

مركـزالملــك عبـدالله للدراســات والبحوث البتروليــة King Abdullah Petroleum Studies and Research Center

## **INTRODUCING KAPSARC**

February 2014

### **KAPSARC** in Brief...

#### **KAPSARC**

King Abdullah Petroleum Studies and Research Center

- Independent, non-profit, research institution
- Focuses on energy economics, policy, technology, and the environment
- Located in Riyadh

#### **Mandate**

- Advance understanding of energy challenges and opportunities
- Both domestically and globally
- Through high caliber research
- To create future value and prosperity for humanity





#### **Board of Trustees**



**H.E. Minister Ali Al-Naimi** Chairman of the Board



**H.E. Prof. Hashim Yamani** President of the King Abdullah City for Atomic and Renewable Energy (KA-CARE)

- Ultimate authority of KAPSARC

H.E. Dr. Muhammad Al-Jasser Minister of Economy and Planning



**Prof. Robert Brown** President of Boston University

 Sets policies and approves strategic, and operational plans of the Center



**Prof. Sir Keith O'Nions** Rector of Imperial College London



**Dr. Rajiv Kumar** Senior Fellow, Center for Policy Research, New Delhi



Dr. Muhammad Saggaf President of KAPSARC



KAPSARC is an independent energy, economics, and environmental policy research center

We promote excellence in collaborative research through effective teamwork to identify opportunities to improve the welfare of humanity

- Intellectual Risk Taking
- Rigor
- Transparency
- Accountability
- Integrity
- · Objectivity and Independence

# Excellence in Research



- Team rather than Self
- Nurturing Talent and Diversity
- Engendering Trust
- Honesty, Candor, and Fun
- Respect for Colleagues
- Non-Hierarchical Structure

Effective Teamwork



• Size rather than Share of the Pie

- Empowering Balanced Debate
- Solutions not Problems
- · Global as well as Local
- Transcending Borders
- Speaking Truth to Power

#### Welfare of Humanity





#### **Current Research Projects**





#### **Recent Workshops**

#### Energy productivity:

- Sept 4-5, in London
- To discuss techniques for analyzing energy productivity and optimize investment in order to increase productivity
- 30-40 participants, most invitees accepted
- 2 Energy modeling:
  - Oct 3-4, in Washington, DC
  - To discuss latest techniques in systems modeling, including KAPSARC's state-of-the-art modeling that captures regulated pricing
  - 30-40 participants

#### **8** Energy transitions:

- Nov 12, in Riyadh, with participation from IAC
- To discuss transition to solar energy and other technologies, including the impact of supply chain dynamics
- 30-40 participants





#### **Energy Productivity Workshop, London, Sept 2013**

Beng Wah Ang

Singapore

Senior Principle Fellow,

National University of

Energy Studies Institute.



Christopher Allsopp Director, The Oxford Institute for Energy Studies (OIES)



**Bassam Fattouh** Director, Oil and Middle East Programme, The Oxford Institute for Energy Studies (OIES)



Aldo Flores Secretary General, International Energy Forum





**Geoff Hammond** Director of the Interdisciplinary International Centre for the Environment (ICE). University of Bath

Coby van der Linde

Director, Clingendael

International Energy

Programme,

The Netherlands

Jason Bordoff

Universitv

Director, Center on Global

Energy Policy, Columbia

**Cameron Hepburn** Professor of Environmental Economics, University of Oxford

Khalid AbuLeif

Resources.

Saudi Arabia

Advisor, Ministry of

Petroleum and Mineral



Xavier Labandeira Director of Economics for Energy and Professor of Applied Economics, Pablo de Olavide University, Spain

Kenneth Medlock Senior director of the Center for Energy Studies and Fellow in Energy and Resource Economics. Rice University



Vanessa Rossi Expert Adviser in Economics and Quantitative Analysis, Oxford Analytica. Former Senior Research Fellow at Chatham House



Peter Tertzakian Chief Economist & Managing Director, ARC Financial Corporation, Canada



Stephane de la Rue du Can Senior Research Associate, Lawrence Berkeley National Laboratory

Norway



Fraser Thompson Senior Fellow, McKinsev Global Institute



**Richard Newell** Director, Duke Energy Initiative. Duke University. Former head of the U.S. Energy Information Administration (EIA)



Giuseppe Sammarco Executive Director. Fondazione Eni Enrico Mattei (FEEM), Italy

China

Chen Zhan-Ming Assistant Professor, Renmin University,



Roula Majdalani Director, UN-Economic and Social Commission for Western Asia.



