NURALITE
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Nuralite:
A Carbon Zero Roadmap

Our 2019 New Years Resolution

We must do something,
even if no one else does anything.

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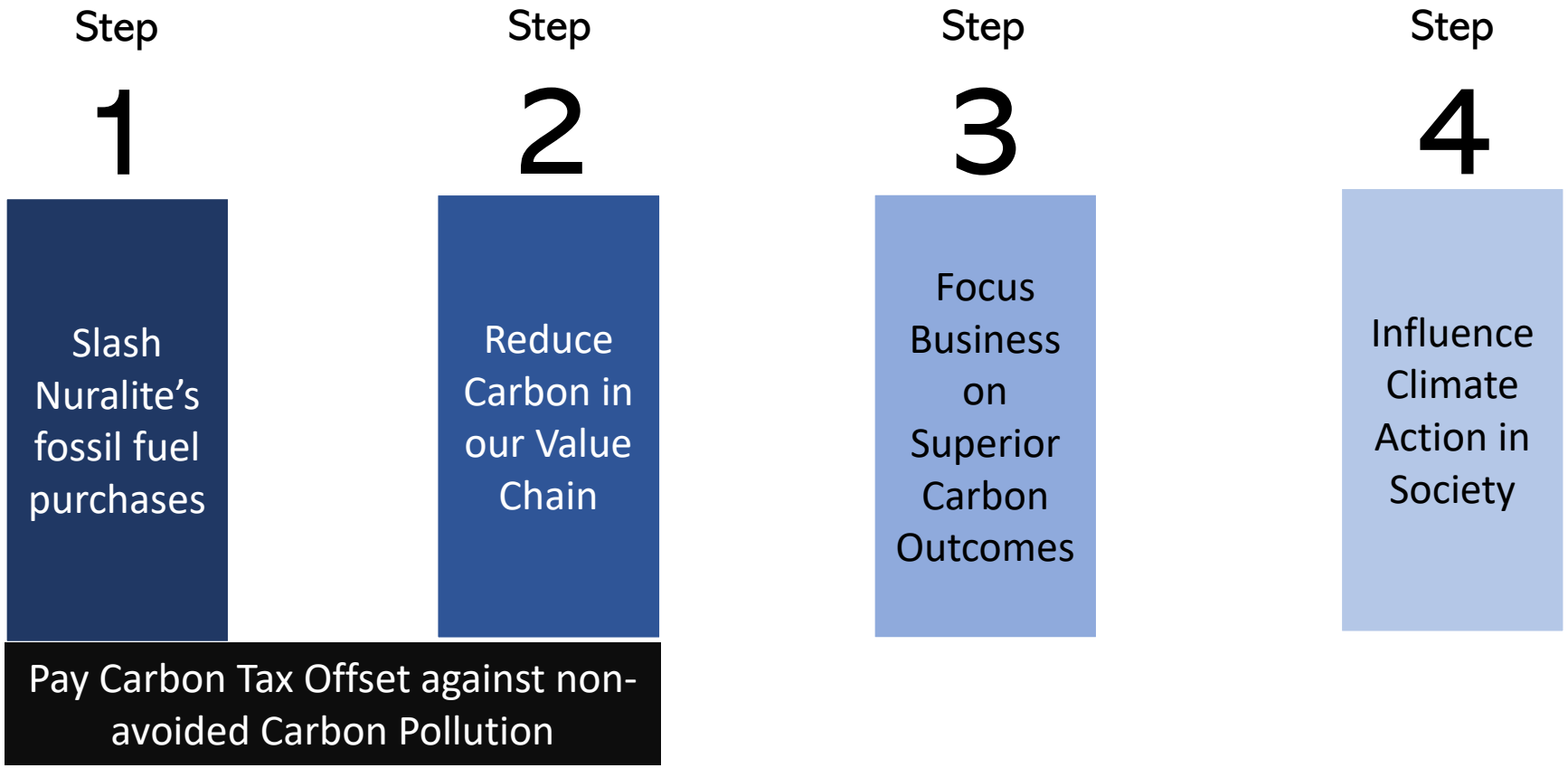
Carbon Zero Roadmap



