



E3G

Europe as a Driver of Global Change

Zero Conference

Nick Mabey E3G, November 2018

Takeaways



Europe has been the vital climate leader for two decades but success in emission reduction means that it is no longer a “high carbon” superpower.

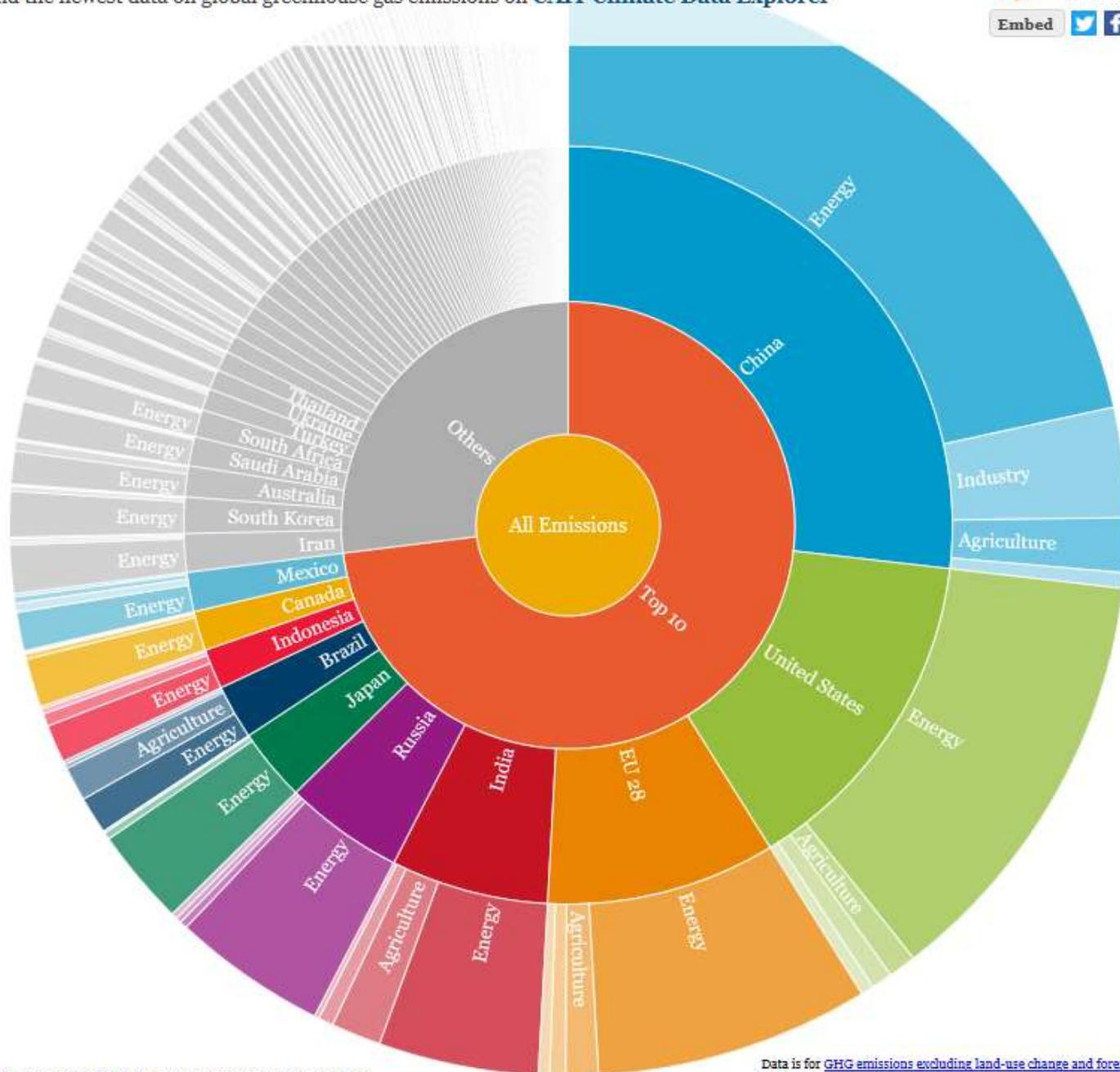
Europe must maximise the impact of its role as a zero carbon pathfinder. Europe needs to change and grow its role in four ways:

1. Driving **technological innovation** in difficult sectors
2. Pioneering **systemic market & infrastructure** transformations
3. Building a **robust social contract** for the climate transition
4. Investing in innovative **real economy diplomacy**

Climate leadership is popular, deliverable & in Europe’s short & long term interest. The barriers are confidence and incumbency.

