Ladies and gentlemen, my thanks to you for being here with us for today’s launch, and a special thanks to Climate Action & Energy Commissioner Arias Cañete and Director-General Dominique Ristori and their staff for arranging today’s presentation. Your support throughout the review process has been greatly appreciated and it is now my pleasure to present to you the results of our in-depth review of EU energy policies.

Since the last review in 2008, the EU has been suffering from a major economic crisis, and energy demand has collapsed. Energy security concerns have come to the fore with the Russia-Ukraine crisis, turmoil in North Africa and unrest in the Middle East. Gas security concerns in particular have become a hot topic. Global energy market trends are also increasingly felt in the EU, as demand and supply is shifting to Asia. And competitiveness is worrying European industries.

These are the reasons why the EU needs to re-balance its energy goals.

And there has been some good news. Since the last review in 2008, the EU has undertaken two major reforms and progress has been positive: first, continuous energy market liberalisation and second, the implementation of ambitious targets and policy action for 2020. Also, the EU is seeking to achieve an Energy Union with a forward-looking climate policy, and ambitious energy and climate targets are set for 2030 by the European Council.

But we will see that it is not all good news.

So with these challenges and goals in mind, and based on the IEA’s review of the past five years, let us turn to the IEA’s outlook for the EU.
First, how are Europe and the world progressing towards the 2020 climate and energy goals?

There is no doubt that the EU has emerged as a global leader in the transition to a low-carbon economy and is on track towards its Kyoto and 20% GHG reduction target for 2020. Since 1990, GHG emissions have decreased by 19.2% and carbon intensity in the EU has almost halved at 40.9%. Today, the EU has a lower carbon intensity than non-European IEA members. This is the result of lower demand during the economic crisis, the growing deployment of renewable energies and EU energy efficiency action on fuels, eco-design and buildings.

Likewise steady improvements in energy intensity led to an overall decline of 31.5% since 1990, lower than the IEA average and lower than Canada, the US and Australia but at the level of Japan.

It is fair to say the economic crisis led to a strong reduction in energy consumption by industry – a 14% decrease in 2007-12.

Improvements are also being made within the Energy Performance Buildings, the Eco-Design and the Energy Efficiency Directives and EU funds dedicated to energy efficiency.
Progress towards the 20% target will, however, depend on:

- the further implementation of EU energy efficiency policies by member states
- the scaling up of energy efficiency investment to finance retrofits in existing buildings and
- the encouragement of demand-side management by consumers through smart meters and grids.

Depending on the scale of economic recovery, achieving the 20% target by 2020 may be challenging.

Also, vehicle fuel economy has improved on average, with current fuel economy levels in some member states leading world efforts, in step with other global leaders, Japan and China. According to the EC, the emissions from new passenger cars sold in 2013 had already fallen to an average of 127 grams of CO₂ per kilometer, which was below the target of 130 set for 2015.

Going further, the IEA encourages the EU to tackle emissions from heavy-duty vehicles.

EU fuel economy policy can be developed to enable an innovative vehicle industry, including electric and alternative fuel vehicles, while helping to ensure future access to world markets.

Global growth in electric vehicle sales has been faster than expected and some manufacturing is occurring in Europe.
But like I said, it is not all good news. Allow me to be frank about problematic areas and what needs to be solved by the incoming EU administration.

The EU’s share of renewable energy in final energy consumption increased to 14.1% in 2012, up from 8.7% in 2005.

IEA analysis shows that trends to 2020 will lead to a further growth in electricity generation from renewable sources. However, there may be a shortfall towards the 2020 target of around 105 TWh, or 9%. Solar PV and bioenergy growth are ahead of expectations, while the deployment of wind power, notably offshore wind, is lagging behind. Some member states might be unable to meet their targets, unless policy initiatives are taken to stimulate the market in some countries and for some technologies.

The new Commission President Juncker and his team have said they want to make Europe a global leader in renewable energy. This seems to be unrealistic. We have seen strong growth in renewables in China and other emerging economies over the last three years. Globally, renewables power generation increased by 50% in 2005-13, with the share in electricity reaching 22.3%. The share of China jumped from 12% to 26%. As renewables have developed more rapidly in emerging and developing economies, the EU share of global non-hydro renewables actually shrank in 2005-13, from 41% to 39%. This share is expected to fall further to 27% by 2020, despite continuing growth in the EU.
The EU has been on a learning curve when it comes to the deployment of renewable energy. In some countries, capacity growth was going faster than the grid development.

