Launch of Energy Technology Perspectives 2015
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Good afternoon, ladies and gentlemen,

Over the coming months, the world will be preparing for what is heralded as a historic meeting for climate change negotiations. If the right decisions are taken – with the aim of making a sustainable energy future a reality – we will be able to reap enormous, multiple benefits deriving not only from decarbonisation, but also from reduced air pollution, better energy access, energy security and economic prosperity.

But we all know clean-energy deployment is not at the level where it needs to be. It is now crucial for governments and other stakeholders to take effective decisions for energy sustainability. This will not be possible by relying on yesterday’s technology and policies. It is clean-energy innovation that will get us on the right path.

That is the story of Energy Technology Perspectives 2015.

Yet as you well know, fossil fuel prices have tumbled in the last year. This new price environment brings both challenges and opportunities to decision-makers. However, these prices should not be an excuse to seek the short-term benefits of lower energy bills at the expense of a long-term sustainable global energy system.

The analysis in this year’s ETP shows us the direction that we will need to take to achieve the 2 Degree Scenario, or 2DS. This is a scenario under which the evolution of the energy system is consistent with limiting the long-term increase in global temperatures to 2 degree Celsius.

With current policies, energy-related carbon emissions will exceed 50 gigatonnes of CO₂ in 2050 – this is about three times more than what would be required to meet the 2DS. A transformation is needed, and it is possible – but a long-term strategy based on a portfolio approach is needed to shift to a low-carbon energy mix.

The deployment of innovative technologies is crucial in making this 2DS scenario possible. The good news is that energy innovation has already proven it can deliver. Previous innovation has provided us with options today that are already transforming the energy system, such as wind and solar PV. Indeed wind and solar PV are now the lowest-cost source of power in a number of regions. This result, unthinkable only a decade or so ago, is the power of innovation. Given our current climate realities, more of that power must be unleashed on the world.
The significant current and potential improvements to energy efficiency also stem from properly supported innovation, and some of the clean-energy technologies needed in the future are starting to make breakthroughs, such as CCS in power generation.

Already we are starting to see results, but this momentum must be accelerated, as we are still not on track to meet the 2DS. Policy makers will need to make sure that innovation will continue to deliver.

The stakes are high for the energy sector, but it is no stranger to profound technological change. An incredible chain of innovations in the energy sector has been at the vanguard of social and economic transformation for over a century, and it is exciting to see the progress being made by solar panels and fuel economy improvements for passenger cars today, to name but two.

But we cannot be complacent. We are setting ourselves environmental and energy access targets that rely on better technologies. Today’s annual government spending on energy research and development is estimated to be USD 17 billion. Tripling this level, as we recommend, requires governments and the private sector to work closely together and shift their focus to low-carbon technologies.

The challenge is daunting but it is possible to fill the gap. On one hand, the technologies are there but they are not deployed – for example, energy-efficiency technologies. So accelerating the deployment of existing technologies that still have some potential for innovation is important. It is not a coincidence that this year we have added storage and hydrogen to the energy technologies we look at as part of our Clean Energy Tracking Report.

On the other hand, there are the technologies that for the moment are just dreams. Now, for obvious reasons, ETP can only model existing technologies. But the right support to innovation coupled with effective public-private partnerships can provide the energy technology breakthroughs that could amplify or hasten the low-carbon transition. The shale gas and shale oil boom of the last few years was virtually unthinkable at the dawn of this century. If we only stick to the beaten path of today, we will miss the game-changers of tomorrow.

I am going to let Didier Houssin walk you through the details of ETP, but before I do let me just say that governments must recognise that innovation is not a linear process. It is an iterative process, where progress or problems at each stage affect previous phases and further developments. The complex nature of the innovation cycle can be addressed only through systemic policies, that for example integrate technology-push policies with market-pull measures. Of course, governments need a clear vision on the perspectives on technology innovation and deployment, and that is where the IEA can play a key role. Much of the work on energy technologies at the IEA, for example the Technology Roadmaps, is aimed at making this vision as much as accurate as possible.

Now, let me hand the floor to Didier.