

Science, Politics & Money

Gold Standard[®]

Climate Security +
Sustainable Development for All

Keynote address

Matt Spannagle

Zurich, 15 April 2016



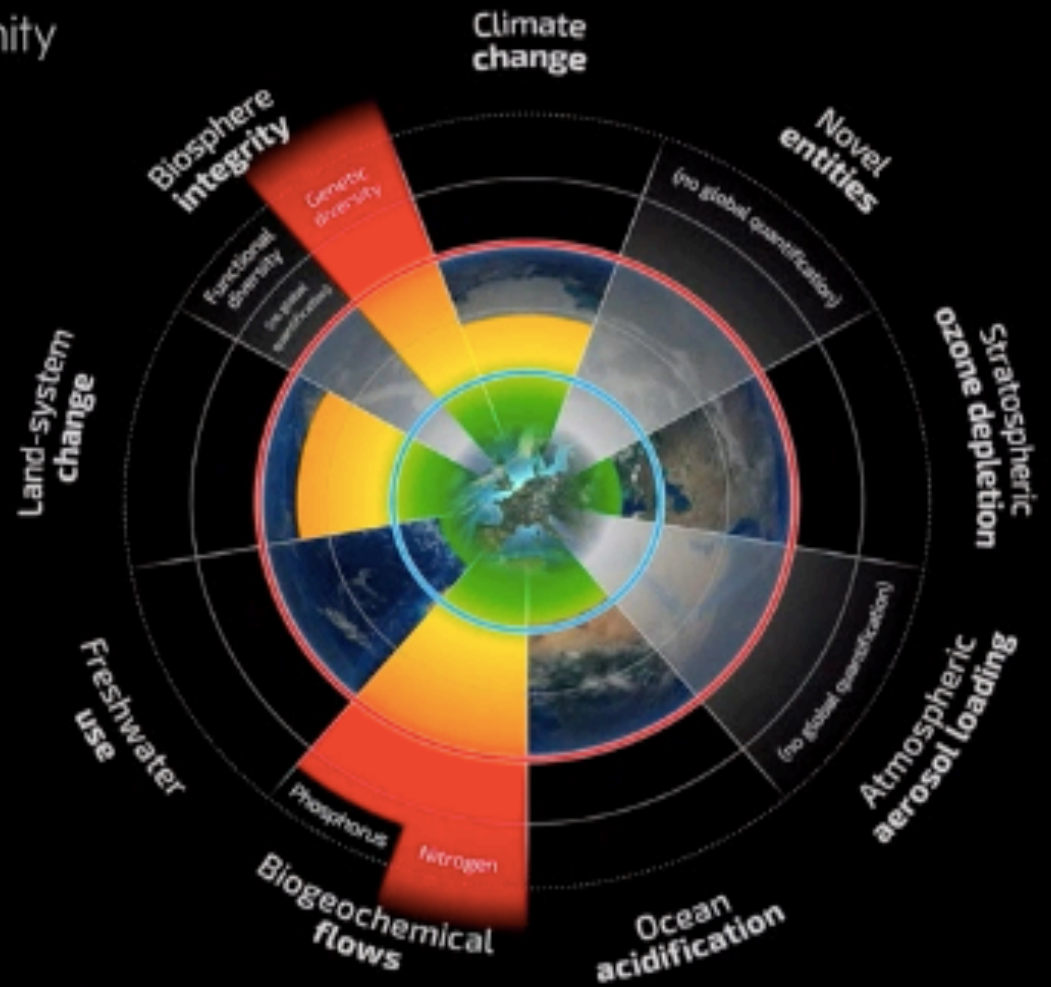
We now have a reasonable understanding of how earth systems work

