

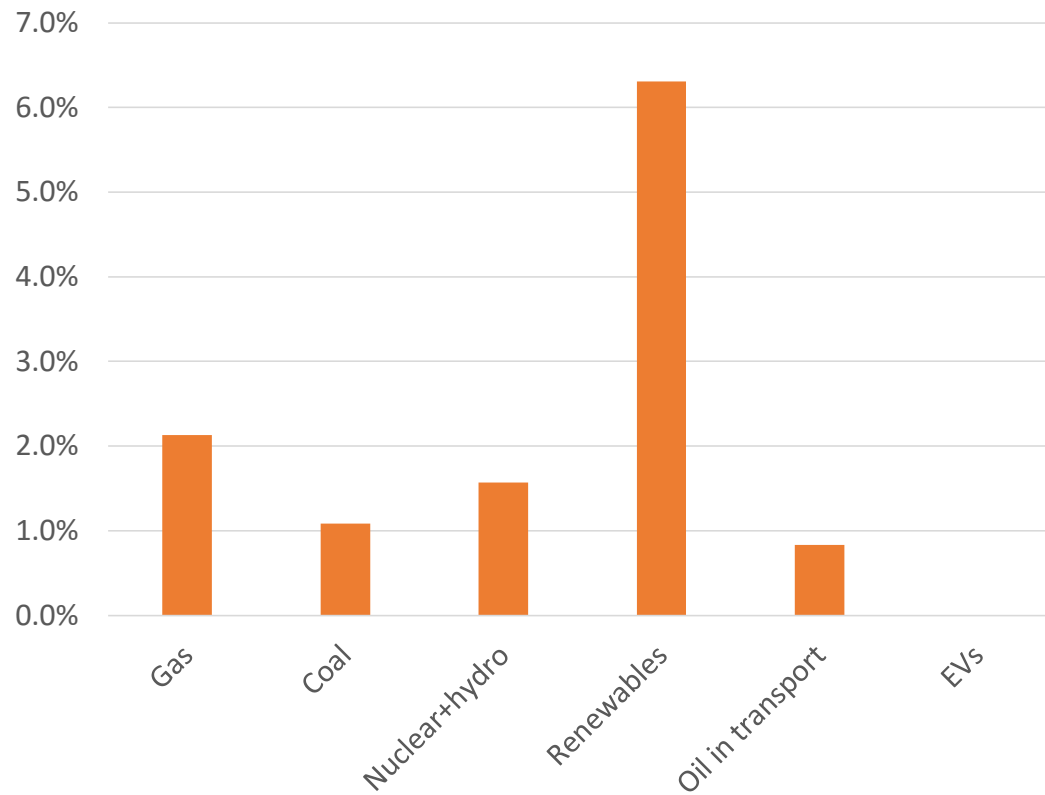
Systemic Carbon Risk and Forceful Stewardship

