

What to expect from COP 21

Simone Mori
Head of European Affairs
Enel Holding

Bruegel, November 26th 2015

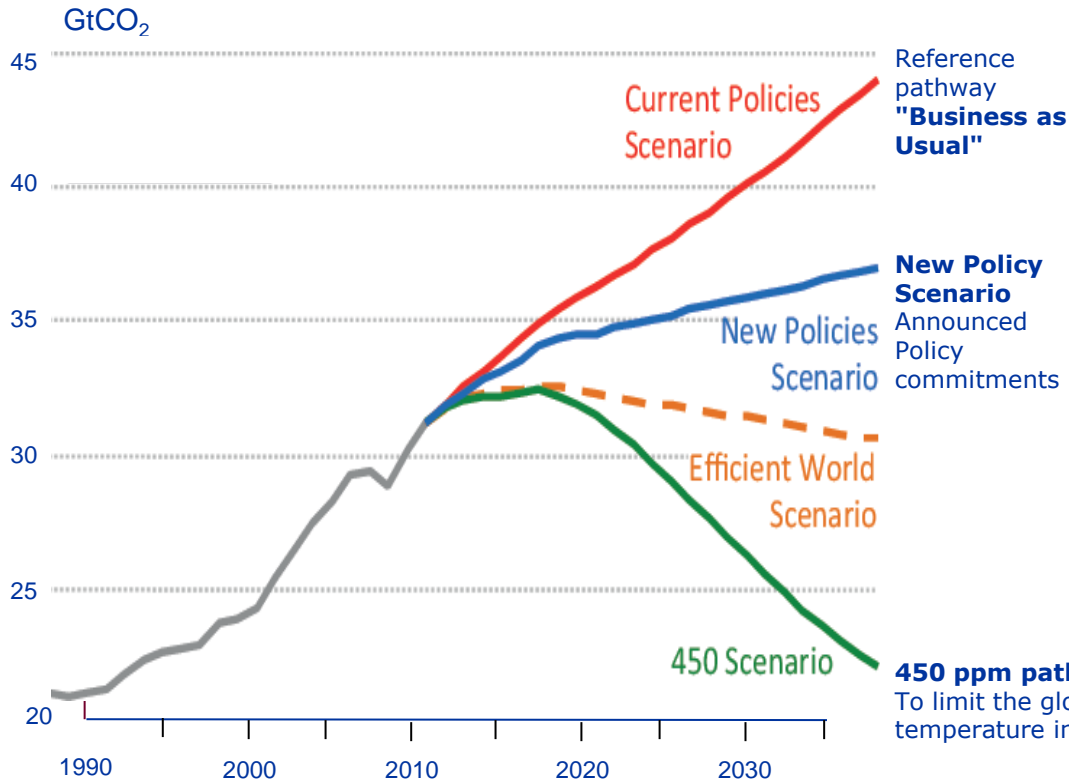


The Climate Challenge

... requires a key role for the energy sector



CO₂ Global emission pathways

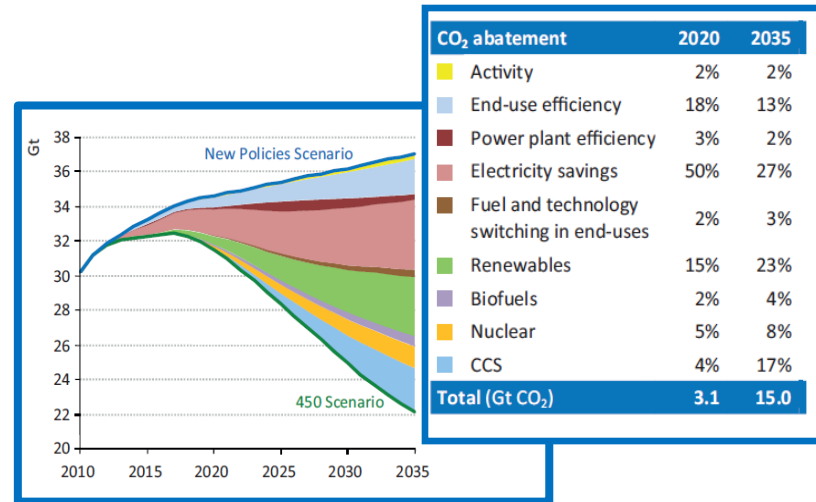


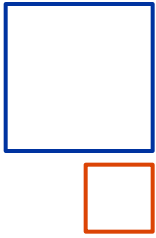
Reference pathway
"Business as Usual"