...just in time to realise how quickly we are destroying them

The Anthropocene

Planetary Boundaries

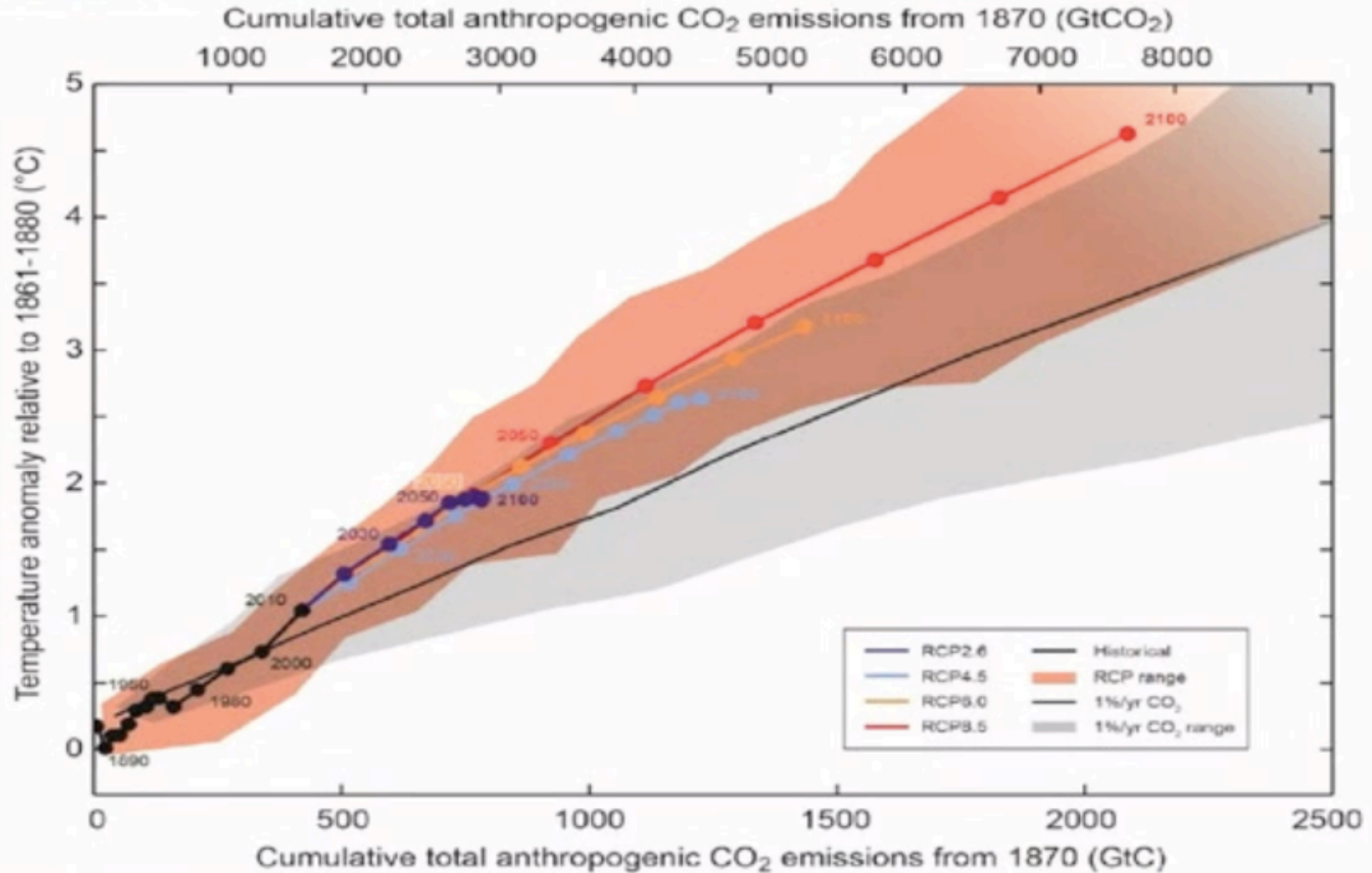
A safe operating space for humanity



