Executive Guide to Carbon Pricing Leadership

A Caring for Climate Report

Innovation
Carbon pricing OPPORTUNITY Ambitious
CARBON FEE CONSISTENT TRANSPARENT
POLICY Investment MARKET-READY Responsible

Awareness Efficiency EMISSIONS TRADING
LEADERSHIP Material
GOALS Responsible
Market Readiness
BUSINESS CASE Pilots SAVINGS

Caring for Climate | UN Global Compact | UNEP | UNFCCC | World Resources Institute

CDP Driving Sustainable Economies | The Climate Group | PRI Principles for Responsible Investment | United Nations Foundation | CPLC Carbon Pricing Leadership Coalition

A Caring for Climate Report by the United Nations Global Compact (UN Global Compact), United Nations Environment Programme (UNEP) and the secretariat of the United Nations Framework Convention on Climate Change (UNFCCC) in cooperation with World Resources Institute (WRI), and together with The World Bank Group, Principles for Responsible Investment, CDP, The Climate Group, and United Nations Foundation.

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This guide is based on research Duke University (Dr. Deborah Gallagher), UN Global Compact (Jayoung Park), and World Resources Institute (Eliot Metzger) completed in spring and summer 2015. This included a survey and interviews with companies in the UN Caring for Climate's Business & Investors Working Group on Carbon Pricing and the Greenhouse Gas Protocol network, as well as comments collected during a public consultation period in fall 2015. Additional contributors are listed in Appendix C.

Foreword Statements

“The global momentum behind putting a price on carbon emissions is growing — with support from the public and private sectors alike. More and more countries have implemented carbon pricing mechanisms, and through our Caring for Climate initiative over 450 companies are calling on Governments to make markets work for the climate. Already, more than 60 businesses have taken their commitment to next level by aligning with our *Business Leadership Criteria on Carbon Pricing*. Following COP21, I urge more companies to champion the criteria as a way to continue to demonstrate leadership, inspire other businesses and influence policy making.

Lise Kingo
Executive Director
United Nations Global Compact

There is a grave cost to releasing greenhouse gases into the atmosphere. We have ignored this fact for far too long and have placed our planet and ourselves in peril. I see great hope in the building private sector momentum, with more and more companies assessing the risk of exceeding 2 degrees of warming and acting to reduce that risk by putting a price on carbon. This private sector effort, together with the earnest efforts of countries to craft an effective international response to climate change at the UN Climate Change Conference in Paris, are crucial to meeting the great challenge of climate change.

Christiana Figueres
Executive Secretary
United Nations Framework Convention on Climate Change

A growing number of companies see the inevitability of emerging carbon prices across the majority of economies. We look forward to using this Guide in the Carbon Pricing Leadership Coalition to help accelerate the uptake of internal carbon pricing, which is essential in serving competitiveness in the new business environment and can support businesses to have more informed dialogues with governments.

Rachel Kyte
Group Vice President and Special Envoy for Climate Change
World Bank Group”

“We have seen investors worldwide calling for carbon pricing, most recently, through the Global Investor Statement on Climate Change.. The material risk that climate change represents to investors in the form of stranded assets is increasingly being recognised. To address this issue, hundreds of companies are now setting an internal price on carbon in order to mitigate risks from current or future climate change regulation, thereby protecting investors interests, and also as a way to drive investments to clean energy and low carbon alternatives.

Fiona Reynolds
Managing Director
Principles for Responsible Investment

Climate change is now part of mainstream business decision-making and represents a bona-fide line item in the standard budget assumptions of successful companies. As expectation builds for governments to agree a global deal on limiting greenhouse gas (GHG) emissions in Paris this December, CDP’s data shows how a growing number of businesses, now over 1,000 worldwide, have been diligently preparing by incorporating a price on these emissions into their every day decision making. This Guide is an important contribution to the growing set of tools that businesses can use to determine how to integrate a price on pollution into their strategies for low carbon growth.

Paul Simpson
Chief Executive Officer
CDP

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Summary

As the risks and impacts associated with climate change become more evident, there is increasing attention, discussion, and action related to carbon pricing. There are now more than 1,000 companies reporting that they price carbon internally or plan to do so in the next one to two years (up from 150 companies pricing carbon in 2014).[1] A similar number of companies are advocating for government action, supporting "carbon pricing policies to redirect investment commensurate with the scale of the climate challenge."[2]

This Executive Guide is designed for the hundreds of companies who are now completing due diligence on carbon pricing on behalf of their companies. It has been shaped by input from dozens of such companies, as well as other experts who have been implementing carbon pricing programmes within companies and/or advocating for government policies in countries around the world.

Specifically, the objective is to help companies better understand the current landscape of corporate action on carbon pricing and challenge all of them to take the following actions:

- Align with the *Business Leadership Criteria on Carbon Pricing* (See Box 1).
- Join the *Carbon Pricing Leadership Coalition* (See Box 2).

The reasons why companies are increasingly interested in carbon pricing and their motives for taking the actions above will vary. One primary driver is the recognition that more government policies are putting a price on carbon, thus establishing a market value for reducing carbon dioxide (CO_2) and other greenhouse gas (GHG) emissions. Companies will want to be prepared and well-positioned where these policies are shaping their markets.

