

UN Side Event: Carbon Pricing

**Organizers: International Monetary Fund and
World Bank**

**Dec 1, 1:15 -2:45, Le Bourget Conference Centre,
Paris, Room 10**

This session will focus on the role of carbon pricing in meeting mitigation pledges countries are putting forward for Paris and lessons learned from experiences to date.

Welcome Remarks and Moderator

Michael Keen, International Monetary Fund

Presentations

The Honorable Kevin Rudd

**Asia Society Policy Institute and former Prime Minister of
Australia**

Benjamin Delozier

Deputy Assistant Secretary, French Treasury

Ian Parry

International Monetary Fund

Tom Kerr

World Bank Group

Nick Robins

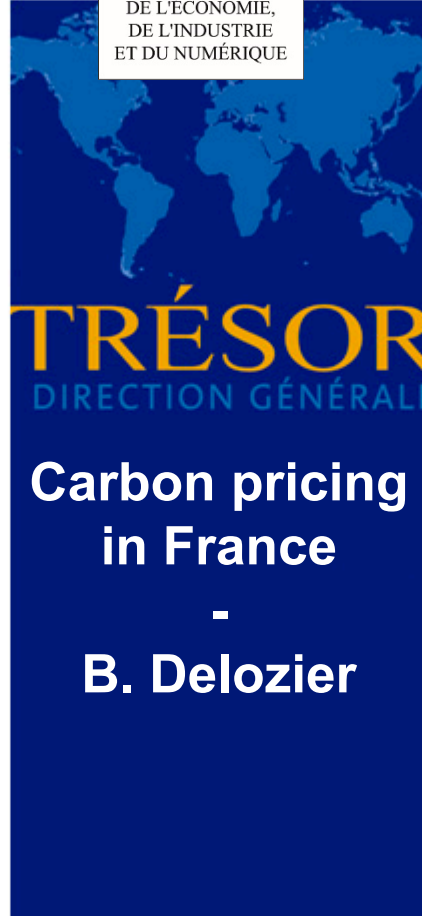
United Nations Environment Programme



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ET DES COMPTES
PUBLICS

MINISTÈRE
DE L'ÉCONOMIE,
DE L'INDUSTRIE
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Nos valeurs : l'ouverture, la loyauté, l'engagement, l'esprit d'équipe

Objectives

▶ European : 2030 Climate and Energy Framework

→ *At least 40 % reduction in GHG emissions compared to 1990 levels:*

→ ETS : - 43 % GHG emissions compared to 2005 levels

→ non ETS : - 30 % GHG emissions compared to 2005 levels

→ *27 % : share of renewable energy consumed in the EU in 2030*

→ *27 % : indicative target on improving energy efficiency compared to projections of future energy consumption based on the current criteria*

▶ France : objectives set by the law on energy transition to support green growth

◆ *Greenhouse gas emissions: -40% between 1990 and 2030, -75% between 1990 and 2050.*

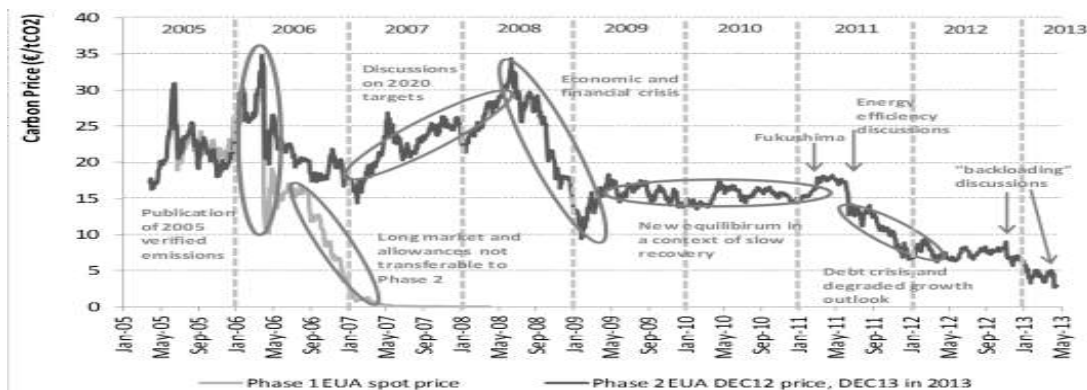
◆ *Renewable share in final energy consumption: 23 % in 2020, 32 % in 2030.*

The EU-ETS : framework

- ▶ The **European Union Emission Trading Scheme** was set up to help the Member States achieve their targets by capping CO₂ emissions from the main emissions-producing industries.
- ▶ Sectors under EU-ETS cover around 45% of the EU's greenhouse gas emissions (2013)
- ▶ It is possible to trade quotas, on the basis of a constant maximum allocation

The EU-ETS : evolutions of prices and reforms

► Evolution of EU-ETS carbon prices



► Two reforms

→ *Backloading decision*

→ *Market Stability Reserve*

► The current surplus of allocations has a downward effect on prices

	Energy Efficiency Directive	Kyoto Off-sets	Total surplus complementary policies not considered in the cap	Downturn and other abatements	RES over Achievement of the 2020 RES target	Total surplus linked to unforeseeable developments	Back-loading	Unallocated EUAs	Total EUA surplus
2014	20	1437	1,457	1,217	10	1,227	-400	-208	2,066
2020	500	1505	2,005	1,900	120	2,020	-900	-881	2,124

Source: IACE – Institute for Climate Economics, based on European Commission data 2015.

At the French level : a carbon tax

- ▶ A CO₂ tax with an increasing path:



- ▶ Introduced on April 1, 2014 on use of gas, heavy fuel oil, and coal; extended to transport fuels and heating oil from 2015 onwards.
- ▶ Taxation based on the carbon content of each fossil energy, added to the existing energy taxes (as a new component)
- ▶ Liables:
 - ◆ *Applied to domestic use of energy products*
 - ◆ *Exclusion of the plants registered to the EU ETS*
- ▶ In 2015 : carbon tax of ~4c€/L of fuel and 2,64€/MWh of gas
- ~90€/year/household (30 € for transport and 60 € for heating)

Carbon tax in France

- ▶ A target price for 2020 and 2030 set by the law on energy transition to support green growth

56€/tCO₂eq in 2020

100€/tCO₂eq in 2030

- ▶ Consistent with the shadow-price applied for infrastructure projects
 - ◆ *Reference values have been updated in the report « Socio-economic evaluation for public investments » by E. Quinet (sept. 2013)*
 - ◆ Initial price = 32 €/ton
 - ◆ To reach 100 €/ton in 2030
- ▶ Same target CO₂ price for private investors and public infrastructure projects

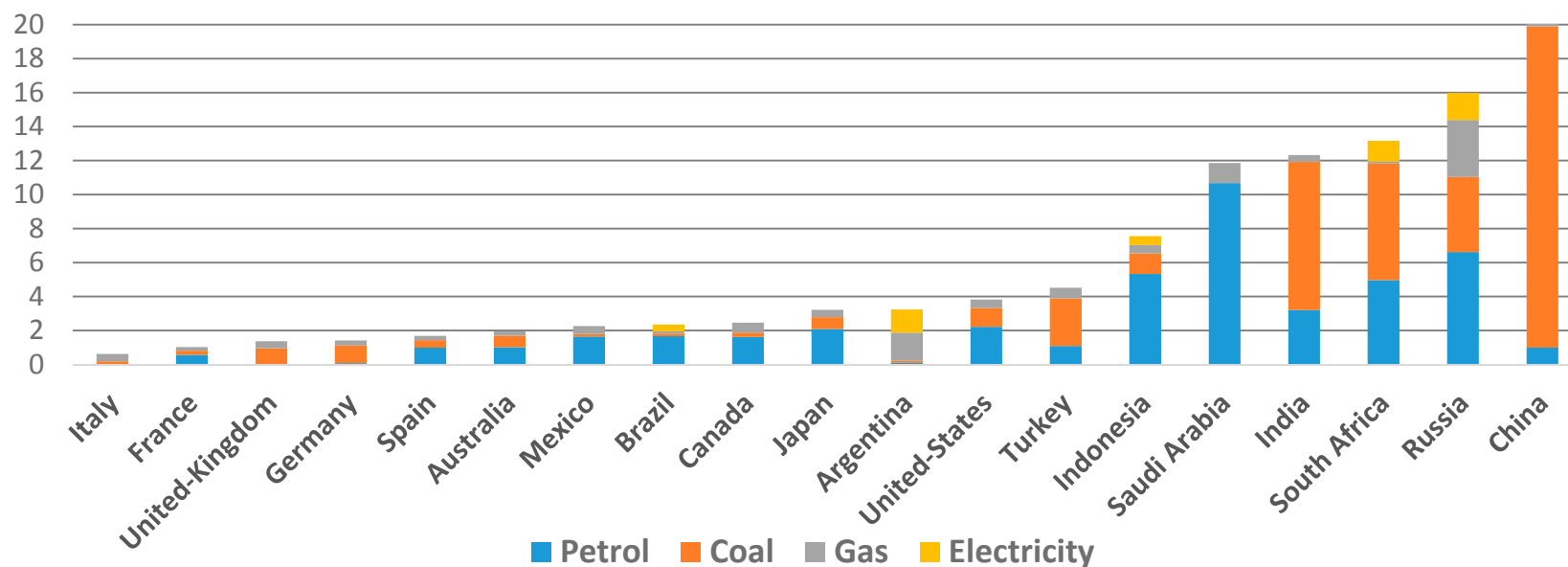
Other carbon pricing instruments – the example of transport

Carbon pricing instruments	Objectives
Carbon tax	Economy-wide reduction of carbon emissions
Shadow-price on carbon for infrastructure projects	Consideration of carbon emissions in public decisions
Subsidies for replacement of old diesel vehicles	Mitigation of social costs of carbon tax
Emission caps for vehicles	R&D incitation

France International engagement

- ▶ Participate to the World Bank “Putting a price on carbon” initiative, 2014
- ▶ Participate in Carbon Pricing Leadership Coalition, 2015
- ▶ Support the Friends of fossil fuel reform , 2015
- ▶ France is among the G20 countries with the lowest level of fossil fuel subsidies (according to IMF definition): 1 % of GDP2015.

