

Financing the Future: The Role of Investors in Addressing Climate Change

Bruce Usher

Professor of Practice

Elizabeth B. Strickler '86 and Mark T. Gallogly '86 Faculty Director

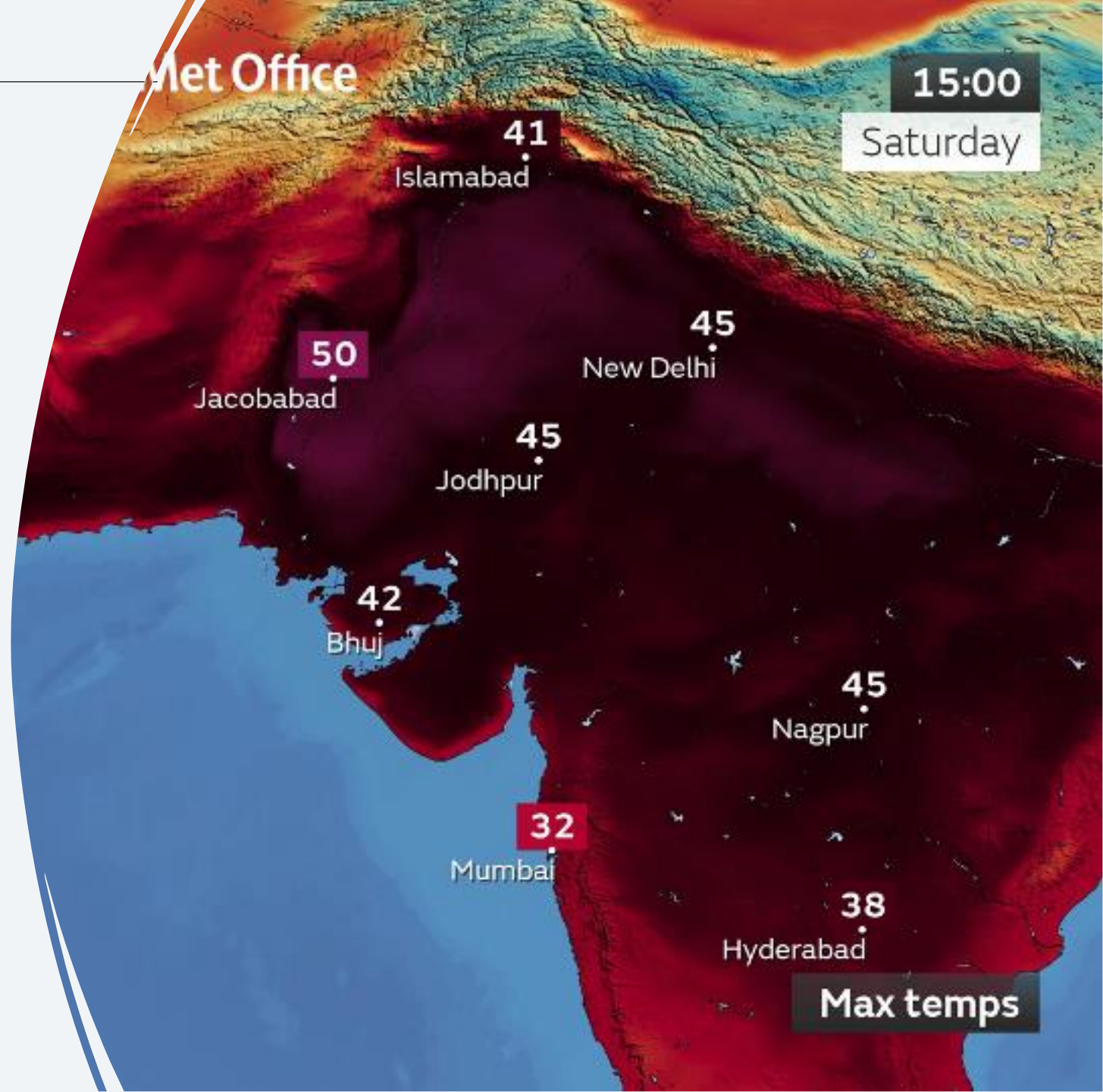
The Tamer Center for Social Enterprise

Columbia Business School

1. Manifestation of Physical Risks

"India could become one of the first places in the world to experience heat waves that break the human survivability limit."

