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WORLD ENERGY COUNCIL ISSUES OFFICIAL STATEMENT

AHEAD OF

22ND WORLD ENERGY CONGRESS

WEC calls for policymakers and industry leaders to "get real" as the global energy body exposes the myths informing the energy debate and defines a path to a more sustainable energy future.

DAEGU, KOREA, SUNDAY OCTOBER 13, 2013: As the 2013 World Energy Congress gets underway in Daegu, South Korea, the World Energy Council (WEC) warned today that several prevailing myths are severely hampering the efforts of governments, industry and civil society to create a sustainable energy future.

The World Energy Council urged stakeholders to take urgent and incisive actions to develop and transform the global energy system. Failure to do so could put aspirations on energy security, energy equity and environmental sustainability at serious risk, the WEC cautioned.

More than 6,000 delegates from 113 countries to the World Energy Congress, including over 50 government ministers and 272 expert speakers from 72 countries, will be contributing to an extensive programme under the theme 'Securing Tomorrow's Energy Today'. The sessions during the event aim to challenge existing thinking on energy issues and define the future global energy environment.

Pierre Gadonneix, Chairman of the World Energy Council, said:

"Since our last congress in Montreal 2010 major events have impacted on the global energy context; the financial crisis has put pressure on competitiveness as a major criteria for the energy sector. The development of unconventional hydrocarbons has emerged as a significant player and incidences such as Fukushima have all caused many countries revaluate their energy strategies. As a consequence the CO2 targets for 2050 will be missed unless significant changes and policy frameworks are adopted.

"Our congress provides the perfect platform for discussions between leaders in such a context.

"It is vital that we form a coherent, long-term framework within which to plan and implement future investment. Leadership is needed if we are to address the triple challenge of the energy trilemma, affordability, accessibility and environmentally sustainable energy for all."

Christoph Frei, Secretary General of the World Energy Council, added:

"As we publish the results of our studies at the World Energy Congress in Daegu, Korea it is clear that we are at a tipping point. There are many myths that impact the energy sector which we have been able to expose through our studies. Our congress is the ideal place to bring these findings and recommendations to seek to find solutions to promoting the sustainable supply of energy for the greatest benefit of all."

The full statement entitled "Exposing the Myths, Defining the Future – It's Time to Get Real to Secure Tomorrow's Energy Today" reads over:

OFFICIAL CONGRESS STATEMENT OF THE WORLD ENERGY COUNCIL

EXPOSING THE MYTHS, DEFINING THE FUTURE – IT'S TIME TO GET REAL TO SECURE TOMORROW'S ENERGY TODAY

Complexity and uncertainty are increasing at an accelerating rate and energy leaders in both the public and private sectors need to make inspired decisions. Action is needed now.

We have found through our multi-year in-depth studies and issues-mapping with energy leaders that we are in a much more challenging world than previously envisaged.

The WEC's analysis has exposed a number of myths which influence our understanding of important aspects of the global energy landscape. If not challenged, these misconceptions will lead us down a path of complacency and missed opportunities.

Much has, and still is, being done to secure our energy future, but the WEC's studies reveal that current pathways fall short of delivering on the global aspirations of energy access, energy security, and environmental sustainability.

Energy leaders in both the public and private sectors agree on many of the actions necessary, but significantly are not aligned on the nature, value and importance of political and institutional risks and their critical impact on investment.

If we are to derive the full economic and social benefits from energy resources, then we must take incisive and urgent action to modify our approach to energy solutions. The usual business approaches are not effective. The focus has moved from large universal solutions to an appreciation of regional and national contexts and sharply differentiated consumer expectations.

Faced with an ever-changing kaleidoscope of issues, we have to embrace this new reality and define enhanced norms of performance and agility.

It's "Time to get Real" in defining our future.

CHALLENGING THE MYTHS

Myth 1: Global energy demand will flatten out

The Reality: Energy demand will continue to increase and double by 2050, primarily driven by economic growth in non-OECD countries.

Myth 2: Peak Oil - there is an imminent shortage of fossil fuel resources

The Reality: There is no shortage in sight. The continued discovery of new resources and the emergence of new technologies that both enable the release of unconventional oil and gas and improve the recovery rates from existing fields have already multiplied the available fossil fuel reserves by a factor of four, and this trend will continue.

Myth 3: Demand growth will be fully met by the new clean energy sources.

The Reality: WEC analysis in the World Energy Scenarios shows that despite significant growth in the relative contribution of renewables from 15% today to a figure between 20% and 30% in 2050, in absolute terms the volume of fossil fuels used to meet global energy demand will be 16,000 MTOE in the Jazz (the more consumer-driven scenario) and 10,000 MTOE in Symphony (the more voter-driven scenario), compared to 10,400 MTOE in 2010. This represents a 5% decrease in the absolute amount of fossil fuels in Symphony but a 55% increase in Jazz.