Howard Covington and Raj Thamotheram

November 2015

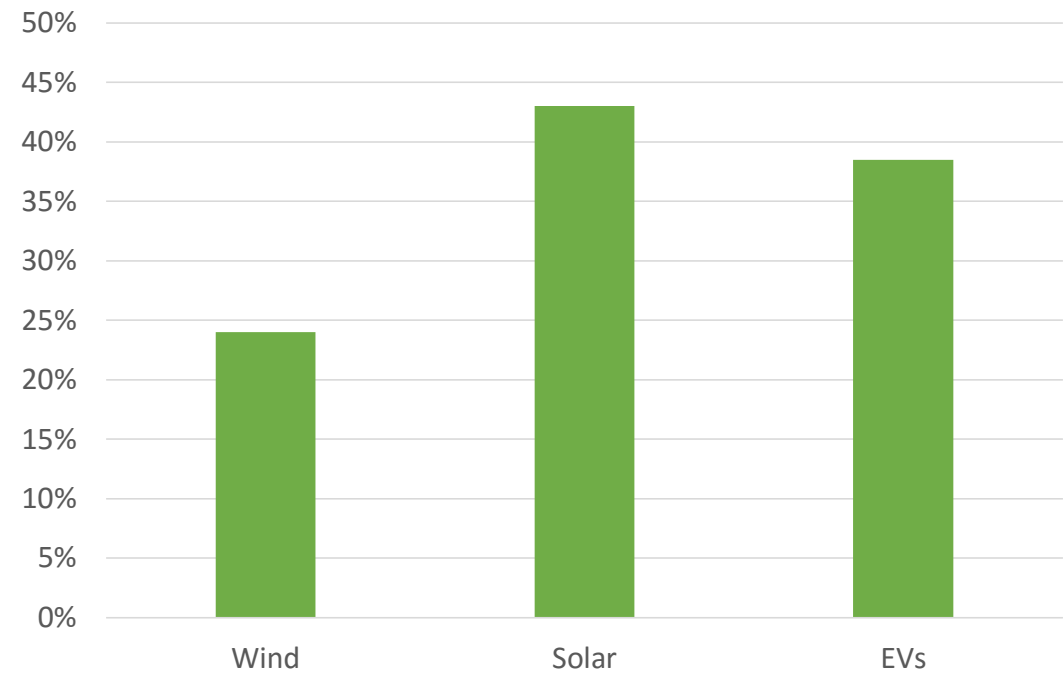
Big Carbon vs Big Silicon

BP's Growth Expectations



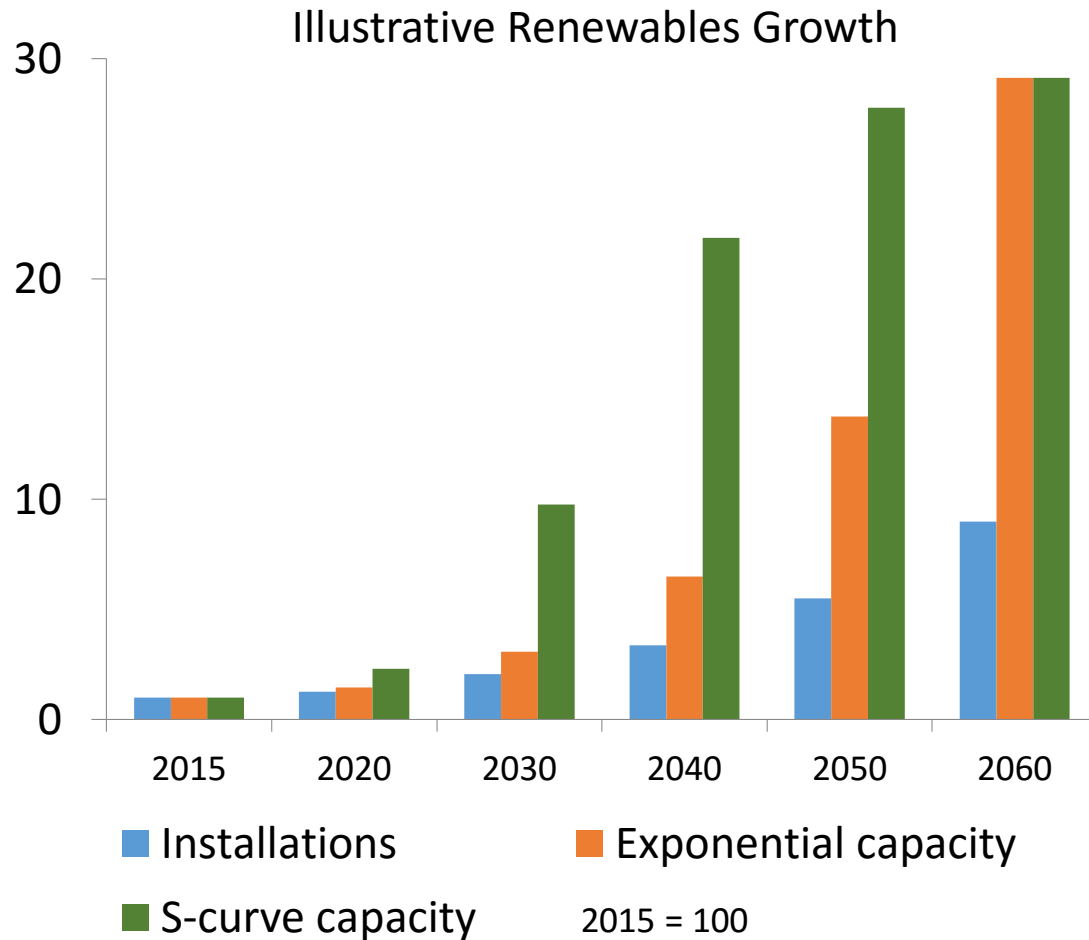
Source: BP 2015: Power and Transport

Renewables and EVs



Source: GWEC 2014, EPIA 2014, UBS 2014

Beware Accelerated Compound Growth

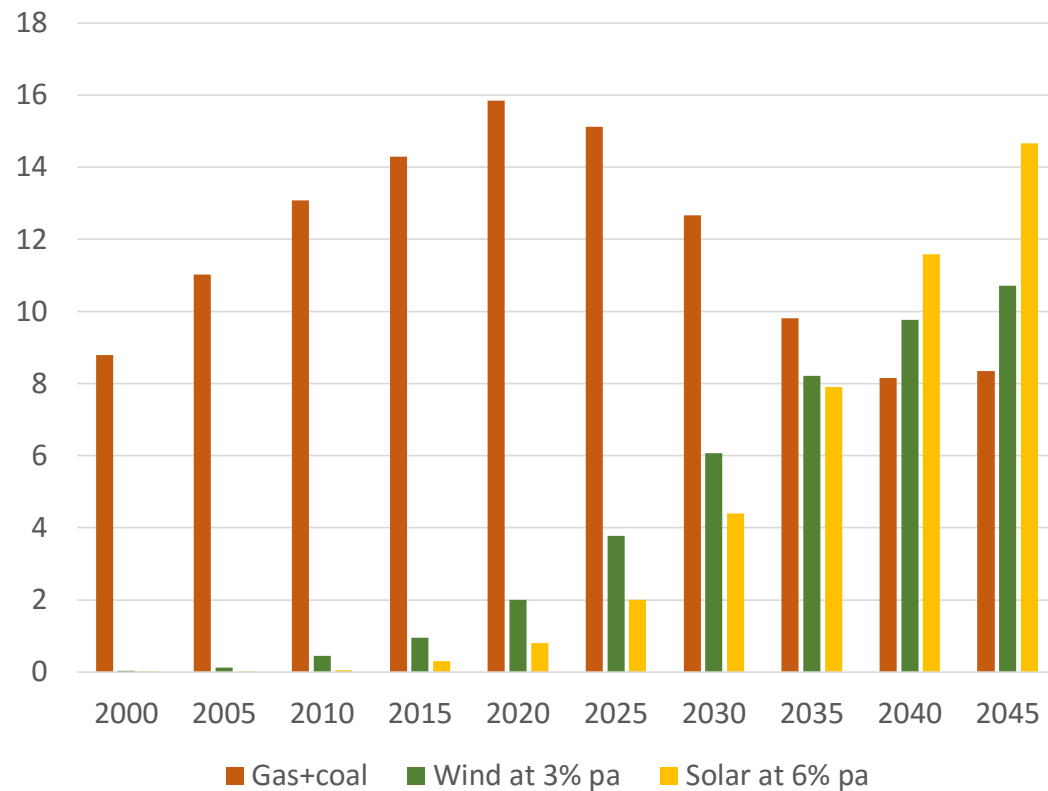