Explore the World's Greenhouse Gas Emissions

Find the newest data on global greenhouse gas emissions on [CAIT Climate Data Explorer](#)



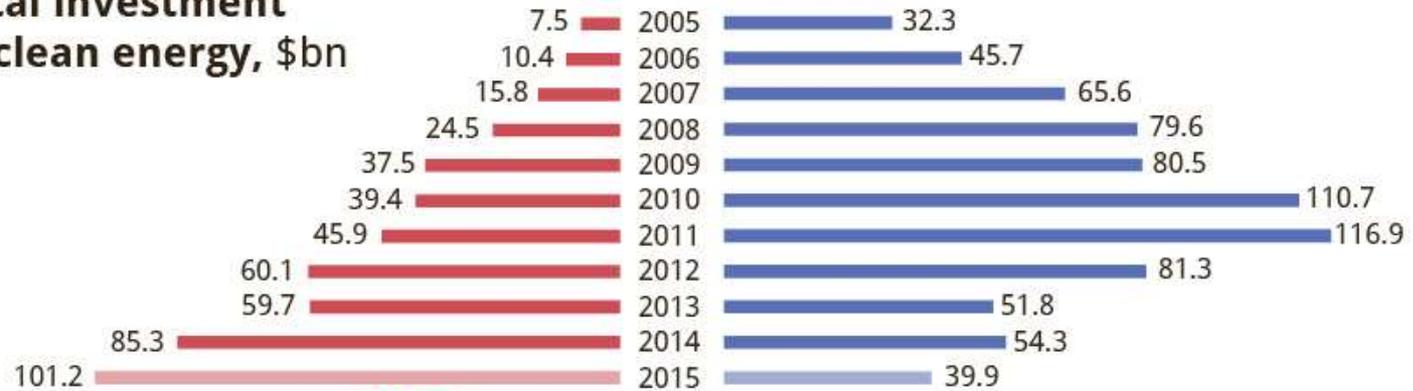
Europe sparked the clean energy revolution but China is taking it to scale



