

Launch of the Medium-Term Renewable Energy Market Report 2013

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Title Slide



- Good morning, Ladies and Gentlemen. It is a pleasure to be here in New York this morning, at the 10th Renewable Energy Finance Forum, Wall Street. New York is one of the most important finance capitals in the world. And finance is absolutely critical in the energy business, in particular for up-front capital intensive technologies such as renewables. This is why we consider this a perfect venue to present the IEA's *Medium-Term Renewable Energy Market Report 2013*, our renewables market forecast for the next five years. We appreciate your being here today, and we thank very much ACORE and the conference organizers for giving us this opportunity.
- This is the third market report we have published in the past month. We decided to release the oil, gas and renewables reports in close succession, so that they can share the same GDP and other assumptions. Our goal is to make it easier for you to piece together the bigger story from these various reports and present them in a coherent context. Later this year we will report on coal and – for the first time ever - on energy efficiency, the so-called “hidden fuel”. From an analytical point of view, we consider all the various fuel markets for the interlinked system that they comprise. We cannot look at renewables or any other energy sources in isolation – especially as the interaction between fuel markets becomes ever more intense. I would like to commend President Obama on his leadership regarding renewables as a part of a portfolio to cut emissions and foster innovation. It was heartening to see that many of the policies he announced yesterday are ones that the IEA has championed for many years.
- This second edition of the *IEA's Medium-Term Renewable Energy Market Report*, provides additional in depth country reviews – looking in depth at 21 leading markets – and also covers for the first time renewable heat and biofuels for transport, in addition to renewable electricity. In my speech, I will cover three main points addressing the following questions:
 1. What is the role of renewables in the context of global energy trends? Is the current dip in investment going to stay or is it a transitory issue?

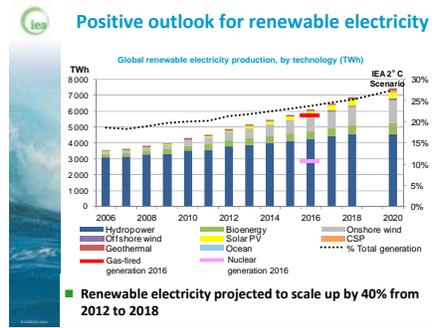
2. What are the main drivers underpinning our five-year projections for renewable energy?
3. What are the main challenges ahead and what are the implications for policy-making?

The context and the role of renewables

- Current world energy trends keep changing but remain clearly unsustainable. Global energy needs are growing. Supply and demand patterns are rapidly changing from region to region but are still deeply rooted in fossil fuels. The supply surge from North American oil and gas production now rippling through global markets is a case in point. The *IEA carbon intensity index* recently revealed a clear but disturbing picture: despite technological development and international efforts, the carbon intensity of the global energy supply has barely changed over the past 20 years. *Redrawing the Energy-Climate Map*, a special IEA report released just two weeks ago highlighted that CO₂ emissions reached record highs in 2012. The report also underlines that the energy industry itself is not immune from the physical impacts of climate change and will need to adapt to improve resilience.

- In this context, the rapid growth of renewables continues to beat expectations and is a bright spot in an otherwise bleak assessment of global progress towards a cleaner and more diversified energy mix. That was the message I delivered to the Clean Energy Ministerial in April and **it reflects my first point today:**

Slide n. 2 - Positive outlook for renewable electricity

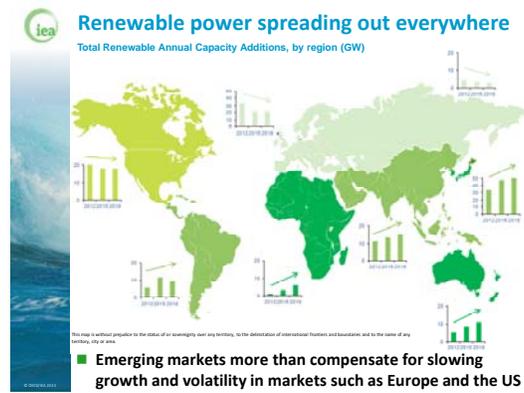


- Despite a difficult economic context, policy uncertainty in some countries and turbulence in industry, **at the global level our medium-term outlook for renewables remains positive. And we expect investment opportunities to grow**, in particular in the power sector:
 - Electricity generation from hydropower, wind, solar and other renewable sources **is projected to scale up by 40% in the next five years.**
 - **By 2018 the share of renewable electricity will account for a quarter of the global power mix**, up from 20% in 2011.
 - **By 2016 global renewable electricity generation will overtake that of gas and be twice that of nuclear**, making renewables the second most important source of electricity after coal.
- The forecasts in the report **build on the impressive growth registered in 2012**, when global renewable generation rose by over 8% despite a challenging investment, policy and industry context in some areas. In absolute terms, global renewable generation in 2012 – at 4 860 TWh -- exceeded the estimated electricity consumption of China.
- In fact the rapid rate of growth of renewables, at least in the electricity sector, is **very much in line with that needed to stay on the trajectory associated with IEA low-carbon energy scenarios.**

Two main drivers for this positive outlook

Now my second point. Overall, the deployment fundamentals of a portfolio of renewable sources remain robust, with **two key trends driving the outlook.**

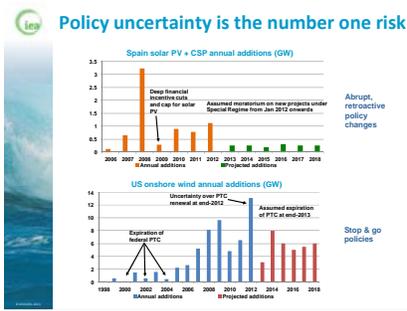
Slide n. 3 - Renewable power spreading out everywhere



