

Washington 26-28 October

Mercer Global Investment Forums 2020



Chicago, October 26-28

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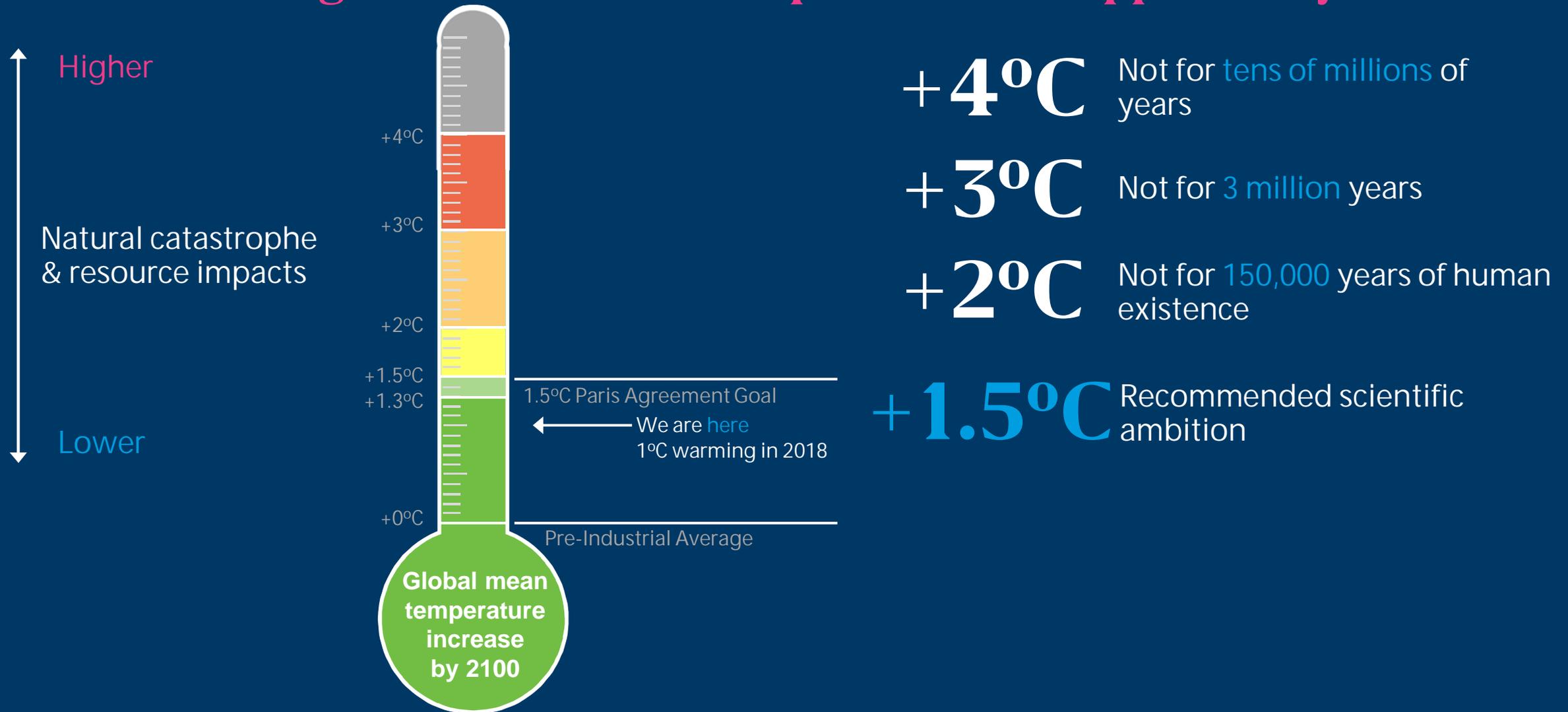
The Future of Energy in the Transition

Monika Freyman, Head of Responsible Investment, Canada

Rob Bailey, MMC Director of Climate Resilience

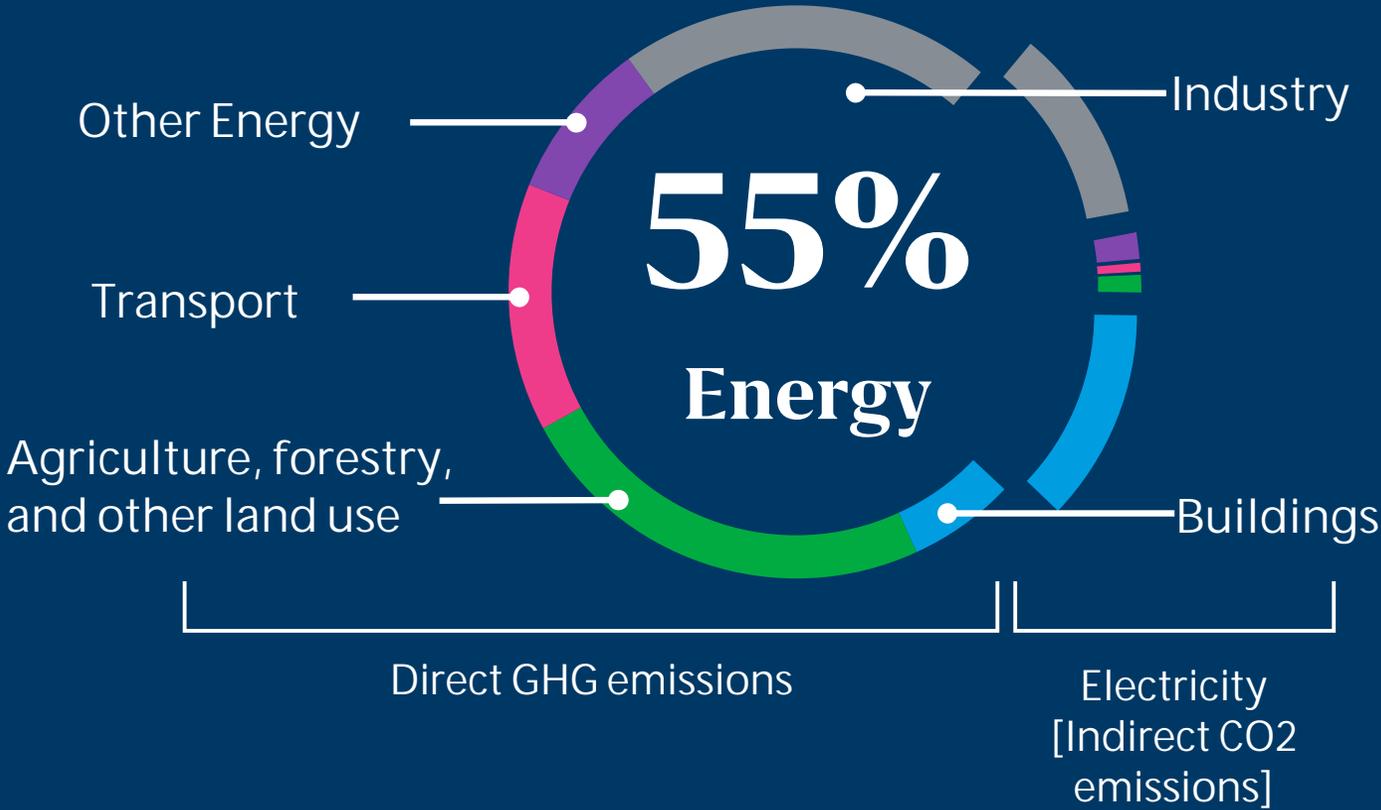
Sid Vittal, Asset Class Specialist, Alternatives