China

China has already overtaken the EU in clean energy investment

Total investment in clean energy, \$bn



In 2015 China spent **2.5x** more on clean energy than the EU

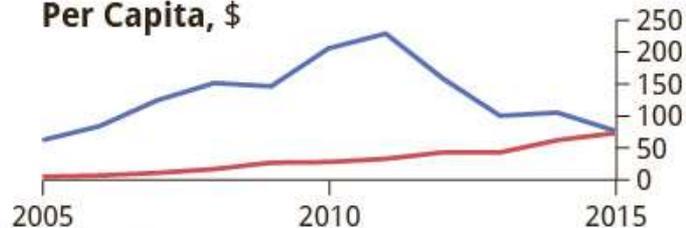


EU

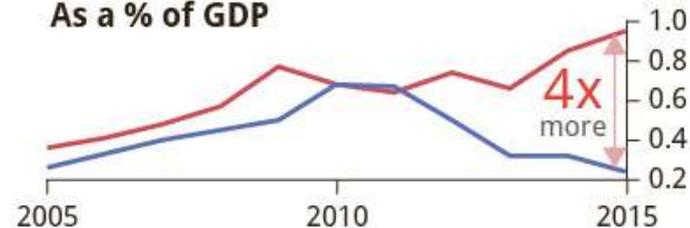


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Per Capita, \$

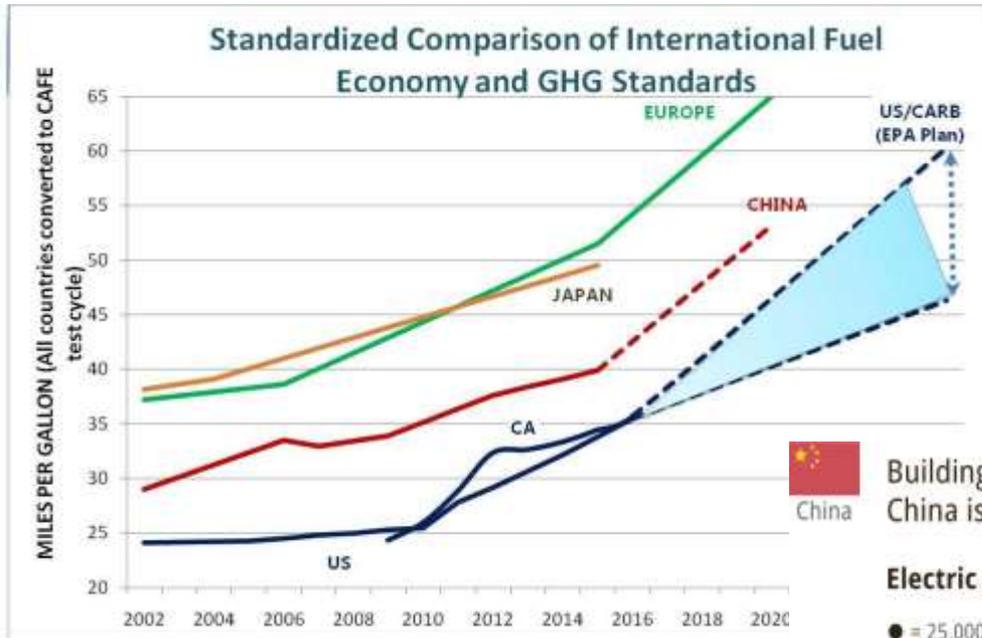


As a % of GDP



Sources: BNEF; Xinhuanet

EU drove global car efficiency standards but China is driving EV market growth



EV Market Growth



China

Building on its dominance in wind and solar energy, China is taking up its next clean energy challenges



EU

Electric vehicle sales*

- = 25,000 sold
- = China
- = EU

Planned increase of **10x** from 2015

In 2015, electric vehicle sales in China were 50% higher than the EU



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2011

2012

2013

2014

2015

2020

Sources: EU Commission; EV Obsession; Auto Sohu; Autohome; news.163. *including Plug-in Hybrid electric vehicles

Incremental Vehicle Efficiency Improvement

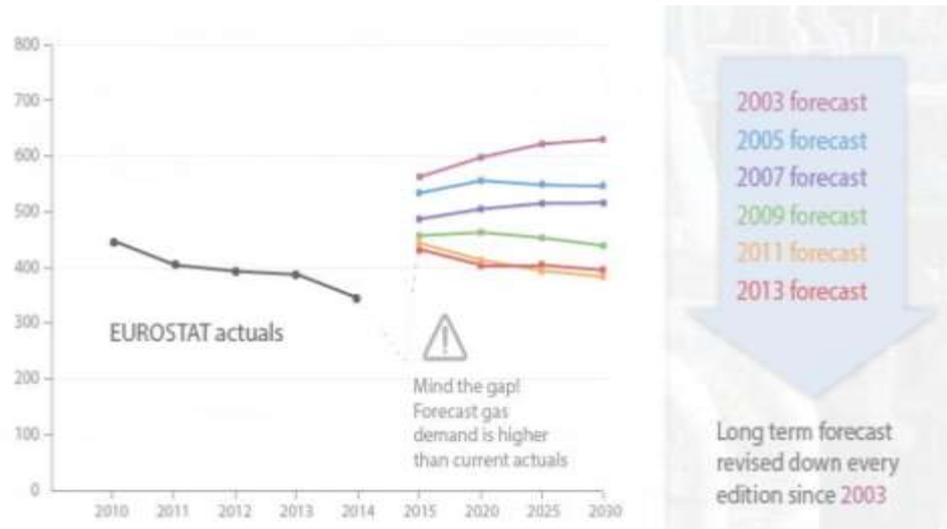
Europe remains a global cleantech leader & can drive innovation in frontier areas



- Europe has 7 of the top ten countries in the 2017 “Global Cleantech Innovation Index”*; and 12 of the top 20 countries.
- **Buildings:** using the zero energy buildings directive to drive innovation in construction, heating and cooling, smart systems etc.
- **Industry:** using RD&D and public procurement to drive process improvements and circular economy markets. Low cost solar in resource extracting countries is the new competitiveness threat.
- **Agriculture:** pioneer new technologies in high emitting livestock sectors
- **Aviation & Maritime:** use EU domestic markets to shape global supply chains and drive technology improvements