"The 1.5º Business Playbook" www.exponentialbusiness.org

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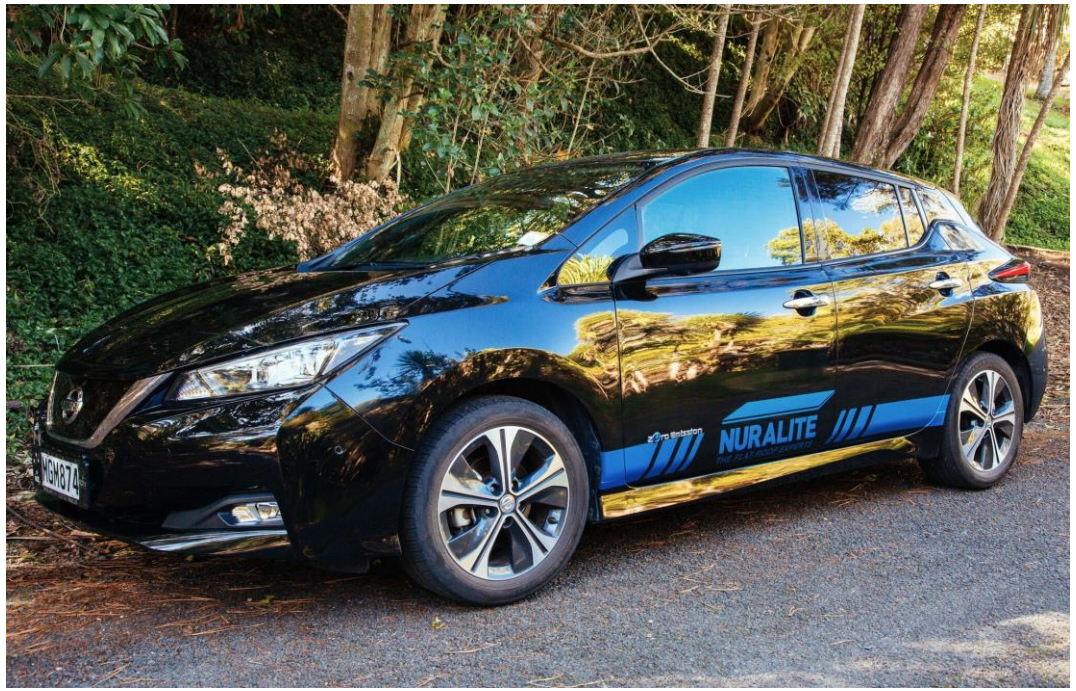
Carbon Zero Roadmap

Step

1

Slash Nuralite's fossil fuel purchases

- Moving architect rep vehicle fleet to 100% electric
- Replace gas powered forklift with 100% electric



Investment so far $200,000+

Carbon Zero Roadmap

Step

2

Reduce Carbon in our Value Chain

- Have presented to all our suppliers and asked them to step up.
- One supplier has invested in solar panels to power their production
- Established warehouse in Christchurch –reducing NZ freight emissions by 15%
- Reduce use of air travel and air freight
- Transitioned to 100% renewable power supplier
- Another supplier is pursuing Carbon Zero certification in Italy
- Changed to Carbon Zero suppliers wherever possible

Investment so far $100,000+

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Carbon Zero Roadmap

Pay Carbon Tax Offset against non-avoided Carbon Pollution

- Carbon Credits are contributions paid to quality projects that reduce Carbon Pollution in New Zealand or Internationally.
- Projects may be:
  - Store: These are usually forestry projects.
  - Avoid: These are usually energy generation projects that use renewable energy instead of fossil-fuels, such as wind farms.
  - Reduce: These are usually a form of technology that reduces the usual amount of emissions produced.

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Carbon Zero Roadmap

The first company in construction products sector to certify as Carbon Zero

From the factory to the building site

https://www.nuralite.co.nz/static-files/1330/application%2Fpdf/SEC%201819%20Nuralite%20Waterproofing.pdf

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Carbon Zero Roadmap

Step

3

Focus Business on Superior Carbon Outcomes

- Moving toward 100% specification of Zero Energy Nuratherm Warm Roofs
- New Design Guide 2020 will demonstrate ways to comply with Architects Declare
- Educating specifiers of the intrinsic environmental benefits of Flat Roofs
  - Green roofs are regenerative
  - Solar production maximized
  - Extra livable space
  - Reduced use of materials