- Installations grow at 5% pa to 2060
- Plant life is 25 years, so
- Capacity grows at 8% pa
- S-curve the capacity, then
- Capacity grows at 13% pa to 2040
- 13% pa growth doubles in 6 years
- 3 doublings takes a 5% share to 40%

Coal and Gas May Decline in the 2020s

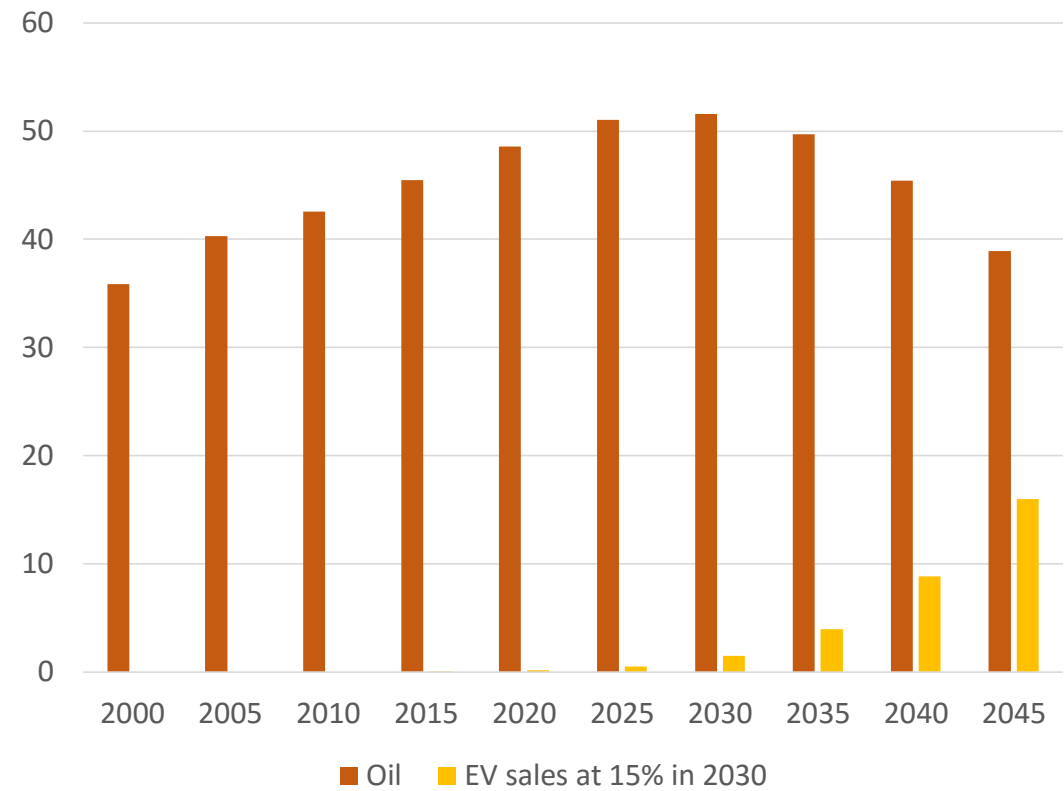
Oil May Decline in the 2030s

Electricity Generation (kTWh)



