

We can't burn it all We won't burn it all

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Carbon Tracker in a nutshell

- 1 Climate science; **finite limits** to carbon emissions for any given warming outcome
- 2 Far more fossil fuel is available – **thus higher cost assets have greater risk of destroying value** in the energy transition
- 3 Falling renewable costs, air pollution and import dependency drives an **Inevitable Policy Response & emerging markets leapfrog**
- 4 **Investors lose money at the peak**, not when the system has changed. Refocus, engage and divest company or management

Carbon budget

Stranded assets

Energy disruption

*Investors need
to act*

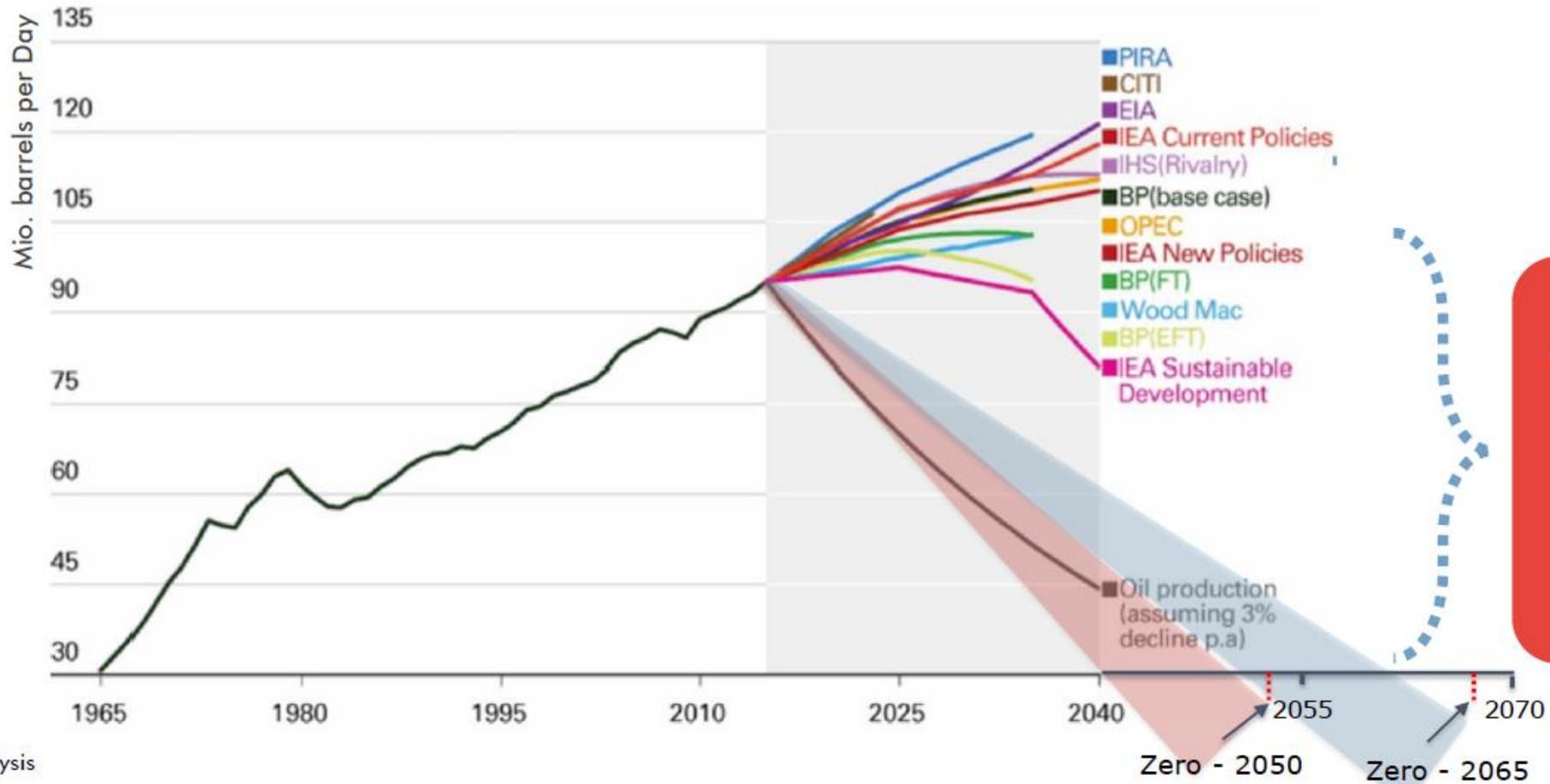
Fossil fuel sector plans for climate failure

The range of various oil production scenarios.