The desire to be "market-ready" also underlies other motives for companies that are making public commitments and engaging in leadership coalitions on carbon pricing.

BOX 1

ALIGN WITH THE *BUSINESS LEADERSHIP CRITERIA ON CARBON PRICING*

There is now a simple and shared definition of carbon pricing leadership. The UN Global Compact, together with partners of the Caring for Climate initiative, developed the *Business Leadership Criteria on Carbon Pricing* to recognize corporate champions and help companies maximize the internal and external impact of carbon pricing efforts. It is a platform to share best practices and showcase leadership for policymakers and other stakeholders. It forms one of the cooperative initiatives of the COP21 Lima-Paris Action Agenda,[3] which brings both state and non-state actors together on the global stage to accelerate cooperative climate action now and into the future in support of the new agreement.

Numerous companies are now aligning with three *Business Leadership Criteria on Carbon Pricing* and committing to take the following actions in a manner consistent with the international target of limiting global warming to 2°C:

1. **Set an internal carbon price high enough to materially affect investment decisions to drive down greenhouse gas emissions;**
2. **Publicly advocate the importance of carbon pricing through policy mechanisms that take into account country-specific economies and policy contexts; and**
3. **Communicate on progress over time on the two criteria above in public corporate reports.**

As of November 2015, there are over 60 Carbon Pricing Champions (listed on back cover), including leading companies from Brazil, China, Europe, India, South Africa, and North America. They are formally recognized by initiatives like Caring for Climate, *Carbon Pricing Leadership Coalition*, We Mean Business, and CDP.

For more information see:
www.caringforclimate.org/carbon-pricing/

Other reasons why a company would want to price carbon internally and advocate for government action include:

- Preparing for policies affecting the company's operations or value chain.
- Helping to achieve the company's GHG reduction targets.
- Translating climate change into financial terms.
- Responding to investor and customer demands.
- Learning, testing, proving and showcasing effective carbon pricing approaches.

This guide is structured in three parts, each designed to be a useful reference for companies exploring the value proposition for any one or combination of the above drivers. The sections that follow are meant to help corporate practitioners become familiar with the concept of carbon pricing, clarify different approaches, and inspire and inform a company's own strategies for putting leadership criteria into practice.

PART 1 provides high-level background information and messages to inform corporate briefings on carbon pricing (with additional information provided in Appendix A). It notes:

- Momentum behind carbon pricing is real and widespread. Governments and companies alike are putting a price on carbon.
- The term "carbon pricing" needs to be carefully defined.
- There are three general approaches to internal corporate carbon pricing — implicit pricing, shadow pricing, and internal taxes or fees.

PART 2 guides individuals through the three elements of the *Business Leadership Criteria on Carbon Pricing* outlined in Box 2. It helps companies understand options for putting the criteria into practice and provides answers to common questions based on corporate experiences and input. It explains:

- *To price carbon internally*, a company should clarify its objectives before setting a price. Clear objectives will help a company select among three general pricing approaches and establish an appropriate price. Companies should keep implementation simple, while finding creative ways to use carbon pricing as a tool for achieving GHG reductions.
- *To be a responsible advocate* for external carbon pricing policies, a company should identify how material interests are impacted by climate change and a carbon price. Companies should create credible, consistent messages for governments, ensuring those messages are reinforced in the coalitions and trade groups to which they belong.
- *To report on carbon pricing activities*, companies can use existing platforms, including UN Global Compact Communication on Progress, CDP, and other public disclosures.

PART 3 concludes with several short examples of how different companies are putting carbon pricing into practice. It is a small sample of a broader compilation of cases to be published on the Caring for Climate website as the list and experiences of *Carbon Pricing Champion* companies grow.

BOX 2

JOIN THE *CARBON PRICING LEADERSHIP COALITION*

Leaders from across government, the private sector and civil society are collaborating within the *Carbon Pricing Leadership Coalition* (CPLC) convened by the World Bank Group. They are sharing experiences working with carbon pricing and expanding the evidence base for effective carbon pricing systems and policies.

Companies that support the *Business Leadership Criteria* are invited to join the *Carbon Pricing Leadership Coalition*. By doing so, companies can capture and share best practices in using internal carbon pricing; mobilize greater business engagement for carbon pricing policies; and participate in leadership dialogues to advance carbon pricing.

For more information see:
www.carbonpricingleadership.org

PART 1:

High-level Background on Corporate Carbon Pricing Leadership

Ambitious

Responsible

Emissions Trading

CARBON FEE

POLICY

BUSINESS CASE

Carbon pricing can get complex quickly, but there are three basic things companies should know. Below is a summary of those top-level messages, with additional detail and supporting data (drawn from a 2015 Caring for Climate survey and interviews) in Appendix A.

1. There is wide and growing momentum to price carbon in countries around the world.

Companies taking leadership positions have motivations and opportunities to leverage, follow and inform these developments.