Climate change – the transition imperative and opportunity



Source: Climate Action Tracker (<http://climateactiontracker.org/>) -last updated December 2019. Goss et al Climate change is increasing the likelihood of extreme autumn wildfire conditions across California

55% of all emissions are from direct and indirect energy



Source: IPCC, 2014: Climate Change 2014: Synthesis Report. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Core Writing Team, R.K. Pachauri and L.A. Meyer (eds.)]. IPCC, Geneva, Switzerland, 151 pp

The energy transition is a multi-trillion dollar investment opportunity

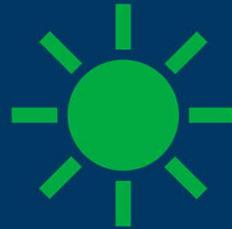
\$5.3Tn

Investment in
wind to 2050



\$4.2Tn

Investment in
solar to 2050



\$0.8Tn

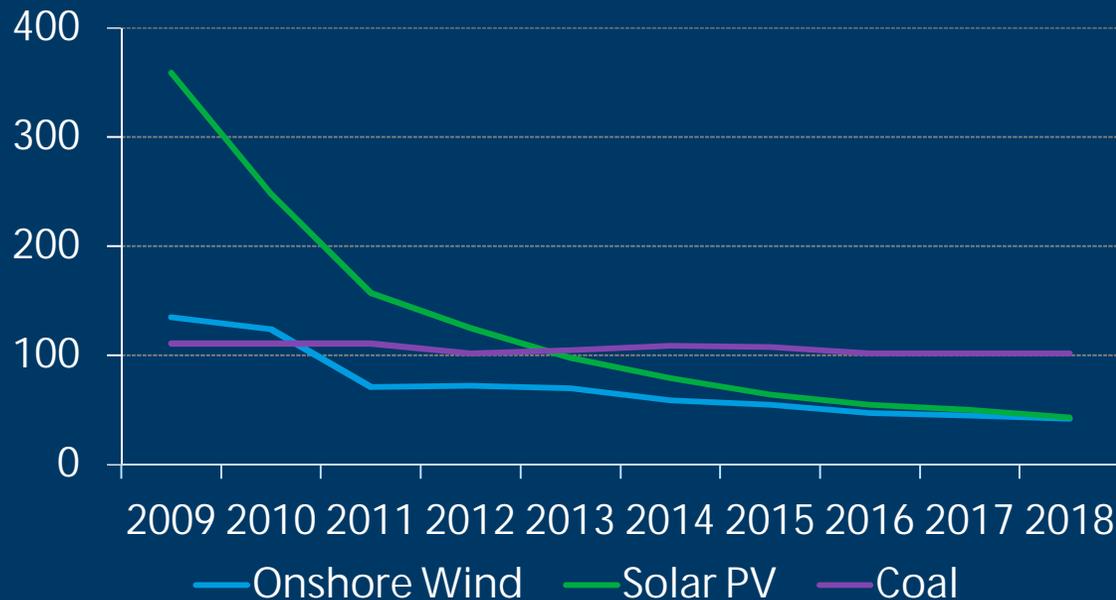
Investment in
batteries to 2050



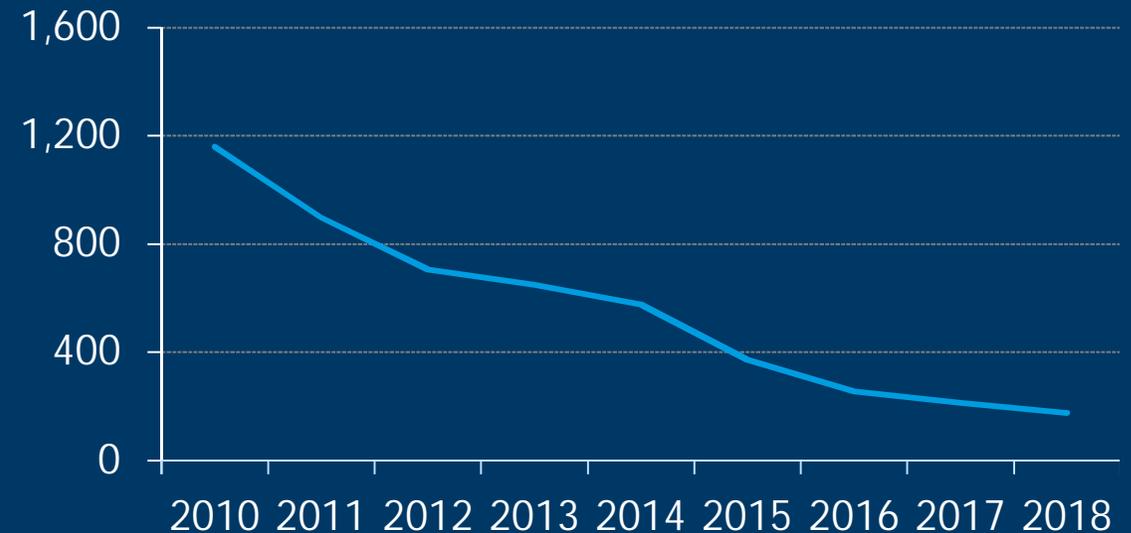
Source: BNEF (2019)

The energy transition is accelerating as technology costs decline

Unsubsidized LCOE for utility scale generation (\$/mwh) (US example)



Lithium-ion battery storage costs (\$/kwh)



Source: Lazard (2018), BNEF (2019)

The transition will proceed through a series of tipping points

It will not be smooth

- 1.** New renewable power generation is cheaper than new fossil fuel plants
- 2.** New renewable power generation is cheaper than the operating cost of fossil fuel plants
- 3.** New renewables plus storage are cheaper than new fossil fuel plants
- 4.** New renewables plus storage are cheaper than the operating costs of fossil fuel plants

The energy transition is not only about renewables

Zero-carbon