Fossil Fuel subsidies of G20 countries (according to IMF, as % of GDP2015)



Thank you for your attention.

Slide 3 – ETS

► Four phases:

- ◆ *2005-2007 (launch period),*
- ◆ *2008-2012 (second phase and first Kyoto Protocol commitment period)*
- ◆ *2013-2020 (new European target set by the 2009 Climate and Energy Package : -21 % for ETS sectors compared to 2005)*
- ◆ *2020 – 2030*

Public instruments towards CO₂ emission abatement: a sectorial approach

Transport

- *Carbon tax*
- *Subsidies for low carbon vehicles (« bonus-malus » scheme)*
- *Emission caps for vehicles*
- *Compulsory incorporation of biofuel*
- *Infrastructure projects: shadow-price on carbon (from 32€/tCO₂eq to 100 €/tCO₂eq in 2030)*

Residential-tertiary buildings

- *Carbon tax*
- *For new buildings: thermal regulation*
- *For existing buildings: subsidies, information program, standards*

Industry and energy generation

- *EU ETS*
- *Renewable energy subsidies : feed in tariff evolving towards premium*
- *Emission caps for polluting plants*

Agriculture and forestry

- *Carbon tax*
- *Subsidies for energy efficient equipments, practice and biomass energy production*

Objectives

▶ European : 2030 Climate and Energy Framework

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→ *27 % RE : share of renewable energy consumed in the EU in 2030*

→ *27 % EE : indicative target on improving energy efficiency compared to projections of future energy consumption based on the current criteria*

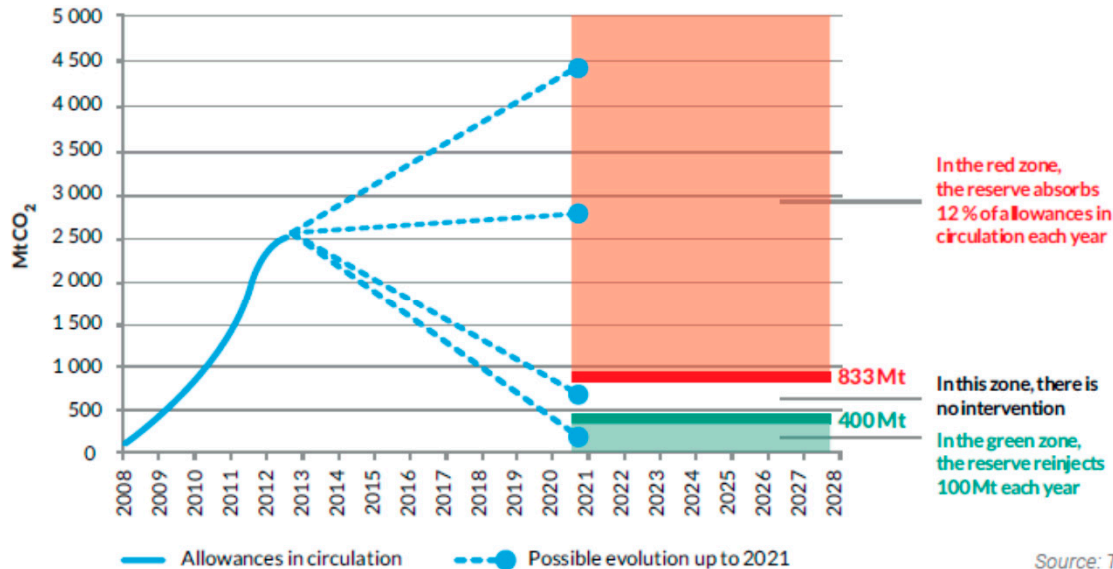
▶ France : objectives set by the law on energy transition to support green growth

- ◆ *Greenhouse gas emissions: -40% between 1990 and 2030, -75% between 1990 and 2050.*
- ◆ *The law also sets a target price of carbon to 56 euros a ton in 2020 and 100 euros a ton in 2030*
- ◆ *Final energy consumption: - 50 % between 1990 and 2050*
- ◆ *Total fossil energy consumption: - 30 % between 2012 and 2030*
- ◆ *Renewable share in final energy consumption: 23 % in 2020, 32 % in 2030 (40 % for electricity, 38 % for heat, 15 % for fuels, 10 % for gas).*
- ◆ *Renewable and recycled heat and cold: x 5 in 2030*

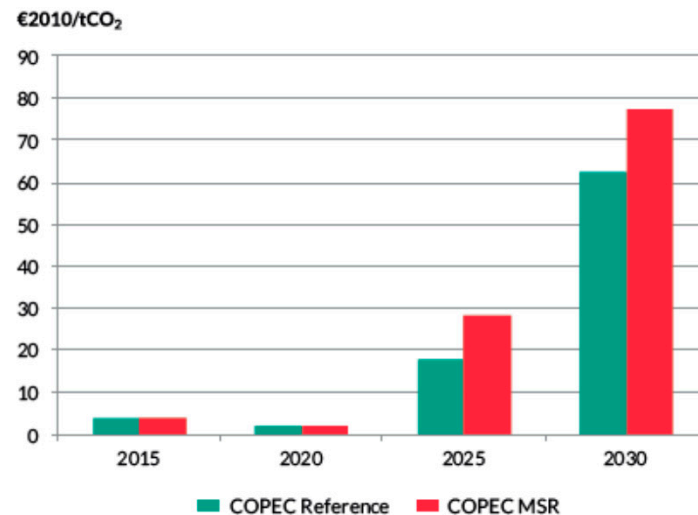
Slide 4 - The recent EU-ETS reforms

▶ The backloading decision

▶ The Market stability reserve



Source: Trotign



Source: Enerdata, POLES model (2015).

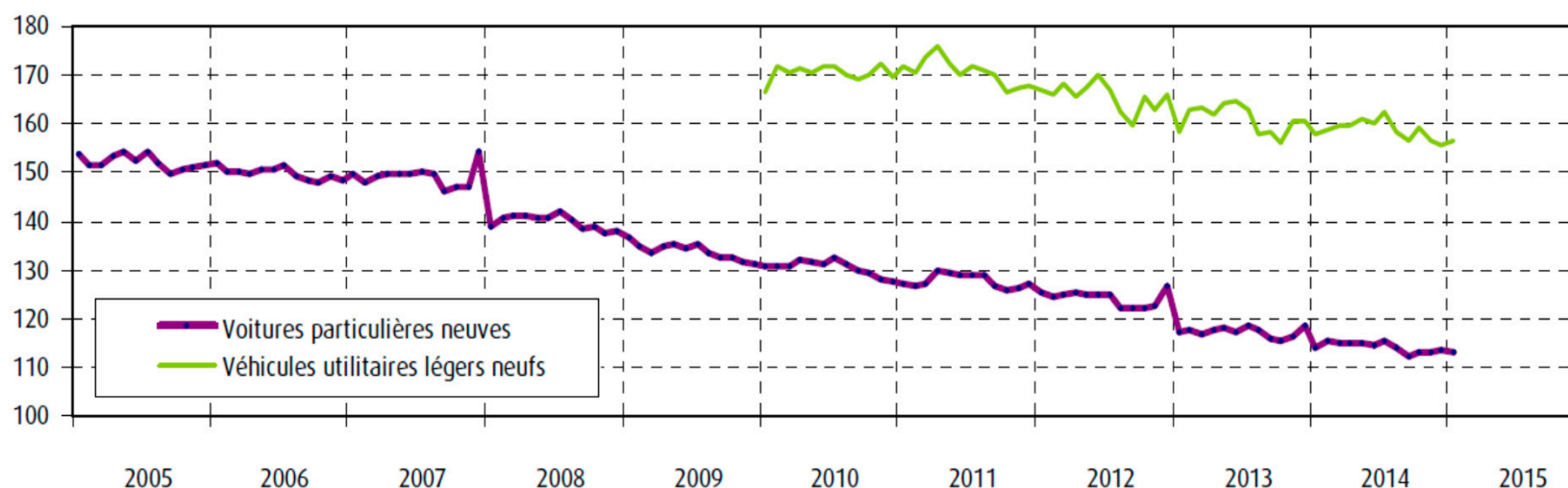
Slide 6 – carbon tax

- ▶ **Before that, a carbon tax project has been planned twice and then blocked by the French Constitutional Council:**
 - ▶ in 2000 a project of General Tax on Polluting Activities for energy products was rejected (the taxation of electricity consumption was one of the reasons).
 - ▶ in 2010 it was considered the bill included too many exceptions.

Slide 7 – Transport Financial incentives for the purchase of low-emission cars

- ▶ Ecological « Bonus-malus » scheme, enacted in 2007
- ▶ Financial incentives for the purchase of cars with low CO₂ emissions
 - ◆ *Transport: 40 % of total CO2 emissions in 2013*

Average CO₂ emissions (grams/km) for new registered vehicles (source : CGDD)



- ▶ In 2015, additional subsidy (« superbonus ») when the purchase of a low-emission car goes with the scrappage of an old diesel vehicle
 - The total subsidy for the purchase of an electric car can reach 10 000€

Slide 7 – transport. caps for vehicles

European emission standards set limits for exhaust emissions of new vehicles registered in EU member states:

- ▶ **Average CO₂ emission objectives:**
 - ◆ *95 gCO₂/km in 2021 for private cars*
 - ◆ *147 gCO₂/km in 2020 for light commercial vehicles*

- ▶ **« Euro » directives set limits for other exhaust emission pollutants:**
 - ◆ *Nitrogen oxides (Nox)*
 - ◆ *Total hydrocarbon (THC)*
 - ◆ *Non-methane hydrocarbons (NMHC)*
 - ◆ *Carbon monoxide (CO)*
 - ◆ *Particulate matter (PM)*

Slide 7 – Transport. Compulsory incorporation of biofuel

- ▶ As part of the Energy-Climate package: intended purpose of 10% renewable energy in transport by 2020.
- ▶ French national implementation for 2014, minimum biofuels threshold :

7,7% for diesel

7% for the petrol sector

+ Within the limit of 7% 1st generation biodiesel

+ Indicative target of 0,5% advanced biofuels

benefiting from double counting



**Inclusion
of ILUC
effect**

- ▶ **2 support tools**

- ◆ *Partial exoneration of TICPE (domestic consumption tax on energy products) - ending in 2016*
- ◆ *Exoneration of TGAP (general tax on polluting activities) if minimum thresholds are met*

Slide 7 – transport. Socio-economic assessment for transport infrastructure projects: the case of CO₂ emissions

- ▶ A socio-economic assessment takes into consideration all the effects of a given project
 - ◆ *Shadow prices (in €) are assigned to non-monetary effects*
 - ◆ *For transport infrastructure, environmental effects such as CO₂ emissions are thus duly valued in the socio-economic calculation*
- ▶ The shadow price on carbon is coherent with the French political objective on CO₂ emissions (“Factor Four”)
 - ◆ *Reference values have recently been updated in the report « Socio-economic evaluation for public investments » by E. Quinet (sept. 2013)*
 - ◆ *Initial price = 32 €/ton*
 - ◆ *To reach 100 €/ton in 2030, then increasing at the discount rate (Hotelling’s rule)*
- ▶ The role of socio-economic assessment in decision process has been reinforced by the programming law of public finances 2012-2017, which makes an independent counter-expertise mandatory for each big project.