World Bank Report, 2022



2. Evolving Social Norms

“I want you to act as if our house is on fire, because it is.”

Greta Thunberg, Climate Activist



3. Government Action

“The Inflation Reduction Act invests \$369 billion to take the most aggressive action ever — ever, ever, ever — in confronting the climate crisis.”

President Biden



4. Innovation

Tesla's all-electric Model S is "the best-performing car that Consumer Reports has ever tested."



520+mi
Range (Est.)

200mph
Top Speed

<2.0s
0-60 mph

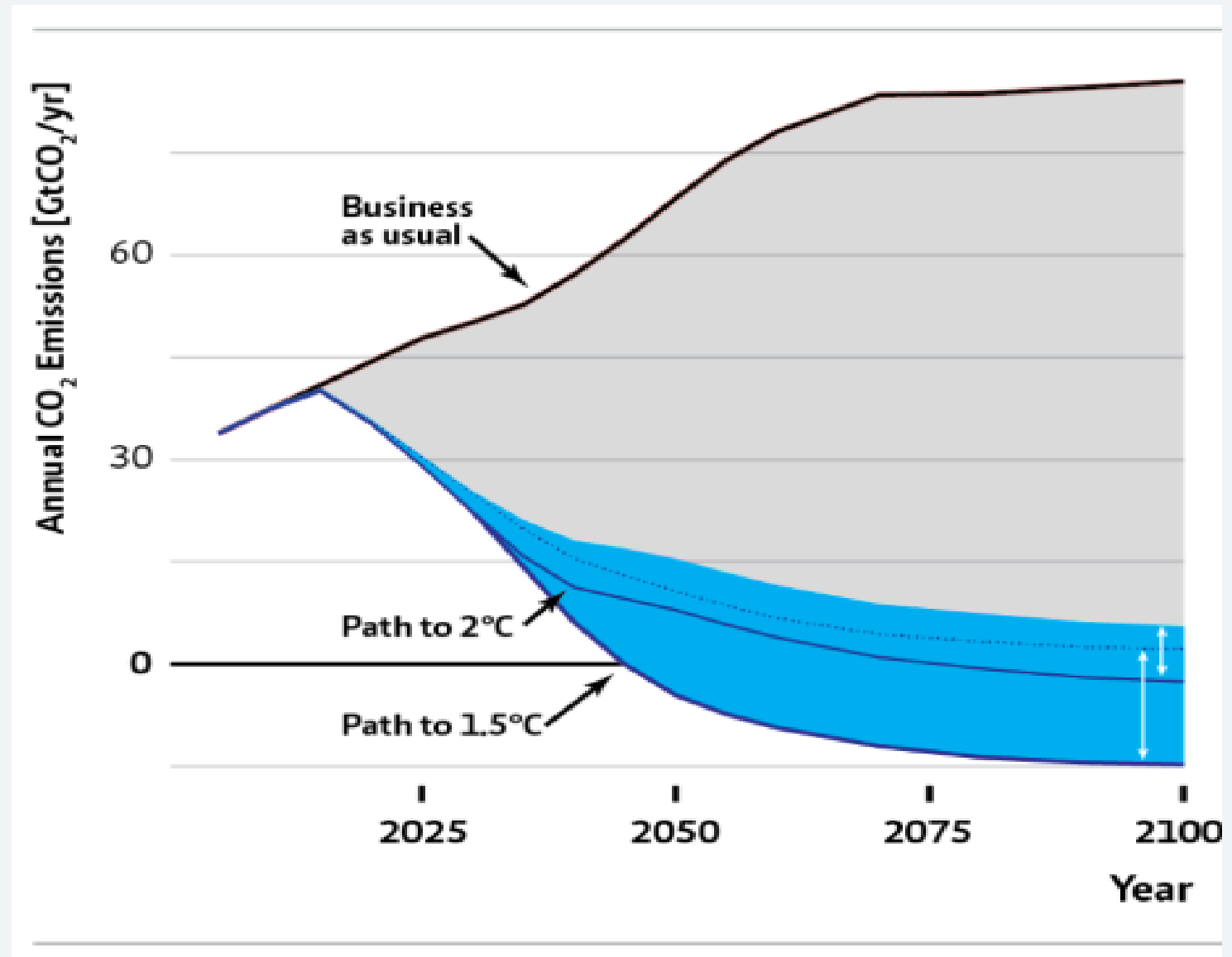
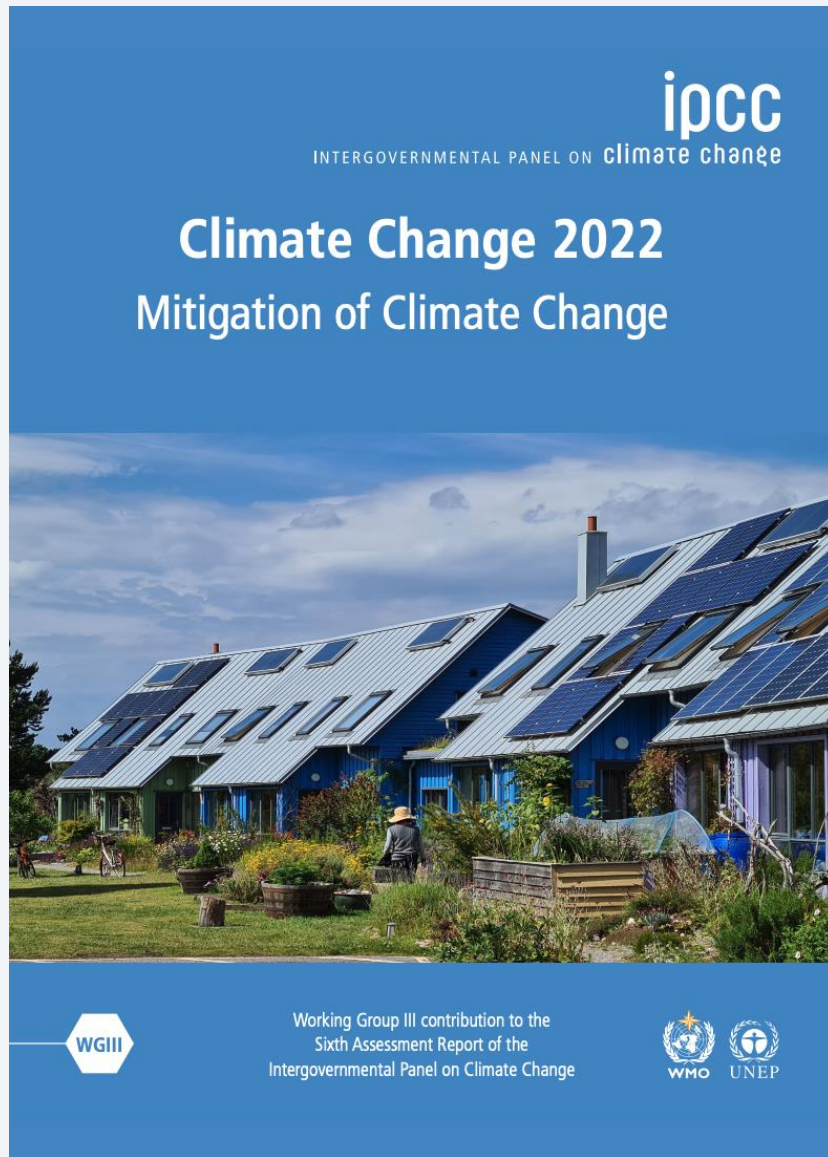
Investor Reaction