power



Energy
productivity



Electrification



New energy
carriers

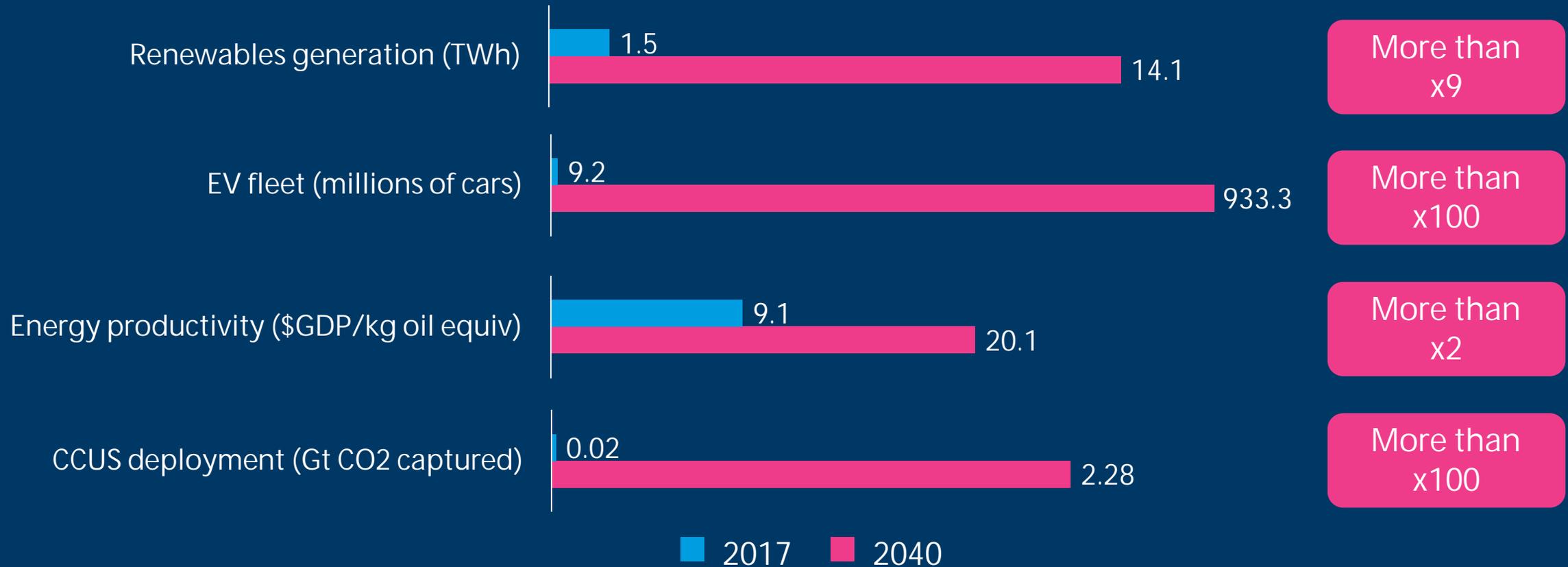


Carbon
capture,
utilization &
storage



There is a long way to go

Shifts in the energy system from 2017 to 2040 for a 2°C pathway



Source: IEA (2018), World Bank (2019) and Marsh & McLennan analysis

There will be surprises



Technologies

Natural gas is a bridge to where?

Prospects for hydrogen networks?



National context

Uncertainty around subsidies for renewables and fossil fuels

Societal acceptance of new technologies

Liberalization of power markets



Recovery plans

Will pandemic stimulus plans be green?

Which technologies will be favored?



Policy ambition

Ambition of countries' 2030 emissions reduction targets must quintuple to get on track for 1.5°C

How will the gap be closed?

Orderly or disorderly transition?

Position for transition



1. Know where you stand

- Determine your current emissions

2. Know how to get there

- Analyze your portfolio possibilities for transition

3. Know where you're going

- Defining your targets and timing

Possibilities for:

- The energy sector
- A transition scenario
- Action
 - Portfolios
 - Asset classes

<2°C scenario – an investor priority



1. The greatest risks in the short term – divergence in sectors (for example energy and utilities) and asset classes (for example equities and infrastructure).
2. The greatest opportunities this decade – particularly where solutions are targeted.
3. In investors' best interests over the long term – beneficial to aim to influence the outcome.