Slide 7 –Buildings

Public support for building renovation (housing) 2/2

- ▶ Major public subsidies for home energy efficient renovations (insulation, high energy-performance equipment):
 - ◆ *Zero rated eco-loan (eco-PTZ) up to 30,000€*
 - ◆ *Tax credit for energy saving related works concerning the main residence (former CIDD, now CITE): 30% of private investments*
 - ◆ *Lower VAT rate (5.5%) for energy-efficient renovation works*
 - ◆ *Renovation housing program targeted at low income families: subsidies (50% of private investments), fixed allowance (€3,000 per household, previously €1,600) and micro-loans*

- ▶ Public information desks: front offices to get personal information about energy efficient renovation works are to be implemented by each local council community

Slide 7 – Buildings

Regulation and requirements to sustainable construction

- ▶ Regulated sustainability targets for new buildings *via* thermal regulation
- ▶ Thermal regulation climate zones
 - ◆ *H1 (ex. Paris): regions with continental climate*
 - ◆ *H2 (ex. Nantes): regions with mild climate*
 - ◆ *H3 (ex. Marseille): regions with Mediterranean climate*
- ▶ Regulation steps of the new regulation implemented in 2012 (RT 2012)
 1. *New constructions (housing and tertiary):*
 - average energy performance 50 kWh_{ep}/m²/year (depending on the climate zone)
 - energy consumption cap-level
 2. *Renovation of buildings built after 1948:*

More than 1000 m², for major renovation: global energy performance targeted



Other case: element-by-element minimum performance levels

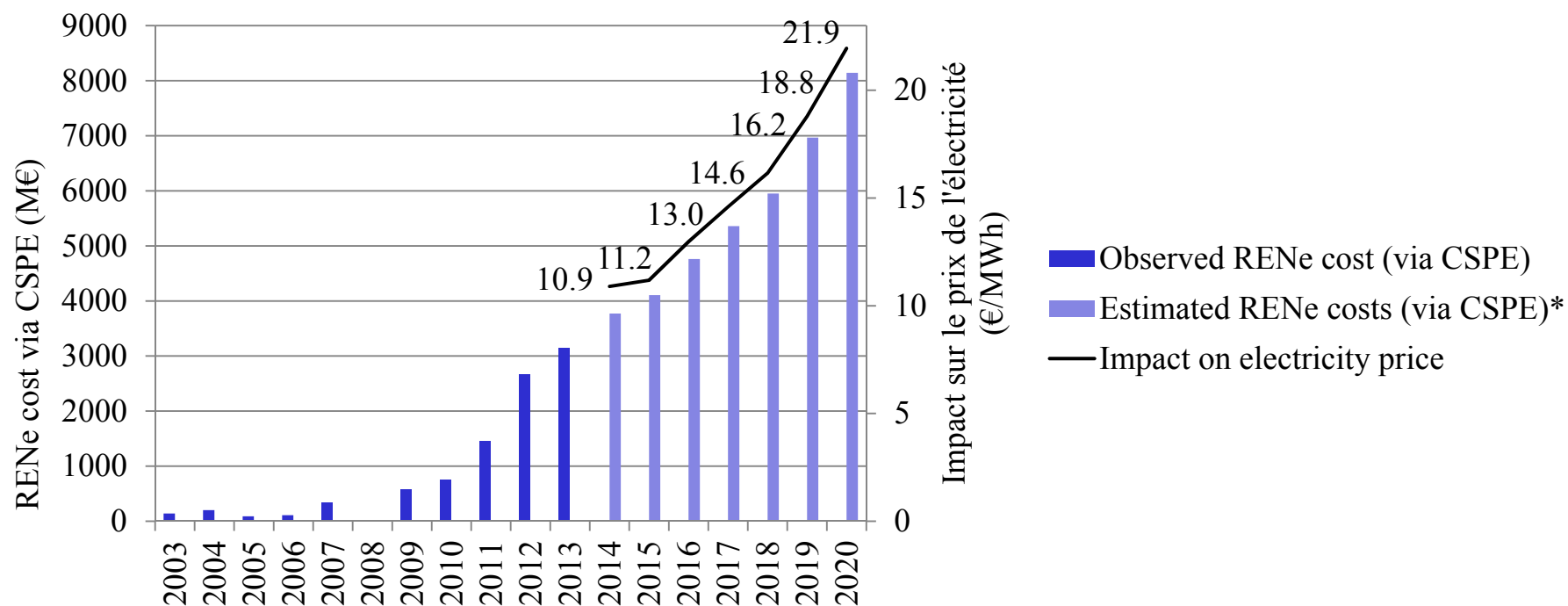
Slide 7 – Energie

Renewable energy subsidies

► Feed-in tariff to support renewable electricity generation : electricity bought at fixed price to renewable producer by EDF

- Contracts granted through tenders or on demand
- Difference between feed-in tariff and market price supported by consumers (CSPE : Contribution au Service Public de l'Electricité)

~ 4 Bn€ for 2015 i.e. ~7 % of consumer electricity bill and 7,6 Bn€ for 2020



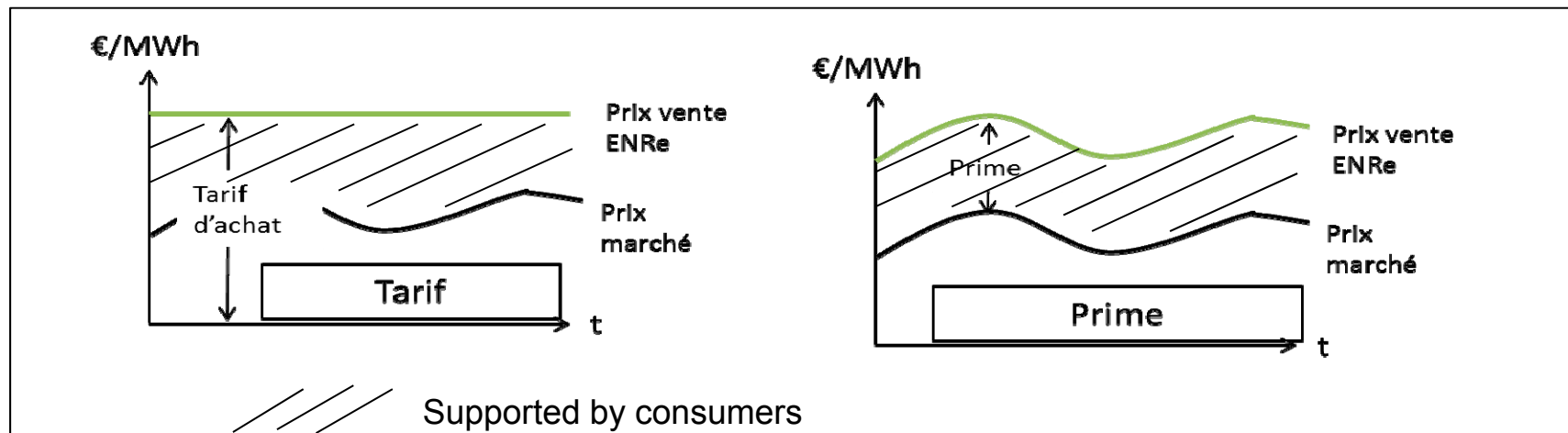
Source : Commission de Régulation de l'Energie and DGTrésor calculation

Slide 7 – Energie

Renewable energy subsidies

► Evolution towards premium

- *According to the guidelines of the European Commission on states aids related to energy and environment*
- *Better market integration*

