>Associated Universities, Inc. and Boston Government Services, LLC., <sup>2</sup> Associated Universities, Inc., <sup>3</sup>AEM Capital, <sup>4</sup> Pontificia Universidad Católica de Chile, and Associated Universities, Inc.

### Nuclear Bias in Energy Scenarios – A Review and Results from an in-depth Analysis of Long-Term Decarbonization Scenarios

Presenter: Björn Steigerwald, Workgroup for Economic - & Infrastructure Policy, Universität of Technology Berlin

Authors: Jens Weibezahn<sup>1</sup>, Björn Steigerwald<sup>2</sup>, Christian Breyer<sup>3</sup>, Christian von Hirschhausen<sup>2</sup>

<sup>1</sup>Copenhagen School of Energy Infrastructure and Universität of Technology Berlin, <sup>2</sup> Universität of Technology Berlin, <sup>3</sup>Lappeenranta University of Technology

**Moderator:** TBA

### Concurrent Session 7D: Role of Hydrogen in MENA's Energy Transition

#### Quest for energy diversification in MENA – opportunities and challenges for hydrogen economy

Presenter: Shahid Hasan, King Abdullah Petroleum Studies and Research Center (KAPSARC)

Authors: Shahid Hasan<sup>1</sup>, Rami Shabaneh<sup>1</sup>

<sup>1</sup> King Abdullah Petroleum Studies and Research Center (KAPSARC)

#### The Role of Civil Law in Environmental Protection for the Suez Canal Axis Development Project

Author & Presenter: Farouk Abdel Rahman, Egyptian Atomic Energy Authority

#### Emissions & Economic Implications of Low-Cost Blue Hydrogen Supply from the Gulf States

Presenter: Manal Shehabi, Oxford University

Authors: Manal Shehabi<sup>1</sup>, Frank Jotzo<sup>2</sup>

<sup>1</sup>St. Anthony's College, Oxford University, SHEER Research and Advisory, <sup>2</sup>Crawford School of Public Policy, Australian National University

#### Production potential and economic viability of green hydrogen in Algeria

Author & Presenter: Nadjib Drouiche, Agence Nationale de la Valorisation des Résultats de la Recherche et de Développement Technologique (ANVREDET)

### How the Arabian Gulf Could Become the World's Clean Hydrogen Hub

Presenter: Abdullah Alshangiti, Columbia University

Authors: Kaushik Deb<sup>1</sup>, Abdullah Alshangiti<sup>2</sup>

<sup>1</sup>Center on Global Energy Policy, Columbia University,

<sup>2</sup>Columbia University.

**Moderator:** TBA

### Concurrent Session 7E: Modelling the Dynamics of Electricity Markets

#### Improving the techno-economic pattern for distributed generation-based distribution networks via nature-inspired optimization algorithms

Presenter: Ahmed S. Hassan, Ministry of Electricity and Renewable Energy, Egypt

Authors: Ahmed Hassan<sup>1</sup>, Araby Sayed<sup>1</sup>, ElSaeed Othman<sup>2</sup>, Mohamed Ebrahim<sup>3</sup>

<sup>1</sup> Ministry of Electricity and Renewable Energy, Egypt, <sup>2</sup> Department of Electrical Engineering, Faculty of Engineering, Al Azhar University, <sup>3</sup> Department of Electrical Engineering, Benha University

#### Modeling, simulation and experimental validation of a membrane distillation unit solar part

Presenter: Khalifa Zhani, Bisha University

Authors: Haled Alserhan<sup>1</sup>, S Mejbri<sup>2</sup>, M.M. Alquraish<sup>1</sup>, K. Zhani<sup>1</sup>

<sup>1</sup>Department of Mechanical Engineering, College of Engineering, University of Bisha, <sup>2</sup>Laboratory of Electromechanical Systems, National Engineering School of Sfax

#### Dynamic electricity tariffs and willingness to engage on the residential side: quantifying the potential of energy intensive consumers in a real case scenario

Presenter: Faisal Alsallum, Center of Excellence for Complex Engineering Systems, King Abdulaziz City for Science and Technology (KACST)

Authors: Faisal Alsallum<sup>1</sup>, Carlos Batlle<sup>2</sup>, Tim Schittekatte<sup>2</sup>, Abdulelah Habib<sup>1</sup>

<sup>1</sup>Center of Excellence for Complex Engineering Systems, King Abdulaziz City for Science and Technology (KACST), <sup>2</sup>MIT Energy Initiative

#### Quantifying the Non-linear Impact of Extreme Temperatures on Power Generation Efficiency

Presenter: Jineon Moon, Center for Sustainable Development, Korea Advanced Institute of Science & Technology (KAIST)

Authors: Jineon Moon<sup>1</sup>, Jiyong Eom<sup>2</sup>

<sup>1</sup> Center for Sustainable Development, Korea Advanced Institute of Science & Technology (KAIST), <sup>2</sup> School of Business and Technology Management, Korea Advanced Institute of Science & Technology (KAIST)



### Short-Term System Marginal Price Forecasting Using 2-Stage Variable Selection Approach

*Presenter:* SangWoo Shim, Konkuk University

*Authors:* SangWoo Shim<sup>1</sup>, DaHan Lee<sup>1</sup>, JaeHyung Roh<sup>1</sup>, Jong-Bae Park<sup>1</sup>