Recent years have seen rapid growth in government policies (or external mechanisms) to price carbon. The World Bank Group, in its *State & Trends of Carbon Pricing 2015*, noted that: "Since 2012, the number of implemented or scheduled carbon pricing instruments nearly doubled." Approximately 40 countries and 20 subnational jurisdictions have implemented carbon pricing policies or have plans to implement them in the next few years.[4]

Meanwhile, many companies are pricing carbon internally and supporting additional government policies for external pricing. In 2014, CDP reported that 150 companies globally were pricing carbon. By 2015, that number had nearly tripled (to 435) and more than 580 additional companies reported that they anticipate pricing carbon within the next two years.[5] The Caring for Climate initiative now includes more than 450 chief executives that call on governments to urgently create policies and mechanisms to create a stable price for carbon.[6] In 2014, the World Bank Group listed more than 1,000 companies that are supporting carbon pricing policy action "to bring down emissions and drive investment into cleaner options".[7] Companies are also coming together with peers in their sector to collectively request government action to establish formal carbon pricing frameworks. Examples include U.S. banks and European oil and gas companies.[8]

So what opportunities do companies see with carbon pricing? Companies and other stakeholders who provided input to this guide (via survey, interview, or public comment) are observing the momentum behind carbon pricing, each from the perspectives of their own sectors and geographies. They have unique reasons and circumstances, but outline one or more of the following common interests and motivations:

- Preparing for the impact of current or future regulations on operations or the company's value chain.
- Building internal awareness, collecting funds, and aligning incentives to meet the company's GHG reduction targets.
- Putting climate change into terms that links it to all other efforts to evaluate and account for financial risks, costs, and market opportunities.
- Responding to investors and customers calling for the company to show leadership in incorporating climate risks into its investment decisions and lobbying.
- Learning by doing and gaining internal expertise or credibility when advocating for external carbon pricing policies.

BOX 3

INVESTORS ARE ALSO EMERGING AS A STRONG VOICE FOR CARBON PRICING

More than 380 investors representing over US$24 trillion have urged governments to "provide stable, reliable and economically meaningful carbon pricing that helps redirect investment commensurate with the scale of the climate change challenge." Investors supportive of carbon pricing are from diverse markets and include CalPERS (USA), AXA Group (France), AP7 (Sweden), Batirente (Canada), BNP Paribas Investment Partners (France), Catholic Superannuation Fund (Australia), Hermes EOS (UK) and Old Mutual Investment Group (South Africa).[9]

2. Understanding the purpose, limitations, and definitions of carbon pricing is important.

Companies committing to study, test, and engage in carbon pricing dialogues can build valuable internal expertise.

With all the recent attention, it is easy to overlook the fact that carbon pricing is itself only a means to an end (GHG reductions) and the term can refer to different approaches. The definition, limitations, and context for the term "carbon pricing" are important to clarify.

Definition: In basic terms, carbon pricing is a financial tool. It is a mechanism to reflect the social, environmental, and economic costs of climate change (using "carbon" as shorthand for GHG emissions) in financial decisions. It attaches a value to investments that reduce such costs and thus creates incentives for low-carbon business innovation.

Limitations: However, a carbon price in practice may not reflect the full social, environmental, and economic costs (externalities). Additional measures may be needed to overcome technology costs, competitiveness concerns, or other barriers, depending on the industry and scope of the pricing programme. So, a price on carbon can be seen as a critical component of a broader approach. It can support ambitious action by identifying the most cost-effective GHG reduction opportunities, but may not be driving change at the pace or scale necessary by itself. Companies that are actively evaluating and testing carbon prices gain insights into such limitations and opportunities to complement a price on carbon with additional strategies to support shifts in behavior and investment decisions.

Context: Likewise, those companies that are building internal expertise will avoid confusion when they hear the term "carbon pricing" used to describe different approaches. In the context of government policy, or external pricing, the term could refer to explicit prices like a carbon tax or an emissions trading system (or "cap-and-trade" programme). Carbon pricing can also be implicit, for example derived from the costs of complying with regulations like fuel standards.[10] Companies with internal carbon prices also apply distinct approaches, though categorized slightly differently, as outlined below.

3. There are three distinct approaches to internal corporate carbon pricing, but with room for innovation.

Companies exploring and adapting approaches to price carbon can determine and create an approach that works best for their specific circumstances and objectives.

In simple terms, companies are using one, or a combination, of the following approaches to put a price on carbon:

- **Shadow price.** Some companies create a "shadow price" to evaluate potential investments. This approach attaches a hypothetical or assumed cost for carbon emissions—for example US$30 per metric tonne of CO_2-equivalent ($MTCO_2e$)—to better understand the potential impact of external carbon pricing on the profitability of a project. Companies also create a range of shadow prices to test sensitivities or build them into financial models with various assumptions, probabilities, and discount rates.
- **Internal taxes, fees, or trading systems.** Some companies are creating formal internal financial incentives and programmes. Some have created an internal tax or fee—for example, US$10 per $MTCO_2e$—that is assessed on various activities or expenditures. Others have set up internal trading programmes where business units or facilities buy and sell credits to meet GHG targets.
- **Implicit price.** Some companies do not establish an explicit carbon price, but calculate the implicit cost per $MTCO_2e$ based on how much the company spends to reduce GHG emissions. For example, a company may have set an aggressive GHG reduction target and is allocating internal capital to energy efficiency or renewable energy to achieve it.