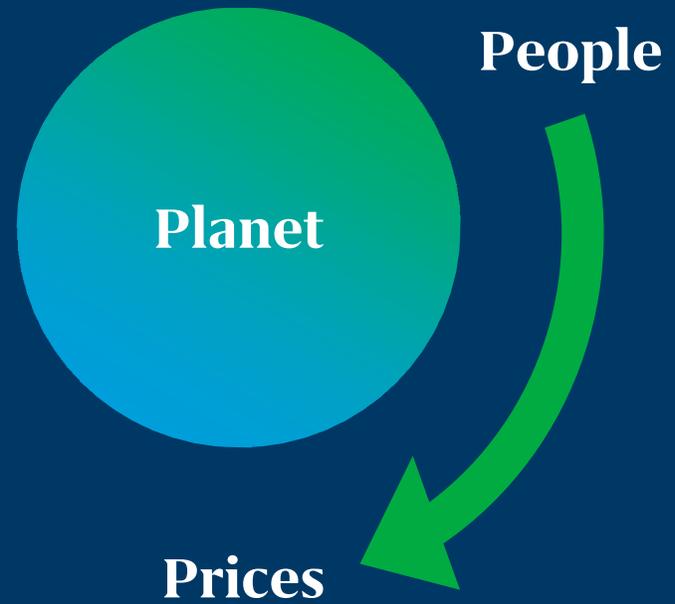
A virtuous circle

Planet, people, price, policy



A virtuous circle

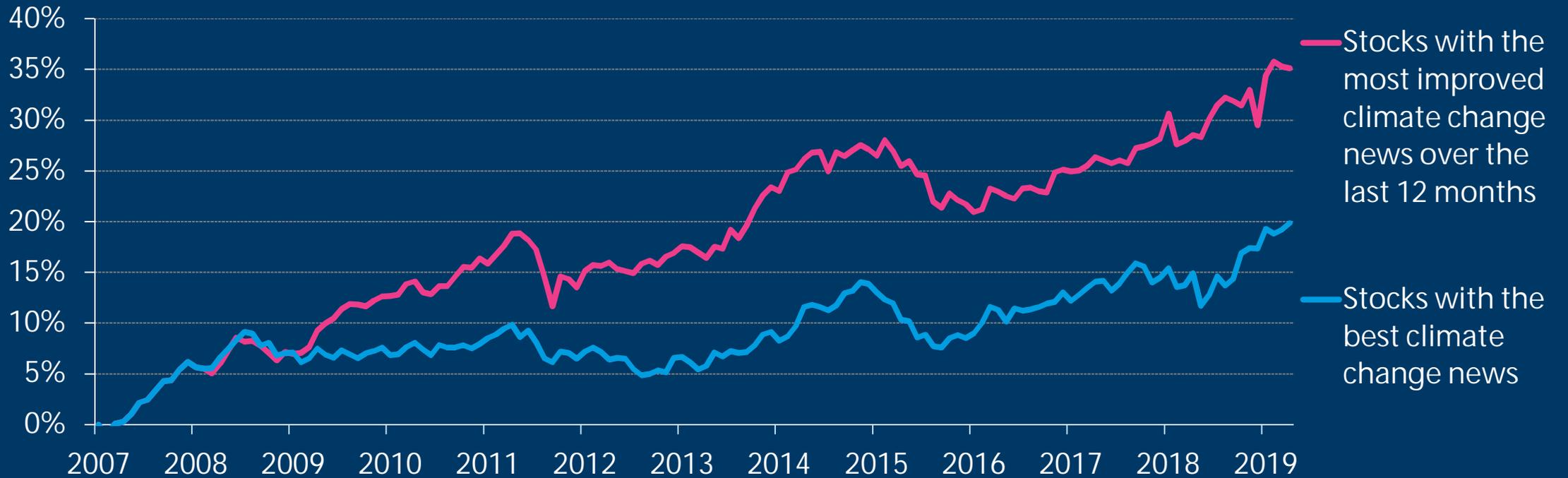
Planet, people, price, policy



A virtuous circle

Planet, people, price, policy

“Good news” portfolios relative to MSCI world



Source: MSCI World

A virtuous circle

Planet, people, price, policy

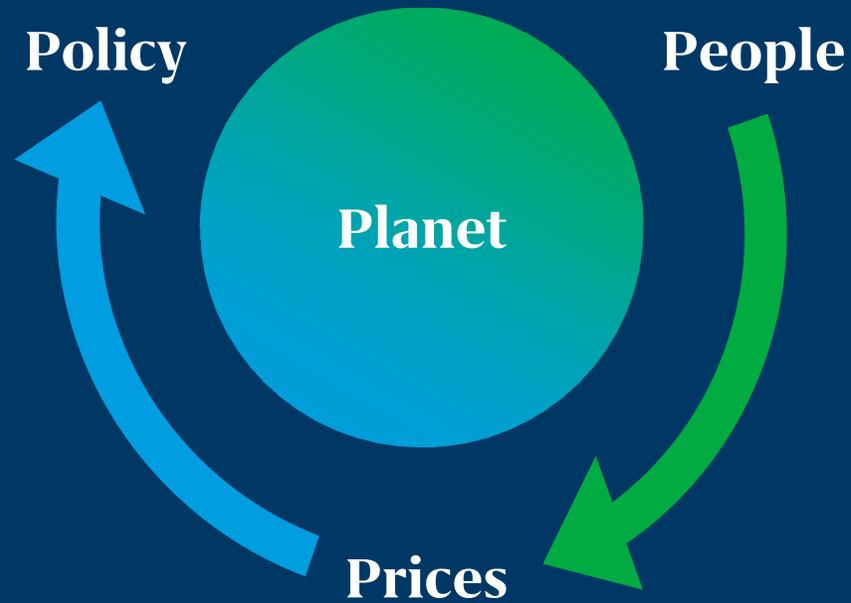


25%

of global Co2 emissions

50%

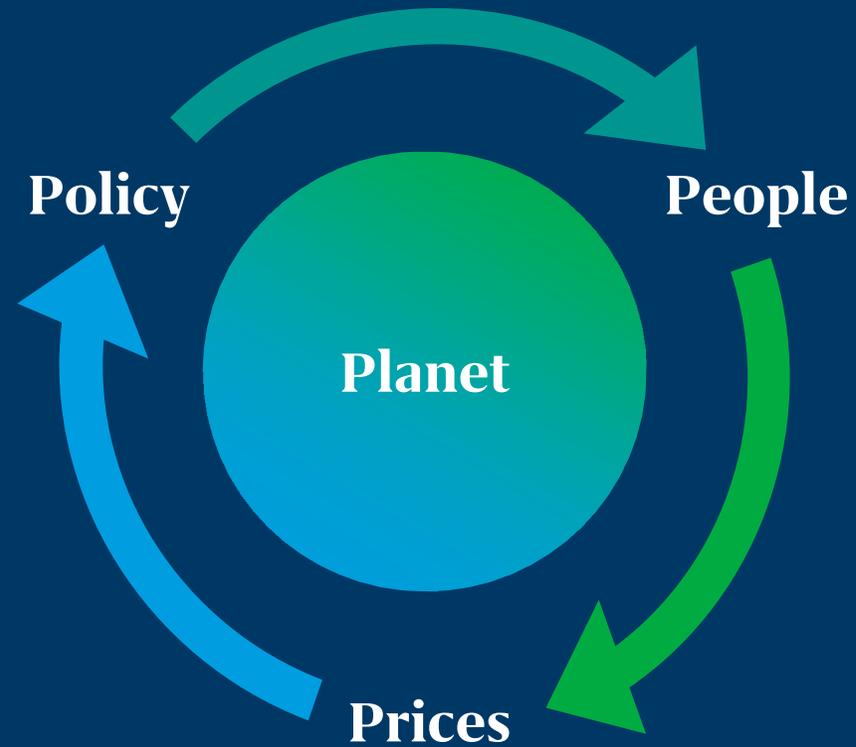
of global GDP



Source: Science based targets, "Foundations For Science-Based Net-Zero Target Setting in the Corporate Sector", September 2020, p4 - See - <https://sciencebasedtargets.org/wp-content/uploads/2020/09/foundations-for-net-zero-full-paper.pdf>

A virtuous circle

Planet, people, price, policy



Position for transition



1. Know where you stand

- Determine your current emissions

2. Know how to get there

- Analyze your portfolio possibilities for transition

3. Know where you're going

- Defining your targets and timing

Develop and implement your transition plan



Transition plan principles

What we **don't** mean

Immediate ...

... divestment from only fossil fuel energy ...

... only in equities ...

... regardless of price ...

... or capacity for emissions reduction in the future ...

... with disregard for broader investment and ESG principles.

What Mercer **does** mean

- ▶ A multi-year plan, with 2030 critical to a 2050 target
- ▶ Emissions for the portfolios and the real world
- ▶ A total portfolio approach
- ▶ “Decarbonization-At-the-Right-Price”
- ▶ Going beyond emissions to transition and transformation
- ▶ Including transition in investment and ESG process.