Source: BP 2015, own analysis

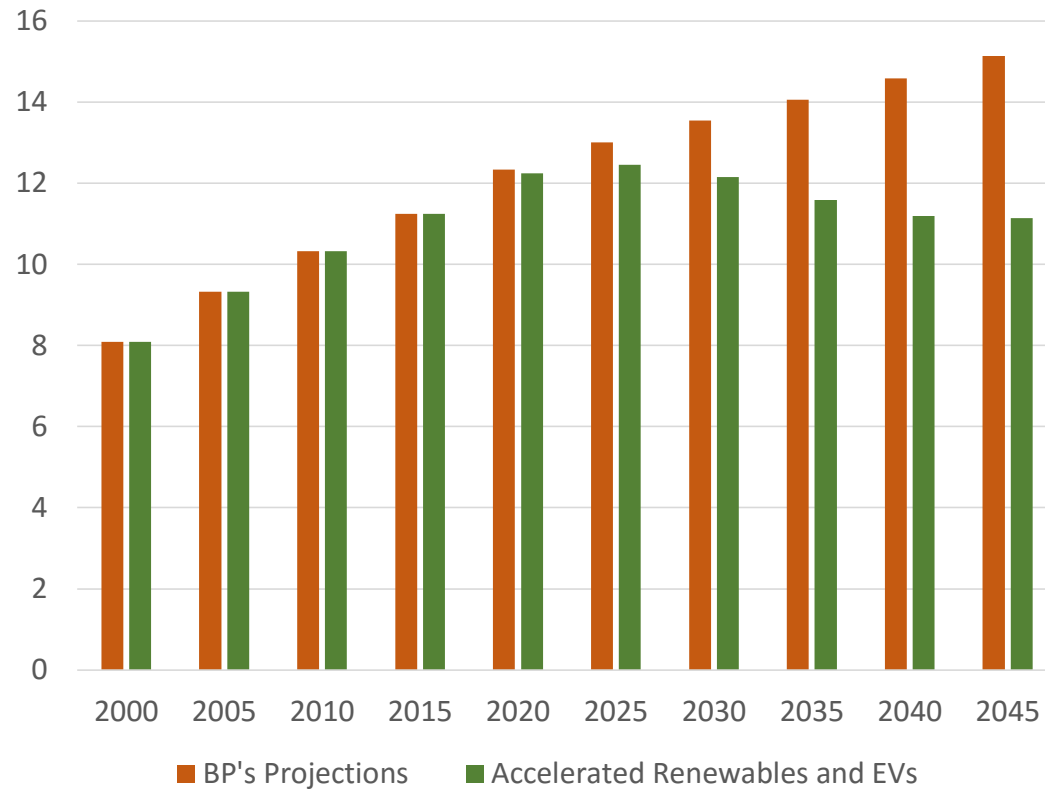
Oil in Transport (mb/d)