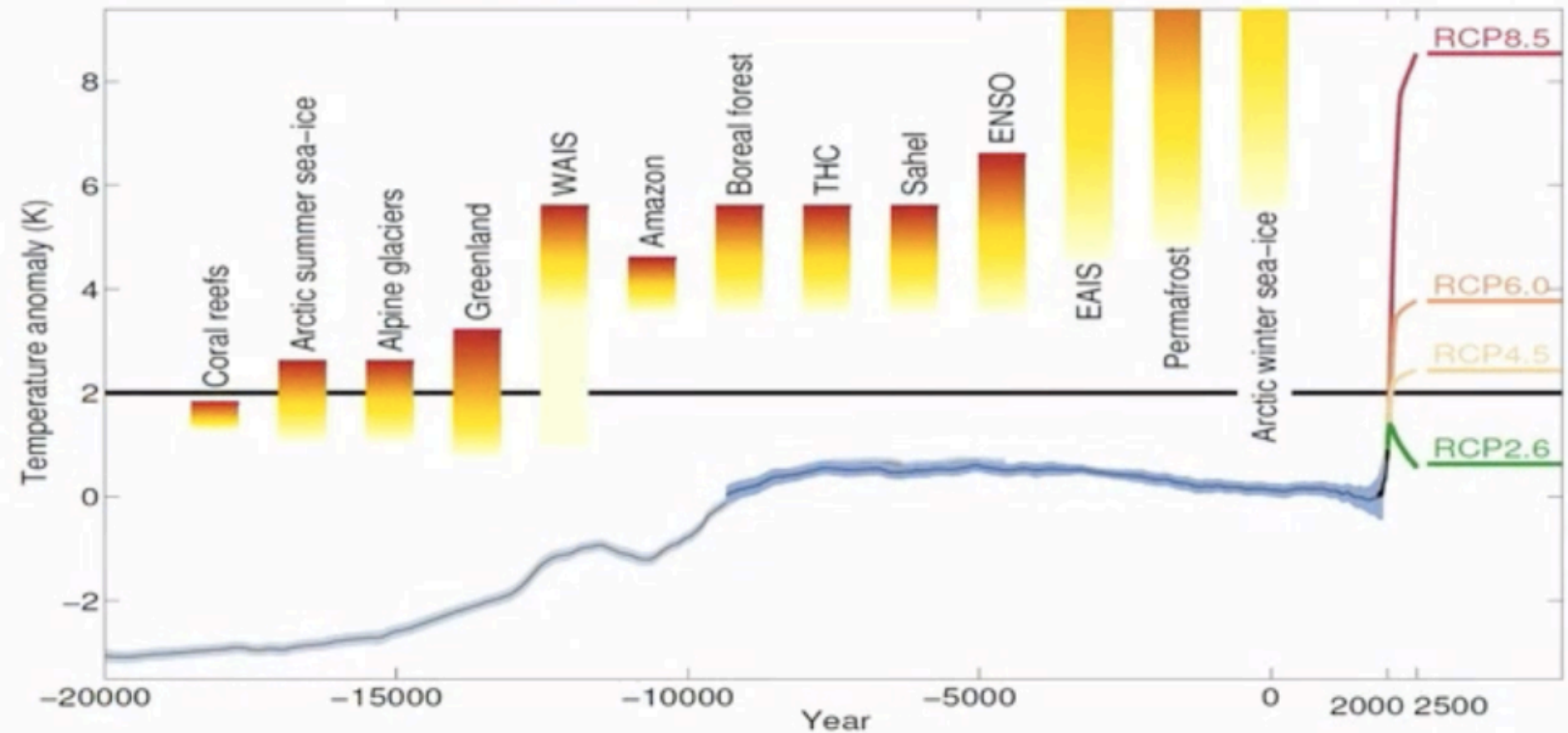
Steffen et al Science 16 January 2015

1.5C < 8 years
2C < 21 years

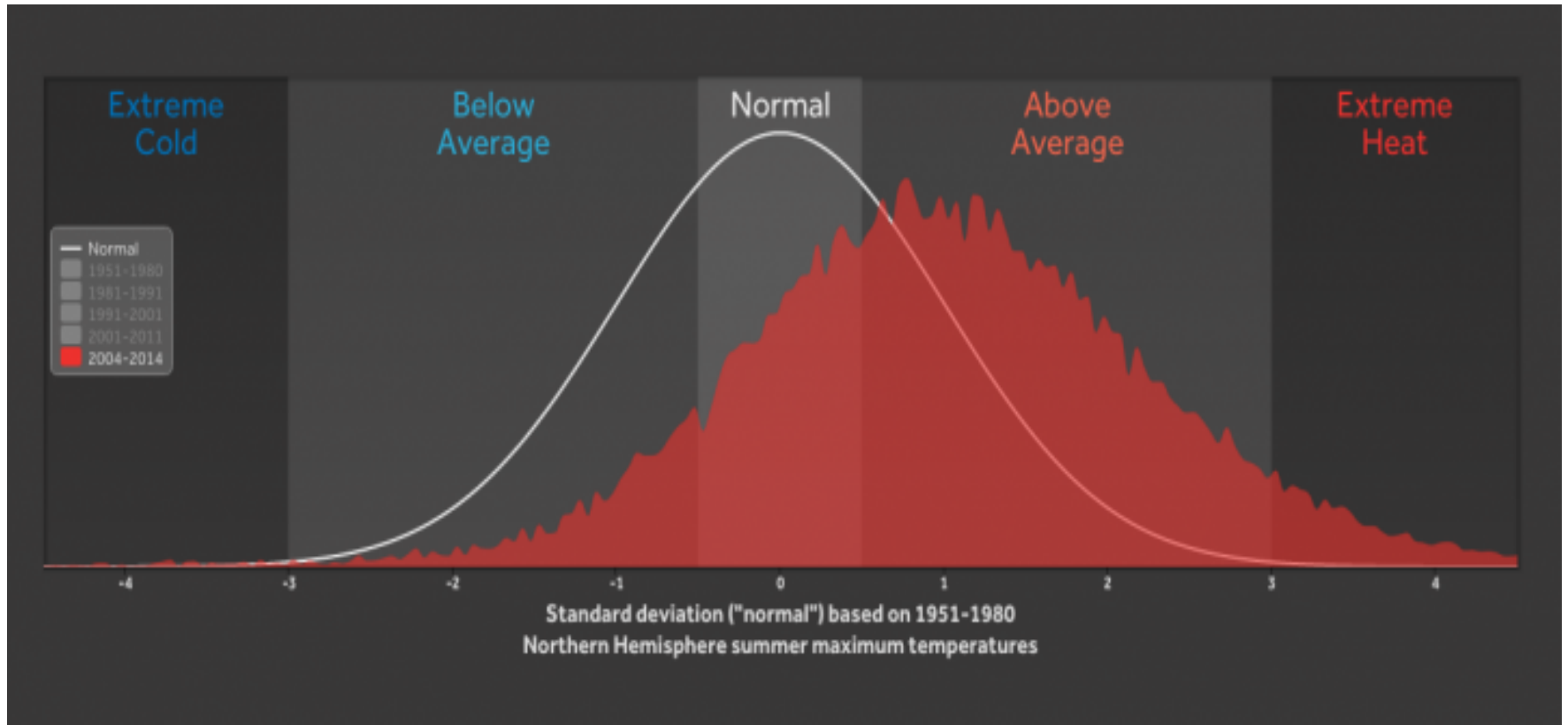