A transition spectrum – risks to opportunities

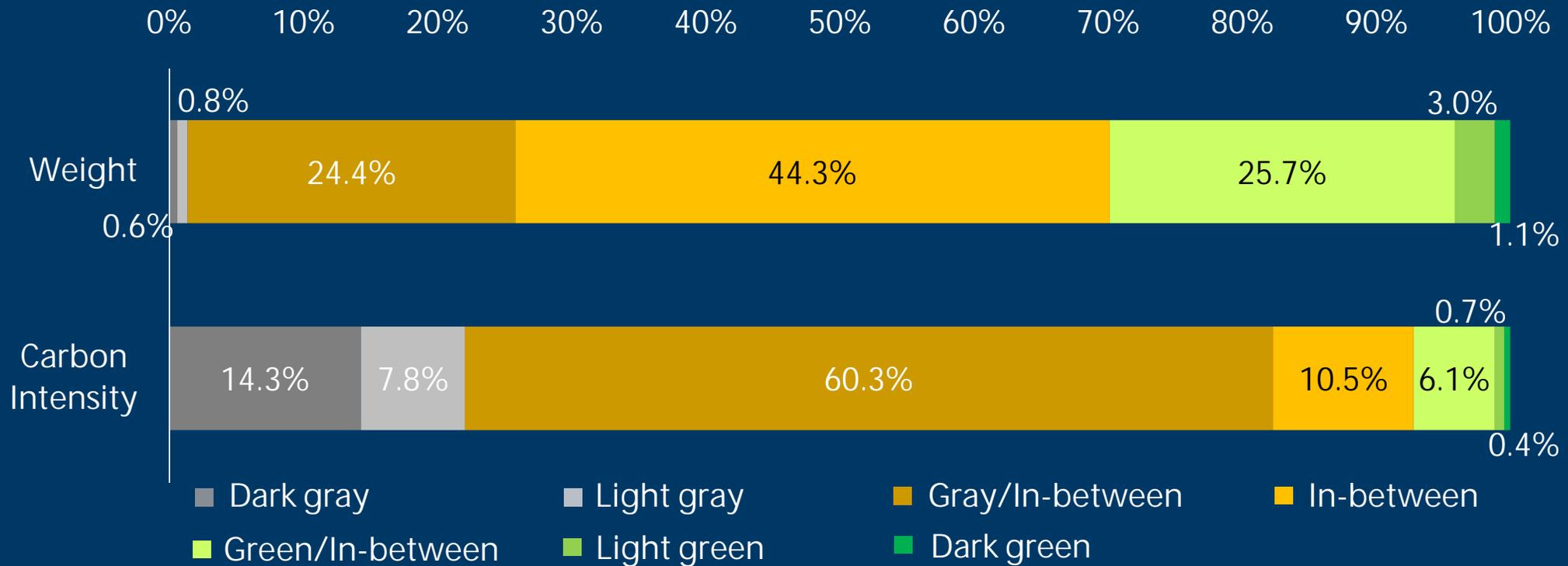


A transition spectrum – risks to opportunities

Transition tool application



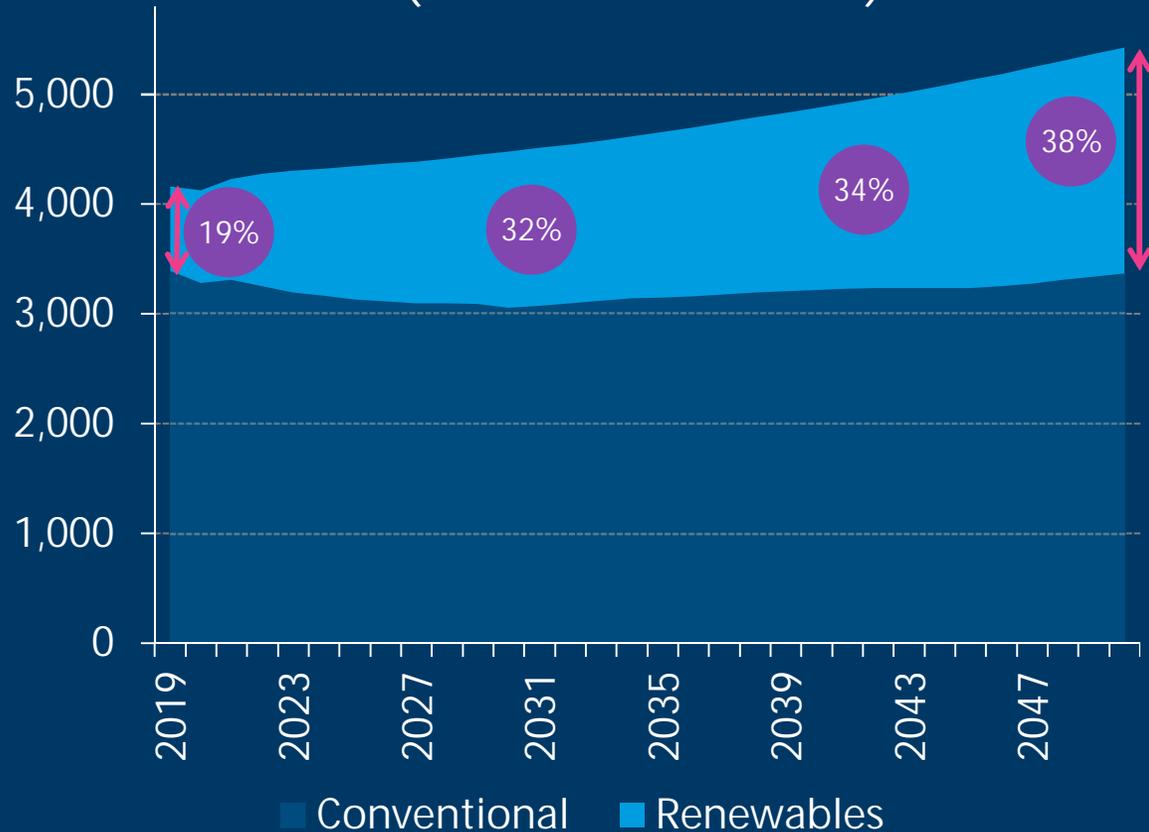
Transition assessment: example diversified portfolio