New Policy Scenario
Announced Policy commitments

450 ppm pathway
To limit the global average temperature increase to 2°C

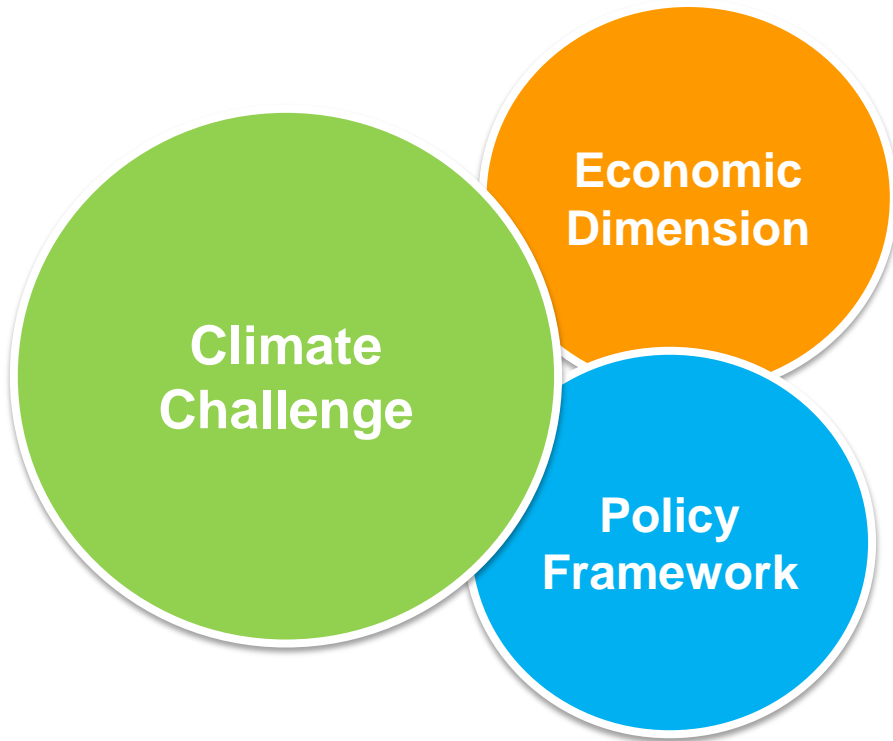
Energy sector contribution





Implementing Effective Decarbonization

Actions revolve along two key-dimensions



New business opportunities..

- *Renewable sources*
- *Energy efficiency*
- *Grids & infrastructures*



An enabling policy framework..

- *Political ambition*
- *Financial leverages*
- *Carbon pricing*



PARIS2015
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GREEN
CLIMATE
FUND

