

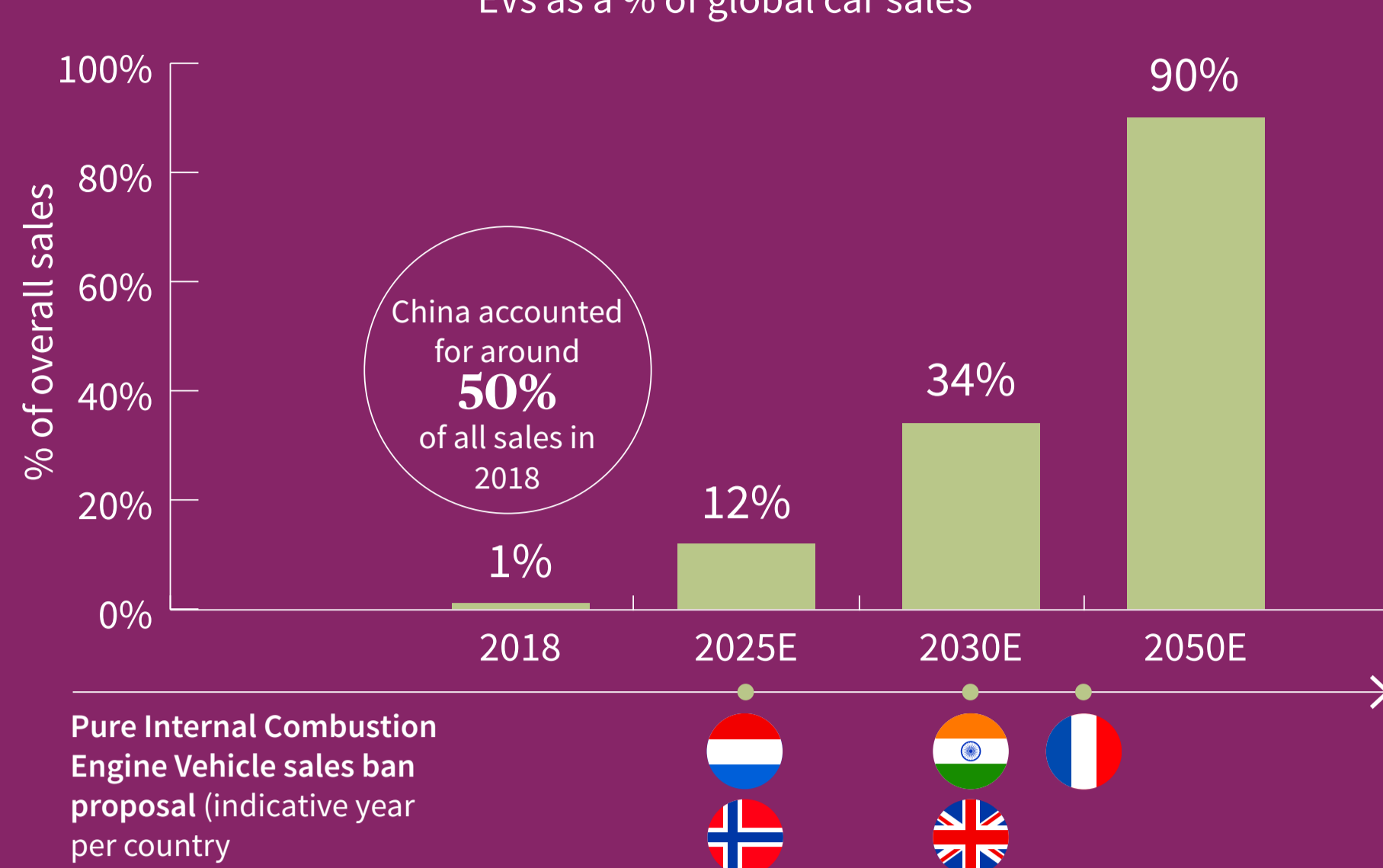
What investors need to know about the clean economy

Governments, companies and consumers are assessing their environmental practices and developing new solutions, as the impact of climate change takes its toll on the planet.