Figure SPM.1



Tipping Points related to 2°C guardrail



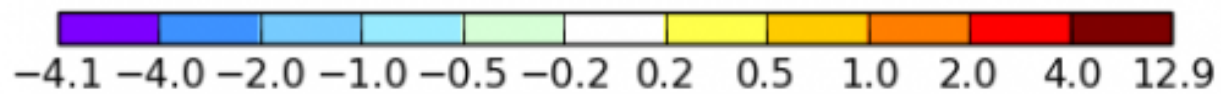
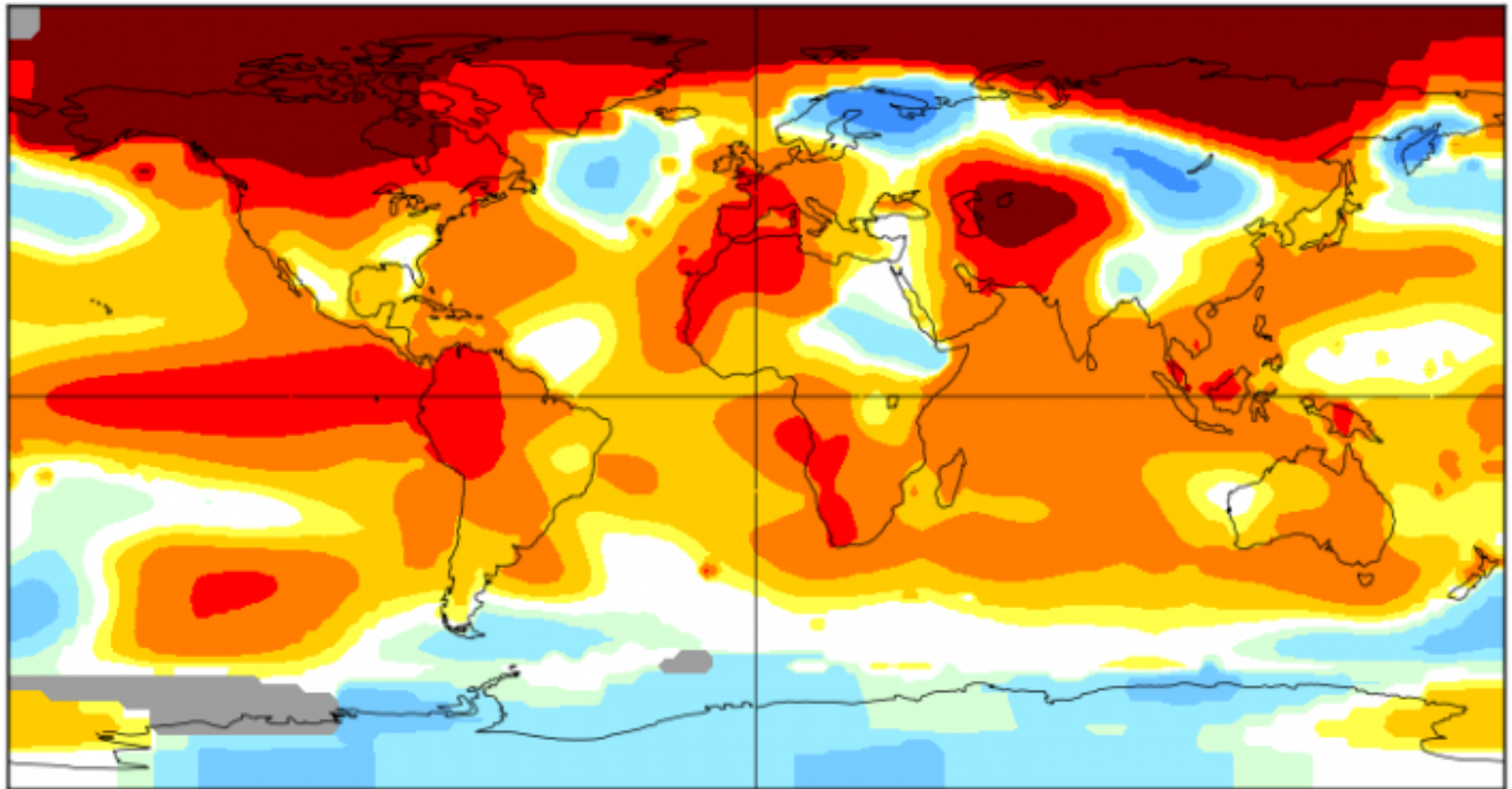
Schellnhuber et al., under r