“In the near future – and sooner than most anticipate – there will be a significant reallocation of capital.”

Larry Fink, CEO, BlackRock
2020 Letter to Investors

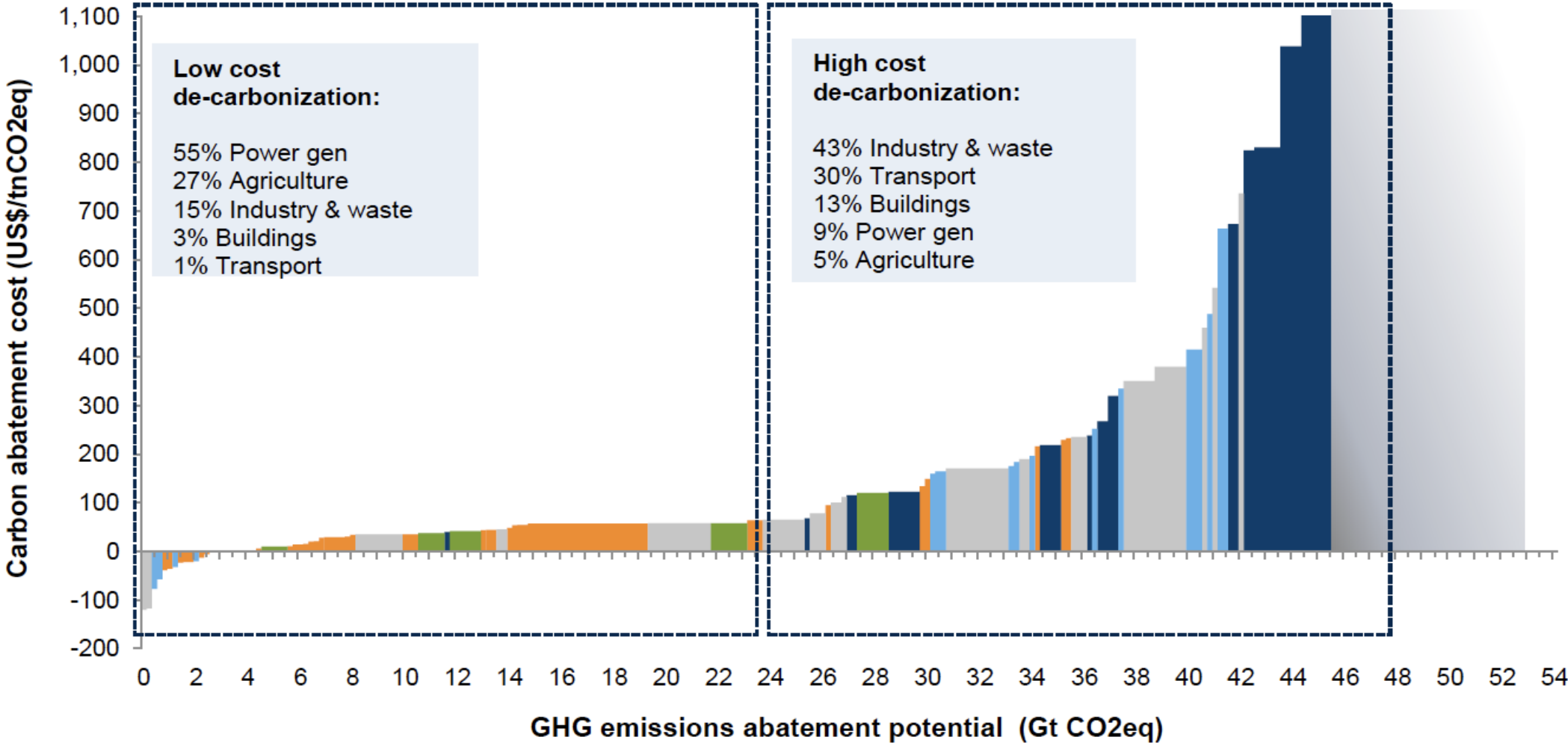


The Next 30 Years: Global Decarbonization



Climate Solutions

Carbon Abatement Cost Curve

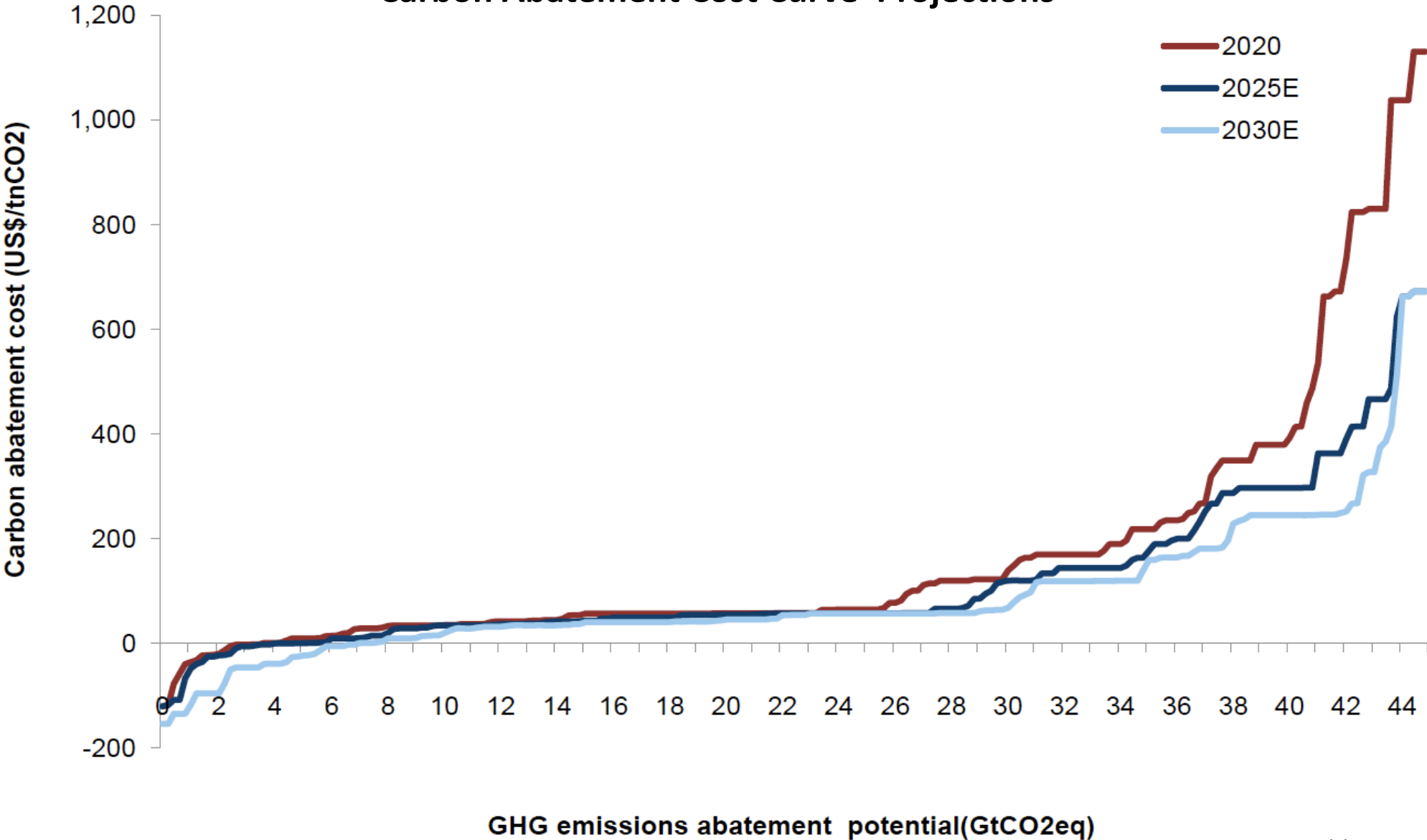


- Power generation (coal switch to gas & renewables)
- Industry (iron & steel, cement, chemicals and other)
- Agriculture, forestry & other land uses (AFOLU)

- Transport (road, aviation, shipping)
- Buildings (residential & commercial)
- Non-abatable at current conservation technologies

Source: Goldman Sachs

Carbon Abatement Cost Curve Projections



Source: Goldman Sachs

“With potentially \$3 trillion to \$10 trillion of earnings before interest and taxes up for grabs, decarbonization could present a material economic and humanitarian opportunity.”