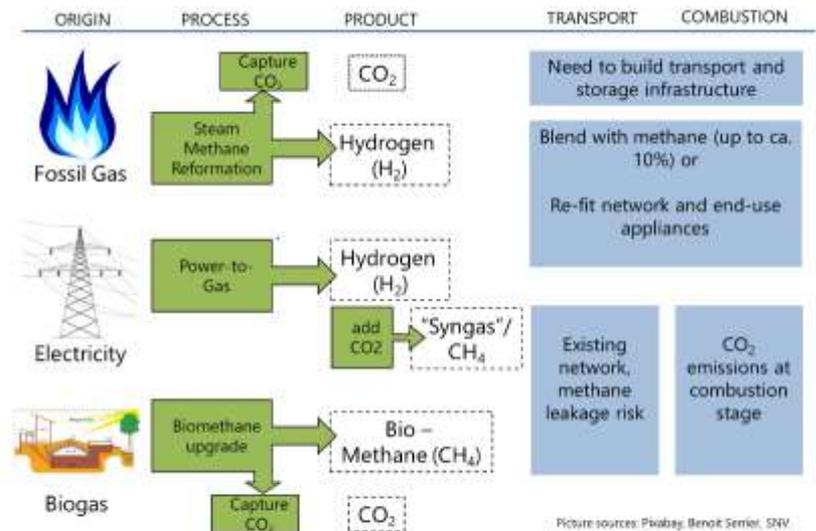
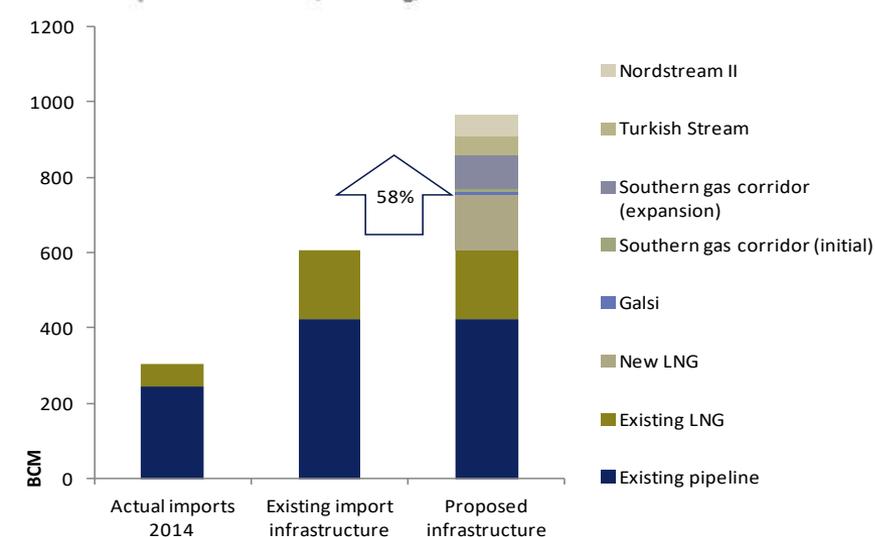
* http://info.cleantech.com/rs/151-JSY-946/images/Global_Cleantech_Innovation_Index_2017_FINAL.pdf

EU is now facing the need for systemic changes in core infrastructure systems



- EU gas demand is well below industry and EU projections due to impact of efficiency and renewables policy
- Planned Import capacity is 300% > than demand
- Potential for “green gas” in current network is highly contested

Source: European Commission, Sandbag, E3G



Source: E3G

Europe can shape the regulatory software of the net zero economy



- **Power Market Reforms:** the new energy package lays the foundation for a fundamentally different power market shaped by consumers, decentralised energy and digitalisation.
- **Integrated Energy Infrastructure:** the convergence of power, gas, heat, building efficiency and transport energy systems requires fundamentally different regulation and planning.
- **Circular Economy:** driving cradle to cradle markets in Europe will improve resilience and competitiveness
- **Sustainable Finance:** the Sustainable Finance Action Plan starts the process of comprehensive reorientation of the European finance system to support European goals.