Myth 4: We can reduce global GHG emissions by 50% by 2050:

The Reality: According to the WEC's World Energy Scenarios, even in the best case we will see a near doubling of global greenhouse gas (GHG) emissions by 2050, compared to where we should be in 2050 to meet the 450 parts per million CO_2 reference adopted by many. At worst GHG emissions could increase by over four-fold.

Myth 5: Current business models and markets are delivering.

The Reality: WEC analysis shows that energy markets are becoming increasingly complex, driven by accelerated change in energy policy, technological innovation, and consumer expectations. Current market designs and business models are unable to cope with the increasing renewable shares, decentralised systems, or growing information architecture.

Myth 6: Current programmes will deliver universal access to energy within the next 10 to 15 years.

The Reality: Universal access is far from becoming a reality. While acknowledging recent progress and current programmes to reduce energy poverty, the WEC's analysis shows that on current paths, between 730 million and 880 million people for Jazz and Symphony respectively will still be without access to electricity in 2030 and between 320 million and 530 million people in 2050 globally.

Myth 7: On a global scale capital is cheap and abundant.

The Reality: Capital is extremely sensitive to perceived political and regulatory risks. Moreover, due to the growing pressures on public finances in most countries, public funds will not be available to substitute or augment the private financing of energy initiatives.

DEFINING THE FUTURE

The global energy environment has increased in complexity. The global aspirations on energy security, access and environmental sustainability are destined to fail unless incisive and urgent actions are taken to both develop and transform the energy system.

1. We are looking in the wrong place. The focus of current thinking about the energy system is biased and inadequate:

If we want to get the greatest social and economic benefits out of our energy systems, the focus must shift from the supply mix to demand efficiency. We need more demand-side investments, innovation, incentives and stronger technical standards to reduce energy intensity. Price controls, subsidies, trade barriers and absolute targets for individual technologies distort the market and can have unintended consequences, so policymakers must use them only sparingly.

2. In order to attract the needed investment national policy and regulatory frameworks have to be balanced:

We need robust, predictable and transparent frameworks that allow the market freedom to exercise informed choices in terms of innovation, technology and investment. The "Energy Trilemma" provides a solid framework for every country to assess its own political risk and work towards balanced, predictable and stable policy and institutional frameworks. The WEC's analysis reveals that there is little agreement between investors and governments on nature, price, and value of risks. It is therefore critical to improve the understanding of the nature of risk and the way to price it. In the absence of such understanding, investment will not flow.

3. We need significant investments in RD&D:

We urgently need to realise the potential of breakthrough technologies such as electricity storage and CC(U)S. WEC analysis shows that the 450 parts per million CO_2 goal cannot be achieved without CC(U)S. It is essential, therefore, that there are clear and unambiguous policy and institutional frameworks to support investment in this technology to justify its inclusion in roadmaps and carbon emission reduction strategies.

4. The energy map is changing and our institutions need to change to keep pace with developments:
The centre of gravity in energy has moved outside OECD countries – and so are interactions between the countries and regions. In addition, consumer groupings and civil society expect to influence our energy future. Existing multilateral and plurilateral energy institutions need to reflect these changes, be more inclusive and responsive, or risk becoming obsolete.

5. To ensure universal access to energy, policy and institutional frameworks and funds are urgently needed to de-risk and support entrepreneurial approaches:
WEC recognises the need for urgent additional action and supports the objectives of the UN Secretary General's Sustainable Energy for All initiative. WEC further supports the inclusion of universal energy access as a key and distinct element in the post 2015 Millennium Development Goals. Supporting mechanisms and suitable funding are essential in order to achieve this goal.

6. It's no longer just about mitigation:
Risks from the energy-water nexus, extreme weather events, or cyber attacks (to name but a few) expose our energy infrastructure to potential disasters. We need to urgently adapt, re-think, and redefine the resilience for energy infrastructure.

SOME OF THE REGIONAL IMPLICATIONS OF NON-ACTION ARE:

- In Sub-Saharan Africa 250 to 400 million people could still lack access to energy in 2050.
- Asia will have the highest need for investments in energy infrastructure until 2050, a staggering US$10 to $12.5 trillion, compared to US$3 to $4 trillion for Europe or North America.
- The Middle East will struggle with increasing demand and energy intensity.
- Europe will struggle with balancing increasing energy prices and GHG objectives.
- North America will struggle with ageing and incremental energy plus issues of transport capacity and infrastructure.
- In Latin America, large hydropower will continue to dominate the energy mix until 2050 and building necessary infrastructure will struggle to meet the expected demand.

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