IPCC emissions scenarios (from all sources) consistent with Paris goals.

Medium-change 1.5C pathways

Likely 2C pathways



Source: BP, IPCC, CTI analysis

Energy disruption breaks barriers

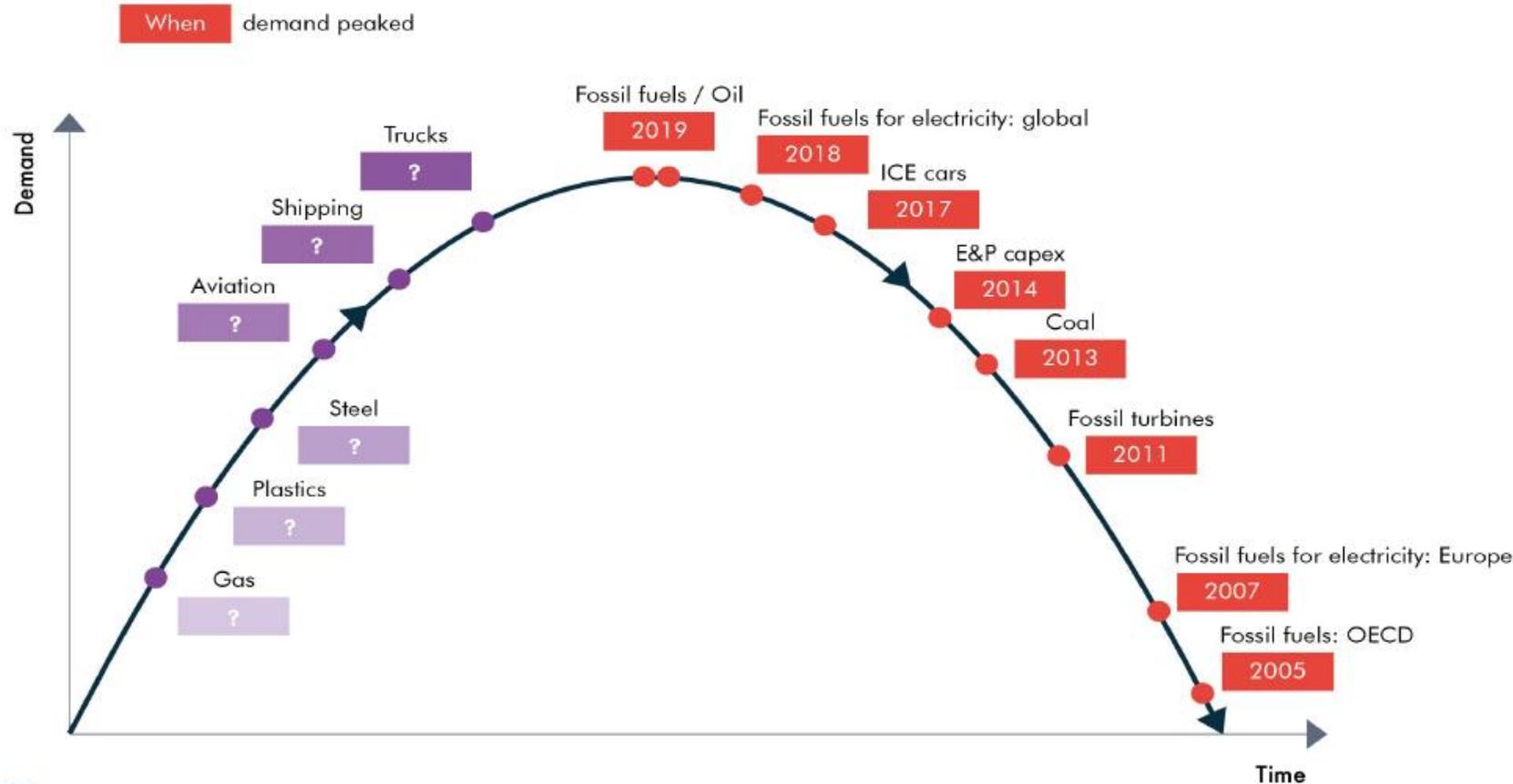


The problem	The solution
"It can't be built"	"Thank you, Germany"
"It's too expensive to build"	"Thank you, China"
"It will upset some important people"	"Thank you, Greta and Biden"

Source: "The Sky's the Limit" Carbon Tracker (2020)

