CEO ROUND-TABLE SERIES

Abdullah Bin Hamad
Al-Attiyah International
Foundation for Energy
& Sustainable Development

AGENDA

Thursday, 12th September 2019
St Regis Hotel
Doha, Qatar

10:00	AM	Coffee and Networking
10:25	AM	Welcome and Opening
10:40	AM	Special Guest Speakers
11:00	AM	Moderated Roundtable Discussion
12:00	PM	Closing Comments
12:15	PM	Networking Lunch

CEO Roundtable Series

His Excellency Abdullah Bin Hamad Al-Attiyah, Chairman of the Al-Attiyah Foundation, launched the CEO Roundtable Series and Dialogues to provide a platform for knowledge exchange and support for the global community in the quest towards a sustainable energy future. All guests have the opportunity to share their opinions and insights in what is always a lively and thought-provoking discussion.

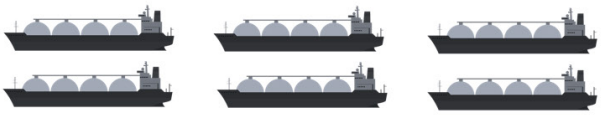
** The series of events take place under the Chatham House Rule and will not be attributed to any individual.*

FACT SHEET

CO2 Contribution by Sector

Cement		3 Giga Tonnes / PA
Iron & Steel		3 Giga Tonnes / PA
Aluminum		0.5 Giga Tonnes / PA

How Much Is A Giga Tonne?



X 1,000 Million

Lifetime of Heavy Industry Plant?

50 Years

Possible Reduction Strategies

1. **Reduce** End Product Demand
2. **Improve** Energy & Process Efficiency
3. Use **Lower** Carbon Energy Inputs
4. Use **Alternative** Processes
5. Employ Carbon Capture & Storage (CCS)

15
GIGA TONNES

Heavy Industry produces the 3rd largest contribution to greenhouse gas emissions every year, with power, transport and land use all playing a role.

1,735
MILLION TONNES

Global demand for **STEEL** will increase by 1.3% in 2019.

64,500
MILLION TONNES

Primary global demand for **ALUMINUM** will increase by 2% i 2019, mostly from construction & automotive industries

10
BILLION TONNES

Global demand for **CEMENT** will increase by 1.5% in 2019. Howeve most cement is used domestically.

THEME

Reducing CO2 Emissions from Energy-intensive Industries

When 196 countries - Parties to the United Nations Framework Convention on Climate Change (UNFCCC) - adopted the Paris Agreement in December 2015, it represented a major breakthrough. After more than 20 years of negotiations, the world agreed on a blueprint on how to keep global climate change well below 2 degrees Celsius and aiming for 1.5 degrees Celsius. The agreement is seen by many world leaders that gathered in Paris in December 2015, as the last hope for humanity to preserve the foundations for a healthy planet. It was hailed in 2015 as a major milestone in global efforts to tackle climate change and now provides a framework for all sectors, particularly the private sector to contribute to the global effort to combat climate change.

The industrial sector, in general, uses more delivered energy than any other end-use sector, consuming about 54% of the world's total delivered energy. The industrial sector can be categorized by three distinct industry types: energy-intensive manufacturing, non-energy-intensive manufacturing, and non-manufacturing. The following industries are considered to be energy-intensive: food, pulp and paper, basic chemicals, refining, iron and steel, non-ferrous metals (primarily aluminum), and non-metallic minerals (primarily cement). Together, they account for about half of all industrial sector delivered energy use. Consequently, the same industries emit large quantities of carbon dioxide (CO2), related to both their energy consumption (combustion emissions) and their production processes (process emissions).