<sup>1</sup> Konkuk University

**Moderator: TBA**

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### Concurrent Session 7F: Techno-Economic Analysis of Solar Installations

#### Can hybrid solar projects pave the way for CSP development?

*Author & Presenter:* Ahmed A Albalawi, King Abdullah Petroleum Studies and Research Center (KAPSARC)

#### Design of Solar Power System for Fish Farm

*Presenter:* Mutlaq Maktaf Albogame, Al Baha University

*Authors:* Mutlaq Maktaf Albogame<sup>1</sup>, Zuhair Ahmed Alqarni<sup>1</sup>  
<sup>1</sup>Al Baha University

#### Future R&D Prospects in DNI Forecasting for An Efficient CSP Integration in the Energy Mix

*Presenter:* Saad Benbrahim, Moroccan Agency for Sustainable Energy (MASEN)

*Authors:* Saad Benbrahim<sup>1</sup>, Ismail Belhaj<sup>1</sup>, Hicham Bouzekri<sup>1</sup>  
<sup>1</sup>Department of R&D and Industrial Integration, Moroccan Agency for Sustainable Energy (MASEN)

#### Performance Investigation of Two Types of Solar Chimney Used for Air Conditioning

*Presenter:* Faouzi Nasri, University of Bisha

*Authors:* Hamod Ghorn Ali Alshomrsni<sup>1</sup>, Faouzi Nasri<sup>1</sup>  
<sup>1</sup>Mechanical Engineering Department, College of Engineering, University of Bisha

#### Effective load carrying capacity ("ELCC") of solar photovoltaic ("PV") resources in a KSA context

*Presenter:* Amit Pinjani, London Economics International

*Authors:* A.J. Goulding<sup>1</sup>, Amit Pinjani<sup>1</sup>, Victor Chung<sup>1</sup>, Shashwat Nayak<sup>1</sup>

<sup>1</sup>London Economics International LLC

**Moderator: TBA**

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### Concurrent Session 7G: Just Governance towards Just Transition

#### Will Current Global Climate Governance Deliver?

*Author & Presenter:* Nadhmi M Alkhamis, CSM

#### Does Climate Change Affect Female Empowerment?

*Presenter:* Anna M Oosthuizen, University of Pretoria

*Authors:* Anna M Oosthuizen<sup>1</sup>, Roula Inglesi-Lotz<sup>1</sup>  
<sup>1</sup> University of Pretoria

#### Cifal Center Methodology in Leveraging the Awareness Towards Improving the Energy Sustainability

*Author & Presenter:* Aiman J Albarakati, Majmaah University

### Deploying National Gas Expansion Strategy and the Smart Towns Urbanization Nexus to Stimulate Sustainable Economic Development

*Presenter:* Oluwaseun T. Tubi, Centre for Petroleum, Energy Economics and Law, University of Ibadan and Nigerian Institute Of Social And Economic Research

*Authors:* Oluwaseun T. Tubi<sup>1</sup>, Adeola Adenikinju<sup>2</sup>

<sup>1</sup> Centre for Petroleum, Energy Economics and Law, University of Ibadan and Nigerian Institute Of Social And Economic Research, <sup>2</sup> University of Ibadan

### Dependence Between The Gcc Energy Equities And Select Global Energy Markets: Evidence From Wavelet Analysis

*Presenter:* Mohammed Alkathery, The Unified Platform in Saudi Arabia

*Authors:* Mohammed Alkathery<sup>1</sup>, Kausik Chaudhuri<sup>2</sup>, Muhammad Ali Nasir<sup>2</sup>

<sup>1</sup>The Unified National Platform in Saudi Arabia, <sup>2</sup>University of Leeds

**Moderator: TBA**

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### Concurrent Session 7H: Technology Case Studies in Energy Transition

#### Short-term energy forecasting system for a photovoltaic power plant installed in Southern Algeria: Oued Nechou

*Author & Presenter:* Reski Khelifi, Unité de Recherche Appliquée en Energies Renouvelables (URAER)

#### Efficiency of zinc oxide nanorods (ZnO NRs) in Real Produced Water Treatment

*Presenter:* Fatema Al Hajri, Oman Hydrogen Centre, German University Technology

*Authors:* Fatema Al Hajri<sup>1</sup>, Sausan Al Riyami<sup>1</sup>, Mohammed Al Abri<sup>2</sup>

<sup>1</sup> Oman Hydrogen Centre, German University Technology,

<sup>2</sup> Nanotechnology Research Center, Sultan Qaboos University

#### Formulate of Fault Ride Through (FRT) Criteria with Large-Scale Wind Integration to Maintain System Stability (System Operator Perspective)

*Presenter:* Mohamed Atia Hazzaa, Ministry of Electricity and Renewable Energy, Egypt

*Authors:* Mohamed Hazza<sup>1</sup>, Sayed El Banna<sup>2</sup>, Dalal Helmi<sup>1</sup>

<sup>1</sup>Egyptian Electricity Holding Company, Ministry of Electricity and Renewable Energy, <sup>2</sup> Electrical Engineering Department, Faculty of Engineering, Al Azhar University

#### Use of transfer prices for intra-company transactions

*Author & Presenter:* Thorsten Fischer, Saudi Aramco

**Moderator: TBA**

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