PART 2:

Understanding the Business Leadership Criteria on Carbon Pricing in Practice

The sections that follow provide suggestions to put the three *Business Leadership Criteria on Carbon Pricing* into practice. They are based on experiences and recommendations gathered (by interview, survey, and public comment) from practitioners who are, or have considered, pricing carbon. This sample of perspectives ranges across more than 30 industries and 35 countries. Many of these individuals' companies are now aligning with the *Business Leadership Criteria*, participating in the *Carbon Pricing Leadership Coalition*, or otherwise assessing options for putting a price on carbon internally and/or externally (See Part 3 for examples).

TOPIC 1. Internal Corporate Carbon Pricing

BUSINESS LEADERSHIP CRITERION #1: Set an internal carbon price high enough to materially affect investment decisions to drive down greenhouse gas emissions.

To align with the *Business Leadership Criteria on Carbon Pricing*, companies need to have an internal pricing approach that helps shift investments and fits within an overall strategy to help achieve the international target of limiting global warming to 2°C. But to do so is challenging. One option is to use carbon pricing as a tool to help achieve a science-based GHG target. As of November 2015, more than a dozen of those companies that are aligning with the *Business Leadership Criteria on Carbon Pricing* have also made public commitments to set science based targets.[11]

In terms of common benefits and challenges for internal carbon pricing, companies mention both the opportunity to help achieve GHG targets and the difficulty determining the "right price". The top three benefits and challenges are outlined in Table 1 and form the basis for the recommendations that follow.

TABLE 1

Most commonly cited benefits of carbon pricing	Most commonly cited challenges with carbon pricing
Helps translate carbon into business-relevant terms and engage internally	Lack of common method or guidance to set a carbon price
Increases support and investment for energy efficiency projects	Lack of clarity and long-term certainty in countries' climate policies
Helps company achieve ambitious GHG reduction targets	Difficulty arriving at the "right price" that is not too high to be reasonably implemented (and thus potentially pose competitiveness issues) or too low and ineffective in shifting investment decisions

“THE DEBATE ABOUT THE RIGHT PRICE TO USE CAN BE A DISTRACTION.”

This note is from a company that has more than ten years of experience pricing carbon internally. It previously spent significant time and resources to build models and scenarios in search of the right price. Today, however, the company has shifted their approach having recognized that it will never be able to predict the market price for carbon with any certainty. Instead, the company determines its pricing approach based on general estimates of what it will cost to position the company (with energy efficiency or renewable energy or other technology investments) to be competitive in markets where carbon is (or will be) priced.

Set Your Goal. Focus first on clarifying internal objectives (and avoid the “right price” trap).

It can be tempting to begin developing a carbon pricing programme by first trying to determine what price is most appropriate. Indeed, many companies want to find out what prices others are using. However, doing this without context can be misleading. Other due diligence and decisions must come first.

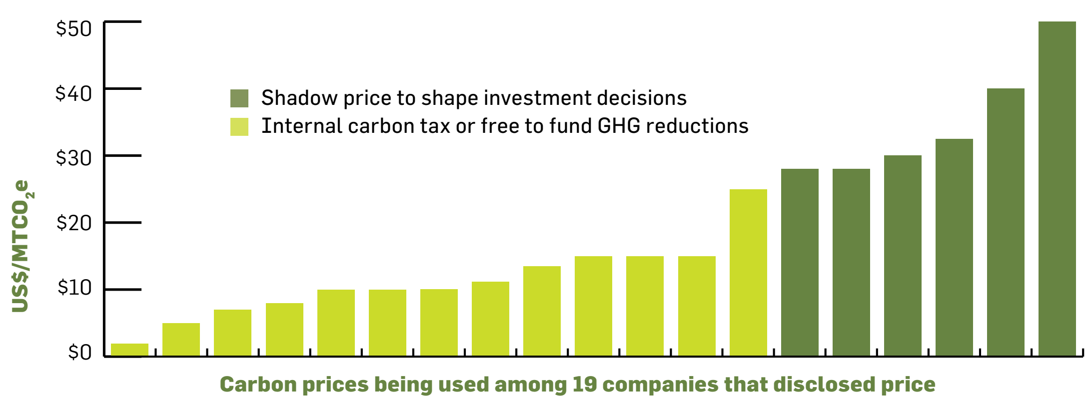
Instead of immediately setting a price, many companies suggest the initial step should be to determine and clarify exactly what goals a carbon price can reinforce internally. Is the primary objective to raise internal awareness and funds to support a company’s GHG reduction target? Is the objective to translate and prepare for the impact of external carbon prices on a company’s operations, suppliers, or customers? Being clear about the purpose of a carbon price helps shape the decisions that will follow about what approaches and prices might be most appropriate.

Determine the Approach and Price. Use the objectives to evaluate options for pricing carbon.