Source: BP 2015, own analysis

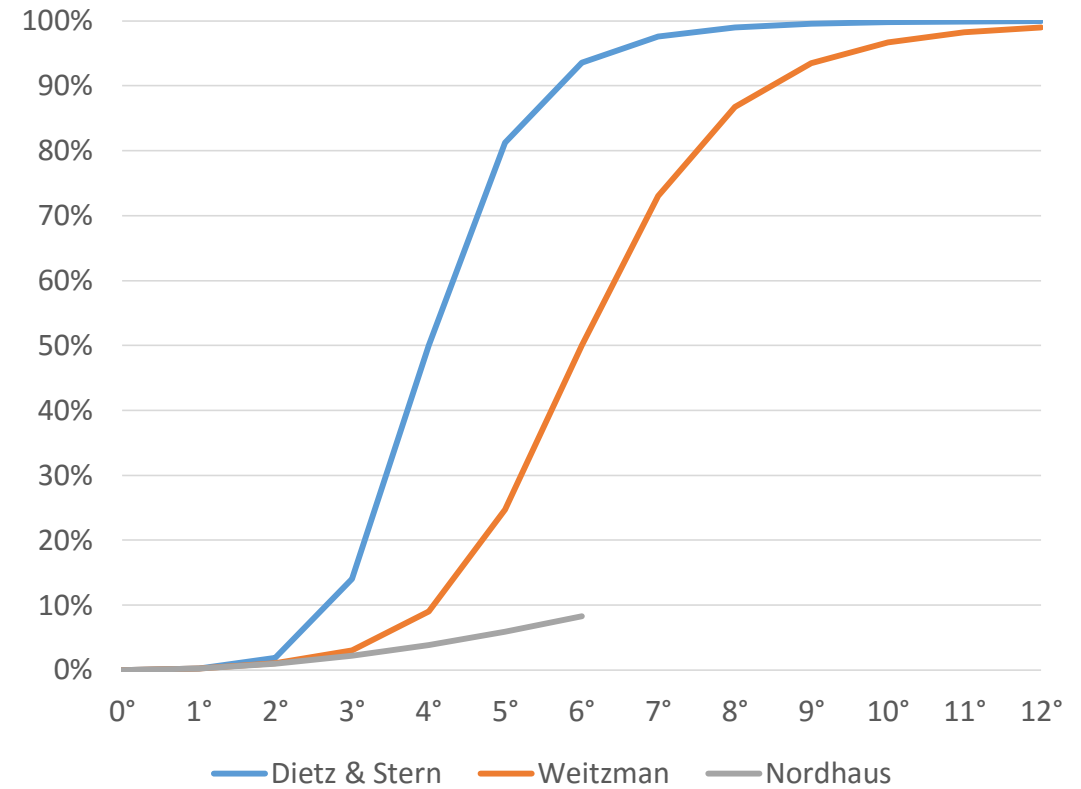
Renewables Aren't Enough

Aggregate Fossil Fuels (bn toe)