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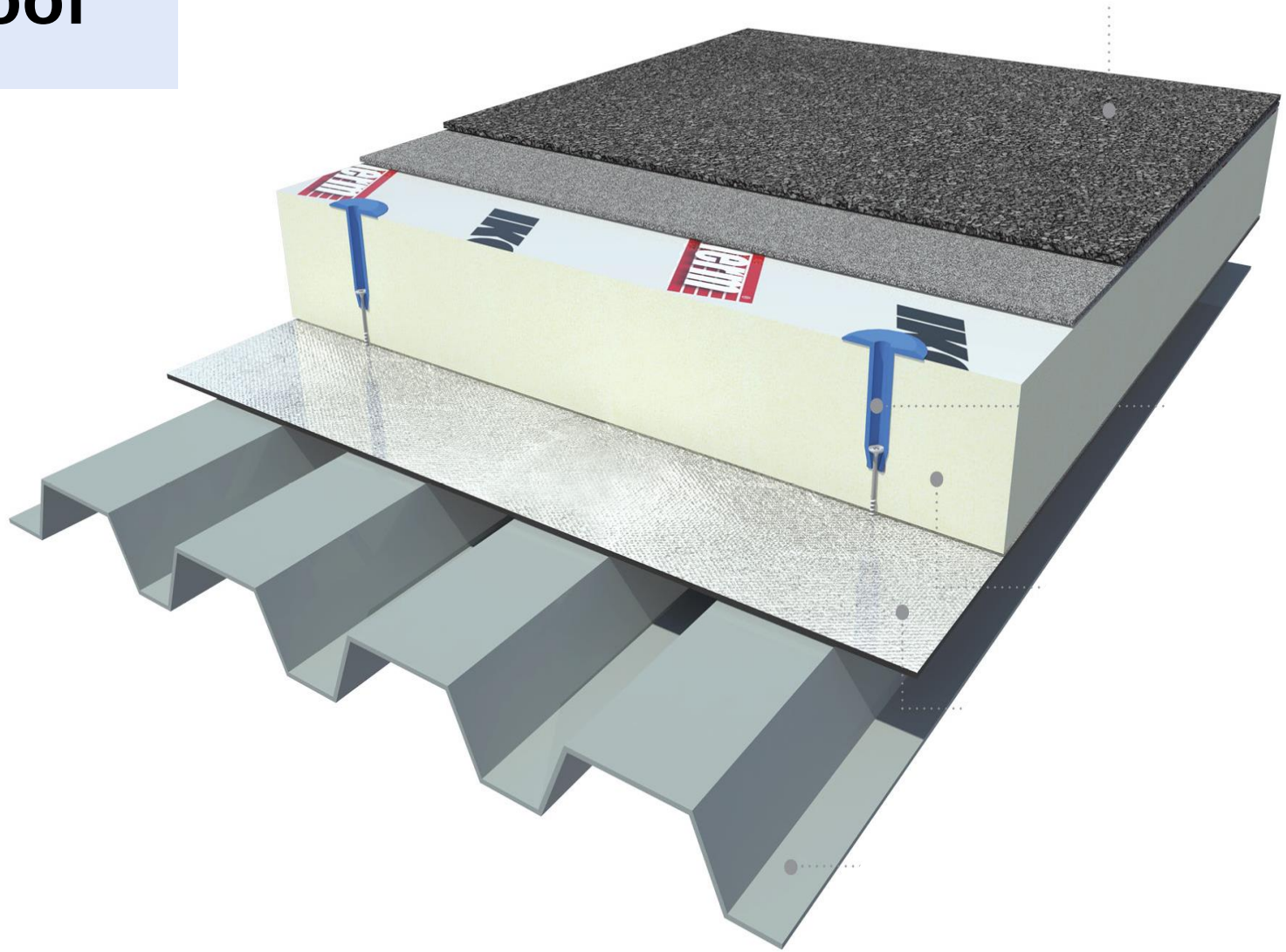
Nuratherm Zero Energy Warm Roof

Step

3

Focus Business on Superior Carbon Outcomes



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Nuratherm Zero Energy Warm Roof

Step

3

Focus Business on Superior Carbon Outcomes

	Watertightness	Airtightness	Insulation	Thermal bridge	Vapour control	Cost
Nuratherm Warm Roof	No extra penetrations or details	Vapour barrier provide air barrier and may be sealed to wall air barrier	Any R value may be accommodated	Enertherm layer provides continuous insulation	No condensation due to vapour barrier before dew point.	Nuratherm install on NPM900 metal tray saves $$
Traditional Cold Roof	Nuravents are a breach in the membrane	No air barrier. In fact air flow is critical to the system	R value limited by the depth of the rafter	Thermal bridge by rafters	Condensation expected – hence the need for venting	Cold roof costs more for the build and during the life of the building