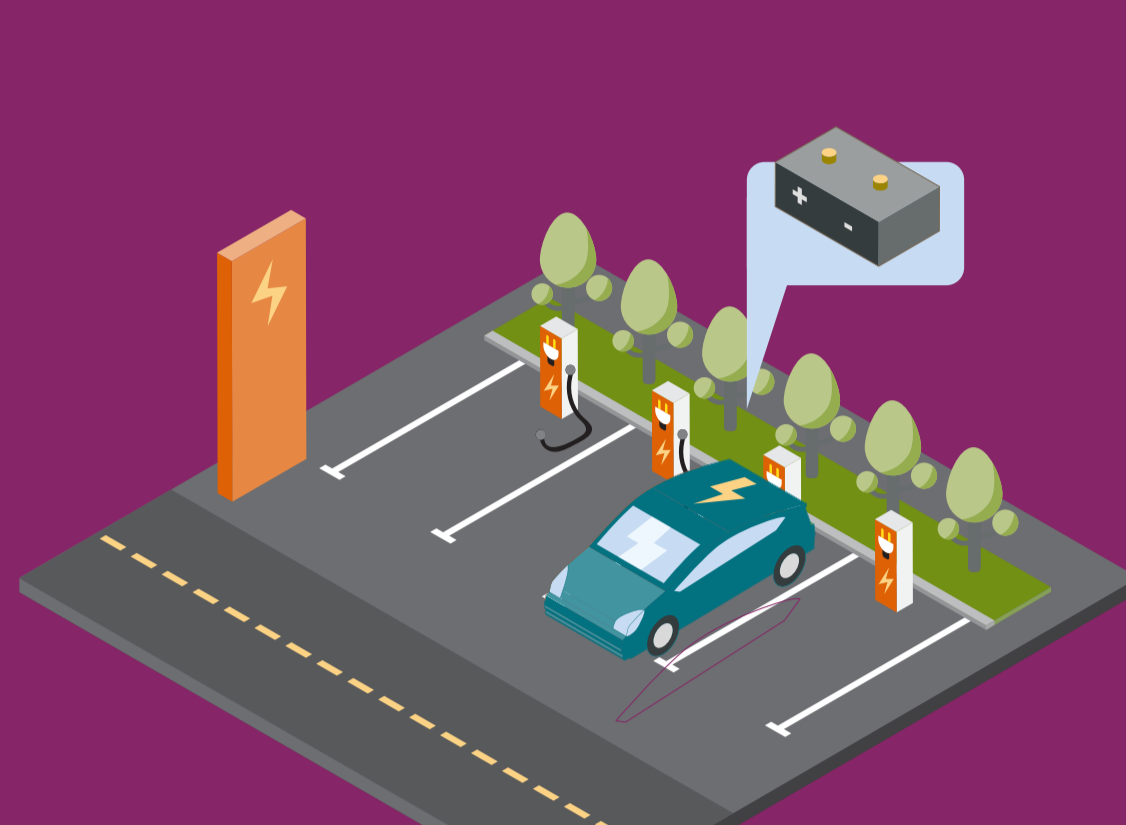
Companies that can adapt and support this energy transition and the drive towards resource optimisation, waste and pollution reduction have a multi-decade growth opportunity. We believe that these areas can be captured within the clean economy investment universe.

1 Low Carbon Transport

Electric vehicles (EVs) are no longer the niche product they once were. Strong government support, falling battery cost and a rapid change in consumer behaviour have accelerated the adoption of EVs.



1mn public EVs charging stations installed globally, with almost one-third completed in 2020²



The cost of lithium ion batteries has significantly fallen over the past decade. We expect this figure to fall by a further

50% between 2018 and 2025³

2 Smart Energy

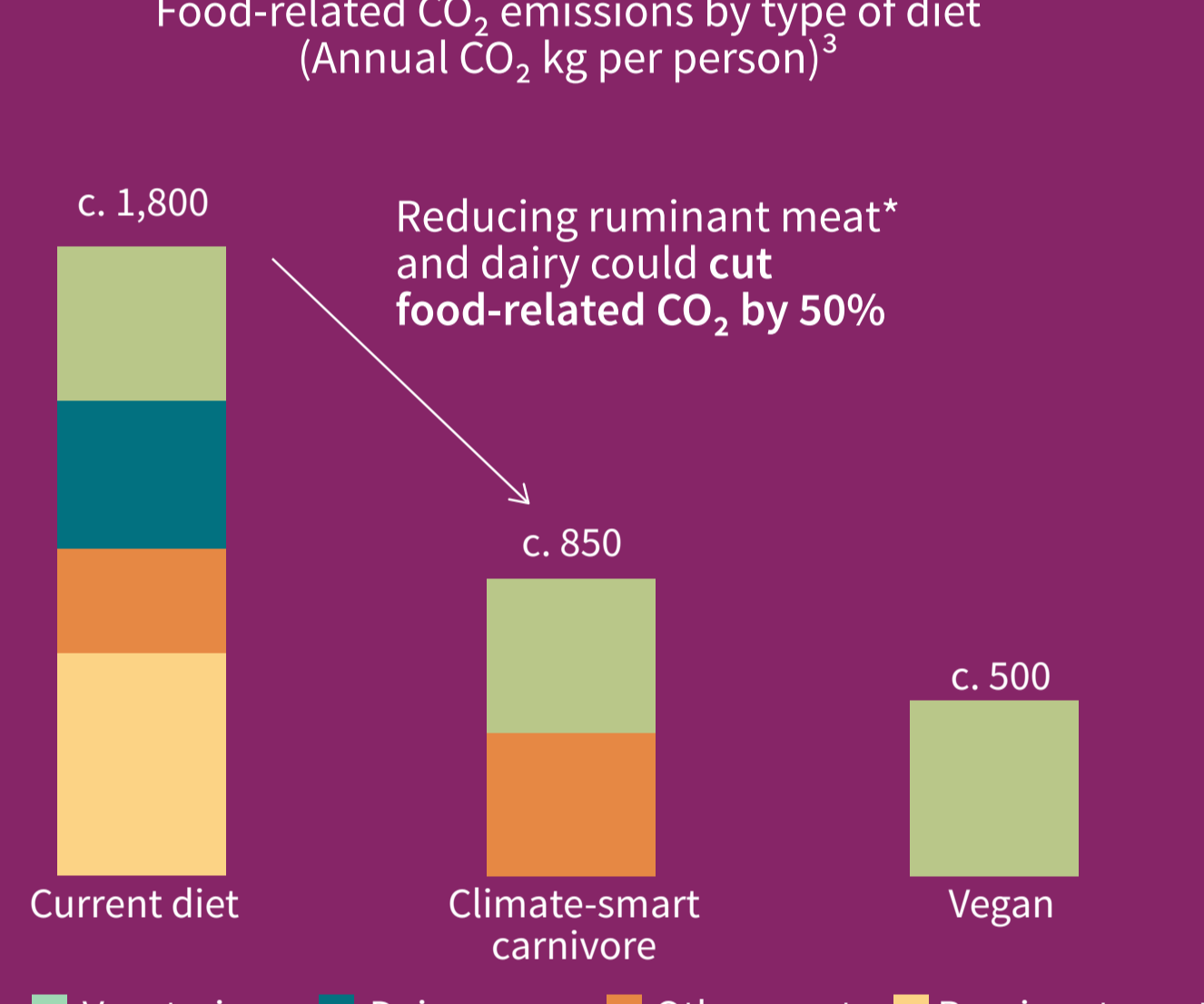
Demand for renewable energy is rising, driven by falling costs compared to fossil fuels. In addition, supportive government policy and consumers' changing attitudes are leading companies to build more sustainable product offerings, such as improving their supply chain production.

