TCFD & SBTi based abatement capacity assessment

How companies can report their capacity to transition to Net Zero GHG emissions in readily assurable, comparable manner thus providing investors with actionable information

COP26's GLASGOW CLIMATE PACT DECISION *expressed alarm and utmost concern* that human activities have caused around 1.1°C of global warming to-date. It resolved to pursue efforts to limit the temperature increase to 1.5°C, recognizing that this requires reducing global carbon dioxide emissions by 45% by 2030 relative to the 2010 level and to net zero by around mid-century as well as deep reductions in other gases.

To thrive as the world transitions to Net Zero companies must plan for the decarbonisation of the value chains they depend on. This means decarbonizing their own emissions, and assessing how their suppliers and customers can decarbonize. Many companies have started to discuss reporting per TCFD and some are reporting 'Science Based Targets[1]' (SBTi). It is, however, difficult for investors to compare and judge these plans. Action to get better information includes:

- The IFRS Foundation creating the International Sustainability Standards Board to issue, this year, a TCFD based standard for companies to report the impacts of Climate on their enterprise values. (Exposure draft open for comment until 29th July.)
- The EU's EFARG developing a Climate reporting standard based on TCFD for inclusion in the EU Sustainability Reporting Standards. The EU's Corporate Reporting Disclosures Directive will require 50,000 EU companies to use this to report their 2023 results. (Exposure draft open for comment until 8th August.)
- The US SEC has also issued an Exposure Draft for Enhancement and Standardization of Climate-Related Disclosures
- Jurisdictions including the UK and Hong Kong have announced that they will require large companies to follow TCFD reporting in 2025 on their 2024 results.

To accelerate the global transition to net zero, CPP Investments has proposed[2] a template for companies to report their capacity to decarbonization. It has invited contributions to refine this proposal to become a decision-useful part of the reporting standards that accelerate the global transition to net zero. It is highly desirable that this input is provided as part of the response to the Exposure Drafts listed above.

The key part of CPP Investment's proposal is reducing the complexity to a single variable of the shadow carbon price at which it is economic to decarbonize each part of the value chains for a company. The value of an asset or business can then be calculated by applying spot and forward shadow carbon prices to the cashflow and carbon emissions from the value chain it depends on.

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[1] **Science Based Targets** are decarbonisation pathways in line with the Paris Agreement's goal of limiting global warming to 2°C above pre-industrial levels and pursing efforts to limit warming to 1.5°C. https://sciencebasedtargets.org/

[2] **CPP Investments proposal**: www.cppinvestments.com/insights/the-future-of-climate-change-transition-reporting. (NB: Page 4's continuation is on page 6.)

Contact: **Richard Manley;** Managing Director, Head of Sustainable Investing
Global Leadership Team; [redacted]

Points on the proposal from conversations with Richard Manley:

1. The issues companies face in reporting their carbon emissions abatement capacity are similar to issues extractive industries face when reporting their mineral reserves. These extractive industry companies have broadly satisfied financial markets by reporting:
    a. their 'Proven reserves' on which there is a high degree of confidence
    b. their 'Undeveloped reserves' which are less certain[3].

    Companies reporting their carbon emissions abatement capacity can similarly divide it into:
    a. Abatement under business plans which are economic at current spot and forward prices. These include energy efficiency measures, changing to lower-carbon fuels (including expected greening of their grid electricity supplies) and other proven technical solutions.
    b. Abatement which would be economic at a shadow spot price of US$150/tCO2e plus a forward shadow carbon price which is consistent with this spot price.
    c. Their remaining carbon footprint which can only be abated by one of:
        i. transformative technology which does not exist today;
        ii. paying for removal offsets[4]; and,
        iii. closing the relevant business units.

2. The proposed template is completely complementary to TCFD and SBTi. It helps companies systematically demonstrate due diligence when providing 2030 or 2050 abatement capacity guidance. This:
    a. Makes their report easier to assure, and,
    b. Faciliates achieving 'safe harbour' if the information is stock price sensitive.
    c. Facilitates investors comparing the results of different companies.

Standard setters and regulators should encourage a reputable organization to publish carbon prices and removal offset prices and require these to be used by companies reporting per their standards. Note:

1. An excellent precedent for this approach is the Greenhouse Gas Protocol which is published by WRI and WBCSD based on IPCC reports. This protocol has become a global standard for reporting Greenhouse Gas emission due to standard setters and regulators requiring its use.
2. Forward carbon prices are a function of regulation and vary by jurisdiction.
3. Forward pricing of avoidance offsets depends on technology and the extent to which governments support RD&D.
4. While these forward prices are very uncertain having all companies use the same assumptions provides consistent data to which investors can apply their own knowledge to generate investment decision actionable knowledge.