Inspired by Sang Architects https://sangarchitects.com/passive-house-design

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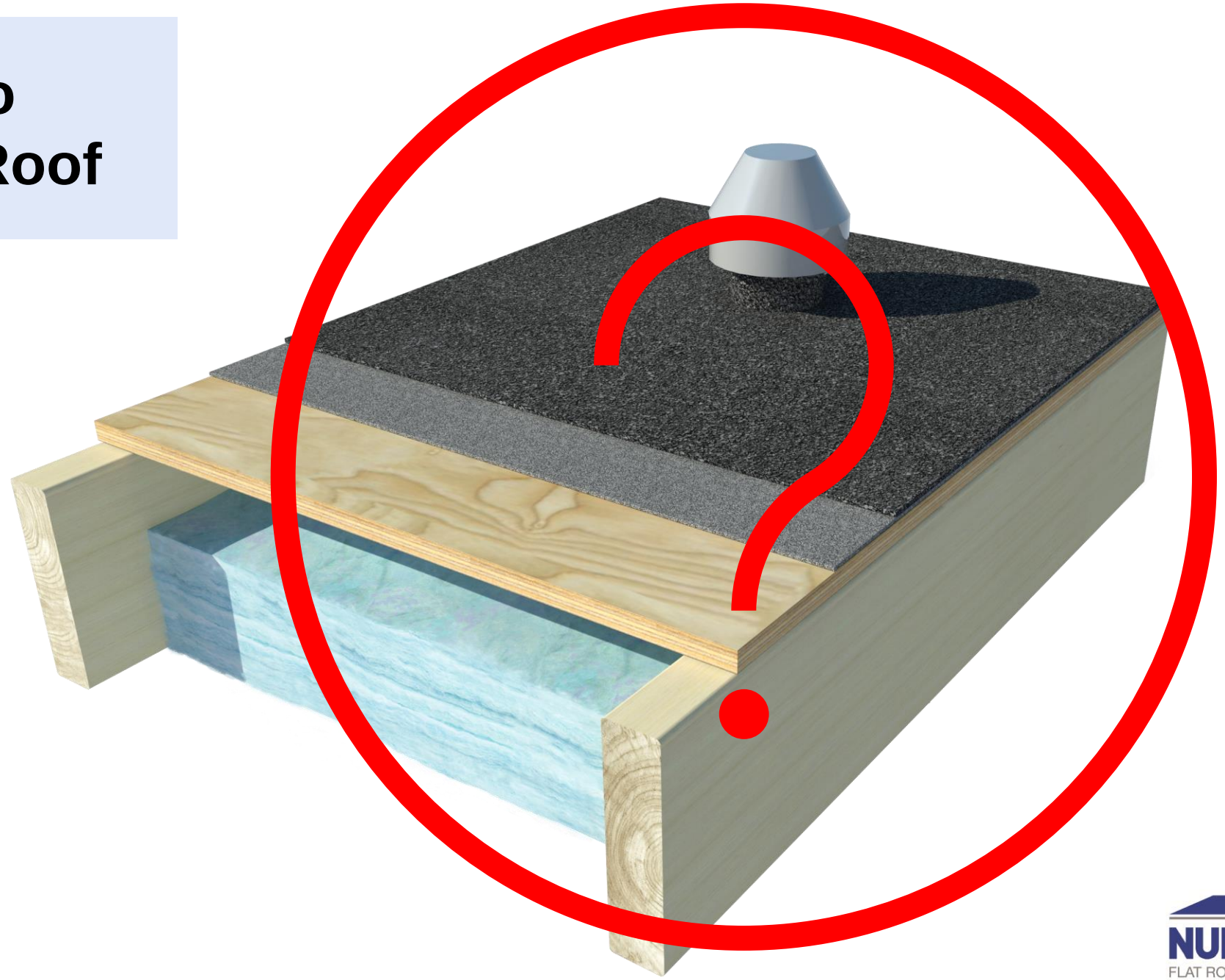
Nuratherm Zero Energy Warm Roof

Step

3

Focus Business on Superior Carbon Outcomes



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Carbon Zero Roadmap

Step

4

Influence Climate Action in Society

- Provide support to Industry Groups – especially those behind “A Zero Carbon Road Map for Aotearoa’s Buildings”:
  - Toitu
  - NZ Green Building Council
  - PassiveHouse Institute New Zealand
  - Living Future NZ
  - Sustainable Coastlines

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Carbon Zero Roadmap

Step

2

Reduce Carbon in our Value Chain

So our challenge to you is,

What measurable actions are you taking today that reduce carbon pollution in your value chain?