Energy-intensive industries, such as steel and cement manufacturing, are struggling with overcapacity as the economic downturn has driven down global demand. The year 2015, which was coincidentally the year of adoption of the Paris Agreement, saw the lowest price of steel in over a decade. As a result, many companies in some parts of the world, had to shut down plants and these hard times have not abated much. The withdrawal from the Paris Agreement by the current US Administration was a direct consequence of the challenge facing these energy-intensive industrial sectors. The big question is whether the sectors could turn these hard times into an opportunity for a much-needed overhaul of aging and inefficient technologies, as part of a comprehensive strategy to transform to a low-carbon future.

KEY QUESTIONS

- What does the future look like, with regards to the contribution of energy-intensive sector to GDP?
- Is it possible to decouple industry energy usage from industry greenhouse (GHG) emissions?
- What are the major barriers to mitigation in industry, in general and energy-intensive industry, in particular?
- What policies, tools, and innovative approaches are available to spur low-carbon transformation in energy-intensive industries?
- Can carbon pricing and carbon market mechanisms play any role? What impact did the EU ETS have on emission reductions in energy-intensive industries?
- What role can the various actors, (private sector, policy makers, investors, civil society), play in addressing the challenge of decarbonising heavy industries?
- What efficiency measures, along the whole value chain, could put heavy industries on track with the Paris Agreement on Climate Change?

OVERALL OBJECTIVE

- To discuss strategies for decarbonising heavy industries, such as, iron & steel; aluminum; and cement, in line with the goals of the Paris Agreement.
- To assess the possible options and pathways for reducing CO2 emissions from the energy-intensive processes involved in the production of these materials that are essential to everyday life.
- To draw lessons and experiences from the various carbon emission reduction initiatives within these sectors.

DISCUSSION POINTS

The CEO Roundtable provides the opportunity for international experts to share insights on recent and ongoing developments on reduction of CO2 Emissions from Energy-intensive Industries. The international experts are drawn particularly from the iron & steel, aluminum, and cement sectors. The discussion will cover, but not limited to, the following aspects:

- The nature and scale of the problem/challenge facing these sectors. The competing challenge of the need for more energy, by the growing population, for socio-economic development; and the need to take urgent actions to address climate change.
- Technological options for decarbonising hard-to-abate sectors of the economy. Mapping out the various pathways for abating emissions from these sectors, including application of high temperature processes, electrification through low-carbon energy sources, hydrogen, biomass, carbon capture and storage, etc.
- The major barriers and enablers and the use of effective policy framework to minimize the barriers and enhance the enablers.
- Emerging innovative approaches for reducing emissions from energy-intensive processes of production of iron & steel, aluminium, and cement.
- Identifying and engaging the entire stock of knowledge available globally to achieve continued contribution of energy-intensive industries to sustainable development but in a low-carbon pathway.
- The long-scenarios for emission reductions from energy-intensive industries.

KEY MESSAGES

1. A complete transformation of the world's energy system over the next century is needed to meet the target of limiting global warming to 'well below 2 degrees Celsius'. Energy-intensive industries, in particular, would have to dig deep, to contribute meaningfully to the goal of keeping global carbon dioxide emissions to 'net-zero' as early as 2070.

2. The decarbonisation challenge faced by energy intensive industries should be considered and addressed in the context of the contributions of these industries to national economies, as well as, the economic challenges the sectors are facing.

3. The required transitions in energy intensive industries will not take place in the absence of smart and committed public policies, building on currently available technologies, or without a paradigm shift towards higher levels of resource efficiency and a circular economy.

MODERATOR

Sami Ziedan

Senior Presenter, Al Jazeera

Sami Zeidan is an award-winning Senior Presenter with Al Jazeera English since 2005. He was chosen to present the channel's first live words when AJE launched on November 15th, 2006. Sami joined Al Jazeera after presenting with a number of the largest broadcasters in the world including CNN, CNBC and NBC.

As a news anchor and talk show presenter Sami has interviewed a wide range of legendary world leaders, including South African President Nelson Mandela and Pakistani Prime Minister Benazir Bhutto and Venezuelan President Hugo Chavez, just to mention a few.