And consumers have had to pay the lion’s share, as it’s not everywhere that business pays.

Governments will need to manage this cost. In 2013, subsidies to renewable-based generation reached EUR 52 billion and are to grow to EUR 64 billion in 2025.

While 2020 targets and subsidies have been driving the renewable energy boom, on the downside, the design of the support schemes has been far from optimal. The learning curve is slow. But the good news is technology costs are coming down. The EU is tackling this issue with new state aid guidelines and this is commendable. We should accept that public support will be needed in the transition to a low-carbon economy, but we need to manage the cost. The design must be more cost-effective and least distortive in the energy market.

Despite good progress on decarbonisation, substantial challenges remain. In 2012, the power sector was the largest emitter at 38%, followed by transport at 24.6%.
In addition, the carbon price in the European Union Emission Trading Scheme collapsed from 30 Euro per tonne of CO₂ in 2008 to 6 Euro in 2014. The carbon market did not deliver on the decarbonisation of power generation – this is rather being pushed by national subsidies to energy efficiency and renewable energies.

In fact the EU saw a revival of coal use in power generation, while gas-fired power plants are being mothballed in several countries. Prices for natural gas increased, while coal and carbon prices turned out to be lower than expected. And solar PV, bioenergy and wind power were added to the system regardless of low energy demand. This pushed down wholesale electricity prices. In a system with high renewables, there is also lower utilisation of thermal power plants, which earn less.

Frankly speaking, there is considerable distortion in the electricity market.

Of course an issue of major importance is the integrated market. A fully integrated EU electricity grid is the best tool to manage the cost of the energy transition in the future.

We applaud the work on harmonising rules for cross-border trade and networks, greater independence of regulators and transmission system operators and their co-operation at EU level through ACER and the ENTSOs. The role of ACER will be key in delivering a European regulatory view.

In electricity, the price coupling of the regions has been growing, but market integration is confined to Northern and Western Europe. We have regional markets – there is no internal market yet in the EU, and Central East and Southern Europe are left out. Key interconnections are missing, leaving EU countries as isolated markets, such as Spain, Portugal, Cyprus and Malta, the Baltic states or the Vizegrad countries. Work is ongoing to speed up investment in EU-wide network connections, and these are projects of common interest. This needs to be swiftly implemented.

Next to this, the transformation of the energy system with higher shares of variable renewable energies is on its way, but networks and back-up generation are not yet ready. In electricity, harmonising rules
for trade and network operation has been difficult, as system operation remains largely confined to the national grid. By interconnecting Europe, greater resource pooling and capacity sharing is possible.

There is no need for investment from a national system point of view alone. I will come back to this. Wholesale market opening has not translated to the retail level, which is national in scope, and consumers are not feeling the benefits of supplier switching, as regulated prices and market power by the historic incumbent in many member states persist.

But now let us take a step back from Europe, for the region is not disconnected from the world. Indeed the shale gas revolution in North America, and energy demand growth in Asia, have tremendously changed the global competitiveness picture.

EU refining capacity has declined by 8% since 2008 and 15 refineries have shut down, further restructuring EU crude production.

Lower EU demand, loss of export markets and the gas price gap among the EU, US and Asia, despite recent convergence, is set to remain. EU gas import prices at major hubs such as Netherlands, UK, Germany were around USD 9 to USD 10 per Mbtu, compared to US gas prices of USD 4 per Mbtu and average Asian LNG prices of around USD 12 to USD 15 per Mbtu. In electricity, EU wholesale prices are higher than in the US, but much lower than in Asia.

This impacts mainly industry which uses gas and electricity as feedstock, thus energy-intensive, petrochemical, industries.

The IEA World Energy Outlook outlined in 2013 that the EU share in the global export market for energy-intensive goods, especially for chemicals, is set to fall by 10% across all energy-intensive goods, such as cement, chemicals, pulp and paper, iron and steel. This is more than Japan. At the same time the US and emerging economies are to increase export market shares.
Power generation has seen an investment boom worth USD 100 billion, in particular in renewable energies and gas-fired power generation. Electricity generation from renewable energies increased but electricity demand collapsed in 2008. And fossil-fuel power plants reduced their generation by 260 Terawatt hours to fewer hours at lower wholesale prices.