New world of peak fossil fuel demand

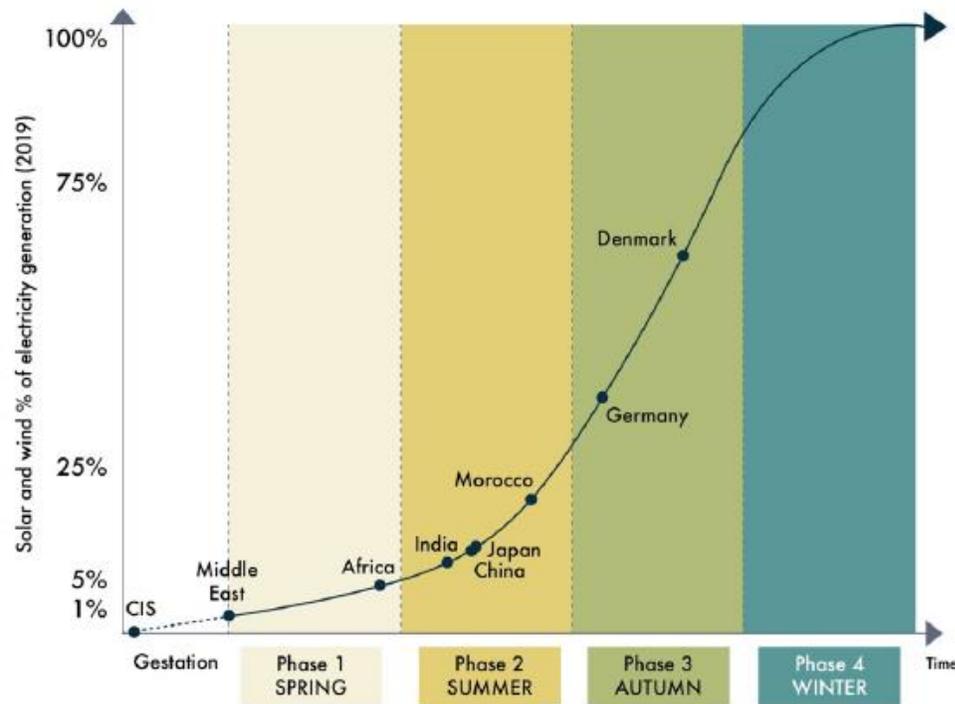
PEAK DEMAND DETAIL



- Fossil fuel for electricity demand peaked in OECD in 2005
- Global coal demand in 2013
- Global E&P capex in 2014
- Internal combustion engine (ICE) cars in 2017
- *Oil demand in 2019 ...?*
- *ICE trucks in 202X...?*
- *...?*

It will not happen all at once ...