Morgan Stanley

Business Opportunities and Challenges

Commercially competitive solutions
eg. solar, wind, EVs



Business Opportunity for Entrepreneurs

Process innovation, scaling existing models

Uncompetitive climate solutions
eg. green hydrogen, DAC



Disruptive innovation, new business models

Winners & Losers

Lightly regulated + incumbents face org change



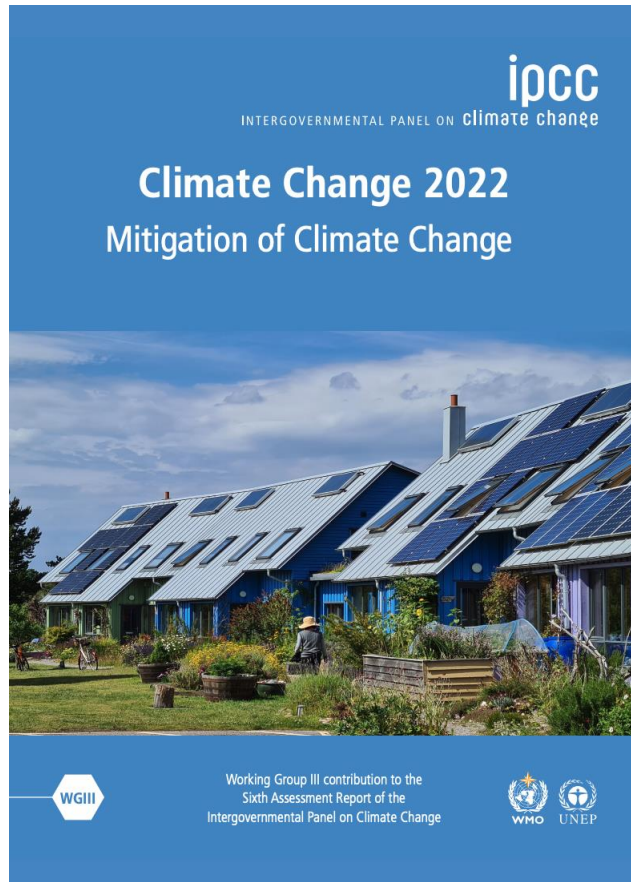
Advantage to entrepreneurs eg autos (Tesla)

Regulatory moats + capital intensive



Advantage to incumbents eg utilities (NextEra)

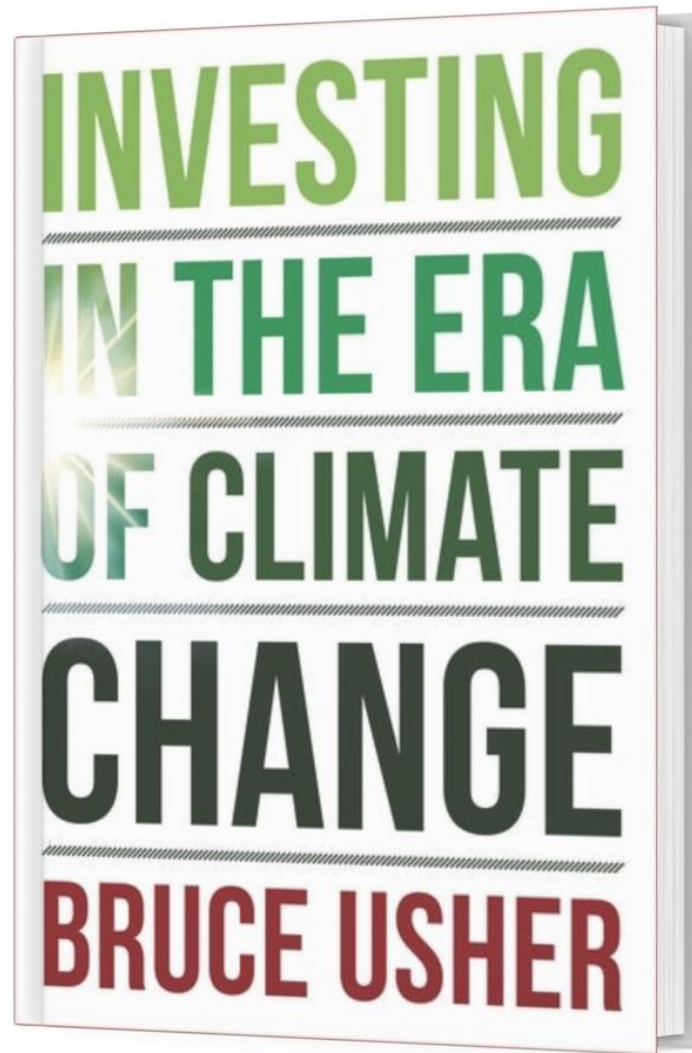
Will we avoid catastrophic climate change?



The New York Times

***Stopping Climate Change Is Doable,
but Time Is Short, U.N. Panel Warns***

- In the future, climate change will impact business globally, much as technology has in the past, creating winners and losers in nearly every sector.
- The low-carbon transition will provide investors with the opportunity and challenge of a lifetime.
- Investors rising to that challenge is critical if we are to avoid catastrophic climate change.



“One of the top ten business books of the fall” — *Publishers Weekly*, June 2022

“Best new books on the environment”
– *Financial Times*, November 2022

Financing the Future: The Role of Investors in Addressing Climate Change

Questions?