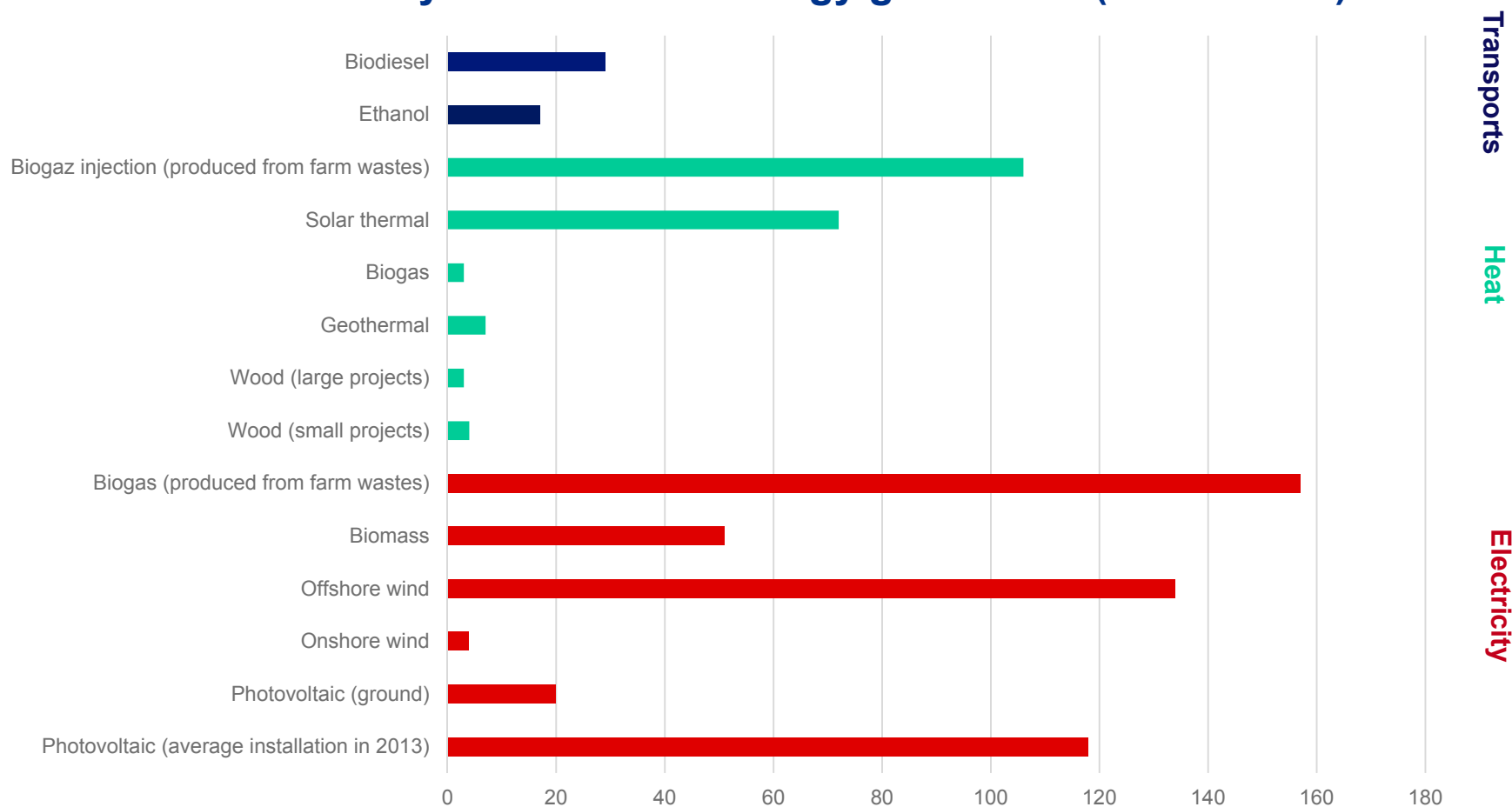


► Investment aids *via* a heat fund (Fonds chaleur)

- *To support heat generation from renewables (biomass, geothermal system, ...)*
- *Around 200-250 M€ per year*
- *To be multiplied by 2 by 2017*

Slide 7 – Energie Renewable energies subsidies (3/3)

Cost* to the community of renewable energy generation (€2013/MWh) :



*compared to a combined cycle gas turbine for electricity generation (~85 €/MWh today), gas boiler for heat generation (gas price at ~75€/MWh today) and fossil fuel for transport sector (~1,3c€/L).

Source : DGTrésor calculation

Slide 7 – Energie / industrie

Emission caps for polluting plants

- ▶ **European directive 2010/75/UE imposes to limit air pollutant emissions from large combustion plants, waste incineration or co-incineration plants, and other polluting plants**
 - ◆ *Sulfur dioxide (SO₂)*
 - ◆ *Nitrogen oxides (NO_x)*
 - ◆ *Particulate matter (PM)*

- ▶ **Article 55 of the draft law for energy transition allows to set a carbon dioxide emission cap for some thermal power plants.**

Slide 9 – Fossil fuel subsidies

- ▶ No agreed definition of Fossil fuel subsidies
- ▶ 3 main definitions:
 - ◆ *IEA: price-gap approach (market price vs end-consumer price). \$493 billion in 2014 globally.*
 - ◆ *IMF: price-gap approach (market price + externality costs vs end-consumer price). \$ 5300 billion in 2015 globally.*
 - ◆ *OECD: fiscal budgetary approach (sum of tax credit and budgetary support). \$ 160-200 billion annually over the period 2010-14 in OECD countries and Brazil, the People's Republic of China, India, Indonesia, the Russian Federation, and South Africa.*
- ▶ 4 countries started G20 peer reviews of Inefficient fossil fuel reforms:
 - ◆ *China & US*
 - ◆ *Mexico & Germany*

CARBON PRICING: AN IMF PERSPECTIVE

Ian Parry

International Monetary Fund

Carbon Pricing Panel, COP 21,

Paris, December 1, 2015

Outline



- Case for carbon pricing
- Basic design issues
 - Domestic
 - International

Pricing vs. Regulation



- Carbon pricing has two advantages
 - Environmentally effective
 - Raises revenue
- Regulatory approaches
 - Less effective
 - Do not raise revenue
 - More complex and costly

Carbon Taxes vs. Emissions Trading



- In theory either is fine if
 - Comprehensive
 - Make productive use of revenues
 - Establish robust and predictable prices
- Trading systems should look like taxes
 - Auction allowances
 - Price stability provisions

Administration



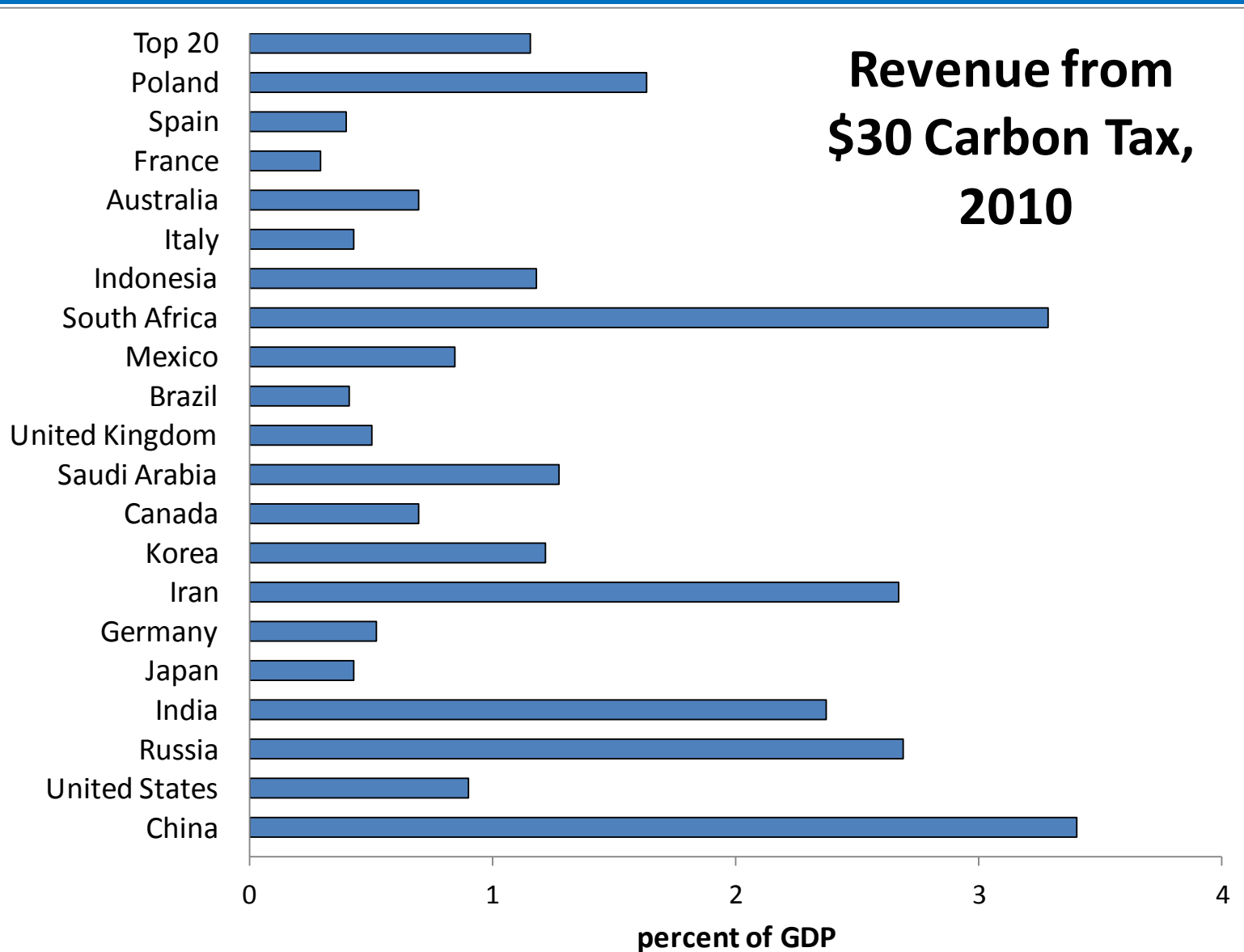
- Upstream: on carbon content of fuel supply
 - Covers all emissions
 - Straightforward extension of road fuel excises
- Downstream: on emissions from large sources
 - Omits small-scale sources (about 50% of CO₂)
 - Administratively more complex

Price Level



- Set (on average) to meet INDCs
 - Using emissions projections and their responsiveness
 - INDCs could include minimum prices (e.g., related to the social cost of carbon, > \$30 per ton)
- 40 countries have national pricing but
 - Only covers 12 percent of emissions
 - Prices typically below \$10 per ton