- First, renewable power deployment is continuing to **expand geographically**. Notably, investments and renewable deployment are accelerating in emerging markets, mainly driven by fast-rising electricity demand, energy diversification needs, and local pollution concerns, while contributing to climate change mitigation. **China alone accounts for nearly 40% of expected global growth**. In addition to strong deployment in a range of non-OECD markets, such as **Brazil, India and South Africa**, significant development is seen for the first time in the **Middle East**, based on compelling economics and long-term targets. This rapid deployment in these regions is expected to **more than compensate for slower growth and smooth out volatility in other areas, notably Europe and the US**.
- Second, in addition to the well-established competitiveness of hydropower, geothermal and bioenergy, **more renewables are becoming cost competitive versus fossil fuels in a wider set of circumstances**. For example, wind competes well with new fossil fuel power plants in several markets, from Brazil, to Turkey to New Zealand. Solar is attractive in markets with high electricity peak prices, for instance if these are set by oil-fired generation. Finally, generation costs of decentralized PV have become lower than retail electricity prices in a number of countries, including Italy, Spain, Australia, but also Denmark and (Southern) Germany. We expect this “socket parity” to increasingly become an additional driver for investment where and when self-consumption of PV is possible.
- **My third point is about the challenges ahead and the implications for policy-making**. Of course renewables also face challenges. Those are also one of the reasons – along with the sharp decline in the costs of PV – for the year-on-year decline in investment in 2012 and the first quarter of 2013. Let me mention some major ones:
 - With stagnating or anaemic economic growth and energy demand in some European countries, there is a heated debate about the costs (either real or perceived) of economic incentives to renewables

- In some markets the share of wind and solar PV is now such that grid integration challenges of variable renewables need to be duly addressed
- In several countries renewables are still facing important non-economic barriers, such as burdensome authorisation procedures or social acceptance issues
- Renewables face competition from other sources, notably cheap coal everywhere and shale gas in the US
- Finally, in several countries the competitiveness of renewables is hampered by subsidies to fossil fuels. The IEA estimates that in 2011 the latter were six times higher than worldwide economic support incentives to renewables.

Slide n. 4 - Policy uncertainty is the number one risk



- I could expand this list further. But the main point here is: To get investment at favourable rates, risks must be reduced and shared. Even for less deployed technologies such as concentrated solar power and offshore wind, technology risk is no longer seen as the main barrier to investment. **The main challenge, the public enemy #1 for investors and the most important barrier to renewable energy deployment is policy uncertainty.** This is the main risk that business is unable to manage.
 - The worst case occurs in countries – such as Spain, Czech Republic, Bulgaria – which have adopted **retroactive policy changes**. Those totally destroy investors confidence, potentially for a long time. I want to restate very clearly what I said in Germany one month ago: Any form of retroactive tariff cuts – even if applied for only a short period – must be avoided.
 - But also **stop&go decisions** – such as around the extension of the Production Tax Credit in the US and the reduction of accelerated depreciation incentives for wind in India – affect business appetite for long-term investments.
 - Finally, many countries have **reduced economic incentives** to renewables. I want to be very clear and not misunderstood on that particular point. Cuts in incentives are absolutely legitimate and desirable if and when they reflect cost reductions of technologies and to maximize benefits to final customers and tax-payers. However, such decisions must be taken in a transparent and predictable way that gives proper time to renewable industries to react and adapt. Those decisions also need to take into account long-term policy targets and the benefits that renewable assets can bring both in the short and in the long term.



Main messages to policy makers

- Many renewables no longer require high economic incentives
- But **they do need** long-term policies that continue to provide a predictable and reliable market and regulatory framework compatible with societal goals

- This is why my **final comments are targeted to policy-makers**. In general terms the rapid growth of renewables has been a success story towards a cleaner, more diversified and more secure energy mix. This report shows that such a trend can continue and even accelerate. **But that does not leave room for government complacency, especially among OECD countries**. Today, policy uncertainty represents the largest barrier to investor confidence. **Many renewables no longer require high economic incentives or subsidies**. But they **do need long-term policies that continue to provide a predictable and reliable market and regulatory framework compatible with societal goals**.
- Policy-makers need to better understand that any decision increasing uncertainty and volatility results in higher investment risks, higher costs of capital, more difficult access to finance, and ultimately worsens the business case for renewables.
- Policy-makers need also to realize that the competitiveness of renewables depends on the market design in which they operate. We all have to ask ourselves whether markets mainly based just on short term marginal pricing are capable to provide sufficiently certain remuneration flows and a secure investment climate for capital intensive technologies like renewables. This calls for a serious reflection on market design needed to achieve a more sustainable world energy mix.
- To conclude: In times of difficult economic context we are often confronted with the question “Can we afford expensive renewables support policies?” My answer is quite clear:
 - Renewables now provide a portfolio of well established and increasingly affordable sources of electricity, where the resources are of good quality and the right policy and market framework is in place.
 - As any other technology, renewables do not represent a “silver-bullet”, one-fits all solution to the complex energy needs of the world.
 - But if we are serious in aiming at a more secure, diversified, affordable and cleaner energy mix, we clearly conclude that no country can afford not having **renewables as a fundamental pillar of a portfolio of energy technologies** responding to those needs.
- The question is not if renewables are needed, but where and when. It is important to identify the countries in which renewable resources are the best, drivers are the strongest, barriers can be overcome and benefits maximized, leading to investment opportunities and market deployment. This is the kind of

information and the added value provided by the *Medium-Term Renewable Energy Market Report* presented today. I hope you will find it an interesting and inspiring read.

- So with that, let me now turn to Paolo Frankl, the head of the Renewable Energy Division, who will elaborate further on the *Report*. He will also expand on renewable heat and biofuels, that I could not cover for sake of time.