Peak Carbon

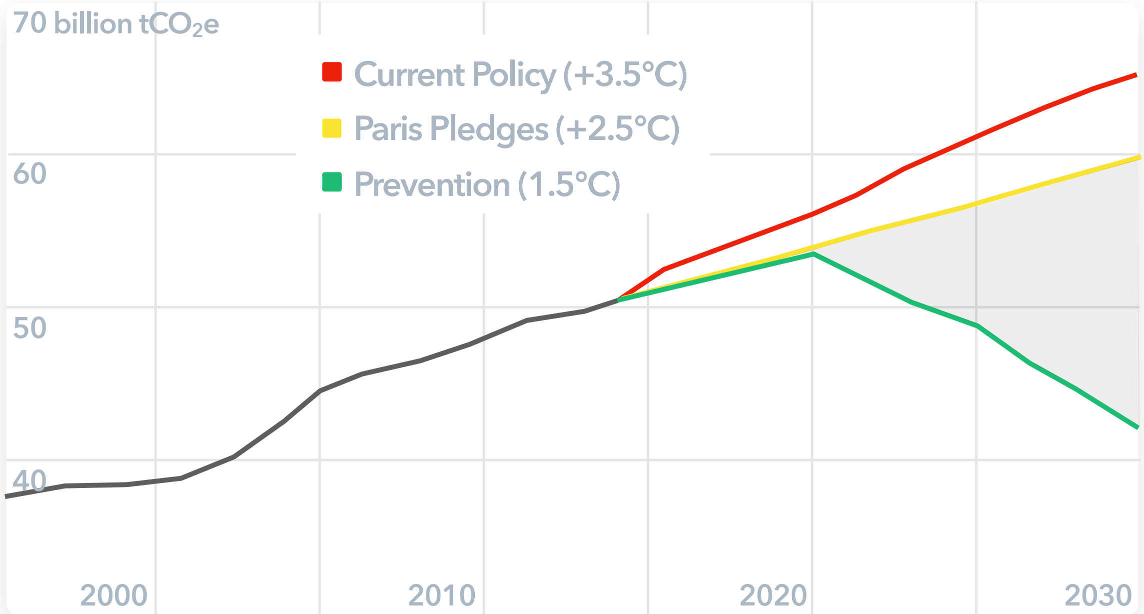
Carbon Pricing: Where to from here?

How can public opposition be overcome?

Peak Carbon

The Challenge

- 12 billion tonne gap
- Escalating emissions
- 5% change of <2 degC
- Modelled range 2-4.9 degC, median 3.2 degC
- Context: at 6 degC Earth => Venus?



Source: www.sparkchange.io / UN Environment Programme 2017 Emissions Gap Report

"The Vanishing Face of Gaia"
– James Lovelock

Peak Carbon

The Great Grandfather

“There is mounting evidence that greenhouse gas emissions exert an influence on the Earth’s climate”
– John Browne, 1997

- 1997 announcement to reduce 10% below 1990 levels by 2010
- Launch 1999, 12 major business units
- Real emissions, fake money, real reward
- March 2002 announcement:
  - 10% reduction achieved 7 years ahead of plan
  - $650m in new shareholder value
  - Average price ~$40/t CO2

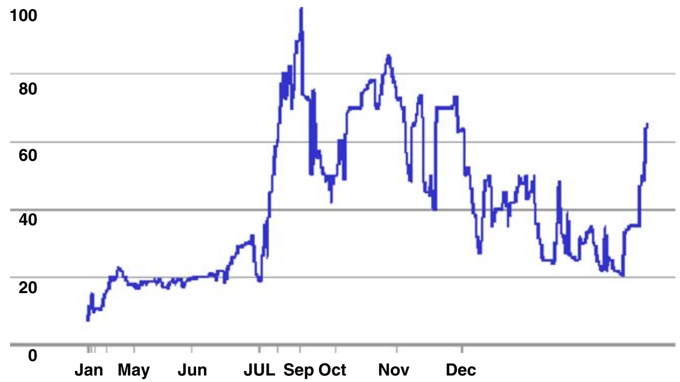
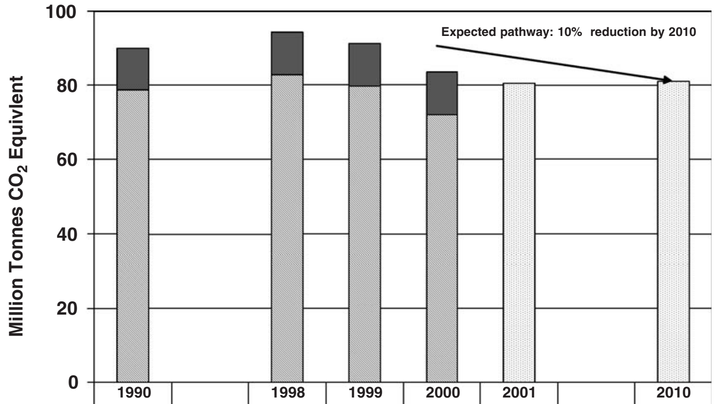


Fig. 3. Permit “Prices” ($/ton CO_2) in 2001.