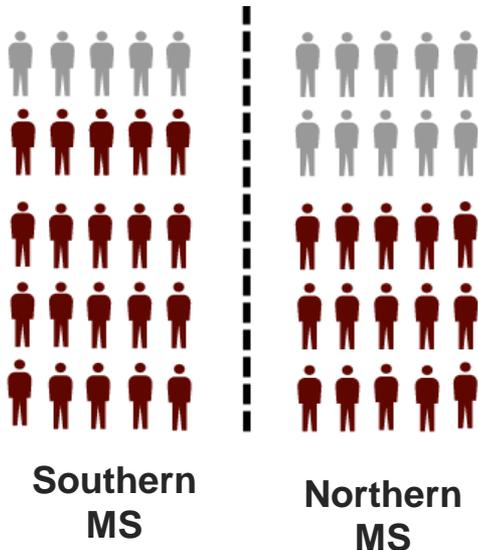
Europe is not the only innovator but has a unique combination of ambition, social licence, market scale & “brand” to shape global norms.

European citizens support climate leadership & action to make Paris work



91% of citizens see climate change as a serious problem

Climate impact experiences increase citizen concern

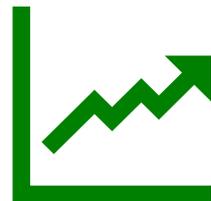


+90%



Support ↑ national low carbon action by 2030

+80%



Agree tackling climate change boosts economic growth

93%



Think fighting climate change will only be effective if all countries act together



COAL PHASE-OUT IN THE EUROPEAN UNION 2017

TOP 10 PLANTS

- 1 BELCHATÓW
POLAND 2027
- 2 NEURATH
GERMANY 2029
- 3 KOZIENICE
POLAND 2028
- 4 NIEDERAUßEM
GERMANY 2028
- 5 OPOLE
POLAND 2029
- 6 JÄNSCHWALDE
GERMANY 2024
- 7 DRAX
UK 2025
- 8 BRINDISI SUD
ITALY 2028
- 9 BOXBERG
GERMANY 2029
- 10 JAWORZNO 3
POLAND 2028