Potential Revenue is Substantial



Revenue Use



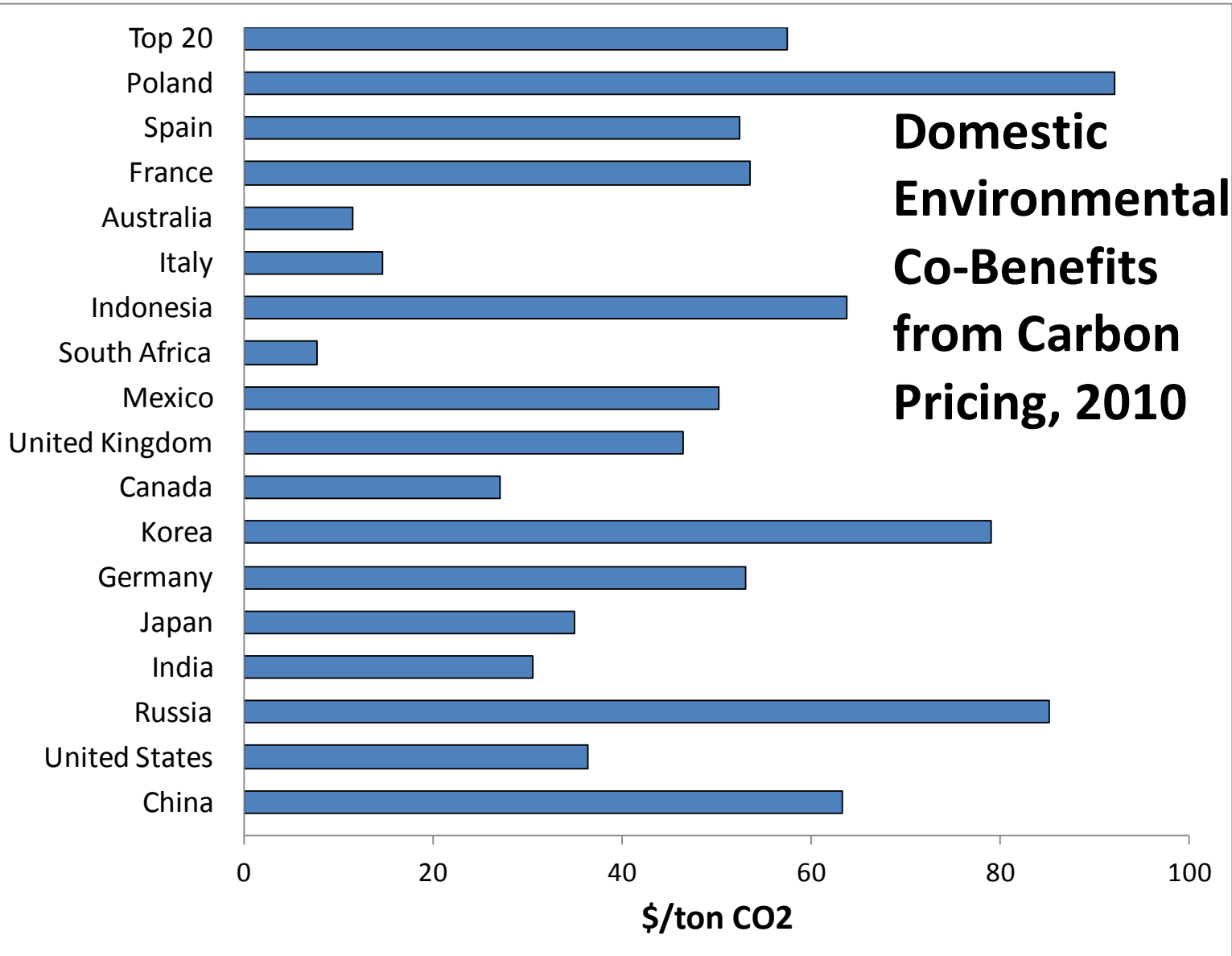
- Cutting taxes on labor and capital
 - Contains costs of carbon pricing
- If used for (general or environmental) spending
 - Should generate comparable benefits to cutting taxes



Vulnerable Households and Firms

- Subsidizing energy is inefficient way to help the poor
 - Targeted measures needed
- Subsidizing uncompetitive firms is inefficient
 - Transitory assistance needed
 - Less concern if international action

Pricing is in Countries' Own Interest



Carbon Price Floor Agreements



- Advantages

- Some protection against competitiveness impacts
- Allow countries to set higher prices than floor
- Only need agreement on one parameter
- Precedents include tax floors for VAT, excises in EU

- Challenges

- Account for broader energy taxes/subsidies (manageable)
- Enforcement



Carbon Pricing - Global context

*IMF/World Bank Group session @ COP21
1 December, 2015*

TOM KERR, PRINCIPAL CLIMATE POLICY OFFICER
INTERNATIONAL FINANCE CORPORATION, WORLD BANK GROUP

Leaders call for action on carbon pricing

**CLIMATE
SUMMIT 2014**
CATALYZING ACTION

Let's partner on
climate action.
Now.

WORLD
ECONOMIC
FORUM



September 2014: at UN Climate Summit, **+1000** companies & investors and **74** national governments signed a statement calling for a price on carbon

December 2014: Convened by the World Economic Forum, the Climate Leadership Group - a coalition of **43 CEOs** - calls for pricing carbon

June 2015: Letter from the CEOs of six of the world's largest oil and gas companies to the UNFCCC and COP President, calling for governments to price carbon

September 2015: Joint declaration by **major US banks** on climate change states that policy frameworks must recognize the cost of carbon

October 2015: Letter calling for carbon markets in the Paris Agreement from 20 progressive business groups

October 2015: The World Bank Group/IMF/OECD launch a Carbon Pricing Panel consisting of heads of state and government and supported by CEOs



“

Our companies are already taking a number of actions to help limit emissions ... For us to do more, we need governments across the world to provide us with clear, stable, long-term, ambitious policy frameworks. We believe that a **price on carbon** should be a key element of these frameworks. ”

Open Letter to UN and Governments from 6 oil and gas companies

**In support of prosperity and growth:
Financial sector statement on climate change**

Scientific research finds that an increasing concentration of greenhouse gases in our atmosphere is threatening the prosperity and growth of the world's economies. Our institutions, working with clients, are committed to providing the business opportunity to build a sustainable future and the ability to help manage risk.

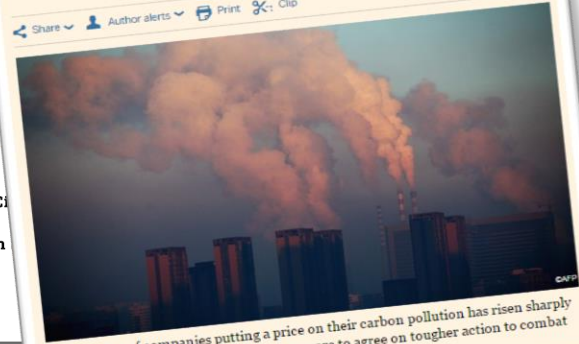
Our institutions are committing to providing the business opportunity to build a sustainable future and the ability to help manage risk. We call for leadership and cooperation from governments, leading to a strong policy framework that recognizes the cost of carbon and the instruments needed to provide green investment, drive innovation in low-carbon technologies, and expand infrastructure and energy. The right policy framework will attract incremental public and private capital to build a sustainable and resilient future.

While we may compete in the market, the importance of policies to address the needs of our clients and customers, we will continue to work with governments and the vision necessary for generations to come.

Bank of America
JPMorgan Chase **Morgan**

Industrial Goods

Companies accelerate use of carbon pricing
Piitta Clark in London



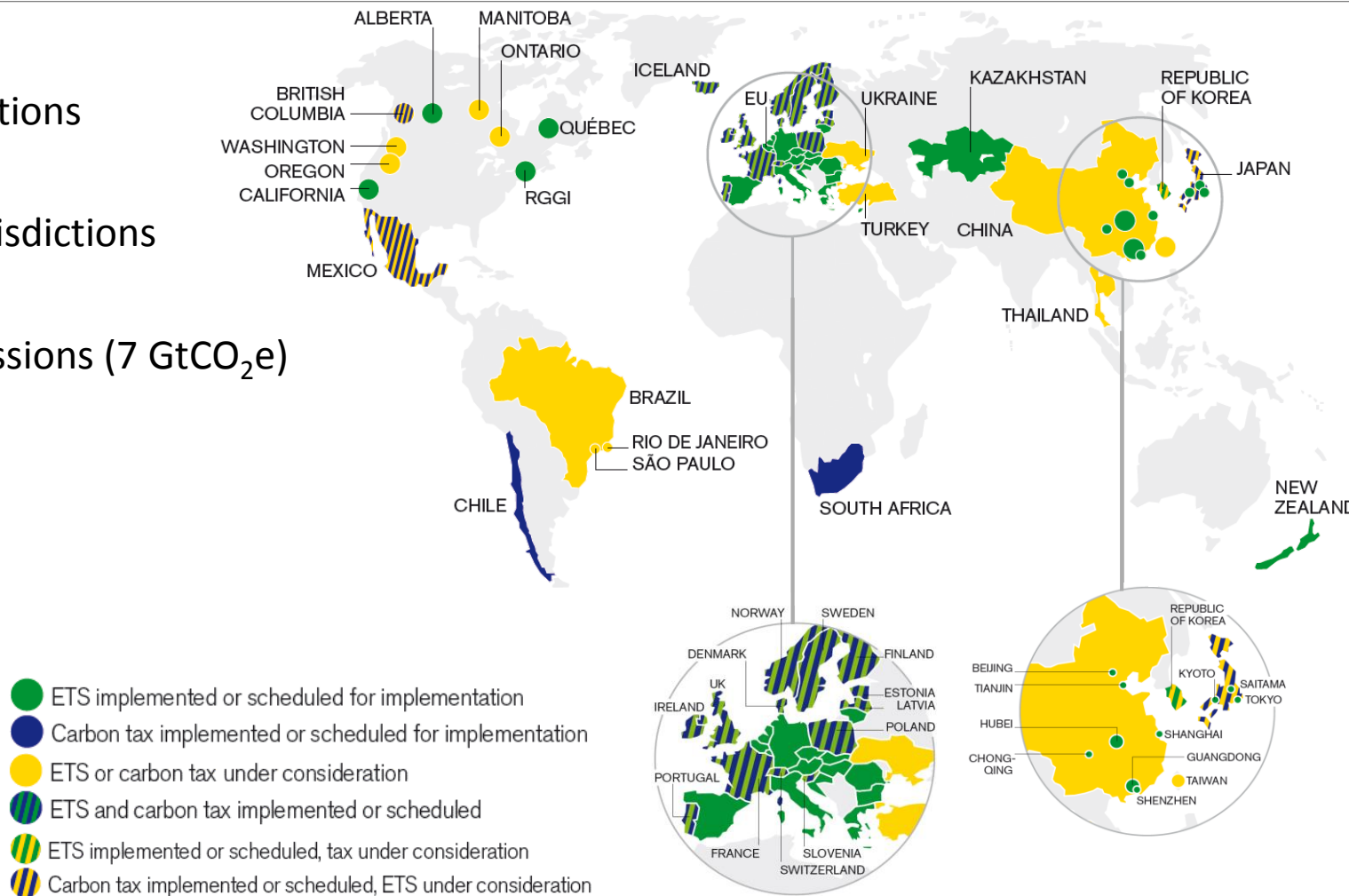
The number of companies putting a price on their carbon pollution has risen sharply in the past 12 months as governments prepare to agree on tougher action to combat climate change this year.