Ensuring generation adequacy in a system with high shares of variable renewable energy and very low marginal operating costs is uncharted territory. The worst solution would be renewable subsidies and capacity mechanisms at a national level. This will further distort regional electricity markets. Instead, we need to achieve system operation and adequacy at least at the level of the interconnected regions.

Renewables require a major upgrade of the EU transmission system and this is nowhere near on track.

Nuclear capacity is around 30 years in the EU and new environmental rules oblige us to close down old coal plants. Today, they ensure baseload electricity supply, with shares of 28 and 27%, respectively. How will Europe replace these retirements, representing 501 Gigawatts? The IEA expects investment needs of 2.2 trillion US dollars with capacity additions of 738 Gigawatts needed up to 2035.

Nuclear is the largest low-carbon source of electricity. And let us be clear, the decline of coal is unavoidable from a climate change perspective. Slow progress of CCS in the EU means slow progress on clean coal. With almost no investment in clean coal and new nuclear, we are converging towards a renewables and natural gas system. The EU should maintain diversity and baseload.
Import dependence is on the rise with fast-declining domestic gas production and LNG imports at a record low, with 18% of gas imports – or 46 bcm in 2013, compared with 87 bcm in 2010. The utilisation of LNG terminals in Europe is low, averaging 24%, leaving 70% spare capacity.

Pipeline imports to Europe, notably Russian gas imports through Ukraine, mostly through the new Nord Stream pipeline, have increased from 145 bcm in 2010 to 167 bcm in 2013. The EU is set to remain dependent on Russian gas for some time. That is the reality.

Two obstacles prevent the EU from diversifying its gas supplies. First, access to storage and LNG is hampered by a lack of interconnections. Second, the EU faces growing competition for LNG in international commodity markets, and higher exposure to price differentials among Asia, North America and the EU.

The 2009 gas crisis also showed the key importance of gas storage in Italy, Germany and Austria. In the aftermath of the 2009 crisis, the EU reformed its gas emergency policies and benefits from several new gas pipelines and reverse flows, higher LNG import and gas storage capacity.

So what does the future hold for Europe?

Upstream underinvestment in the Middle East including Iran, Iraq, and Qatar, as well as the Eastern Mediterranean and North Africa, will affect new gas supplies.

LNG remains the most credible diversification option, and the medium-term outlook is good for new LNG. US and Australia will become LNG exporters, and so will Canada.

Also, shale gas perspectives in the EU are gloomy. Europe could potentially develop up to 80 bcm of unconventional gas by 2035 under the conditions of a supportive regulatory and political framework and sufficient public confidence. International experience on shale gas production increases and many best practices could be applied also within the EU.
In terms of oil, the EU is importing increasing amounts of diesel and kerosene while exporting gasoline. This growing imbalance in oil demand is also the result of taxation which favours diesel.

Since 2008, EU crude processing capacity has decreased by around 8% with 15 refineries closing and three reducing their output.

There is another trend boosting Europe’s import dependence: indigenous crude oil production in the EU has been falling markedly, declining by more than 50% over the last decade, thus at a faster rate than the decline in EU demand.

That said, oil security levels are good. The EU currently imports crude oil from a range of sources. At the end of 2013, the EU held emergency stocks of 100 days of net imports. The EU revised its Oil Stocks Directive in 2009.

The EU is exposed to global oil product disruptions, but also dependent on Russian crude oil by pipeline. Over one-third is supplied by Russia via pipelines, and certain EU members are highly dependent on these imports. Diversification of pipeline supplies is key, too.

Despite the overall alignment of EU and IEA rules, the oil stock monitoring carried out by the EU and the IEA will need to be closely co-ordinated. This can ensure an effective IEA collective action.
But let us turn back to climate goals.

EU 2030 targets are very ambitious. Looking at the lessons learned from the 2020 targets, we have a long and costly transition ahead, if no new measures are put in place.

As member states adopt different energy policy choices and decarbonisation pathways towards 2030, a strong “Energy Union” is needed to achieve the EU 2030 goals. But let’s be clear: such a union should not represent a buyer’s cartel. Rather, it should feature an integrated energy market and effective climate and energy policies.

To make the most of the diversity of its energy sources, and to move towards an Energy Union, the EU must better pool its resources within the internal energy market to enhance both energy security and the competitiveness of its industry.