[3] **Extractive industry reserver reporting**: For an example see page 231 of BP's 2020 Annual Report www.bp.com/content/dam/bp/business-sites/en/global/corporate/pdfs/investors/bp-annual-report-and-form-20f-2020.pdf

[4] **Removal offsets** ones which take CO_2 out of the atmosphere. In the required net zero economy avoidance offsets are not relevant. Standards

The attachment is based on the CCP Investments proposal and has been sent to Richard Manley for consideration.

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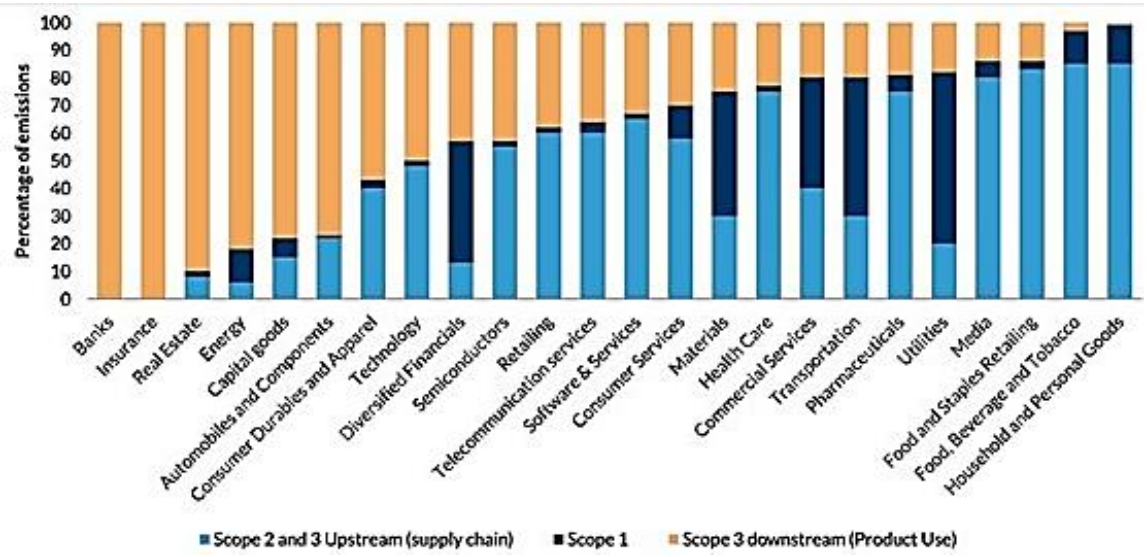
A template for reporting a company's capacity to transition to net zero[5]

1) Information needed for investing in the transition to net zero

Investors need to understand and compare the ability of many companies to transition to net zero. For this they need consistent reports from companies. It is recommended they use shadow carbon price as the key single variable for doing this. Further they advise how much of their carbon emissions it is economic to abate at current carbon prices, how much could be abated at a higher shadow carbon price – say US$150/tonne and the residual emissions that are uneconomic to abate at this price. **This reporting provides:**

- Boards with consistent and intuitive data for overseeing strategy development.
- Executives with the ability to benchmark and prioritise capital allocation.
- Regulators with the line of sight on the most efficient opportunities to intervene.
- Innovators with information on the biggest levers to support decarbonisation.
- Capital markets with information to better price risk and allocate capital to cause the transition.
- Investors such as CPP Investments with the ability to rapidly compare the extent to the many companies they invest in can do business as the economy transitions to net zero.

This is not just for a company's Scope 1 emissions (carbon emissions from its own activities) and Scope 2 emissions (carbon emissions from creating the electricity and other energy it uses). It is also for material Scope 3 emissions from the value chains it is part of. That is, material emissions from its suppliers and its customers. To illustrate this point, consider the distribution of emissions in the value chain of different sectors[6]:



As this chart shows, Scope 3 forms the majority of the footprint of most companies. If a company's suppliers and customers are not able to abate their emissions, then they must buy removal offsets to reach net zero.

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[5] This paper is an elaboration of CPP Investments proposal: www.cppinvestments.com/insights/the-future-of-climate-change-transition-reporting Contact: **Richard Manley;** Managing Director, Head of Sustainable Investing Global Leadership Team; [redacted]

[6] Kepler-Cheuvreux. Carbon Compass: Investor Guide to Carbon Footprinting, 360 Report 23 Nov 2015.

So how can all companies report their capacity plus that of their suppliers and customers to transition to net zero in a way which provide consistent, useful data? Put another way: How can companies consistently report on their Projected Abatement Capacity?

Part of the answer is for all companies following the same reporting template provides the data which each company can use to report on the abatement capacity of its suppliers and customers.