Source: BP 2015, Covington 2015

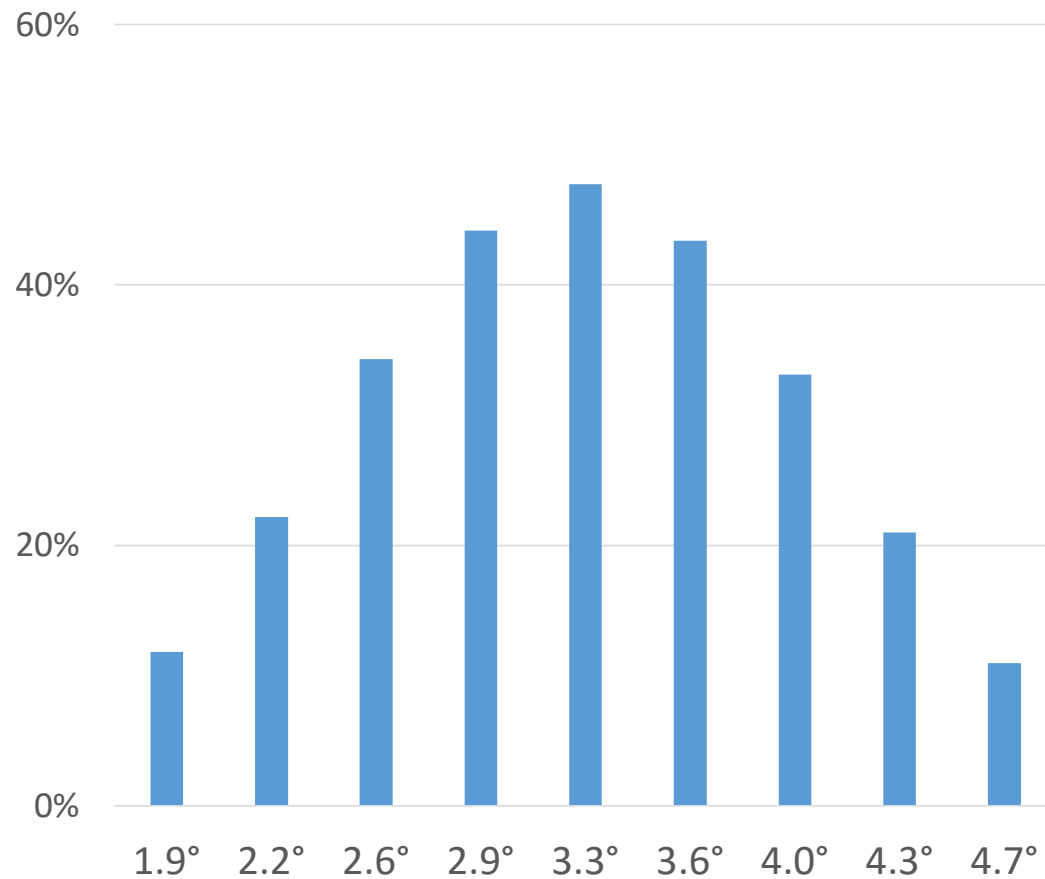
Climate Damage Functions



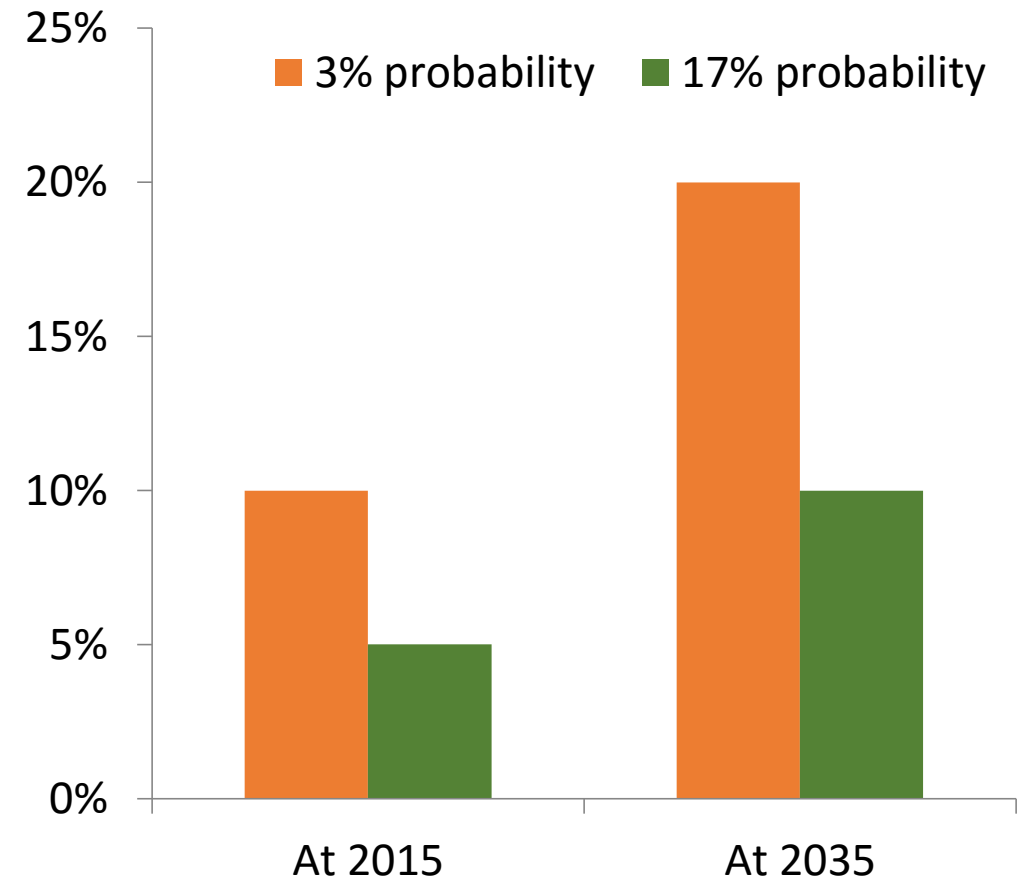
Source: Dietz and Stern 2015

Value at Risk From Future Warming

Probability of Warming by 2100



Value Impairment from Future Warming

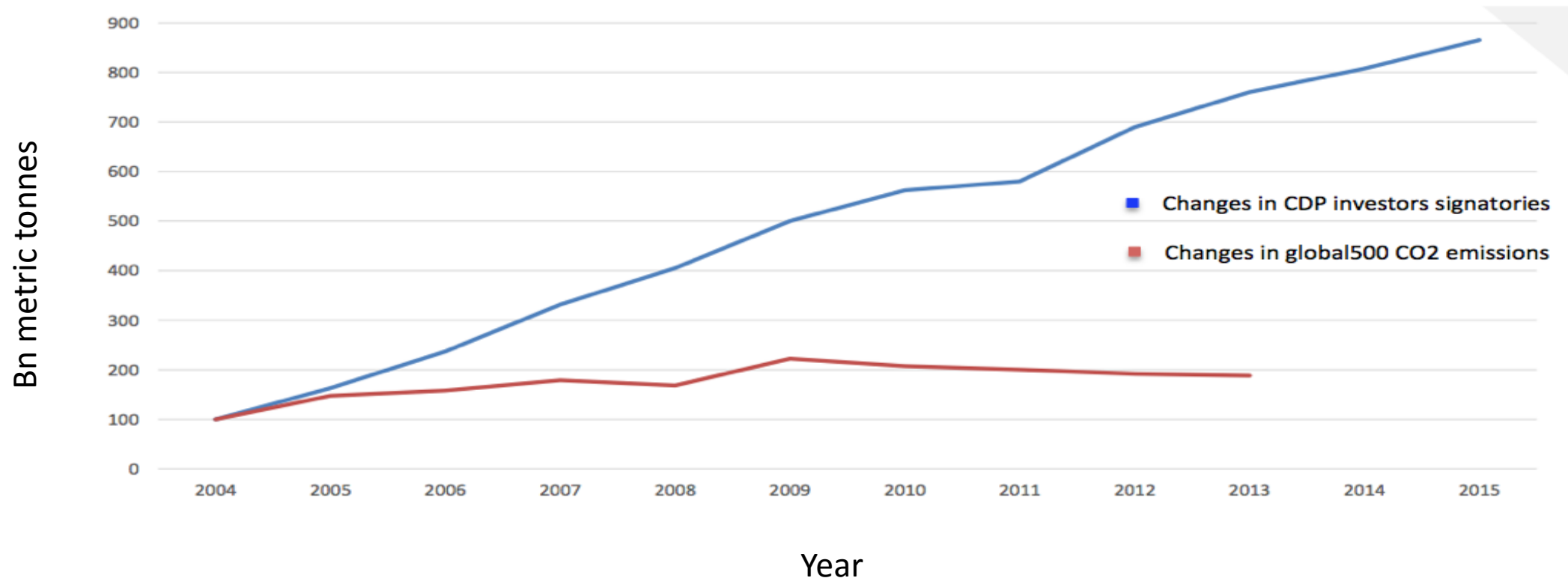


Current value at risk ~ \$7 trillion

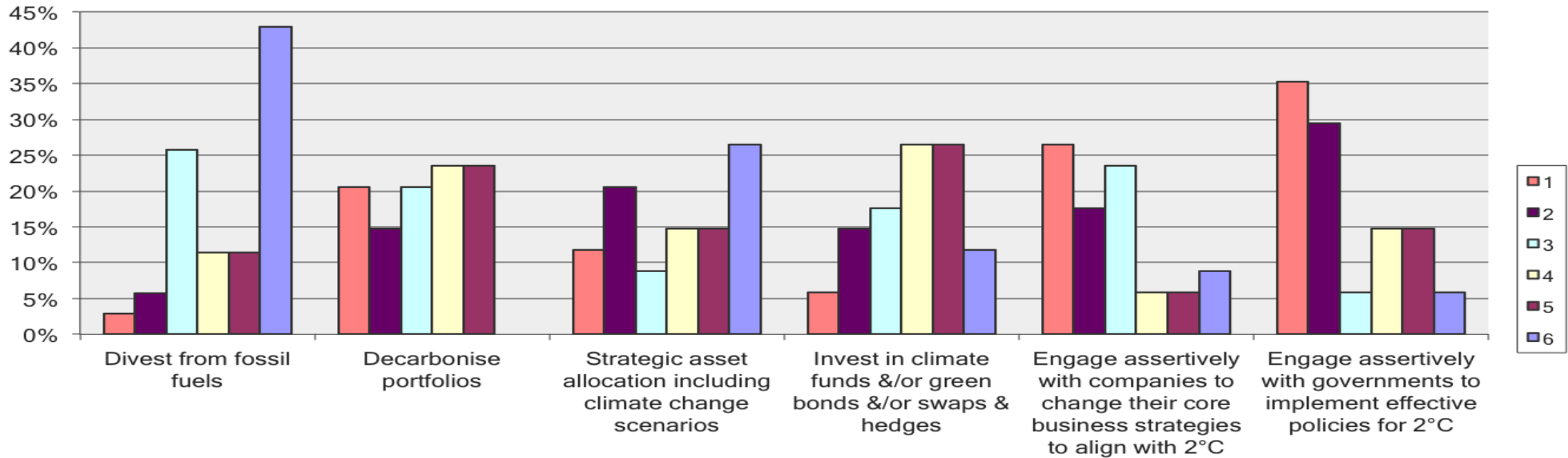
Investors are in the hot seat – what to do?

- Investors own ~30% of emissions
- Investment fiduciaries must control for risk
- Climate risk is systemic and cannot be sold or hedged
- There are value-creating projects that reduce emissions
- Taking a portfolio wide and long horizon perspective, the benefits outweigh the costs
- Regulators, litigators, legislators and campaigning groups are focusing on investors

Asking for disclosure is easy



What investment ‘positive mavericks’ think



With 1 being the most effective and 6 being the least, please rank the following strategies the world’s 100 biggest institutional investors could take in order to combat the effects of “big climate risk”