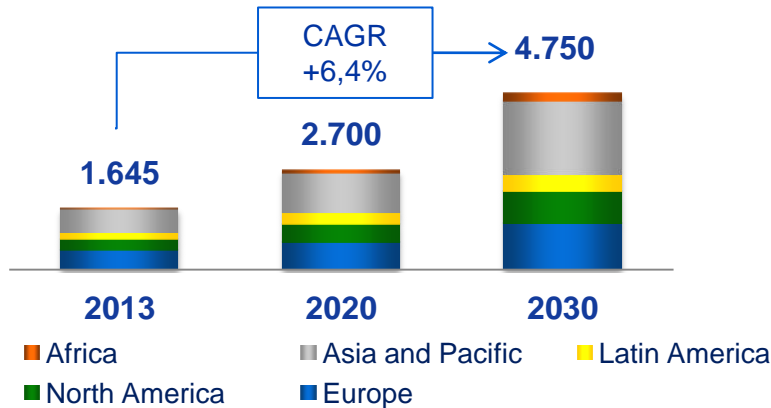


Renewable and Energy Efficiency

Geographical and technological opportunities



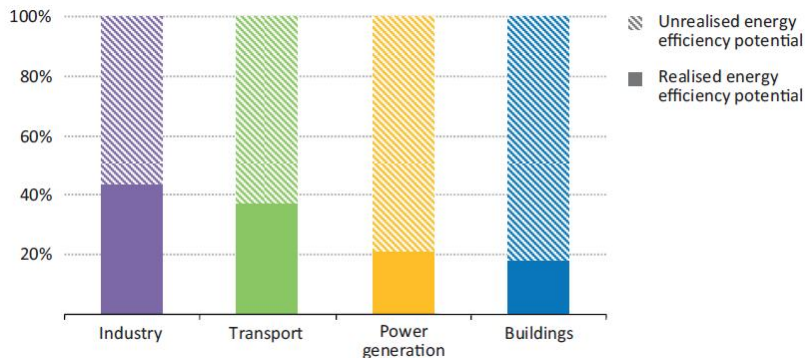
Projected renewable capacity growth (GW)



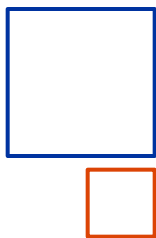
- A significant growth at global level
- Important investment opportunities in Latin America, Middle East and Asia: areas with high potential still not exploited
- Key role played by mature renewable technologies such as Wind, PV and Hydro

Expected contribution of energy efficiency

Long-term energy efficiency economic potential by 2035



- The electricity sector will play a major role in improving the energy efficiency, through :
 - ✓ Electric cars and rail transport
 - ✓ Efficient lighting
 - ✓ Smart metering and digital grids for wide integration of final users
 - ✓ Heat pumps and induction cooking



2015 Climate Deal key issues

Private sector perspective



A number of elements in the Paris Global agreement will play a key role in shaping private sector investment trends:

- **The level of ambition of national targets** will determine to what extent and how quickly national energy sectors will decarbonize
- **The legal form of the new agreement** will influence the extent to which governments will be asked to prove the achievement of their low-carbon policy goals
- **The geographical scope** will determine the pattern of global low carbon investments as well as have an important impact on energy related commodities
- **The risk of a shrinking role for market instruments** and linking provisions within the global framework may inhibit a much needed mobilisation of private sector economic resources
- **Climate Financing** will play a crucial role in mobilizing private capital in low carbon technologies and energy infrastructures

Emerging Business initiatives



WE MEAN BUSINESS
economic
opportunity through
bold climate action



Assessing Ambition (INDCs)

Coverage has widened ambition is missing



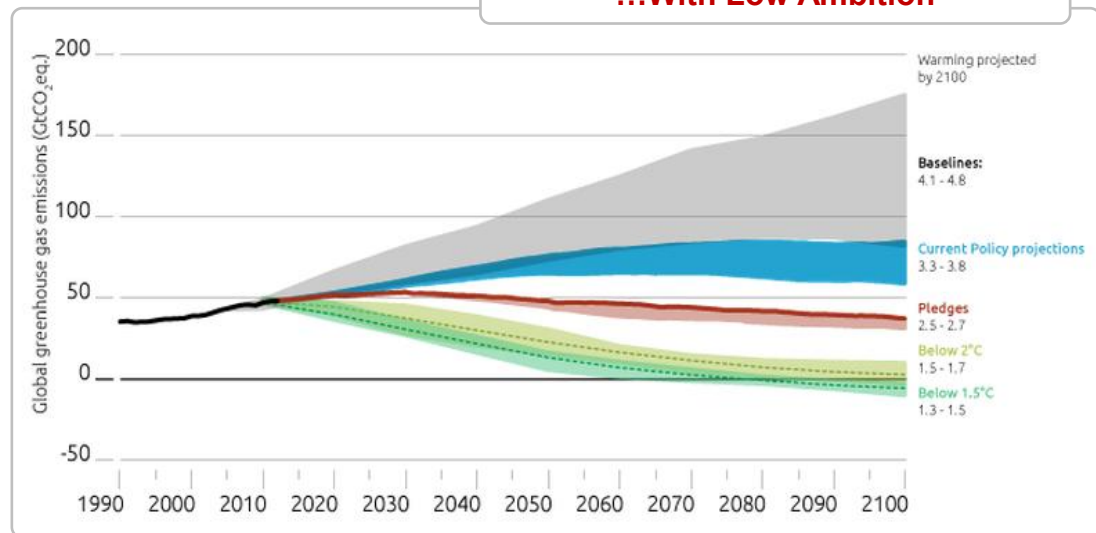
Many pledges....