2) Proposed transition capacity reporting – introduction (Simplified from CPP's paper)

CPP Investments proposes companies report their Projected Carbon Emissions Abatement Capacity in three sections. Those which are economic to abate at current carbon prices. The addition which is economic to abate at a higher shadow carbon price – say US$75 or US$150/tonne and the residual emissions that are uneconomic to abate at this price. It suggests these are consistently reported in the following template:

Carbon Emissions Projected Abatement Capacity (PAC) (Mt CO2e)

Currently close to economic	Scope 1	Scope 2	Scope 3	Total		**Example abatement actions**
Efficiency	400	100	1,100	1,600	33%	Stopping methane leaks Better building management Behavioral change
Investment	200	100	200	500	10%	Investments that are economic at current costs, carbon prices and prevailing regulation (e.g., switching to electric vehicles, heat pumps and retrofitting buildings.)
Lower carbon energy	100	200	1,000	1,300	27%	Changing to lower carbon electricity or low carbon hydrogen.
Current (proven) capacity	700	400	2300	3400	**71%**	
Economic if higher carbon price						
Economic @ $75tCO$_{2e}$	50	200	--	250	5%	Additional abatement which becomes economic if carbon prices rise to this point either directly or effectively due to other regulatory change
Economic @ $150tCO$_{2e}$	400	200	100	700	15%	
Long-term (probable) capacity	450	400	100	950	**20%**	
Handling residual emissions						
Closure/Abandonment	150	--	100	250	5%	Closing operations
Transformative technology	150	--	--	150	3%	Development of new technology which currently is only conceptual
Purchase of offsets	50	--	--	50	1%	Paying for residual emissions to be removed from the atmosphere
Currently uneconomic to abate	350	--	100	450	**9%**	
Total emissions	1,500	800	2,500	4,800	**100%**	
	31%	**17%**	**52%**	**100%**		

In this example the company is reporting that:

- It can economically abate 71% of its emissions by measures which are economic at today's spot and forward shadow carbon prices.
- It can abate a further 20% at a current spot shadow price of US$150/tCO$_{2e}$ with a matching forward shadow carbon prices.
- This leaves 9% of the company emissions which are currently uneconomic to abate even at US$150/tCO$_{2e}$. If a new transformative technology is not found, then the options for the company to get to Net Zero will be either to close the relevant business unit or pay for carbon offsets.

Reporting standards will need to define how to complete this report in a consistent manner which is easy for investors to interpret and easy to for data-platforms, such as Bloomberg, to handle.

3) Proposed transition capacity reporting – detail **(written based on page 5 of CPP's paper)**

Reviewing each of the three groups of abatement capacity in more detail:

01 Current (Proven) Projected Abatement Capacity.

- For this, a company must assess its current emissions and develop an estimate of what portion of these it is economic to abate using currently available, proven technologies.

02 Long-term (Probable) Projected Abatement Capacity.

- The interplay of assumptions for falling technology costs, tightening regulation and higher carbon prices make it very difficult to standardize reporting of long-term abatement capacity.
- Companies operate in different jurisdictions, have multiple technologies they monitor for future abatement and diverse assumptions regarding future shadow carbon prices. To manage this complexity it is proposed companies assume no change to today's technology costs and regulation, but flex future projections of abatement capacity by using two standardized spot shadow carbon price assumptions that exceed current levels (e.g., US$75 and US$150 per tCO_{2e}) together with forward shadow carbon prices based on these spot shadow prices.
- The calculated increase in economic abatement capacity based on these assumptions would permit users to compare outputs within and across industries and jurisdictions. Results can be updated annually in response to new regulation or changes in costs.

03 Uneconomic Projected Abatement Capacity.

- In the process of assessing their abatement potential, most companies will identify significant opportunities to cut emissions. Some may even conclude that 100% of their emissions can be abated at or below a US$150/tCO2e shadow carbon price.
- The residual sources of emissions that are uneconomic – or even technically impossible to abate with currently viable technologies – can be reported based on management's currently expect view on how they would address these issues. This may include:
    - closing or ceasing a business activity (for example, managed wind-down and closure of coal mines),
    - further technology development which is not currently proven (such as hydrogen-fueled planes) or,
    - acknowledging emissions that must be covered by buying high quality, permanent removal offsets.

Standard setters and regulators should arrange for a reputable organization to publish forward carbon prices and removal offset prices and require these to be used by companies reporting per their standards. Note:

1. An excellent precedent for this approach is the Greenhouse Gas Protocol which is published by WRI and WBCSD based on IPCC reports. This protocol has become a global standard for reporting Greenhouse Gas emission due to standard setters and regulators requiring its use.
2. Forward carbon prices are a function of regulation and vary by jurisdiction.
3. Forward pricing of avoidance offsets depends on technology development and the extent to which governments support RD&D.
4. While these forward prices are very uncertain having all companies use the same assumptions provides consistent data to which investors can apply their own knowledge to generate investment decision actionable knowledge.

