**Talking points: The road to resilience- managing and financing extreme weather risks**

*Who*: The World Energy Council, Marsh and McLennan Companies, and Swiss Re Corporate Solutions have joined forces with the specialist support of the European Bank of Reconstruction and Development, and over 175 global experts

*Why*: New emerging risks are posing threats to the energy sector, impacting both the physical structures and the investment needed to evolve the energy system to a more sustainable future. This extreme weather report specially looked at the frequency, severity and exposure of the energy value chain to extreme weather events. It then proposes solutions on how to create systemic resilient energy infrastructures and how to finance it.

*What:* The report finds that the number of extreme weather events increased more than 4 times from only 38 events in 1980 to 174 events in 2014. Although the energy sector has focused on transitioning in the long-term, the understanding of the vulnerability to risks now has been largely unaddressed, leaving energy systems exposed and the financial risk in energy investments increased.

**Key findings:**

1. Protecting infrastructure assets will add significantly to the investment needed in energy infrastructure by 2035.
2. Energy industry needs to move from fail-safe to a safe-fail approach. We need smarter, not stronger, solutions for resilience.
3. Energy systems must be viewed more systemically- an event in one area can cause a chain reaction and cause unforeseen problems in other areas. Instead, focusing on what the system as a whole needs can better prepare and help to recover, critical assets.
4. The costs of resilience is not included, nor counted as beneficial, in the financing of infrastructure. Uniquely tailored financial instrumentation can turn system vulnerabilities into investment opportunities.

**What does this show?**

Governments alone cannot cover the costs and private investors must join in the funding of resilience; yet to make these critical investments rewarding, all stakeholders must be involved in developing and operating existing projects in order to have the tools necessary for comparing the costs with the benefits of investing in resilience.

**The World Energy Council calls for:**

1. Agreed goal or metric for adaptation; set clear standards for operation and new build.
2. Further work with insurers and banks to encourage the incorporation of environmental investment considerations to help better capture weather risk; to develop uniquely tailored instruments that turn this risk into an opportunity, such as in the use of weather derivatives.
3. Overcome the information deficit and risk modelling challenges with greater cooperation, sharing of best practices and data.
4. Regulators must provide guidance for resilience and market regulation but also by opening energy infrastructure as an asset class.
5. Long-term and institutional investors must collaborate with other stakeholders to overcome investment barriers.

**Concluding remarks:**

Resilience has long been associated with vulnerability; with identifying weaknesses and suggesting improvements. Yet what this report has found is that the world is in danger of failing to meet the energy Trilemma goals, and the basic goals of economic development, if action is not taken now. Smarter, not stronger infrastructures are needed for resilient energy infrastructures. There is no region unaffected, no economy strong enough to protect its energy assets, nor its citizens; resilience is not an option, it is a must.