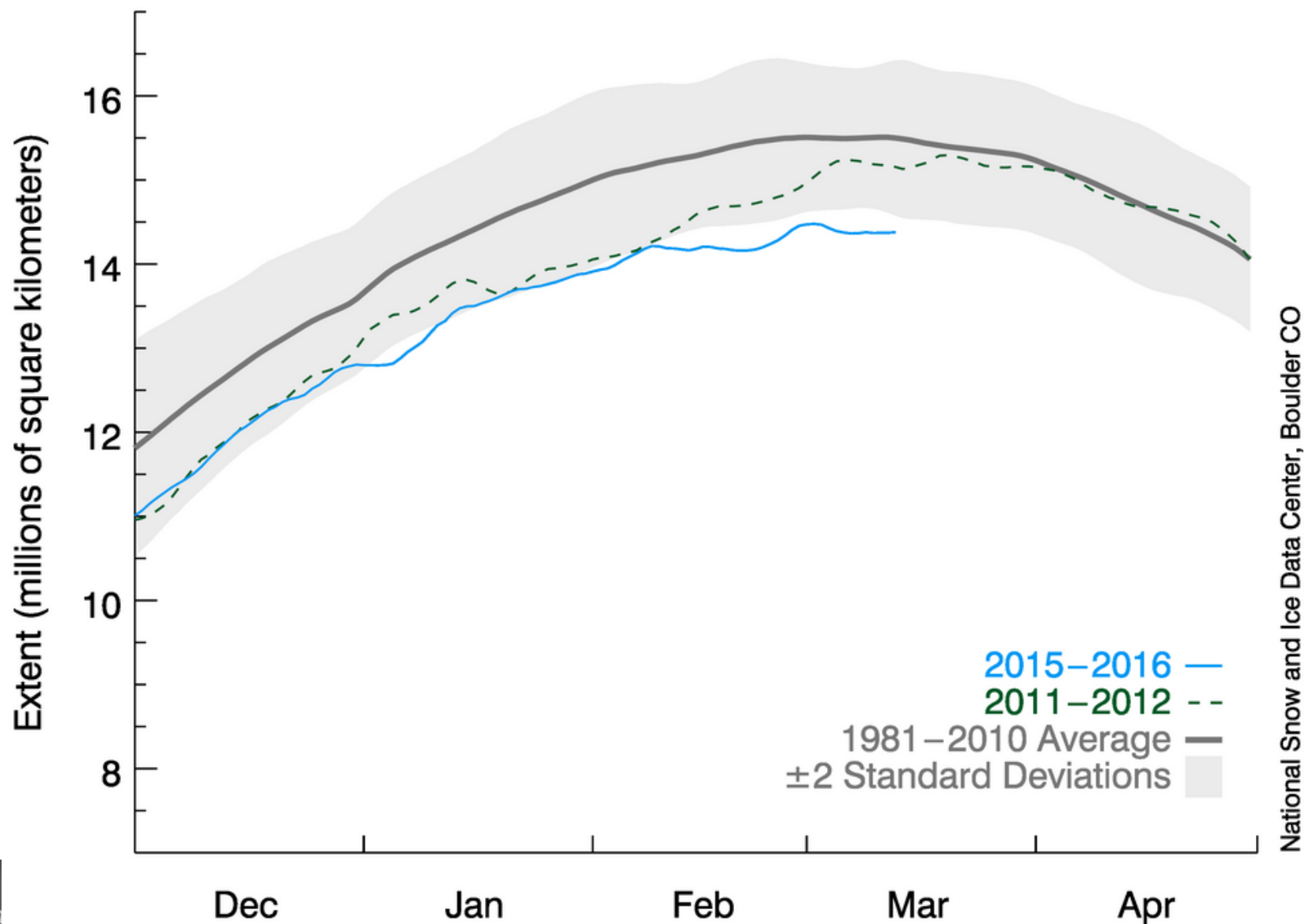
January 2016

L-OTI(°C) Anomaly vs 1951-1980

1.13



Arctic Sea Ice Extent (Area of ocean with at least 15% sea ice)



“But what does it mean?”



Goal 6. Ensure availability and sustainable management of water and sanitation for all

See Annex 1 (page 67) for a synthesis of how indicators track water and sanitation across all goals

45	Per (mo	17 SDGs! 169 Targets! How many indicators??? 229? 149? Barrier to mainstream buy-in to sustainability	EF	oring	1, 2, 3, 9, 11
46	Per urb		EF		1, 2, 3, 9, 11
47	Per to b		EF		3, 9, 11, 12, 14
48	[Indicator on water resource management] – to be developed		UN Water		12, 14, 15
49	Proportion of total water resources used (MDG Indicator)		FAO, UNEP		2, 9, 11, 12

Goal 13. Take urgent action to combat climate change and its impacts

See Annex 1 (page 67) for a synthesis of how indicators track climate change across all goals

77	Availability and implementation of a transparent and detailed deep decarbonization strategy, consistent with the 2°C - or below - global carbon budget, and with GHG emission targets for 2020, 2030 and 2050.		UNFCCC		9, 11, 12, 17
78	CO ₂ intensity of new power generation capacity installed (gCO ₂ /pkm) and of new cars (gCO ₂ /pkm) and trucks (gCO ₂ /tkm)				
79	Net GHG emissions in the Agriculture, Forestry and Land Use (tCO ₂ e)				
80	Official climate financing from developed countries (in US\$)				
	Complementary National Indicators: 13.1. [Climate Change Action Index] – to be developed 13.2. GHG emissions intensity of areas under urbanization				

But!

there is an instinctive understanding of the flip side – actions to reduce emissions (usually) provide benefits for health, gender, social, etc.

A woman wearing a black hat, a red cardigan over a white patterned blouse, and a red skirt is cooking over an open fire. She is using a long-handled spoon to stir a pot. Steam is rising from the pots. There are several pieces of wood and logs around her, suggesting a rural or mountainous setting. The background shows a wooden structure and a dirt ground.

▮ \$3 in employment
\$93 in livelihoods
\$55 in health impacts
For every 1 ton of CO2
mitigated

▮ “Sustainability requires a paradigm shift in the way we look at development”

188 countries to Paris Agreement
188 NDCs and aim for 1.5°C.