Companies that are already pricing carbon seem to have matched certain objectives with specific pricing approaches. Companies that have responded to the Caring for Climate survey are either seeking to raise internal funds for GHG reductions or preparing for external policy and market signals. It followed that a company was either using a modest internal tax or a higher range of shadow prices (Figure 1).[12] These are important distinctions to have in mind when looking at what prices other companies are using.

- If a company’s direct objective is to collect internal funds for capital investments in energy efficiency or renewable energy that might suggest an internal tax or fee (or internal trading system where funds are collected). The prices for such approaches (among those who disclosed their price in the survey) fell in the range of US$5-15 per MTCO$_2$e. Reasons for this might include a desire to keep the internal burden low (for a better chance at internal buy-in) or simply a case where a certain price was sufficient to raise the internal funds necessary for capital investments. To be clear, the intent of such an approach is to raise internal capital and not necessarily to significantly shift investment behavior or directly respond to external policy. Instead, the objective might be to use carbon pricing as a means of building internal awareness and achieving a GHG reduction target or clean energy goal.
- Other companies’ direct objectives may be very different and focused more on preparing for an external carbon price’s impact on operations, suppliers, or customers. Such cases might suggest an internal shadow price that helps a company evaluate, compare, and prioritize strategic investments. Here the priority would be to internalize the expected external costs into financial decisions. The prices for such approaches (among those surveyed) were notably higher and ranged between US$25-50 per MTCO$_2$e. Additional companies interviewed as part of this research had recently set shadow prices as high as US$100 per MTCO$_2$e.

FIGURE 1 **Clear differences in carbon prices depending on objectives and approach**



Implement a pricing programme. Be creative with carbon pricing strategies that fit the company and keep it simple to start.

Although there are three primary types of carbon pricing approaches, there is plenty of room for creative hybrids and innovative adaptations. For example, some companies have raised the idea of embedding carbon prices in revenue targets or taxing marketing budgets to incentivize low-carbon research and development. Companies in the food and beverage or service sectors are looking upstream or downstream in their value chains where their environmental impacts are the greatest. They are considering options for pricing carbon in partnership with their suppliers or customers and clients.

The most compelling examples of internal carbon pricing programmes are those that have strong links to the company's material interests and circumstances. Companies can shape carbon pricing within broader and unique corporate strengths or identities. One company noted a strong culture and motivation around achieving business unit performance targets. Rather than establish a new programme, the carbon price was built into the process of setting and updating those goals. Carbon pricing remained secondary, but helpful to achieving a business unit's targets.

It also helps to recognize growth engines within a company. One individual interviewed for this guide described how she recognized early on that a carbon pricing programme would need to first be embraced by the group of managers that will be driving future profits. The programme was designed in a way that they were comfortable and excited to participate, which helped ensure its success.

"Keep it simple" are the final words of wisdom from those pricing carbon internally. Creating an internal carbon price does not need to be complex at the outset. There will be questions and complications that arise over the course of implementation, but multiple individuals urged others not to overcomplicate matters upfront.

Noted challenges and opportunities to overcome them

There are many additional challenges and barriers to establishing an internal carbon price not addressed by the high-level guidance above. Future work and collaboration among companies will be needed to answer important questions, such as:

- How do we create, find, or use a standard methodology to price carbon internally?
- What time and resources are required to implement and manage a carbon pricing programme?
- How do we apply a carbon price across global operations?
- How do we measure success?
- What does it mean to "materially affect investment decisions"?

See Part 3 for some early lessons and examples gathered from companies across multiple sectors and geographies.

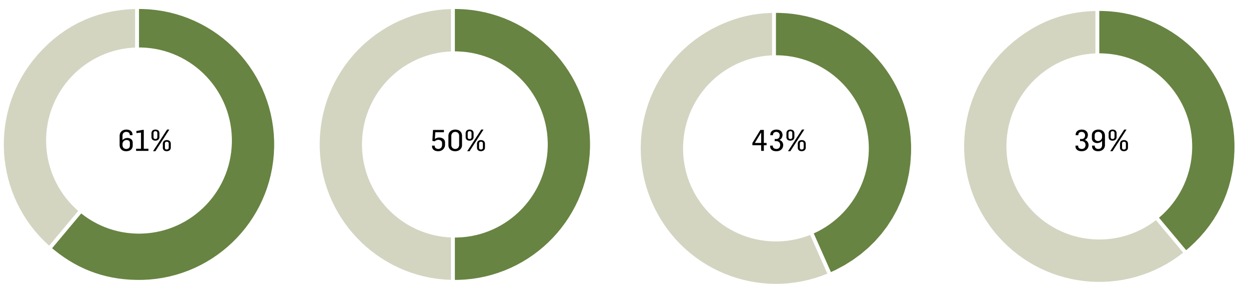
TOPIC 2. Carbon Pricing Policy Advocacy

BUSINESS LEADERSHIP CRITERION #2: Publicly advocate the importance of carbon pricing through policy mechanisms that take into account country-specific economies and policy contexts.

To align with the *Business Leadership Criteria on Carbon Pricing*, companies should advocate for policies that contribute to meaningful GHG reductions aligned with the international target of limiting global warming to 2°C.