Expansion of jurisdictions putting a price on carbon

39 national jurisdictions

23 sub-national jurisdictions

12% of global emissions (7 GtCO₂e)



The annual value of instruments implemented is just under

US\$ 50 billion

Prices used vary from

US\$ 1-130/tCO₂e

Key developments (2014-15):

Portugal and Mexico have implemented new carbon taxes

South Korea started one of the world's largest emissions trading systems

California and Quebec linked their cap-and-trade systems, which **Ontario** will join

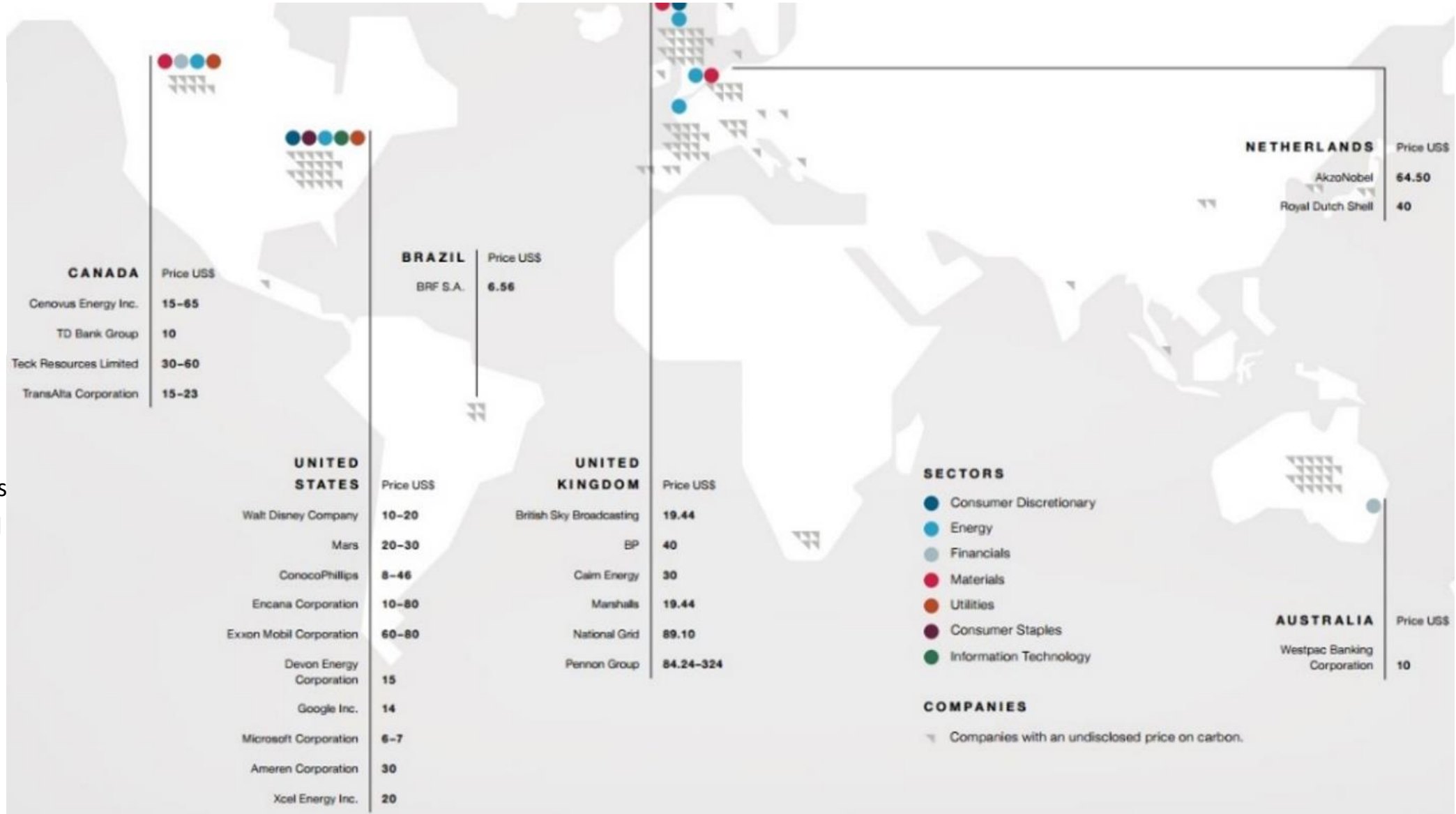
China announces a national ETS

More companies are using internal carbon pricing

1000+
companies

disclose the use of an internal carbon price – or intend to do so in the next 2 years

435 global companies currently use an internal carbon price, up from 150 in 2014



Source: CDP, Global corporate use of carbon pricing, September 2014



Carbon Pricing in Action – China ETS

Since 2011, China has been experimenting with **7 regional carbon market pilots**

7 schemes cover **18%** of China's population and **28%** of its national GDP (Guangdong 3rd largest ETS in the world)

At present, prices range from **\$3.34 to \$8.43**

National ETS to be launched in 2017



Counted together, Chinese ETS pilots represent the **largest national carbon pricing** initiative in the world in terms of volume, putting a cap on **1.3 GtCO₂e**

For the compliance year 2014, **24.7 million allowances** were traded in all systems combined

China commits to **reducing its carbon dioxide emissions per unit of GDP by 40-45 % by 2020**, compared with 2005 levels, and **increase non-fossil-based primary energy consumption to 15 % by 2020**.

Carbon Pricing in Action – Microsoft

In July 2012, Microsoft adopted **a carbon neutral strategy** for its global data centers, offices, software development lab and company air travel.

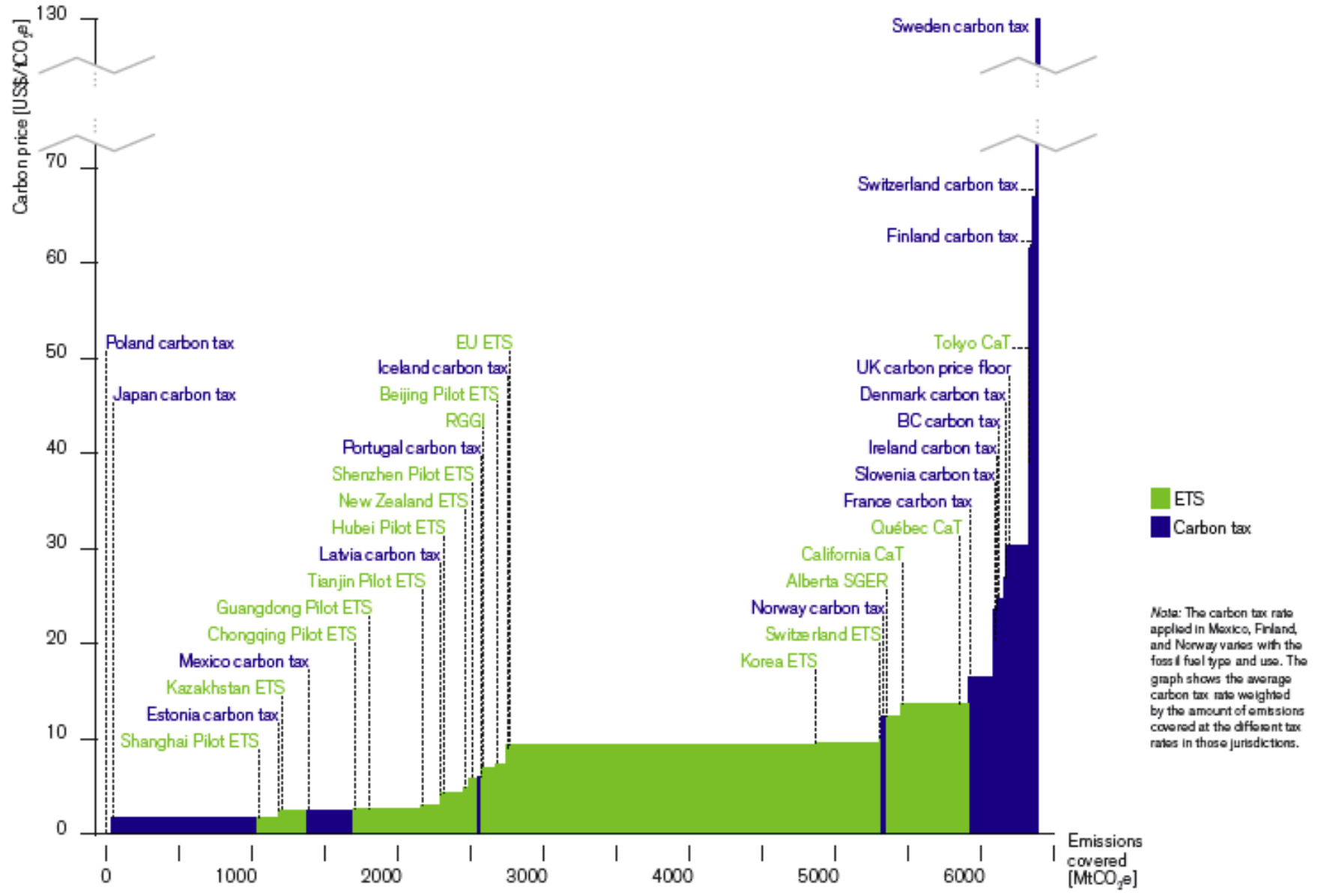
Microsoft uses an internal carbon pricing program and an **investment fund** to help cover costs. Microsoft buys **certified renewable energy certificates** and direct carbon offsets.