Furthermore, the adoption of the 'smart grid' concept allows businesses and consumers to take control of their energy use. Smart grids encompass a range of technologies that could help revolutionise electricity networks. Examples include:

- The increasing use of smart meters, energy storage solutions and better insulation are helping to improve energy efficiency in factories and cities.
- Different floating offshore wind foundations are emerging with many untapped locations worldwide, helping to increase renewable generation capacity.
- Mainstream companies are investing in clean technologies to reduce their carbon footprint from production processes, with many committing to net zero emissions targets.

3 Agriculture & Food Industry

Livestock farming uses approximately 80% of agricultural land⁴ while generating around 15% of global greenhouse gas emissions.⁵ Resilient practices such as agritech⁶ solutions and lab-grown or plant-based meat could support better use of land, help reduce food waste from fork to field, and limit the production of CO₂ emissions coming from the agriculture and food industry.



*Ruminant meat includes cattle, sheep, goats and pigs.

4 Natural Resource Preservation

We believe that businesses which mitigate environmental damage could benefit from secular growth potential. These companies tackle areas that facilitate recycling and reusing practices, as well as improving water quality.

- Lower energy costs**: Recycled aluminium is c.95% more energy efficient than creating new aluminium
- Lower emissions**: A 10% increase in aluminium end-of-cycle recycling rates can decrease greenhouse gas emissions by 15%
- Cheaper end-products**: Containerboards made from recycled containers are c.12% cheaper than kraftliner (linerboard made of virgin pulp)
- Reduction in landfill use**: Decreases risks with accumulation of potentially hazardous materials⁷



320bn aluminium beverage cans are sold globally each year, with North America and Europe accounting for the largest portion of this market⁸

What's next?

- It is estimated that annual investments in renewable energy will need to increase **3-4 times** over the next three decades to fulfil key global decarbonisation and climate goals⁹
- It is estimated that electric vehicles will account for around **1/3** of global car sales by 2030¹
- It is estimated that food innovation, including plant-based and lab-grown meat, will represent a **\$700bn** market by 2030⁹



"Unsustainable human civilization on earth is now a reality. Awareness of this is steadily rising among government, companies and consumers alike, creating opportunities for investors across the clean economy."

Amanda O'Toole
Clean Economy Portfolio Manager, AXA Investment Managers

Sources:
 1 Bank of America Merrill Lynch, global research estimates, April 2018
 2 Electric Vehicle Outlook 2020, BloombergNEF, November 2020
 3 Emission Impossible? Global climate change primer, Bank of America Merrill Lynch, Bloomberg, 2020
 4 'How much of the world's land would we need in order to feed the global population with the average diet of a given country?', Our World in Data, October 2017
 5 Bank of America Merrill Lynch, 2020
 6 Agritech - or agricultural technology - is the use of technology and technological innovation to improve the efficiency and output of agriculture.
 7 Closing the loop on global recycling, Citi, February 2020
 8 International Renewable Energy Agency, November 2020
 9 UBS predicts plant-based meat sales could grow by more than 25% a year to \$85 billion by 2030, Business Insider, 19 July 2019

We are seeing a clear shift towards investments in clean technology, as more companies develop new solutions and respond to the need for change.

Want to learn more ?
[Click here to visit our website on CleanTech](#)