

Climate Action Roundtables: Net Zero Roadmap Development

AusLSA February 2024

• Agenda.

Introduction

Abatement opportunity identification

Technical analysis of opportunities

Stakeholder engagement

Executive support

Funding

Guest speaker (Katie Swain)





Introduction

Context

Global emissions must be lowered to meet the requirements set out in the Paris agreement to keep the rise in global temperature below 1.5°C by 2050.

Decarbonisation is the process of reducing the amount of carbon dioxide entering the atmosphere. To help achieve this, businesses can decrease their carbon footprint to reduce their impact on the planet and aid in mitigating the affects of climate change.

Objectives

- Understand the need for decarbonisation in businesses
- Understand the importance of evidence to support a decarbonisation roadmap
- Understand the challenges of decarbonisation and how to overcome them
- Understand the components of a decarbonisation roadmap and how it aligns with science-based targets

Pathway to Net Zero



Do you have a decarbonisation roadmap?



Key steps of a decarbonisation plan





What is decarbonisation?

All actions taken by a business sector to reduce its carbon emissions.

Decarbonisation strategies may include: Improving energy efficiency

Switching to renewable electricity

Encouraging sustainability travel practices

Utilising virtual meeting facilities

Aligning with suppliers that have decarbonisation plans

What are the drivers of decarbonisation?



Process overview for roadmap development

 Identify emissions sources
Collect accurate emissions data to create an emissions inventory 3. Technical analysis Examine the feasibility of the opportunities identified through cost analysis, degree of control, and ease of implementation.

5. Decarbonisation roadmap

Development of a strategic-level roadmap which aligns with science-based targets and achieves the greatest abatement potential



2. Opportunity assessment Assess emissions inventory to identify which decarbonision levers provide the greatest opportunities for emissions reductions. 4. Pathway planning Development of decarbonization phases which prioristise decarbonization levers based on the findings of the technical analysis

Decarbonisation approach

Opportunities assessment

Compile a comprehensive list of emission reduction opportunities. Some of which may include:

- Energy efficiency opportunities
- Electricity decarbonisation opportunities
- Upstream supply chain optimisation opportunities

Following the compilation of abatement options, categorise the opportunities into short, medium and long term.

Pathway planning

Process for pathway planning:

- Assess abatement potential (and cost) of opportunities
- Determine phased implementation
- Determine funding requirements and capital allocation for initiatives to decarbonise

Tools to support technical assessment include:

- Marginal Abatement Cost Curve (MACC)
- Emissions Reduction Investment Curve

Decarbonisation process hierarchy

S COP

Eliminate Through avoiding

Sustainably designed buildings with integrated efficiencies (such as passive heating and cooling) which avoid emissions sources

Reduce Through efficiency

Improved energy and supply chain efficiencies which reduce energy consumption

Substitute Through alternatives

Switching to greener fuels and technologies which reduce emissions

Compensate *Through offsets* Offsetting residual emissions



Marginal Abatement Cost Curve

What is a Marginal Abatement Cost Curve?

A MACC helps decision makers visual the costs or savings expected from different opportunities, alongside the potential volume of emissions that could be reduced if implemented. MACCs measure and compare the financial cost and abatement benefit of individual actions. They use the metric of dollars per tonne of carbon dioxide equivalent – usually represented as $t.CO_2e$.

Each rectangle represents one emissions reduction

opportunity

Opportunities are sorted on the horizontal axis by increasing cost per tonne of carbon dioxide equivalent. Rectangles below the horizontal axis represent net savings and rectangles represent net costs over the lifetime of the emissions reduction opportunity.

The rectangle height is the estimated cost in a given year to reduce emissions by 1 $t.CO_2$ -e

Note: A detailed MACC analysis is generally only undertaken for technology cost assessments to mitigate Scope 1 & 2 emissions.

The rectangle width is the annual emission reduction in a given year (t.CO₂-e)

> Scope 3 emission reduction initiatives are much more complex to quantify in terms of a financial cost due to the nature of the emissions sources and abatement opportunities.



Emission Reduction Investment Curve

What is an Emissions Reduction Investment Curve?

An ERIC plots the Internal Rate of Return (IRR) against abatement potential, as compared to a MACC that plots abatement cost against abatement potential. This offers a number of benefits over MACCs for presenting the business case for projects to financial decision makers within the organisation.

IRR is typically well understood and regarded by financial decision makers. It is used in capital budgeting to measure and compare relative profitability of investments, where projects with the highest IRR are the most desirable.

Using Internal Rate of Return as a basis:

- An ERIC is similar to a MACC, except the Internal Rate of Return (IRR) is used as the vertical axis instead of the cost of abatement. Cumulative IRR is calculated for the portfolio of abatement actions.
- This metric provides the flexibility to present a business case for a portfolio of abatement actions with varied IRRs, provided the overall IRR is acceptable.
- As such, projects that present a low IRR, but can deliver large non-financial benefits can be included in an ensemble of projects while keeping the overall IRR viable.



Abatement potential (CO₂-e)

Decarbonisation pathway planning





Simplified roadmap and emissions reductions



Time (years)

Key opportunities for law firms Scope 3 Employee commuting emissions • Incentives for employees • Remote working opportunities Scope 2 Scope 1 Supply chain emissions • Supplier engagement Green Supply chain efficiency Power • Alignment with supplier that have decarbonisation goals LGCs Waste Smart purchases Fuel switching Recycling Business travel emissions Appliances Vehicles • Virtual meetings • Low emissions transport options • Business travel policy



Stakeholder engagement

Establish **clear objectives** to ensure stakeholders understand the importance of the decarbonization roadmap and their role in its success.

Outline the different **phases of implementation** for the decarbonization roadmap to ensure stakeholders are educated and engaged.

Use workshops **and feedback mechanisms** to increase stakeholder engagement in the decarbonisation process.





The proposed opportunities and phase implementation must be credible. This can be achieved through technical analysis of abatement opportunities.

Highlight successful case studies within the industry.



Explain the potential pay back opportunities and timeline. Showcase how these opportunities will contribute to the long-term resilience of the firm.





Low cost of capital

 Explore options with lenders for low cost of capital for sustainability initiatives – e.g. Sustainability linked loans



Allocate internal budget

• Dedicate a portion of the internal budget to sustainability efforts.

Government subsidiary and incentives:

• Energy efficiency grants for small and medium sized enterprises



• • • Guest Speaker

Katie Swain

Head Of Pro Bono & Responsible Business Barry Nilsson





What are the challenges you have encountered when developing a decarbonization roadmap?

senior buy-in interest target setting business travel lack of resources siloed program upfront costs resources cultural scoops 3 data activity level data senior commitment



Final contributions?