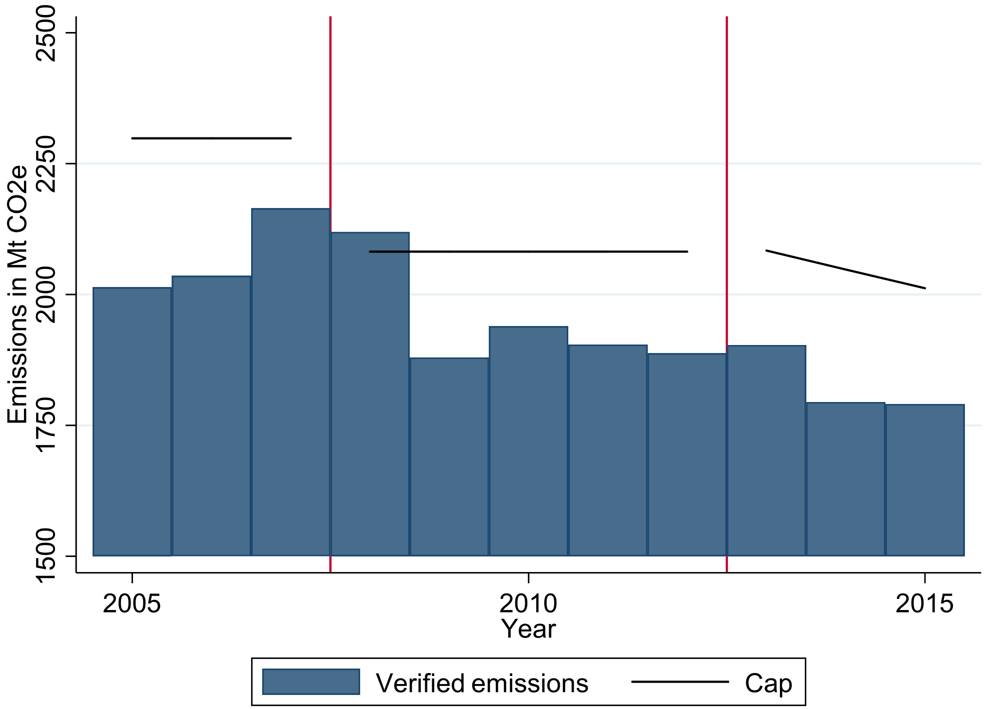
	1990		1998	1999	2000	2001		2010
ARCO	11.4		11.5	11.6	11.5			
BP Amoco	78.7		82.9	79.8	72.2			
BP (total)						80.5		81.1

Fig. 2. Greenhouse Gas Emissions Inside BP.

Source: BP’s Emissions Trading System, Victor and House (2005)

European ETS

- Core pillar of EU climate policy
- 43% below 2005 levels by 2030, 1.82bn cap in 2020
- ‘10% reduction 2005-2012, no impact on competitiveness’
- Erosion of impact through overlapping policies leads to allowance oversupply, depressed prices and policy intervention:
    - Renewable Energy Directive
    - Fuel Quality Directive - Upstream Emissions Reductions ~£200/tCO2
    - ‘Reduction in 700mt demand’
    - Backloading/Market Stability Reserve

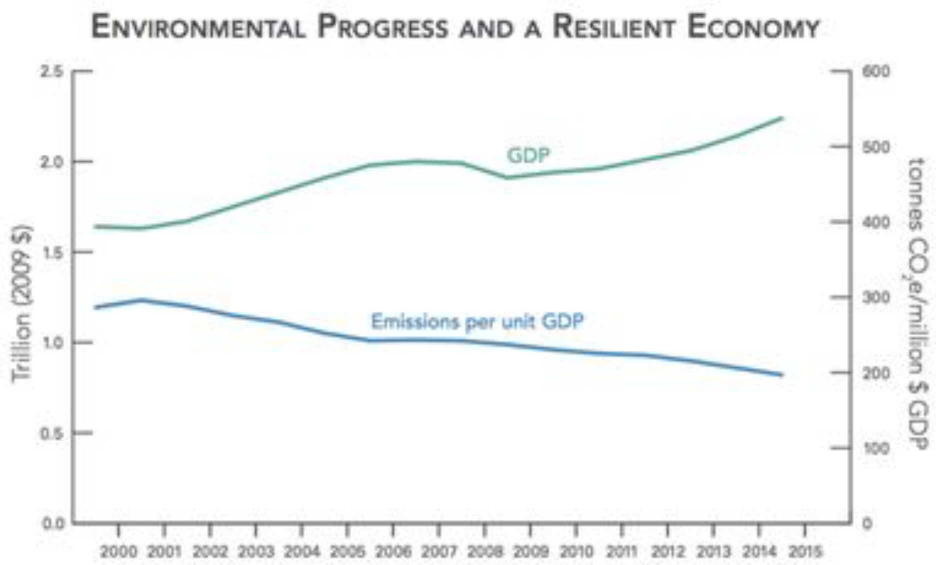


Source: OECD Economics Department Working Paper 1515

“[Our] main recommendation is to avoid overlap as a matter of principle as it inhibits the market effectiveness of the EU ETS”
- International Emissions Trading Association