As a reporter Sami has covered several seats of power including the United Nations, the White House and the European Commission, as well as conflict zones stretching from Syria to Korea.

SPECIAL GUEST SPEAKERS

John Drexhage

Energy & Extractives Global Practice Consultant – The World Bank.

John Drexhage has worked on issues related to climate change and sustainable resource development for over 25 years. He is currently working as a consultant with the Energy and Extractives Global Practice at the World Bank. In that capacity, he advises on implications of climate change and other related material issues for mining activities, and in particular, examining the growing role of minerals and metals in a low carbon future and implications for resource rich developing countries, and helping to develop the recently established Climate Smart Mining Facility at the World Bank.

Dr. Patrick Linke

Prof. Chemical Engineering Program Texas A&M University Qatar.

Dr. Patrick Linke currently holds the Qatar Shell Professorship for Energy and Environment Professor and Chair, Chemical Engineering Program, Texas A&M University at Qatar Executive Director, Office of Graduate Studies, Texas A&M University at Qatar. As a professor at TAMUQ Dr. Linke specializes in a number of research fields including; Chemical process design and integration, Eco-industrial parks and industrial symbiosis, and Nexus integration across the resources water, energy, Greenhouse Gases, Hydrocarbons.

Liv Rathe

Director, Corporate Climate Office, Norsk Hydro.

Liv has been involved in climate change issues since the early 2000s. Before that she has worked in Corporate Finance and has particularly been involved in developing renewable industries. She has been a professional Board member in several industries, including the Research Council of Norway. She was also a board member of the World Bank's Prototype Carbon Fund, an initiative established in 2000. The Fund played an important role in establishing a framework for the UN approved international carbon credits. Since last year, Liv has been in the Board of the International Emission Trading Association, (IETA).

Matthew Bateson

Senior Environment and Corporate Affairs Executive Former Head of Environment, Climate Change & Legacy Management - Rio Tinto.

Matthew Bateson is a senior environment and corporate affairs executive in the energy and natural resources sectors. He is a mining sector expert in climate change. Over the last seven years he was the head of environment, climate change and legacy management at international mining company Rio Tinto, leading the environment, climate change and mine closure strategies. Prior to joining Rio Tinto, Matthew spent three years leading the energy and climate mandate for the WBCSD and 15 years with Shell in project finance and external affairs in corporate and project roles, working and living in Europe, Australia, Canada, West Africa, Peru, Kazakhstan and Russia.

ABOUT THE FOUNDATION

The Abdullah bin Hamad Al-Attiyah International Foundation for Energy and Sustainable Development is a non-profit think tank providing independent insights, in-depth research and informed debate on energy and sustainable development themes.

THE FOUNDER AND BOARD OF TRUSTEES

The Foundation's Chairman, His Excellency Abdullah Bin Hamad Al-Attiyah's 40 years' experience is unprecedented. Over several decades he held many high-profile positions including Deputy Prime Minister for the State of Qatar, CEO, Qatar Petroleum, and President of OPEC. In addition, His Excellency was elected Chairman of the United Nations Commission on Sustainable Development in 2006 and six years later successfully served as the President of the United Nations Convention on Climate Change, COP 18.

H.E. Al-Attiyah's unique experience gave him first-hand knowledge of the challenges and opportunities faced by the global community in their quest to provide sustainable energy. He hopes the Al-Attiyah Foundation's work can support its members, partners and society with this quest.

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MR. REDA IBRAHIM ALI

Managing Director
The Abdullah Bin Hamad Al-Attiyah International Foundation for Energy & Sustainable Development

OUR MEMBERS

Currently the Foundation has over fifteen corporate members from Qatar's energy, insurance and banking industries as well as several partnership agreements with business and academia.

OUR PARTNERS

Our partners collaborate with us on various projects and research within the themes of energy and sustainable development.

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