In practice, this means expressing and embedding such views in public policy positions, including the positions of trade associations. More than half of the respondents to the Caring for Climate survey noted their company is engaging in carbon pricing policy debates by shaping the positions of trade groups and broader business coalitions (Figure 2). Other common ways companies are engaging, included public positions and statements, as well as public and private meetings with heads of state, ministers, agencies, or regulatory bodies.

FIGURE 2 **How respondents to the Caring for Climate survey are engaging and informing government carbon pricing policies.**



Percentage of respondents taking positions on carbon pricing policies within trade groups or coalitions.

Percentage of respondents creating company position statements on carbon pricing and sharing directly with regulators and legislators.

Percentage of respondents participating in public events on carbon pricing with heads of state, ministers, agencies, or regulatory bodies.

Percentage of respondents participating in private meetings on carbon pricing with heads of state, ministers, agencies, or regulatory bodies.

Even companies that do not find opportunities for internal carbon pricing are advocating for an external price on carbon. The majority of those companies that noted they have no internal price on carbon still said they want to see an external carbon price and are actively engaging governments to advance such policies. These companies may not have opportunities to implement an internal price, but still want to communicate to governments a view that carbon pricing can be part of an effective policy response to climate change.

To express their policy views, companies can incorporate five core elements into the activities in Figure 2: legitimacy, opportunity, consistency, accountability, and transparency. Specifically they can follow the recommendations in the *Corporate Guide to Responsible Engagement in Climate Policy* (Figure 3) to:

IDENTIFY. Determine how carbon pricing affects business risks and opportunities. Complete an analysis of how carbon pricing will affect the company's operations, suppliers, and customers. Complete an inventory of the countries, policy debates, and platforms through which the company can inform nationally-appropriate carbon pricing approaches.

In going through this exercise, a company can make decisions about how deeply it can and should engage in policy design choices. Companies that have established internal carbon pricing mechanisms have the added benefit of direct experiences and examples. Several of the companies interviewed noted that they stay agnostic on the policy approach itself (tax or cap-and-trade). Others, particularly those in energy-intensive industries or sectors currently subject to carbon pricing at national and subnational levels, may wish to highlight design features they see as critical for creating a level playing field.

ALIGN. Ensure internal positions and interests match external messages on carbon pricing policies. Review direct and indirect influences on carbon pricing policies to determine if they are consistent. For instance, ensure alignment between what the company is saying to governments and what the government is hearing from trade groups and coalitions representing the company. Companies that fail to create a clear, consistent position on carbon pricing policy will undermine their own goals and expose themselves to scrutiny from investors and public interest groups.

Report (via CDP, the UN Global Compact, and other platforms) the company's positions and activities related to carbon pricing advocacy. (Discussed further in Topic 3.)

FIGURE 3

Noted challenges and opportunities to overcome them

Some companies point out that a perceived lack of material interest in carbon pricing policies prevents them from being active advocates. Despite the fact that climate change will have an impact on all sectors of the global economy, several sectors are mostly unengaged. Consumer staples, health care, and information technology are relatively less active on carbon pricing policy compared to companies from the utilities, materials, and energy sectors (Figure 4).[13] Individuals outside of the latter sectors note that they do not have government relations staff tracking carbon pricing policy developments, and often it is difficult to make it a priority when there are other regulations with more direct impacts on the company. But others simply point out they have not been invited to engage in dialogues or coalitions, which can offer both legitimacy and opportunity to advocate for carbon pricing. (*See resources outlined in Box 4.*)

To build stronger, material links between a company's interests and carbon pricing policy debates, companies can ask questions such as:

- How will carbon pricing affect our market position, corporate reputation, or brand?
  - Are customers demanding that we lead?
  - Are competitors leading and should we keep pace?
- What do our investors think of carbon pricing?
  - Are we seeing more shareholder resolutions?
  - Are we receiving more questions?
- Where are carbon prices likely to be applied in our value chain?
  - In which of our key markets do carbon prices currently exist (or will soon)?
  - Will reducing GHGs in our supply chain help mitigate costs that suppliers may otherwise pass on to us?