Source: Mercer, 2020

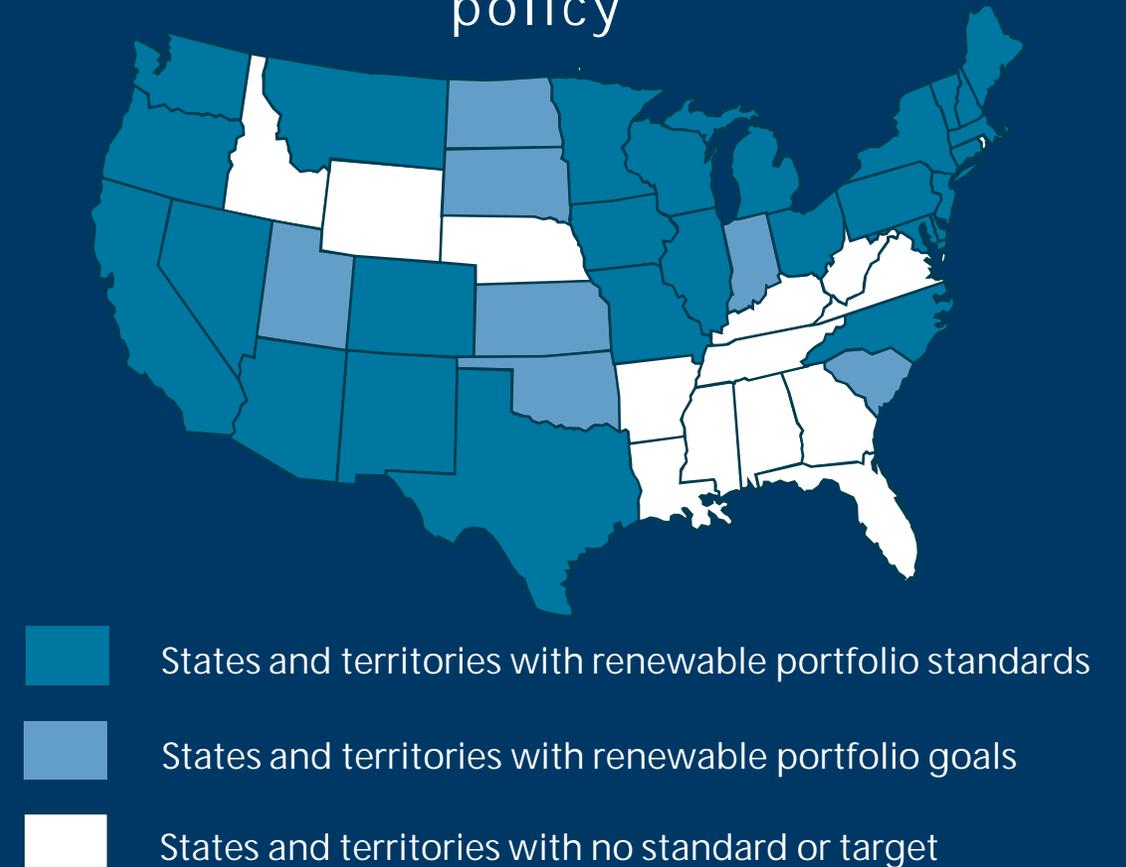
Opportunities in North America

Power generation from renewable and conventional power generation (billions of kWh)



Source: US Energy Information Administration – Annual Energy Outlook 2020

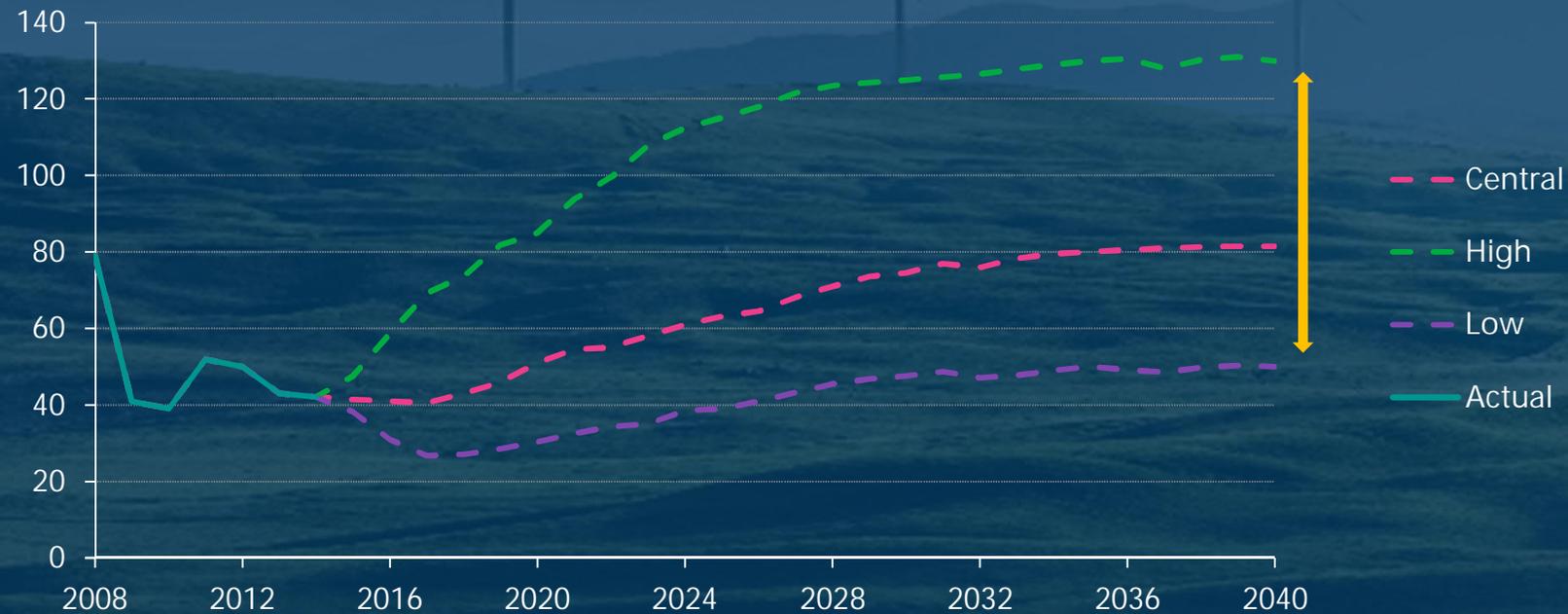
Renewables are supported by public policy



Source: Database of State Incentives for Renewable Energy and Efficiency, June 2019