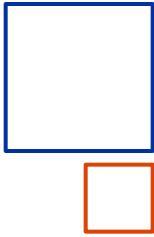
Almost 150 submissions covering ~95% of global emissions in 2010



...With Low Ambition



**Towards 2.7°C
Need to double current pledges to stay in line with the 2°C goal**



Mobilizing Climate Finance

The need to enable private sector leverage

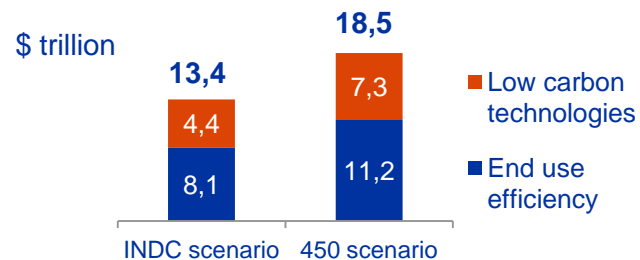


- **\$18.5 trillion in low carbon energy investments are needed by 2030** to get the world onto a 2°C emission path. Mitigation and adaptation actions require 100 bn USD/yr by 2020
- **Current investment path falls short of reaching climate stabilization goal** - Today's policies and market signals are not strong enough to switch investments to low carbon sources at the necessary scale and speed. Only 10.2 bn USD have been announced so far to the Green Climate Fund (GCF)
- **Business involvement, carbon markets and a transparent governance of the GCF are required to efficiently leverage private sector investments**

Mobilizing climate finance

- ✓ **Around half of INDC include explicit energy-focused targets** in the form of increased renewables deployment (40% of submissions) or improved energy efficiency (one-third of submissions)

Cum. global energy sector investments 2015-2030



Promoting Carbon Pricing

Mobilizing markets and private capital



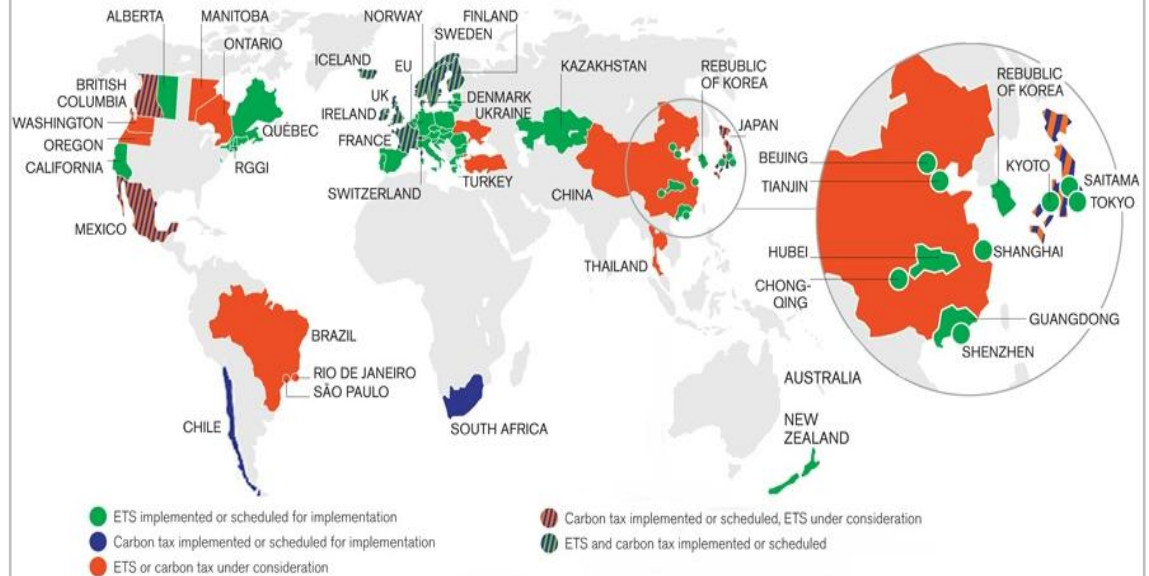
Private sector support to carbon pricing