Microsoft departments added **a budget line item reflecting the financial value of emissions**, which translated to new capital for sustainability initiatives. Microsoft makes energy efficiency grants to internal business lines.

- **\$5/ton** carbon price; expected to rise
- **\$10 million** in annual energy savings
- **7.5 million metric tons** of CO₂e emissions reductions
- **10.2 billion** kilowatt-hours worth of new renewable energy investments



Prices and coverage of existing carbon pricing systems are insufficient to put us on a 2-degree path



What is the Future Carbon Price Pathway?

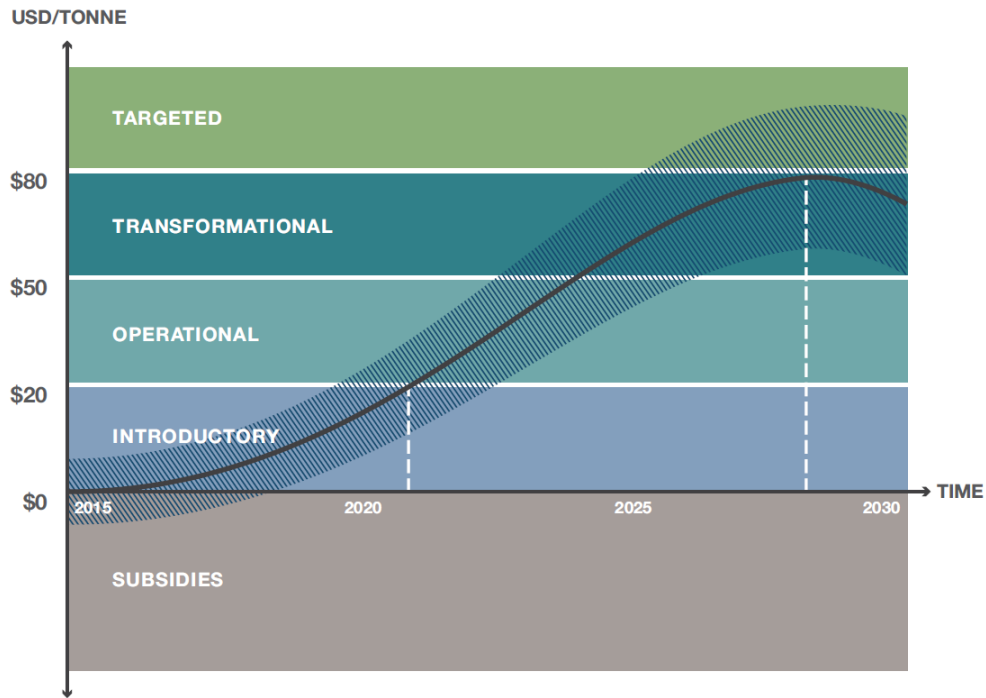
Sailing to the New World

Global Temperature rises stay below 2°C

National policies and global agreements align. Carbon pricing becomes an important mechanism to cutting emissions and stimulating investment.

Need complimentary policies and private sector efforts:

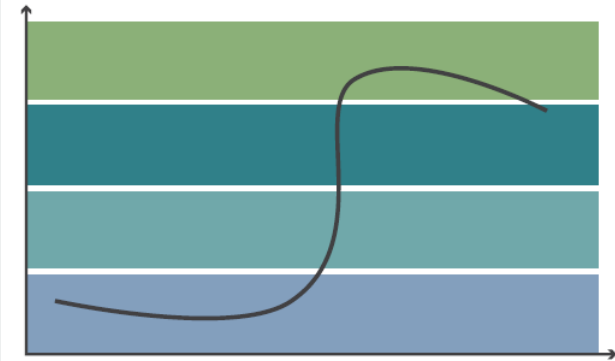
- Industry and energy efficiency standards
- Infrastructure and renewable energy investments



Sailing into the cliff

Delayed action delivers a 3°C world

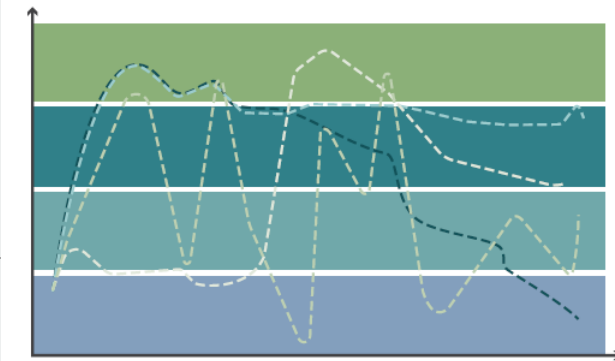
- Sustained low prices, followed by sharp, sudden rise
- Strong global agreements not matched by effective national carbon pricing policies.
- Crisis brings radical course-correction.



Stormy waters

Chaotic pricing land a 3°C world

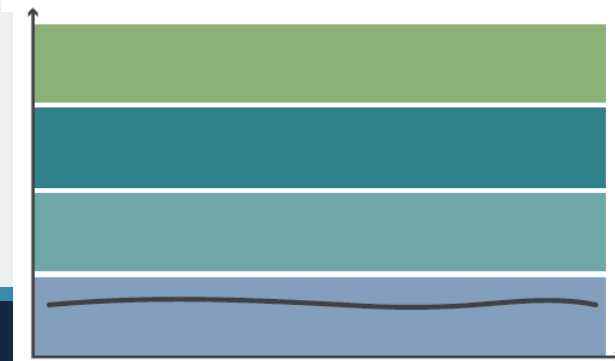
- Prices rise then collapse
- Decarbonisation declines
- Many disjointed schemes, no price convergence
- Some sectors rapidly cut CO₂e but low investor confidence



Running aground

Low ambition produces a 4°C world

- Prices languish at low levels, very few schemes
- Carbon pricing is a “non-starter”
- Low ambition on climate action and no global agreement
- Significant economic damage, social upheaval.



A common set of key issues

- **Competitiveness** and concerns about carbon leakage
- **Distributional impacts** – e.g., higher energy prices for low-income households
- **Alignment** of carbon pricing with other policies
- **Productive use of revenues** – to ease the transition, accelerate technology innovation
- **Linking and networking** different carbon pricing systems

FASTER Principles for Successful Carbon Pricing

Fairness

- Reflect Polluter Pays Principle
- Distribute costs and benefits equitably
- Avoid disproportionate burdens on vulnerable groups

Alignment of Policies

- Coexists with mutually reinforcing complementary policies
- Reforms counter-productive policies
- Facilitates policy coherence

Stability and Predictability

- Predictable policy framework and strong investment signal
- Incorporate flexibility to adjust to unpredictable events

Transparency

- Communicate rationale, objective, shared benefits
- Monitor and verify emissions

Efficiency and Cost-effectiveness

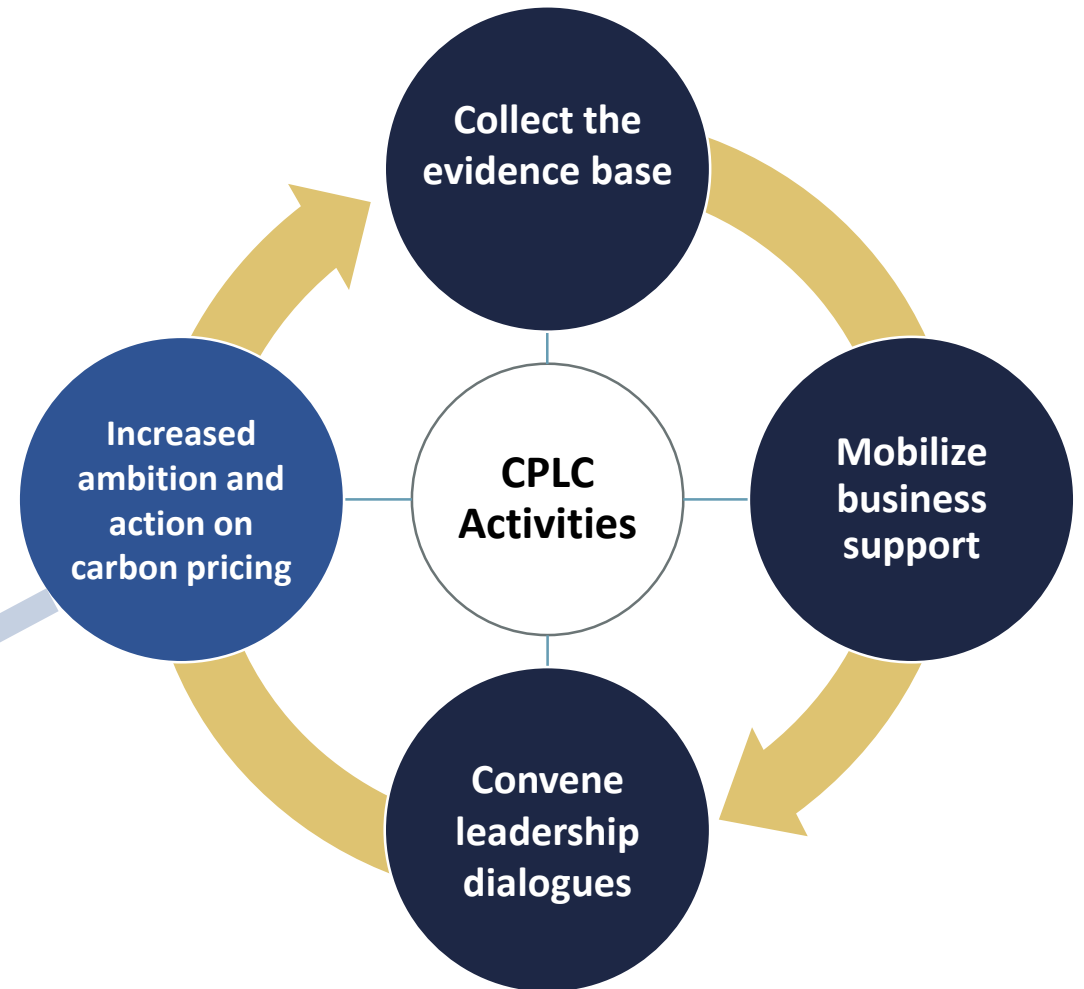
- Reduce emissions at least cost fostering flexibility and innovation
- Enhance efficiency, simplify administration
- Recycle revenues & enhance economic benefits

Reliability and Environmental Integrity

- Ensure measurable reductions in harmful behavior
- Comprehensive coverage

Carbon Pricing Leadership Coalition

The Carbon Pricing Leadership Coalition **is translating support into action** by bringing together government, business, and civil society leaders to share experiences with carbon pricing and expand the evidence base for effective carbon pricing systems and policies—leading to successful implementation.