California Cap and Trade

- 40% below 1990 levels by 2030
- 334m cap in 2020
- $6.5bn state revenue in 2017
- CaT is ‘back-stop’ to quilt of overlapping policies:
    - Renewable Portfolio Standard
    - Energy efficiency Programs
    - Low Carbon Fuel Standard (~$200/ tCO2)



Source: California Air Resources Board (CARB)

“the best designed program in the world”
– Dallas Burtraw, Resources for the Future

“the real threat to the program is we get to a high price level and have apolitical crisis”
- Severin Borenstein, Prof Haas Business School

Corporates Internal Carbon Pricing

- 1,400 companies, $7Tn annual revenue
- 150 companies in 2014
- Higher price than regulated markets
- What objective?
  - Identify opportunity
  - Pre-empt policy
  - Risk stress testing
  - Satisfy investor pressure

Energy	OMV AG	Austria	
	Neste Oyj	Finland	
	Total	France	30.00–40.00
	MOL Nyrt.	Hungary	
	Eni SpA	Italy	47.53
	Royal Dutch Shell	Netherlands	40.00
	Vopak	Netherlands	47.53
	Aker BP ASA	Norway	
	Statoil ASA	Norway	50.00; 59.00
	Galp Energia SA	Portugal	40.00
	PJSC Gazprom	Russia	
	Compañía Española de Petróleos, S.A.U. CEPSA	Spain	
	Repsol	Spain	15.00
	Lundin Petroleum	Sweden	50.00
	Premier Oil	United Kingdom	
	Tullow Oil	United Kingdom	40.00

Source: Carbon Disclosure Project (CDP), 2017

"it's not just the price, its how you use"
- Albzeta Klein, Director IFC

The 'Real' Challenge

- Companies are designed to optimise profits
- Science has the burden of proof
- Rational man is not rational society
- Democracy moves to social media mentality

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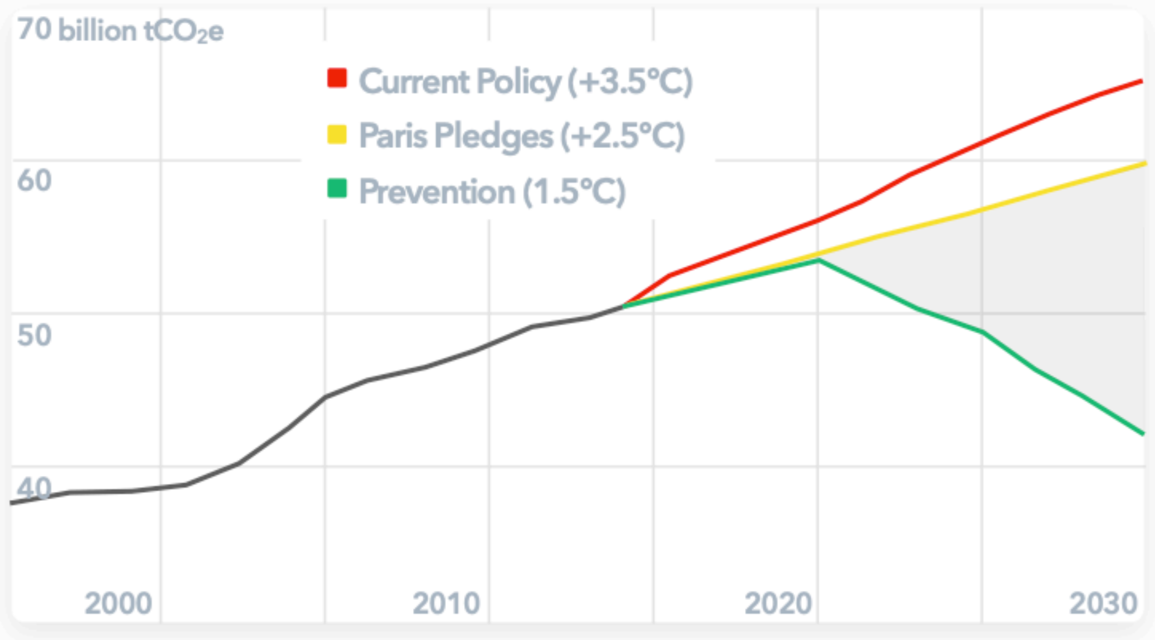

Source: www.sparkchange.io / UN Environment Programme 2017 Emissions Gap Report

"Losing Earth: The decade we almost stopped climate change"
– Nathaniel Rich, NY Times

Peak Carbon

Thank you for your time!

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