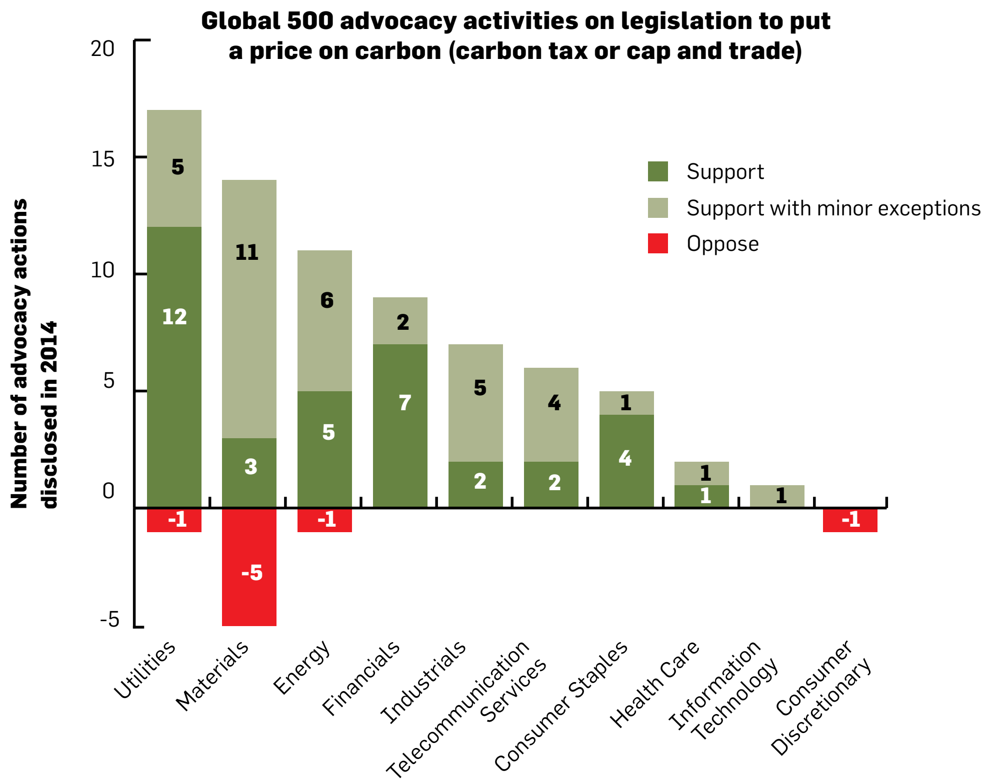


FIGURE 4 **Several sectors are relatively unengaged in carbon pricing advocacy based on Global 500 disclosures to CDP in 2014.**

BOX 4

PLATFORMS, TOPICS, AND REFERENCES FOR COMPANIES ADVOCATING FOR CARBON PRICING POLICIES

Several companies noted that they advocate for carbon pricing policies by speaking with and learning from others. Companies can participate in working groups and country dialogues, including those hosted by the *Carbon Pricing Leadership Coalition* and Global Compact Local Networks. For more information, please visit www.caringforclimate.org/carbonpricing.

Companies can also find reference materials on carbon pricing fundamentals and specific topics like carbon leakage or equity and fairness concerns in resources such as:

- CDP and We Mean Business
- New Climate Economy's 2015 Report (2015.newclimateeconomy.report) and Working Paper: Implementing Effective Carbon Pricing
- World Bank Group's *State & Trends of Carbon Pricing 2015*
- World Resources Institute's *Carbon Pricing Handbook* and associated working papers
- OECD, World Bank Group, and International Monetary Fund's FASTER Principles for Successful Carbon Pricing
- Mary Robinson Foundation Climate Justice's Principles of Climate Justice
(See Appendix B for case story)

TOPIC 3. Reporting on Carbon Pricing Leadership

BUSINESS LEADERSHIP CRITERION #3: Communicate on progress on the two criteria above in public corporate reports.

To confirm alignment with the *Business Leadership Criteria on Carbon Pricing*, companies will need to share updates on their efforts to price carbon internally and advocate for external policy. Doing so also presents a chance to collect data and assess a company's own progress, which can identify opportunities to improve its approach to carbon pricing.

Disclosure need not include any sensitive or proprietary information, but that determination will be left to the company's discretion. It is notable that hundreds of companies are already disclosing their internal carbon price (or price range) along with other information about their positions and lobbying on carbon pricing policies.[14] Some companies, however, feel such disclosure would reveal strategic information in competitive markets. For example, both of the companies that chose not to disclose their carbon price in the Caring for Climate survey were from the electric power sector in Europe. Companies' expectations and planning around future prices are, in this case, considered sensitive.

Reporting on carbon pricing can also be an opportunity to respond to questions companies are fielding from investors and other stakeholders. Many companies already report through platforms such as CDP or the UN Global Compact's Communication on Progress. Most have their own financial reporting and corporate sustainability reports as well. Any one of these options would be an appropriate, existing means of disclosing progress on aligning with the *Business Leadership Criteria*. Among those companies that responded to the survey, approximately 70 percent are already reporting information on carbon pricing via those platforms.

Each company will have its own approach for demonstrating leadership on carbon pricing and aligning with Business Leadership Criteria #1 and #2. However, for general guidance, companies can use the framework outlined in Table 2.

As carbon pricing develops, key investor questions for company boards are likely to include:

- Business operation: How have you assessed your company's risk exposure to the impacts of climate change?
- Do you price carbon as a part of internal decision-making?
- How do you incorporate a cost of carbon into capital management and planning activities?
- How has your approach influenced or changed the company's priorities or decisions?
- Public policy: Do you have a position on carbon pricing policies by governments? How is this prosecuted?