Focus is also needed on the power sector, the modernisation of coal, combined heat and power and nuclear; and competitiveness needs to be factored into energy policy. The transport sector will also need to be linked to energy policy. It remains unclear what the 2030 framework will bring for biofuels.

An EU-wide RES target of at least 27% requires new implementation tools, but no rules are in place, and uncertainty remains around the perspective for renewable heat and transport. When setting up the governance for the 2030 EU wide target, the EU should improve the tracking of subsidies, not only renewables, and re-think the support scheme design, based on the lessons drawn from the 2020 policy.

The EU indicative target of a 27% reduction of energy efficiency is equally ambitious. The IEA is supportive of increasing the ambition towards 30% for two reasons: 1) multiple social and economic benefits of energy efficiency are yet to be evaluated and 2) the technology and economic conditions are likely to change.

Meeting multiple energy policy objectives requires a close alignment of all policies, coordination of targets and measures. The 2030 framework will need to embrace stringent coordination between national and EU and across EU energy, climate, industry, trade and competition.
And with that, let me turn to our final recommendations.

It is time to reconcile energy and climate objectives with economic growth and energy security. The IEA welcomes the new approach that the European Commission is taking. Commissioner Arias Cañete will make it happen! Lower compliance costs from an integrated energy and climate policy are essential measures to managing the cost of the transition towards a low-carbon economy.

There are many security benefits from energy efficiency and renewables. They are improving competitiveness of the EU industry. Climate and energy need to go hand in hand.

To achieve these objectives, the trade-off between public intervention and competitive markets should be reconciled by ensuring that public intervention is cost-effective and least distorting. Tracking all energy subsidies is a first step to effectively manage distortions.

Let me stress again the importance of a stronger EU-ETS – it needs to adjust to changing economic development and abatement policies. The IEA recommends a swift EU-ETS reform along with proposals to support coal-to-gas switching, and some investment in renewable energies thus lowering the need for subsidies.

We should not overpromise on short-term carbon markets – the EU ETS alone is not sufficient. Sector specific policies to remove non-economic barriers are needed to boost investment in low-carbon technologies, such as nuclear, CCS and renewable energies.
The European electricity and gas markets also need further integration.

More cross-border trade offers benefit from capacity – in the form of storage, LNG, and backup – and diversity in the EU. Interconnections are vital. Still a lot remains to be done, as capacity actually declined at some borders and congestion remains high.

The electricity system has to accommodate variable renewable energies. This requires greater integration of intra-day and balancing electricity markets, system operation and adequacy at the level of interconnected systems. Some TSOs are already working together, but there is neither formal framework nor transparency on reliability. To secure investment in the coming decade, market rules need to remunerate generation depending on the time, location and contribution to the system.

In terms of gas, next to ensuring full access to storage and LNG across the borders, action needs to go beyond the EU and continue the push for diversification, through LNG and new supply sources. The Southern gas corridor is a success in this respect and should be scaled up. At the same time, unconventional gas is a good measure, where it is possible.

In an internal energy market, wholesale market opening should benefit consumers. Regulated retail prices that exist in a number of member states need to be phased out and demand-side responses activated, so that consumers can enjoy the benefits of greater choice.
Nuclear remains the largest low-carbon source in the EU electricity mix. But half of the EU’s 131 nuclear power plants have been operating for more than 29 years. The ageing of the EU reactor fleet requires decisions on new plants, safety, upgrades and uprates, licence extensions, retirements, and decommissioning as well as spent nuclear fuel and radioactive waste management.

EU-wide rules to support these decisions are important given the significant role nuclear plays in the EU and the safety and security concerns linked to nuclear waste management.

Let me conclude by stressing the need for technology innovation and better finance management at the EU level. We applaud the increased energy RDD funding under the Horizon 2020. Around EUR 10 billion were available to energy RDD in 2007-14.

However, the demonstration and deployment funding showed mixed results – demonstration plans for CCS or offshore wind have not gone ahead. The New Entrants Reserve or the European Energy Programme for Recovery show that we need to leverage large-scale funding at the EU level and higher-risk guarantees. Today, the EIB works like a private bank and does not take on board any risks – the EIB should finance the projects that are most difficult. EU energy funding should be regularly monitored, in particular its contribution to competitiveness and innovation.

And so, Commissioner, ladies and gentlemen, I trust our review and recommendations provide you encouragement for the work that lies ahead. After your remarks, Mr Ristori, I would be happy to take questions.