Full UN GA adoption of SDGs

Addis Ababa Action Agenda (FfD)

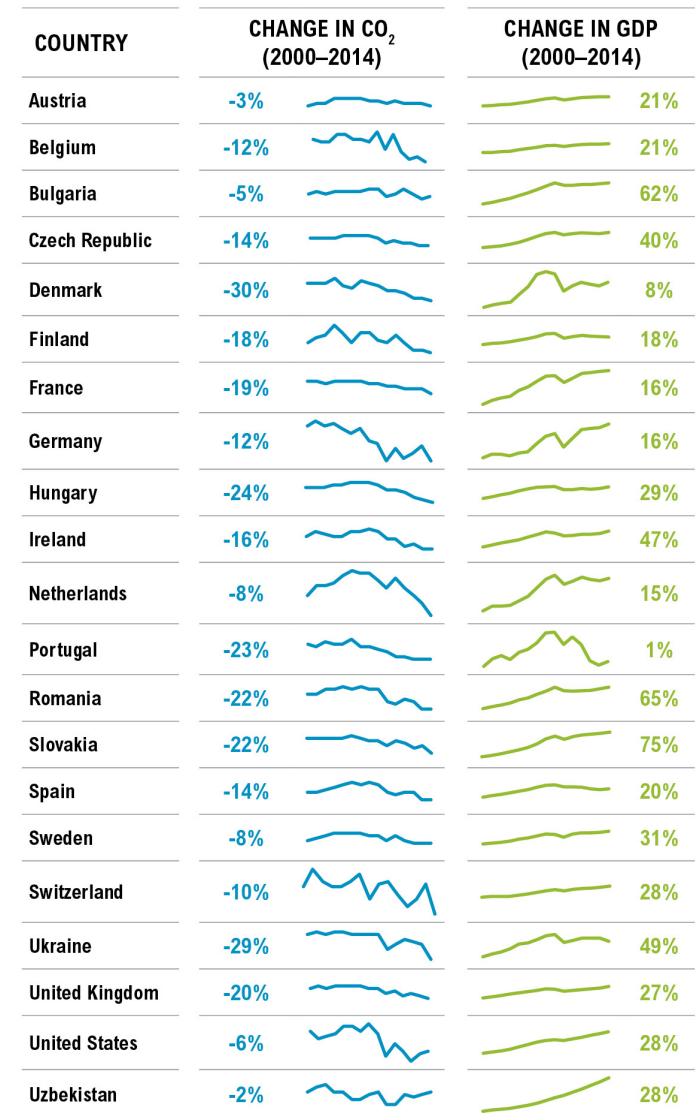
DO INTERNATIONAL POLITICS REALLY COUNT?

WHERE THE POLITICS MATTER

Sweden aims to be 'fossil free' by 2030 in it's transport fleet, and no net emissions by 2050.

EU 40% by 2030, and 80% by 2050.

Since 2000, More Than 20 Countries Have Reduced Annual GHG Emissions While Growing Their Economies



Sources: BP Statistical Review of World Energy 2015; World Bank World Development Indicators

└ WHERE THE POLITICS MATTER

California and Quebec

British Colombia

ACT, South Australia

Race to be the first 'carbon neutral' city

Copenhagen? Adelaide? Stockholm? Boulder?