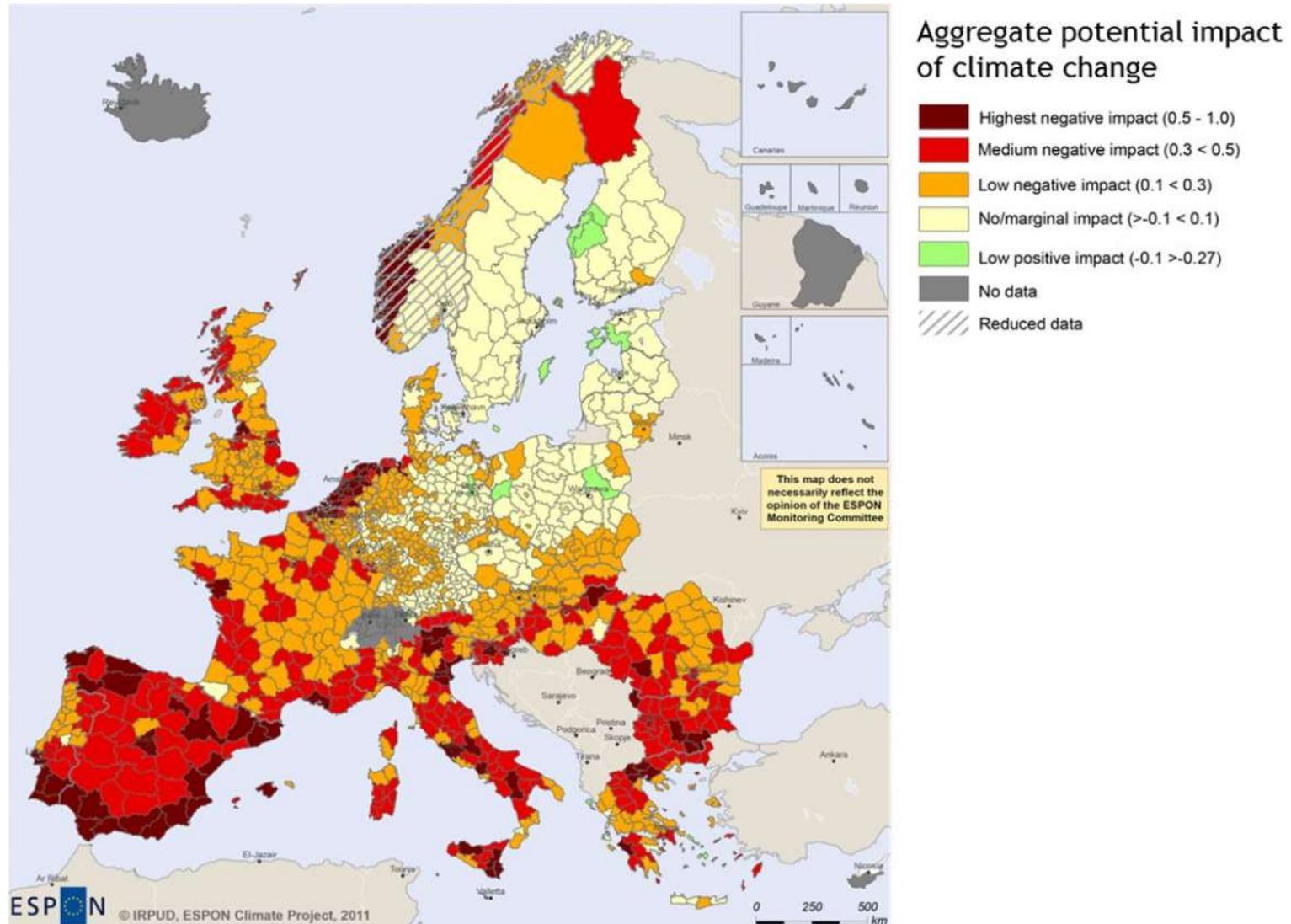
REGULATOR PERSPECTIVE

Germany and Poland must close most coal capacity by 2030s.

Social & political issues dominate decisions

New models of “just transition” and industrial policy must be developed

Climate vulnerability varies hugely across Europe. A new social contract for transition is critical.



Europe has unique assets to drive “real economy diplomacy”

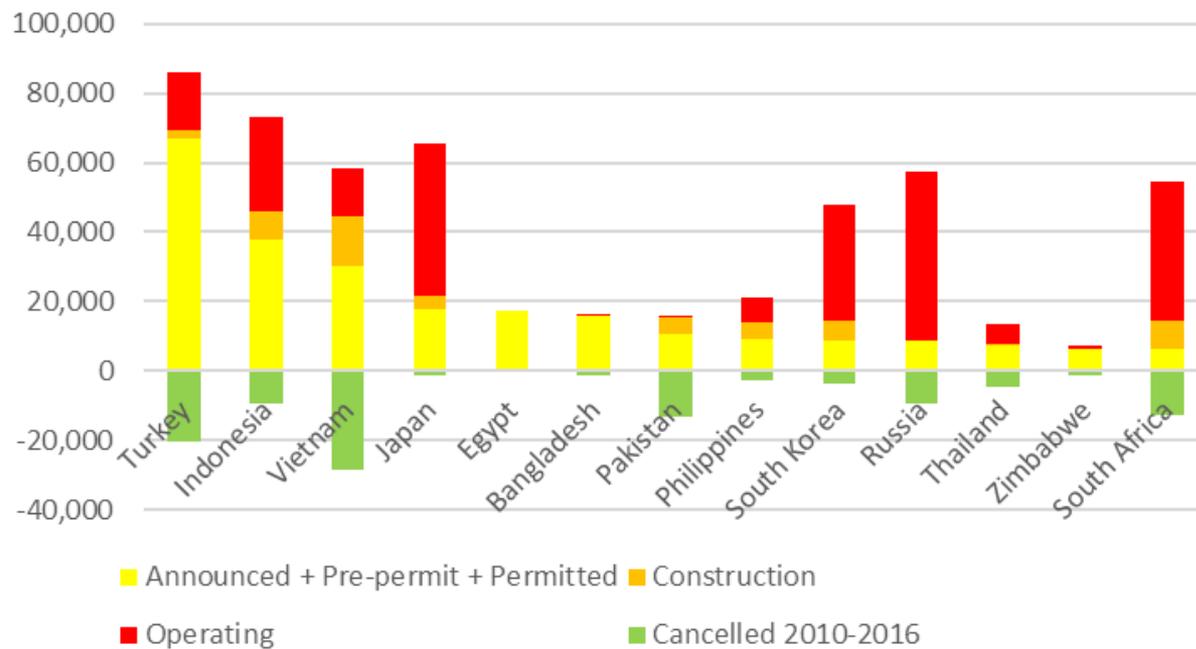


- Europe is the world’s largest provider of public climate finance and development aid
- Europe has large shareholdings in global development banks
- Europe has developed a unique range of global partnerships to help drive resilient, low carbon development