Results indicators

- # of governments putting in place new carbon pricing
- # of governments raising ambition on existing carbon pricing
- # of businesses using internal carbon pricing
- Evaluation of effectiveness in delivering environmental & economic results

Join Our Coalition of the Working



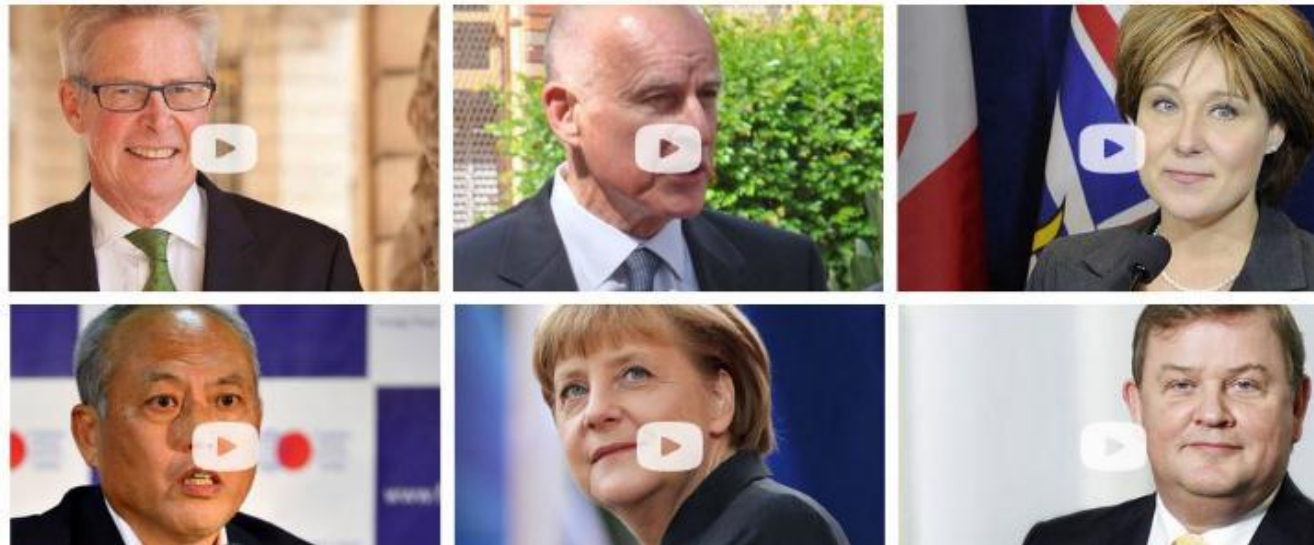
HOME CARBON PRICING COALITION LEADERS RESOURCES NEWS

"We face an existential challenge with the changes in our climate.
The time to act is now."

- GOVERNOR JERRY BROWN, STATE OF CALIFORNIA, US

CARBON PRICING LEADERS

A growing number of leaders – national, local and corporate – are speaking out in support of carbon pricing. Listen as they describe their experiences with carbon pricing and the reasons they consider it a powerful and efficient way to reduce emissions.



Concluding



- Other policies needed
 - R&D (e.g., for carbon capture and storage)
 - Infrastructure (e.g., transit, smart grids)
- But carbon pricing is critical policy for
 - Mitigating emissions
 - Price signals for redirecting technological change
 - Mobilizing climate finance
 - While also raising revenues
- Finance ministers have key role



The Financial System We Need

Amplifying the impact of carbon pricing

Nick Robins, High-Level Event on Carbon Pricing, 1 December 2015



A systemic approach: Actions within the financial system can complement measures such as carbon pricing.



A quiet revolution: A growing number of policy innovations have been introduced, focusing on the 3Rs: responsibility, risk and reporting.



A moment of opportunity: Systematic action can now be taken to shape a sustainable financial system, amplifying the impacts of carbon pricing.



MANDATE

Advance policy options to improve the financial system's alignment with sustainable development

FOCUS

Financial system rulemakers – ministries, central banks, regulators, standard setters

Dynamic between market and policy approaches

ANALYSIS FRAMEWORK

Understanding the rationale for action



FINDINGS

Focusing on country experience and sector priorities



NEXT STEPS

Recommendations for national action and international collaboration

FRAMEWORK FOR ACTION

Packages of policy proposals



TOOLKIT

38 approaches in four clusters



Upgraded governance



FINANCIAL ASSETS & ACTORS



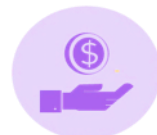
Banking
US\$135 tn



Bonds
US\$100 tn



Equities
US\$70 tn



Investors
US\$100 tn



Insurance
US\$29 tn

PRIORITIES FOR ALIGNMENT

*Real economy
regulation & pricing*

*Mobilising public
spending*

*Action within the
financial system?*

REASONS FOR ACTION IN THE FINANCIAL SYSTEM

Managing risk

Inadequate risk management in the financial system may exacerbate environmental & social externalities

Promoting innovation

Upgrading the standards and regulations required to catalyze investment, for example, in bond markets

Strengthening resilience

Environmental factors can pose risks to assets and system stability

Ensuring policy coherence

Ensuring coherence between financial regulation and wider goals, such as long-term investment, access to finance, environmental security.



Diverse starting points



Financial inclusion,
greening industry



Air pollution



Infrastructure
investment



Post-crisis rebuilding
of trust in finance



Climate change

Measures in practice



Integration in prudential
banking regulation



New investor reporting
requirements on climate



Coordinated roadmap led
by regulator



Financial sector compact



Incentives for clean
energy bonds

Levers for action



Enhancing market
practice



Harnessing the public
balance sheet



Directing finance
through policy



Transforming culture



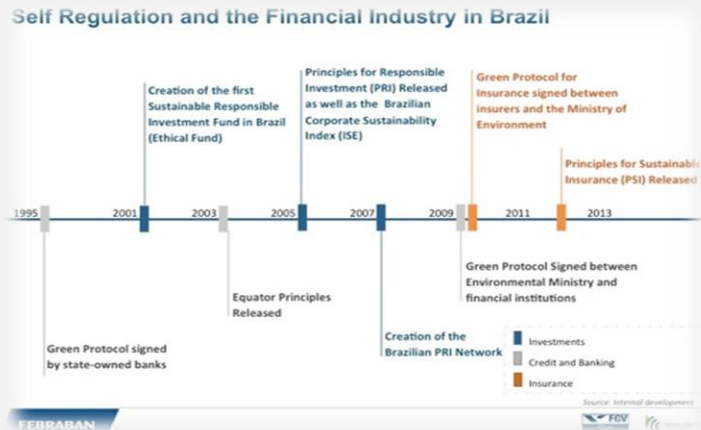
Upgrading governance



- **Corporate use of carbon pricing:** According to the CDP, 435 companies now use an internal price on carbon, up from 150 in 2014. These range from US\$5 for GM to US\$15 for Essar Oil to US\$50 for Vale and US\$150 for Enbridge.
- **Investor support for carbon pricing:** Investors with US\$24 trillion in assets have called on governments to “provide stable, reliable and economically meaningful carbon pricing that helps redirect investment commensurate with the scale of the climate change challenge”.
-



- **RESPONSIBILITY:** clarifying that environmental and climate factors a key part of prudent financial governance.
- **RISK:** overcoming the ‘tragedy of the horizon’ by assessing climate and carbon risks of financial institutions.
- **REPORTING:** requiring financial institutions to report on their carbon performance and outlook.



RESPONSIBILITY: In 2014, BACEN introduced new responsibilities for banks to manage socio-environmental factors as part of core risk system to improve governance and strengthen soundness.



“Sustainability is a positive asset for financial and monetary stability”
Aloisio Tupinamba, Chief of Staff, Financial Regulation, Central Bank of Brazil



theguardian

'Carbon bubble' poses serious threat to UK economy, MPs warn

RISK: In 2015, the Prudential Regulatory Authority examined the impact of climate change on the safety and soundness of insurance companies, identifying physical, transition and litigation risks.

“The central bank time horizon is relatively short. But the real challenges to prosperity and economic resilience from climate change will manifest well beyond this. We face a 'tragedy of horizons'.” **Mark Carney, Governor, Bank of England**

the French Minister of Finance and Public Accounts



How to shift the trillions?

MAY 22ND, 2015 - PARIS, FRANCE
UNESCO HEADQUARTERS

REPORTING: investors need to report on investment policies, carbon footprint, climate risks and alignment with energy transition (Article 173)

“It is essential that the financial system as a whole takes climate risk into account, anticipates ambitious targets and integrates this into investment decisions.” **Laurent Fabius, Foreign Minister, France**



- **Setting a carbon price signal:** governments set a voluntary ‘carbon price corridor’ of US\$15-20/t in 2020 to US\$60-80/t in 2030 (Canfin/Grandjean)
- **Building capacity to hear the signal:** governments encourage financial institutions to stress test their portfolios and policies using the signal
- **Boosting market transparency:** to enable stakeholders to understand the implications of long-term carbon pricing.



www.unepinquiry.org



Global Report
(English + 6 languages)

Policy Summary

Country research

Other reports

Working papers



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