Carbon neutral events

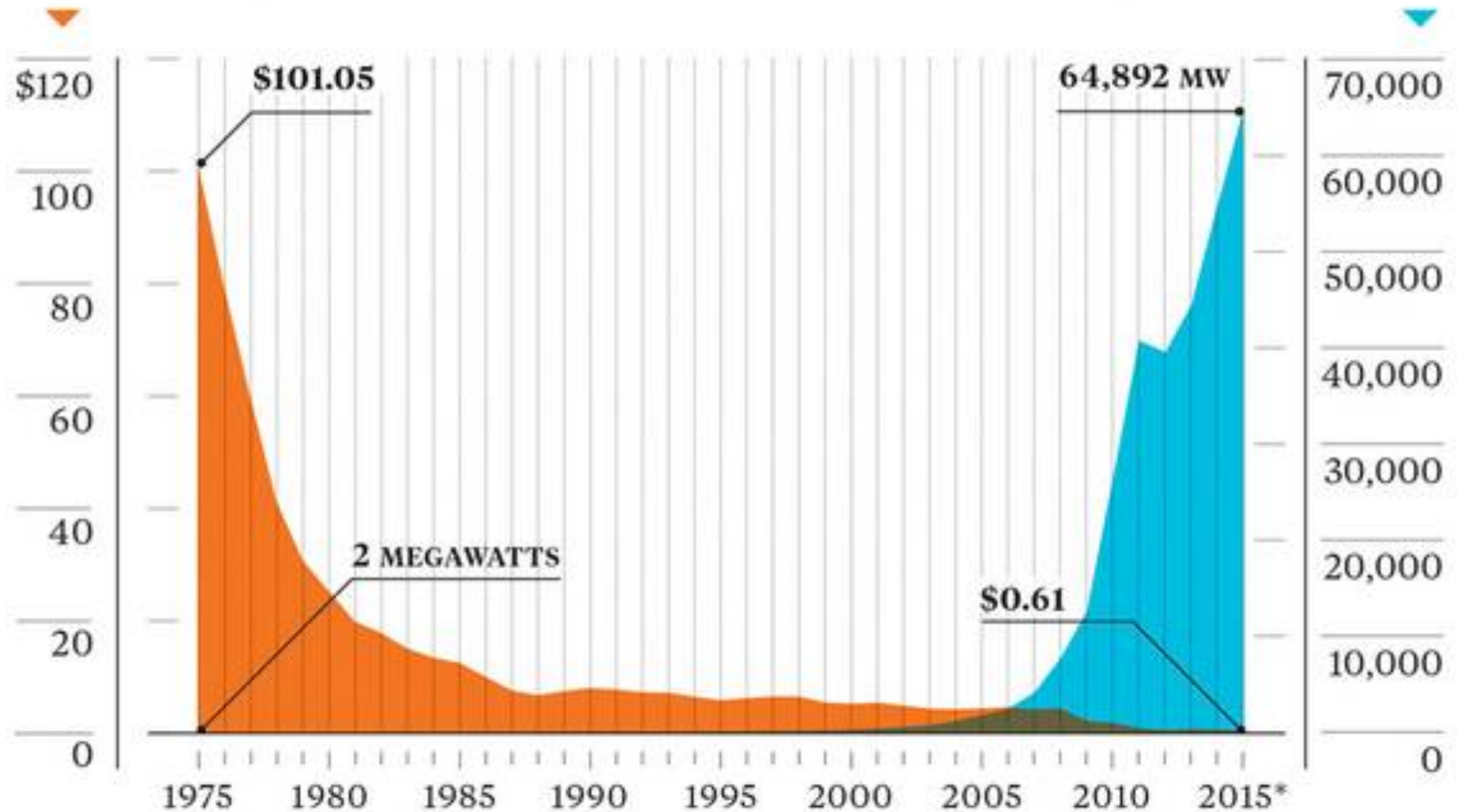
Sustainable sports and activities

Fly neutral, neutral beef, carbon neutral socks...

It's not about politics It's about MONEY!