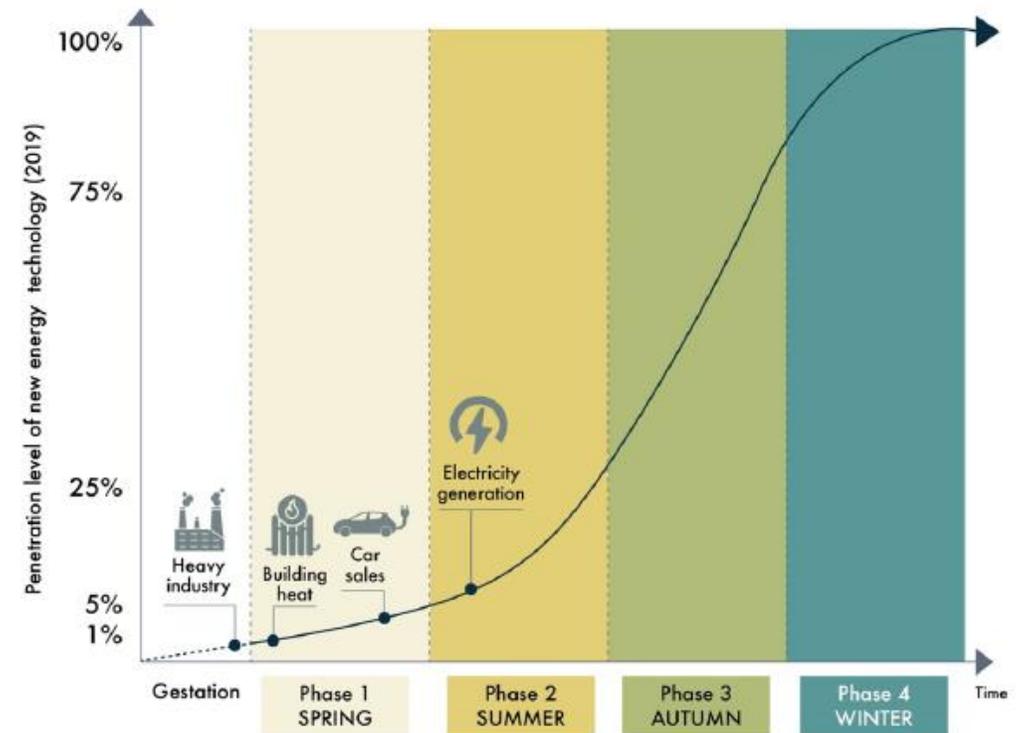
COUNTRY SEQUENCING



Carbon Tracker

Source: Carbon Tracker, BP Statistical Review 2020

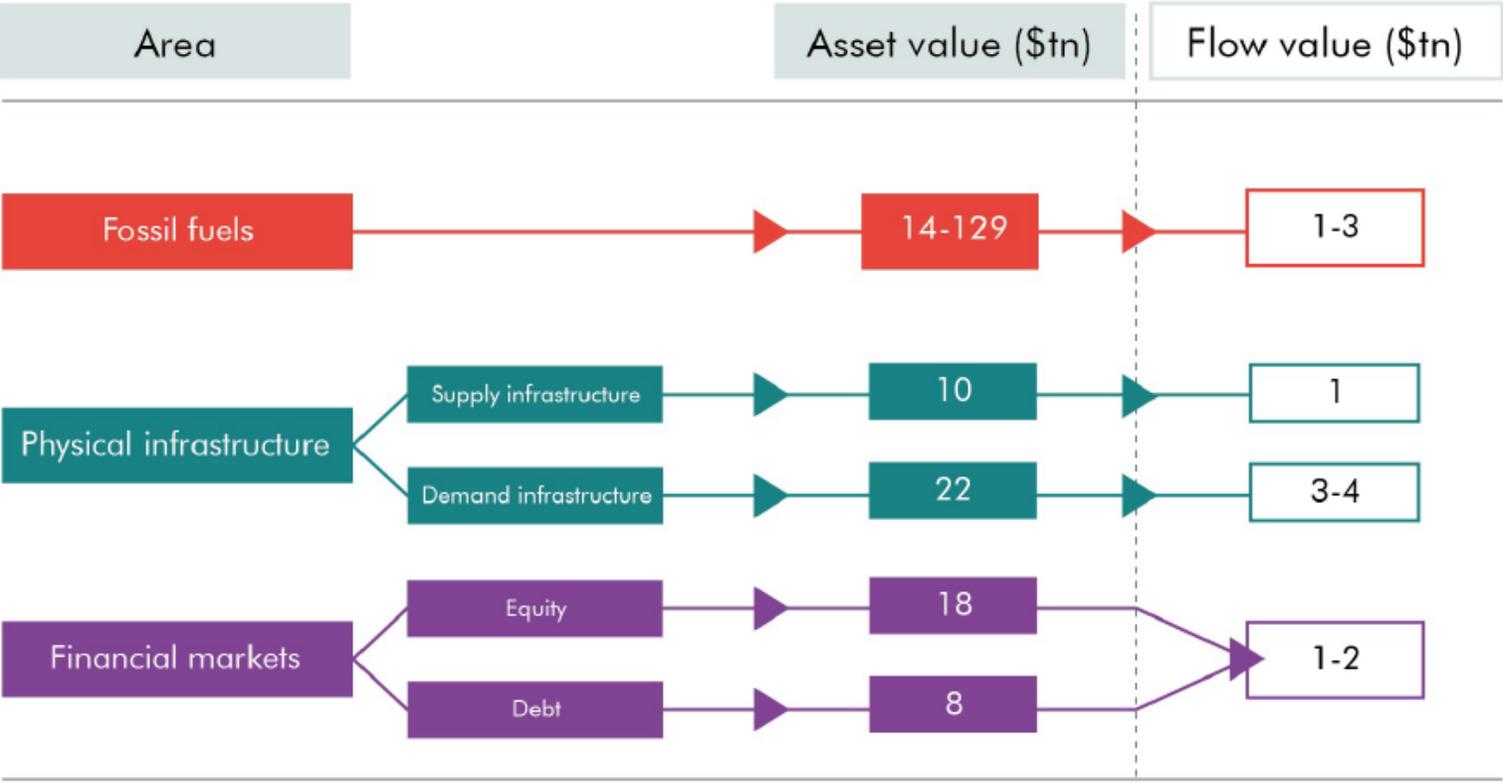
SECTORS AND THE ENERGY TRANSITION



Source: CTI analysis

Fossil fuel system – a financial juggernaut

THE FOSSIL FUEL SYSTEM IN NUMBERS

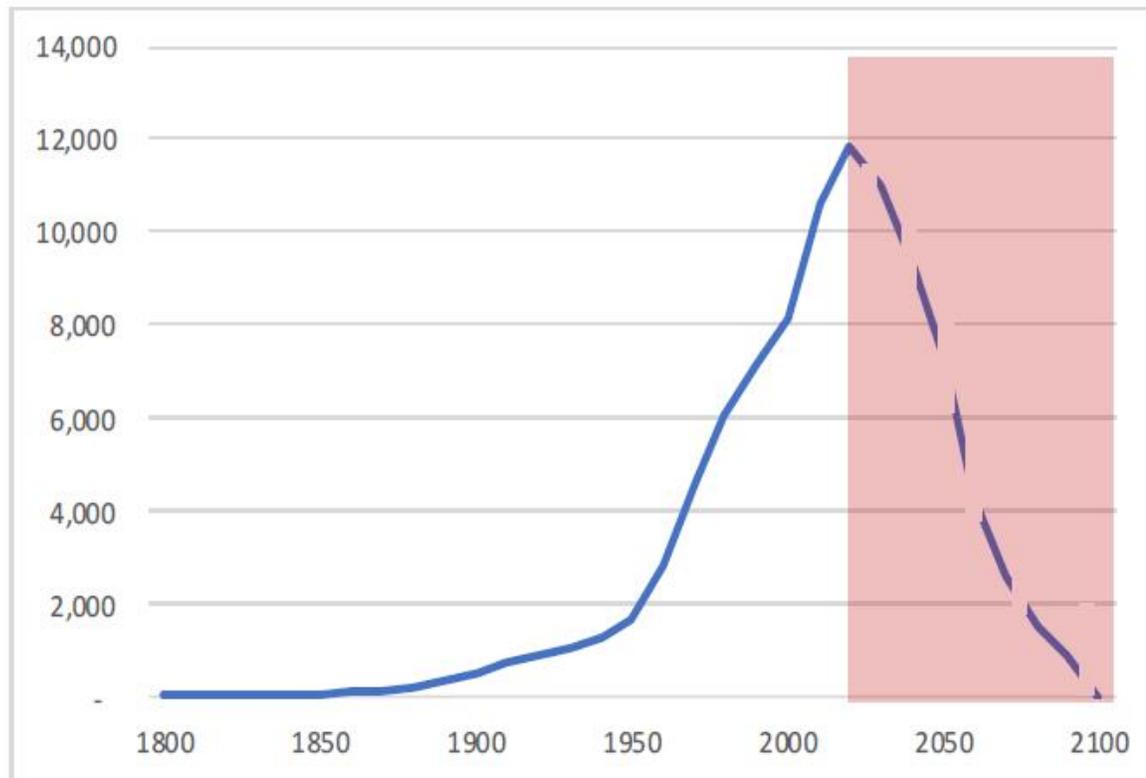


- \$32 tn worth of assets in physical infrastructure
- \$26 tn in equity & bonds - direct or indirect
- 25% of listed equities
- 50% of non-financial fixed income

Source: 'Decline and Fall', Carbon Tracker (2020)

Energy transition - risks & opportunities

Global fossil fuel demand (mtoe)



Risks	Opportunities
Accelerated depreciations	Replacement of existing fossil fuel-based energy infrastructure
Impairments & asset write-downs (stranded assets)	Adaptation infrastructure
Underfunded asset retirement obligations (stranded liabilities)	Disruption from new energy technologies
Can incumbents pivot?	New business models emerge

Source: Smil, BP, DNV, Carbon Tracker

COP26 change focus: Gain not Pain

What has changed since Paris in 2015

Mitigating climate change is no longer an expensive collective action problem ... It's a technology revolution with enormous wealth-generating and retributive potential

2015

- By 2040, cost of electricity from solar will still be higher than from fossil fuels (IEA)
- 360 GW cumulative solar by 2020 (IEA)
- Batteries are too expensive
- People scared of >2% renewable on grid

2020

- 90% of new electricity generation from renewables was cheaper than fossil fuels (BNEF)
- 710 GW was deployed globally (BNEF)
- Battery costs halved and deployment up 4x
- Denmark >50%

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Thank you for listening

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