4) Key characteristics and benefits **(Copied unchanged other than format from CPP's paper page 4 & 6)**

Any company that has already calculated its marginal abatement cost curve should be able to allocate this information directly to each of the Projected Abatement Capacity line items.

Disaggregating an organization's abatement capacity into its constituent parts will allow that company to divide its transition planning into smaller, more manageable sub-strategies.

Strategic planning.

With detailed projections of abatement capacity across a company's operations, directors and executives can develop a clear view of the steps their business can take to cut emissions, in what order, over what period and at what cost.

In addition, the information provided by these projections can help shape a long-term strategy to fulfill commitments to achieve net-zero emissions.

Benchmarking.

A standardized approach to projecting abatement capacity helps benchmark companies against their peers and provide greater transparency to stakeholders.

And as carbon reporting and reduction standards harden, regulators, investors and other interested parties can benefit from this framework.

Greater transparency will speed transformation within companies and their value chains, which in turn is likely to accelerate sector and economy-wide decarbonization.

Financing the transition.

Ultimately, the ability of capital providers to objectively appraise an organization's relative ability to remove carbon emissions from its operations will help borrowers and innovators to more efficiently allocate capital. For example:

- A company with high abatement capacity relative to its industry, will likely have access to more and cheaper capital.
- The information provided by these projections may reveal multiple industries are confronting similar regulatory or technical hurdles to lower a specific source of emissions. Such information can help guide policy decisions and prioritize investment in innovation.

Independent validation.

As with financial reporting today, boards will need an independent review of their company's self-assessed abatement projections to verify their credibility.

Establishing a common methodology is vital, lest stakeholders face conflicting estimates of a company's capacity. For example, how is a stakeholder to adjudicate between a company's claims that it can only cut emissions by 30% by 2030, while a non-governmental organization asserts the company's achievable abatement capacity is 70%?

Absent transparency and consistency in the underlying assessments and third-party review, it is likely that conflicting estimates will persist.

Annual review.

If this approach takes hold, abatement capacity could be reported and updated annually. Year to year changes to these projections would reflect realized emission reductions along with the emergence of newly economic abatement opportunities via declines in technology costs, shifts in regulation, and prevailing carbon prices.

For both companies and their sectors, overall abatement projections should increase as the costs of solutions fall, regulation advances and carbon prices rise.

5) Competitive pressures and climate urgency

(Copied unchanged other than format from CPP's paper page 6)

As businesses begin to demonstrate progress in their abatement efforts, constructive rivalries are likely to emerge. Abatement competition promises to accelerate greenhouse gas reductions between rivals and peers, across sectors and throughout the wider economy. If a chief executive announces 70% current projected abatement capacity, his/her company's peers will be motivated to identify similar levers for decarbonization. If these assessments become integrated into management compensation programs, senior executives will have a more powerful incentive to uncover new opportunities.

Developing such a concept as the Projected Abatement Capacity is not easy, but antecedents exist and the building blocks are already taking shape. In the oil sector, for example, companies and investors today use a similar model to project their capacity to extract hydrocarbon reserves economically. Oil companies report projections of their reserves considering a mix of factors — costs, reservoir modelling, commodity prices, foreign exchange and the like — which are qualified across a continuum of recoverability, from proven, to probable, to possible reserves. Auditors are required to review these models so that investors can integrate the gradations into their credit analyses, lending decisions and equity valuations. This reporting is mandated by regulators in specific jurisdictions.

The Abatement Capacity Assessment framework will enable stakeholders to hold companies to account on their emissions reduction targets. By itself, the framework cannot determine whether a business is heading toward net zero or not, but if a company has articulated a carbon reduction target, the framework can help validate a company's capacity to get there.

6) Supporting companies report their capacity to transition to net zero

(copied from CPP: www.cppinvestments.com/insights/the-future-of-climate-change-transition-reporting)

Much work remains to evolve this concept into a generally accepted reporting framework.

CPP Investments is testing and refining Abatement Capacity Assessments of select holding companies in its active portfolio, where climate change impacts are deemed to be material, and where it can influence businesses to adopt the PAC methodology.

To help inform the broader implementation of this recommended approach, CPP Investments has begun planning to test and refine Abatement Capacity Assessments of select holding companies in our active portfolio, where climate change impacts are deemed to be material, and where it can influence businesses to adopt the methodology.

CPP believes a widely accepted, standardized approach to reporting Projected Abatement Capacity will advance the capacity of companies, sectors and economies to transition to net zero. It looks forward to working with interested parties to this end.

End