Climate needs to be at the heart of Europe's geo-political strategy

Coal plant pipeline (excl. China and India)

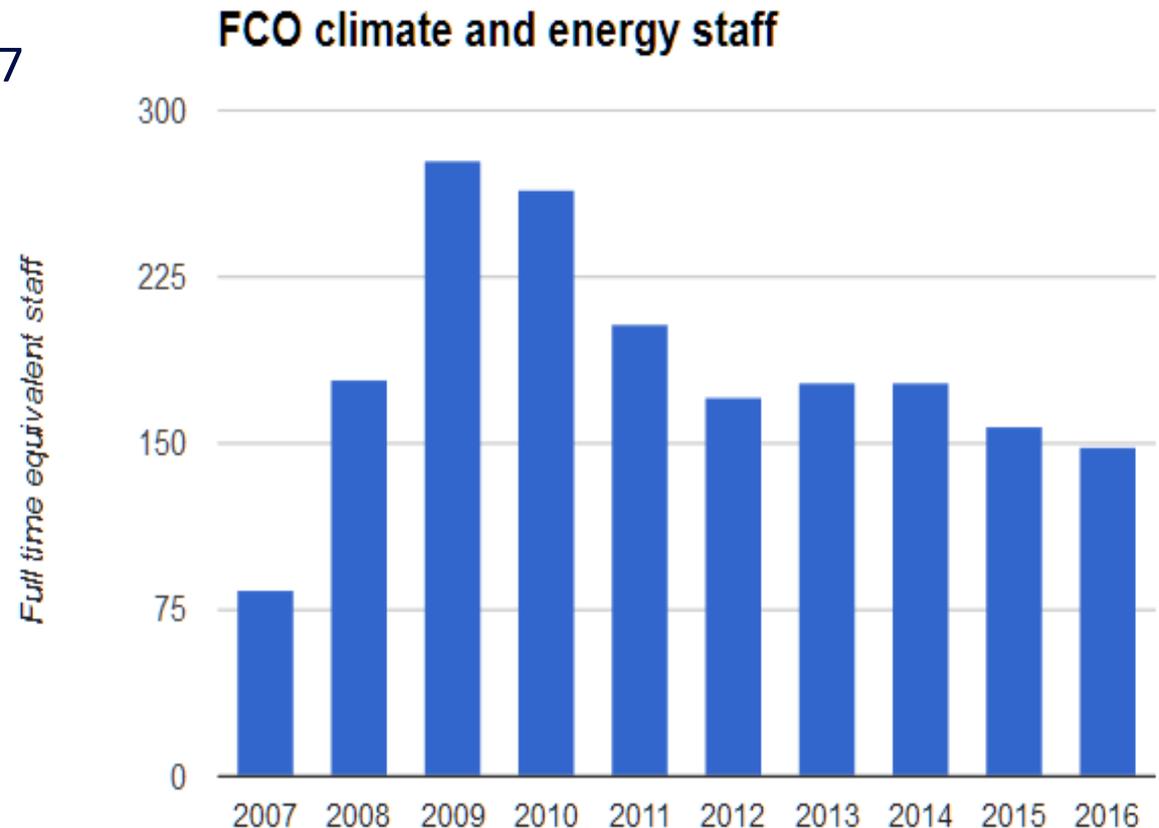


- Coal plants planned in BRI countries would break Paris carbon budget
- Public funding coming from China, Japan and Korea
- China discussing “green” BRI. Japan, Australia and US discussing fossil investment alliance?
- **Can EU support China's BRI on climate without undermining broader foreign policy goals?**

Europe needs more “climate diplomats” if it wants to influence global policy



- Brexit means EU loses 147 FTE UK Climate & Energy diplomats.
- EEAS has 1 full time climate diplomat (on secondment)
- Other EU MS climate diplomacy teams are shrinking





The Logic of EU Leadership

- Europe is highly vulnerable to unmanaged climate change and needs to keep temperatures 2C>>
- As the world's largest energy importer the EU gains economic stability and geopolitical freedom reducing fossil dependency.
- The European public supports climate action
- Europe has the economic, technical and financial assets to shape the global climate transition
- Europe risks losing its technological edge in global markets it paid to create due to incumbent hesitation to change

In the climate transition slow isn't safe – it is life threatening