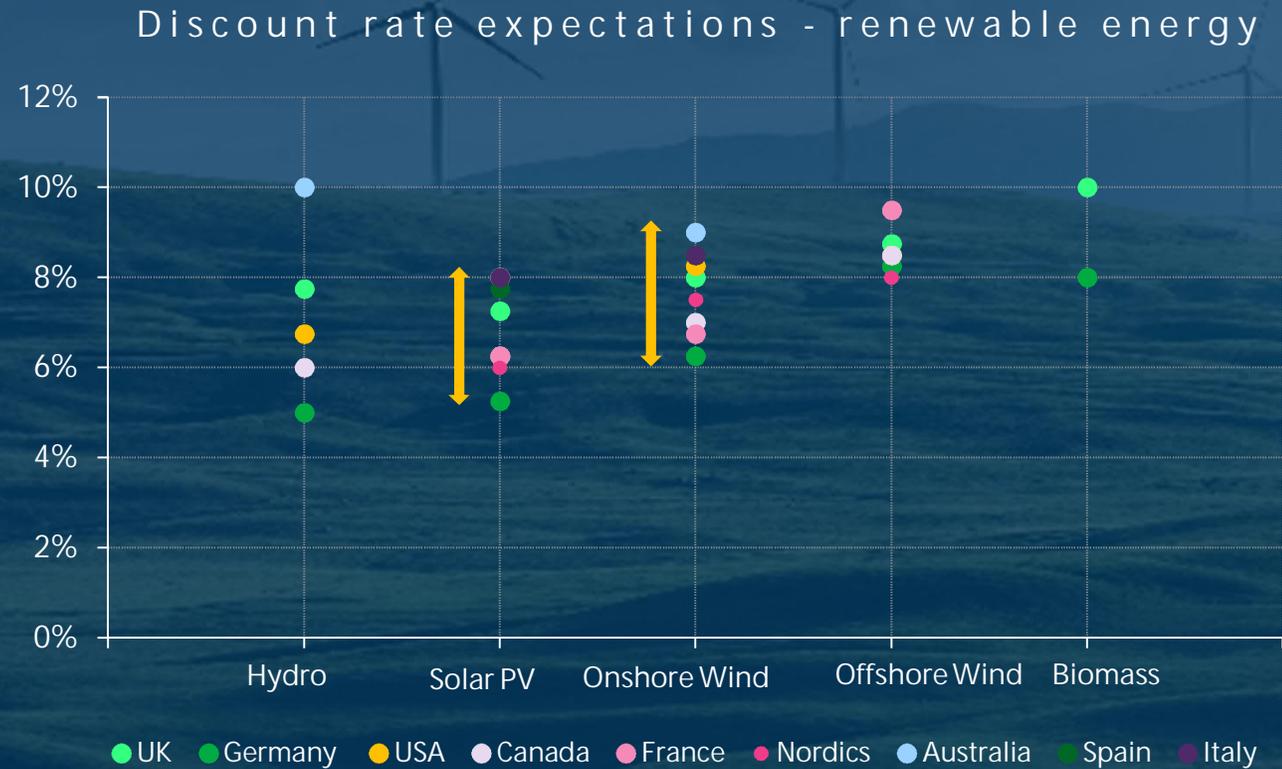
Renewable energy – invest in the whole value chain

Electricity price projections - 2015 to 2040
(€/MWh, 2014 real)



Source: Pöyry, July 2015

Renewable energy – invest in the whole value chain



Source: Renewable energy discount rate survey results 2018 – Grant Thornton

Renewable energy – invest in the whole value chain

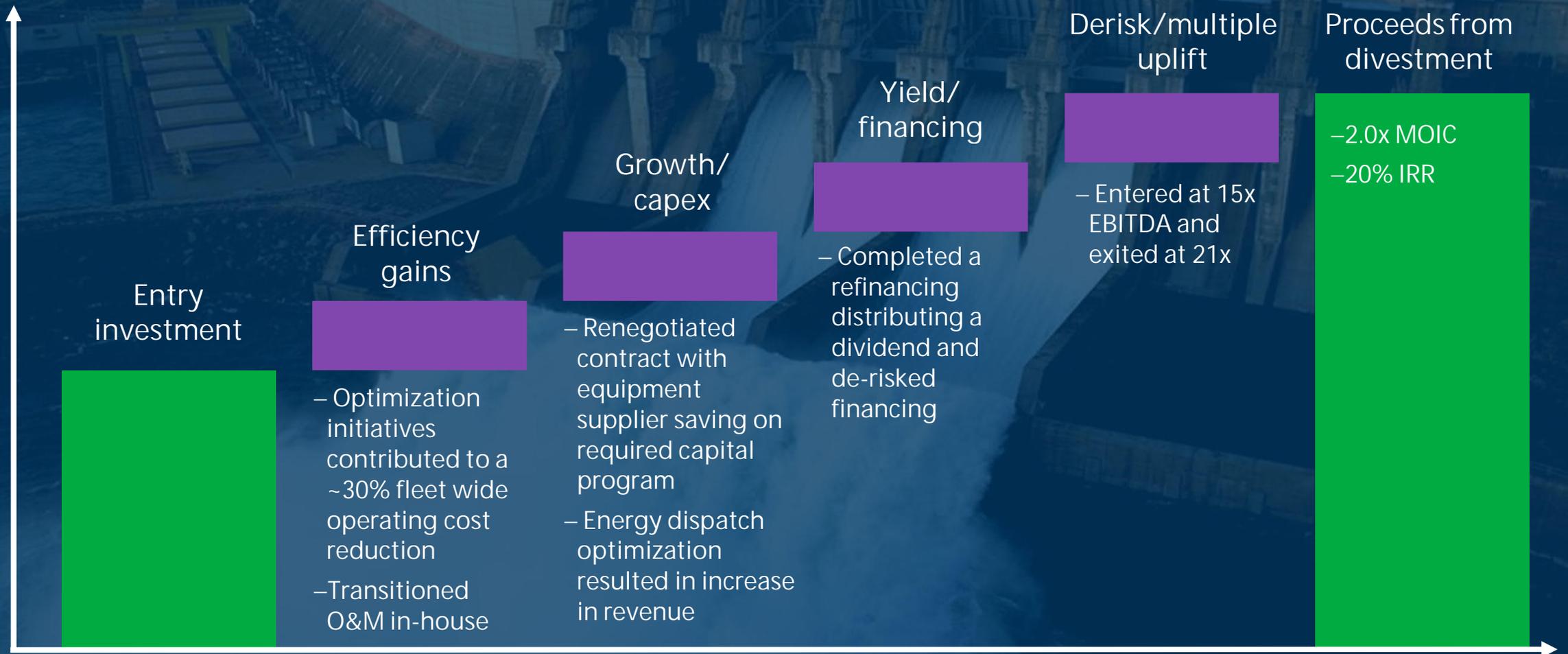


Asset and manager selection matters

Value creation through active management



Value creation through active management



Position for transition



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<http://www.mercer.com/content/dam/mercer/attachments/private/nurture-cycle/gi-2020-investment-management-index-definitions-mercer.pdf>

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