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Appendix

GHG emissions data summary by scope (tCO2e)	2019
Step 1	
LPG stationary commercial	4.7
Petrol	53.0
Sub Total	57.7
Step 2	
Air travel domestic (average)	21.5
Air travel long haul (econ)	19.3
Air travel long haul (econ+)	6.8
Air travel short haul (econ)	2.2
Taxi (regular)	0.3
Electricity	5.1
Freight Air travel long haul (average)	53.1
Freight Air travel short haul (average)	16.9
Freight Rigid and Articulated trucks	42.4
Freight Shipping container (average)	799.6
R-420A	8.8
Waste landfilled LFGR Mixed waste	2.6
Sub Total	978.6

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Appendix

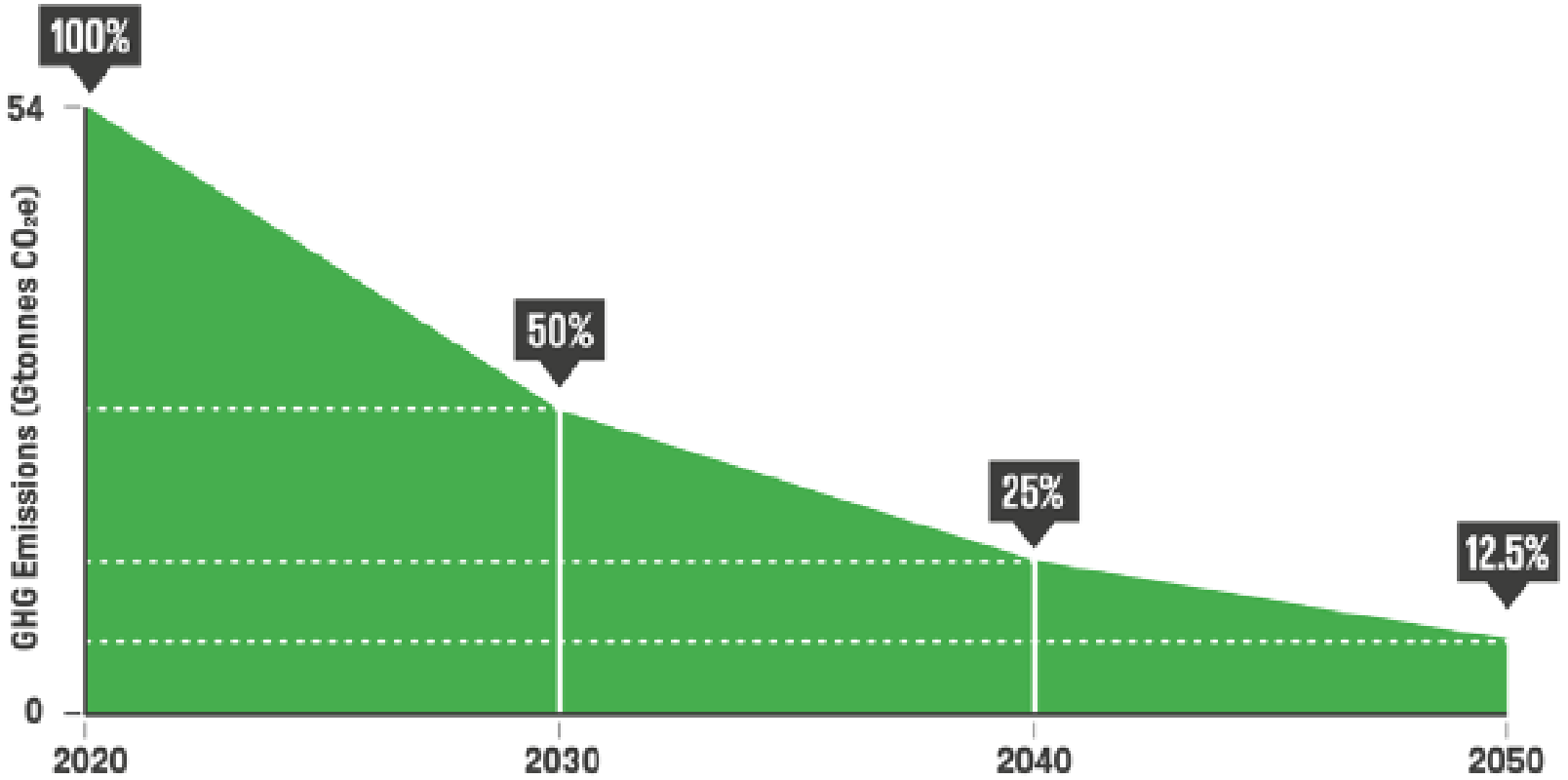

Figure 1. The Carbon Law – halving global greenhouse gas emissions every decade. The estimated 2020 emission level is 54 billion tonnes of carbon dioxide equivalents.[12]

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