“Enel strongly supports the policy of putting a price on carbon as a necessary and effective measure to reduce emissions”
 (Enel CEO F. Starace)

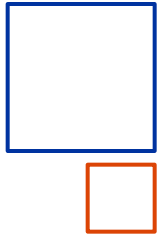


“Caring for Climate” UNFCCC, Global Compact

Public policies - carbon pricing initiatives

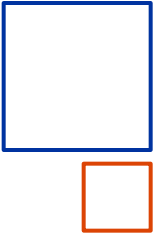


In 2015, about 40 national jurisdictions and over 20 cities, states and regions, representing almost a quarter of global GHG emissions, are putting a price on carbon



Back-up





From the vision to the strategy

Enabling action at national level



Renewable sources



RES deployment to ensure GHG emission reductions, energy security, enhancement of local air quality. As RES technology mature their promotion should rely clear long-term price signals complemented by on competitive tendering mechanisms

Conventional generation

Best available technologies for thermal power generation to ensure cleaner and more efficient combustion plants



Smart and digital solutions

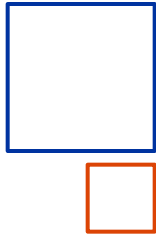


Development of Energy infrastructures smart grids, through digital solutions will allow to reduce costs for consumers and play a key role in enabling the integration of RES in electricity systems

Energy Efficiency

Promotion of Efficient electric technologies (e.g. heat pumps and electric vehicles) in sectors characterized by high saving potentials and the presence of non-economic barriers





The 2015 Climate Deal

Enel Group's position



- **Enel Group is fully committed to decarbonise its fleet**, reaching carbon neutrality even before 2050
- **Enel supports the achievement of a strong 2015 Climate Deal and the development of long term ambitious reduction targets** – The Group is playing an active role in leading key initiatives to prepare the ground for the upcoming Paris COP and a climate deal ensuring
 - ✓ **Climate Ambitiousness** - Ambitious INDC will stimulate investments in low carbon technologies and energy infrastructures
 - ✓ **Governance** - A Common monitoring and reviewing framework with a periodic “pledge review” will enable long term investments in the energy sector
 - ✓ **Climate Financing** – maximise financing facilities for climate action will allow a full engagement of the private sector mainly through carbon markets. The Green Climate Fund has to play a significant role in financing climate action and energy infrastructure development



FINANCIAL TIMES

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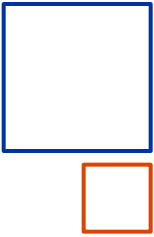
Enel pledges to tackle climate change

James Politi in Rome

“Enel has pledged to phase out new investments in coal and lead the charge among global energy companies for a global climate pact this year”



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The science-based carbon budget logic

How soon before 2050 the coal phase out?



The Logic

- The world has used over a third of its 50-year carbon budget of 886GtCO₂, leaving 565GtCO₂
- All of the proven reserves owned by private and public companies and governments are equivalent to 2,795 GtCO₂
- **Only 20% of the total reserves can be burned unabated, leaving up to 80% of assets technically unburnable**

Carbon dioxide emission potential of fossil fuel reserves