Engage with Companies

Engage with Govts

Investors are discovering the 3rd leg



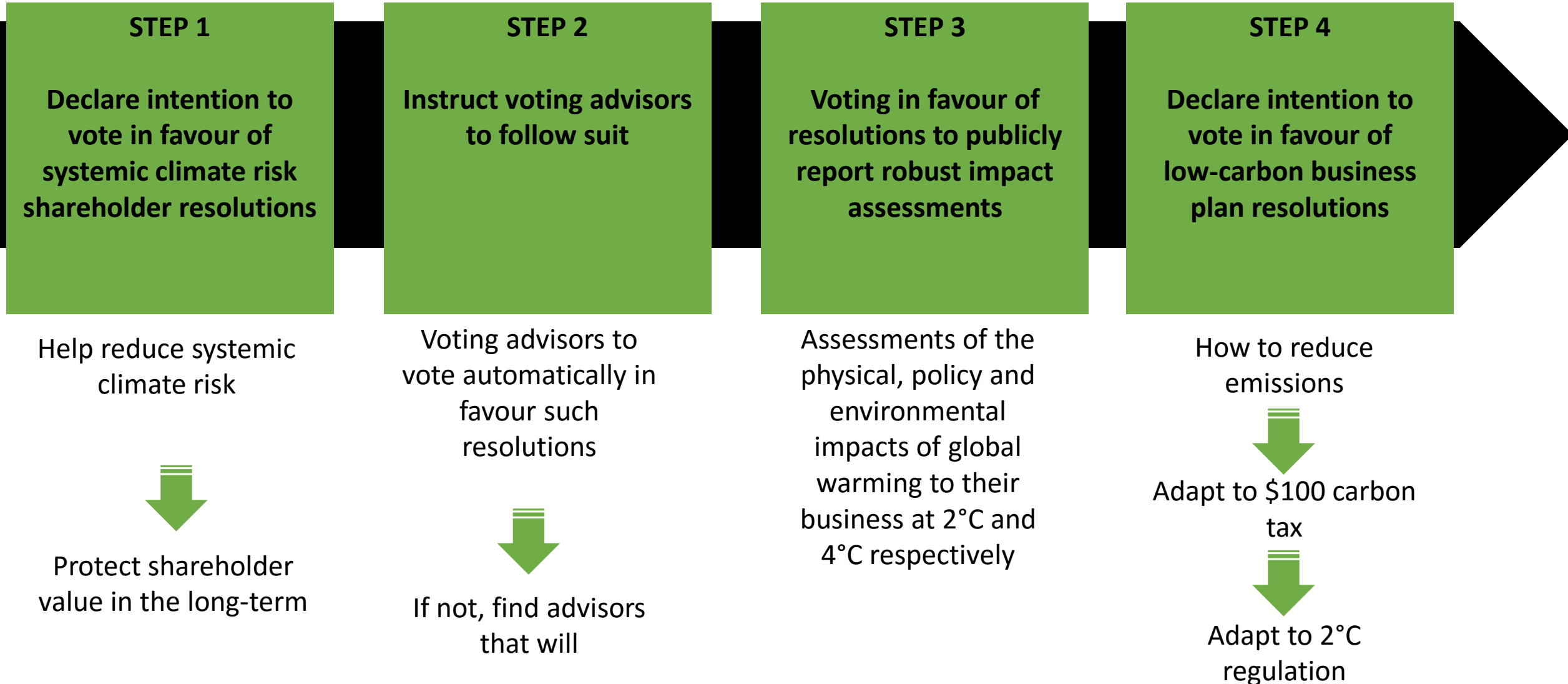
Solution: Forceful Stewardship

Investors acting together to guide the decisions company directors make about corporate purpose and strategy via **shareholders resolutions** at company AGM's

3 design criteria

- As easy to understand and monitor from the outside as divestment
- Fit for purpose in terms of systemic risk management
- Shifts accountability from ESG heads to boards/senior execs

Forceful Stewardship Guidelines (1-4)



Forceful Stewardship Guidelines (5-7)

STEP 5

Case-by-case evaluation
of board, reports and
accounts

If persistent and
unacceptable bad
practice



Initiate a 'book and
records' lawsuit

STEP 6A

For AO's: Require active
support from
consultants
who want to engage
with climate risk

Identify principles in
research, screening,
and selection



If not, find
consultants that will

STEP 6B

For IM's: Instruct
analysts and credit
rating research to assess
business plans

Assess business plans and
adapt recommendations
in accordance with new
principles

STEP 7

Redouble efforts to
engage with credible
and well informed
scientists and other
experts

Take the blinkers
off



Expect shareholders to require GHG reductions

“The primary role of investors should be engagement, that’s where the effects are the strongest” “We need a more coherent set of engagement policies to address the overall risk in the system”.

Martin Skancke, Chair, PRI

“But shareholders, if motivated, could force the industry to shrink just by limiting the funds they provide for new oil discoveries.”

The Economist, “Nodding Donkeys”, 14th November, 2015

“Climate change and its risks are going mainstream.”

Blackrock, November 2015