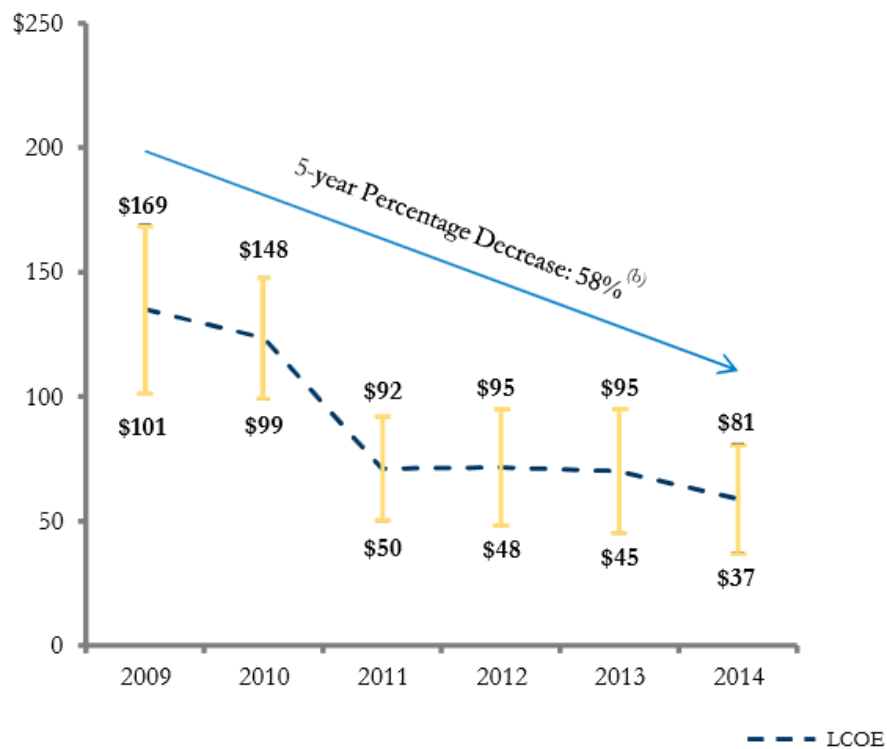
Price of a solar panel per watt

Global solar panel installations



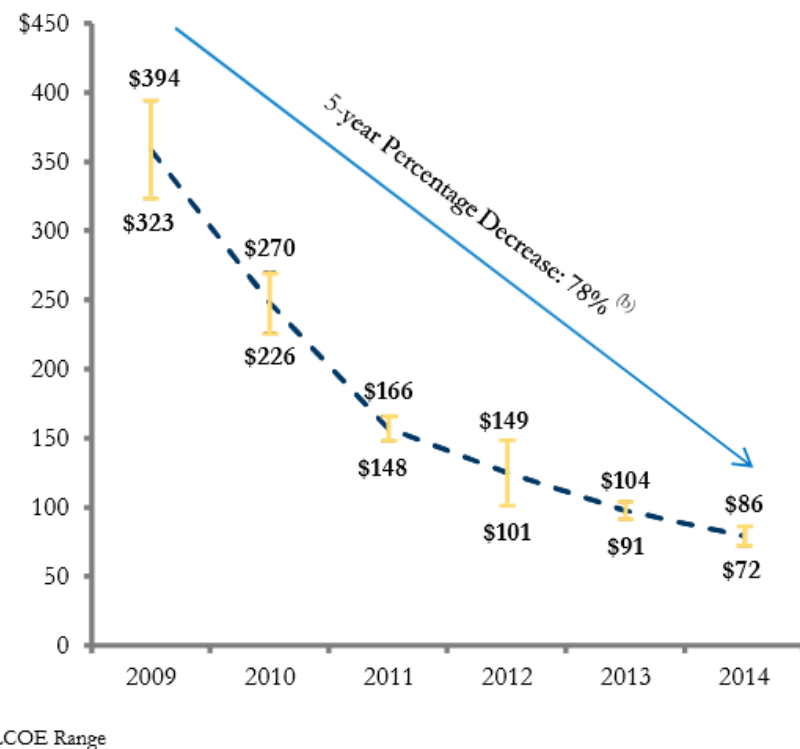
WIND LCOE

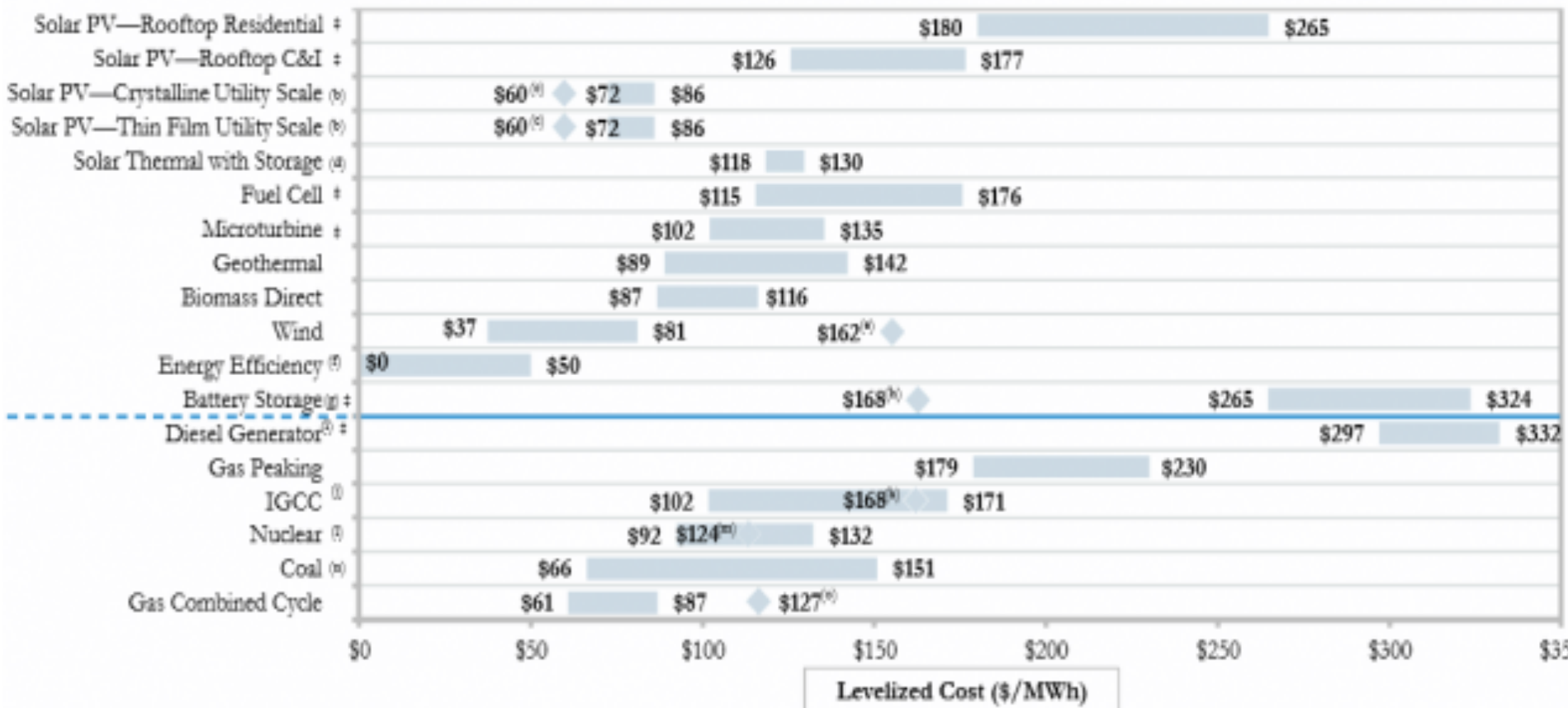
LCOE
\$/MWh



SOLAR PV LCOE^(a)

LCOE
\$/MWh





NEW SYSTEMIC APPROACHES

- Predictability of intermittent RE through real time weather projections (big data)
- Electric cars as realistic alternatives (smart meters, storage)
- GPS + GIS + sensors for fertilizer spreading & irrigation
- Facilitation of 'city bikes' (internet of things)
- 3D printers/nanotech
- Etcetera!



└ BUSINESS IMPACTS

3 Global Giants drop Malaysian palm oil supplier over deforestation

The Straits Times

The largest U.S. coal company just filed for bankruptcy

CNN

Will the “Tobacco Strategy” Work Against Big Oil?

The New Yorker

Saudi Arabia restructures oil giant Aramco

Reuters

BUSINESS IMPACTS

Environmentally-friendly business is profitable business

Guardian

‘Sustainable Investing’ Goes Mainstream

Wall Street Journal

Making Green Energy Profitable: The Boom In Distributed Renewable Energy

Forbes

Gold Standard can provide the tools to make this paradigm shift easier, faster, and bigger.