Glen Peters Senior Research Fellow. Centre for International Climate and Environmental Research - Oslo (CICERO), Norway



Bin Su Fellow, Energy Studies Institute, National University of Singapore



Mattei (FEEM), Italy

Dan Moran Postdoctoral Researcher. Norwegian University of

Science & Technology,

Dr. Alessandro Lanza

Fondazione Eni Enrico



#### Energy Systems Modeling Workshop, Washington, DC, Oct 2013



Anthony Andrews Congressional Research Service



Andreas Ehrenmann GDF Suez Energy



Howard Gruenspecht Energy Information Administration (EIA)



Frederic Joutz KAPSARC and the George Washington University



Frederic Murphy **Temple University** 





Govinda Timilsina World Bank



**Robert Brooks** RBAC Inc`1



Benjamin Hobbs Johns Hopkins University



Amit Kanudia KanORS

**Richard O'Neill** Federal Energy Regulatory Commission (FERC)

Maria Scheller **ICF** International



Sonia Yeh University of California, Davis



Ximing Cai University of Illinois at Urbana-Champaign



Mark Finley ΒP

Susan Holte

Formerly EIA

Steven Kimbrough

Wharton School of the

University of Pennsylvania

Dalia Patino-Echeverri

Duke University



John Conti Energy Information Administration (EIA)



Lessly Goudarzi OnLocation Inc.



**Hill Huntington** Stanford University



Michael Kumhof International Monetary Fund (IMF)

Anthony Paul Resources for the Future (RFF)



**James Smith** Southern Methodist



Benjamin Schlesinger Benjamin Schlesinger and Associates, LLC







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#### **Energy Transitions Workshop, Riyadh, Nov 2013**

**Roberto Bocca** 

Najeeb Al Jamea

Council (GCC)

Former Gulf Cooperation

Coby van der Linde

Energy Programme,

The Netherlands

Peter Pearson

Cardiff University

Adnan Shihab-Eldin

Kuwait Foundation for the

Advancement of Sciences

Clingendael International

(WEF)

World Economic Forum



Ibrahim Babelli King Abdullah City for Atomic and Renewable Energy (K.A.CARE)



Zak Henry International Energy Forum (IEF)



Timm Lau King Fahd University of Petroleum and Minerals (KFUPM)



Maiid Al-Moneef Supreme Economic Council of Saudi Arabia



Ton Schoot Uiterkamp Faculty of Mathematics and Natural Sciences, University of Groningen



Mohammed Al-Suwaiyel King Abdul Aziz City for Science and Technology (KACST)



Masakazu Toyoda Institute of Energy Economics, Japan (IEEJ)



**Guv Caruso** Center for Strategic and International Studies (CSIS)



Fatma Al-Hakmani **Gulf Cooperation Council** (GCC)



Abdullah Jum'ah Former Saudi Aramco



C. S. Kiang Sustainable Development **Technology Foundation** 



Canadian Energy Research Institute (CERI)



Harro Meijer Energy and Sustainability **Research Institute** Groningen



Christof Ruhl

Sonia Yeh

Studies



Hamad Al-Savari Saudi Arabian Monetary Agency (SAMA)



**Daniel Sperling** Institute of Transportation Studies



Abdullah Sultan King Fahd University of Petroleum and Minerals (KFUPM)

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**Daniel Yergin** IHS CERA



#### **Current Research Projects**





#### **Embodied Energy Intensity**





#### **Energy Normalization for Water and Other Factors**





#### **Energy Intensity Investments**

CHINA JAPA USA CANADA Identify the benefits KOF and impacts of trade linkages in determining the optimum investments (from a societal perspective) to improve global energy productivity. Move beyond the "micro-economic" curves on carbon abatement and energy efficiency. Energy ormalizatio for Water Energy Intensity Energy Intensity Drivers of China's Energy Policy ansportation Choices Valuing curity of Oi Demand



#### **China's Energy Policy**





#### **Energy Role in Africa**

THE GAMBIA





#### Valuing Security of Oil Demand

Addressing impediments to international agreement with alternative framework for policymakers to avoid leakages and "gaming the system" i.e. achieving individual country targets without delivering any societal benefit. Energy ormalizat for Wate Energy Intensity Energy Intensity Drivers of ransportation na's Energy Policy Choices



#### Source: FreeFoto.com

#### **Drivers of Transportation Choices**



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#### **Energy Systems Modeling**



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#### **Energy Transitions Pathways**

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#### **Smart Grid Regulation / Consumers**