- Fiona Reynolds, Managing Director,
Principles for Responsible Investment (PRI)

TABLE 2

Draft reporting guidance for Carbon Pricing Champions		
Companies are strongly encouraged to disclose:	• Pricing programme objective (GHG reduction target, risk mitigation, differentiation strategy) • Pricing approach (e.g., internal tax or shadow price) and scope (e.g., direct emissions from [country or activity] or all Scope 1, 2, and 3) • Quantitative measure of shift in investment, engagement, behavior, or GHG profile over time	• Public statement (or link to statement) explaining general position on policy objectives for carbon pricing • Policy lobbying positions taken (by the company or its major trade associations) and whether they aligned with the company's public statement (and any actions taken in accordance with recommendations in the *Guide for Responsible Corporate Engagement in Climate Policy*) • Top carbon pricing policy objectives and any related outcomes and policies
Companies are also welcome to disclose:	• Internal carbon price (or price range) • Value of funds raised (if applicable) • Plans to review, adjust price	• List of coalitions, activities, and countries where the company is actively involved (e.g., *Carbon Pricing Leadership Coalition*) • Results of internal audit of alignment between public and private, direct and indirect policy influences • Financial expenditures related to policy engagement on carbon pricing

PART 3:

What Companies Are Doing to Put a Price on Carbon

Learning
Savings Engagement
Successes
PILOTS AWARENESS
CHALLENGES Market readiness

This Executive Guide concludes with a sample of a large and growing number of companies working to adapt carbon pricing for their strategic objectives. The brief stories below came from interviews and information that helped shape the preceding sections. (Many have agreed to have their story attributed, but others have requested to remain anonymous.) The more that these and other business leaders can do to share their experiences—successes and challenges—the more effective and impactful carbon pricing can be as a tool for GHG reductions.

Companies seeking to benefit from and help build collective knowledge on carbon pricing are invited to:

- Align with the *Business Leadership Criteria on Carbon Pricing*.
- Join the *Carbon Pricing Leadership Coalition*.

More than half of the companies below have already done so. Contact Jayoung Park (park10@un.org) at the UN Global Compact for more information.

Abengoa

Developing a pricing approach to meet the company's GHG goals

- **Carbon Pricing Approach:** internal fee
- **Industries:** energy, telecommunications, transportation

Abengoa began looking into carbon pricing in late 2014. Its primary objective: incentivize and fund GHG reductions across its business units to a 2020 GHG reduction goal.

The company found much uncertainty around how to set the right price. Existing methods, for example from the oil and gas sector, did not seem to apply to their industry's context. Abengoa found a general lack of good examples that it could study and adapt. So, it opted to develop and test a method of its own, drawing where it could from other existing experiences.

An internal team within Abengoa began holding regular calls and meetings, inviting outside experts into discussions as well. The team looked at the company's marginal abatement curve to get a sense of what various GHG reduction efforts would cost. Based on this analysis, it created a formula that suggested an internal fee of approximately US\$9/MTCO$_2$e would be sufficient to fund GHG reductions of 5 percent across all business units and meet its 2020 target.

In 2015, the company began to implement the pricing programme. It has scheduled quarterly check-ins to get progress reports from business units and adapt its approach as needed.

Ben & Jerry's

Pricing carbon to invest in supply chain GHG reductions

- **Carbon Pricing Approach:** internal fee
- **Industry:** food

Ben & Jerry's has developed a set of ambitious goals, including an absolute GHG reduction goal that includes supply chain emissions (Scope 3). The company's objective with carbon pricing: create internal funds to support investments that help achieve the company's GHG reduction target.

In looking closer at its supply chain, Ben & Jerry's had found that more than half of its GHG emissions were in its ingredients. The company worked to evaluate options for an internal carbon price and a method for identifying products and technologies that would reduce GHGs in its ingredients. It arrived at a fee of US\$10 per ton after surveying what other companies like Microsoft had done.

The fee generates more than US\$1 million annually, which accrues and is being spent mostly on projects in the supply chain. The company is investing in farms where projects can reduce GHGs, but also has other benefits like improved water quality and financial stability.

The experiences from the Ben & Jerry's carbon pricing program are also helping to inform the strategy of its parent company, Unilever, and its general advocacy on climate policy via coalitions like Business for Innovative Climate and Energy Policy (BICEP).

Braskem

Studying carbon pricing with others to determine nationally-appropriate options

- **Carbon Pricing Approach:** policy advocacy
- **Industry:** chemicals

Braskem wants to be viewed as leader on sustainability and has been investing for years in advancing new low-carbon products and for reducing its own GHG emissions. It has found that existing technologies based on fossil fuels are still more competitive than the new ones. Carbon pricing policies present an opportunity to create the financial incentives to make low-carbon innovations financially viable.

The company has a team studying carbon pricing policy options. It has joined different initiatives that are engaging companies, business organizations, non-governmental organizations and universities. Those initiatives have analyzed mitigation options and evaluated economic and social impacts (e.g., employment) and policy design choices (e.g., revenue recycling). The company is also exploring internal shadow pricing options that will help inform where and how the company invests in future projects.

The results of these include examples of more viable mitigation options and possible consequences of adoption of carbon pricing policies in Brazil. Braskem expects to have deeper understanding of impact of carbon pricing soon—insights and experience that can be used to influence dialogues with government.

Cemex

Advocating for external carbon pricing policies

- **Carbon Pricing Approach:** policy advocacy
- **Industry:** cement

Cemex has long been in favor of carbon pricing as a key policy tool to control GHG emissions. However, in view of the high abatement costs in its CO_2-intensive sector and competitiveness issues, the company has concluded that an internal carbon price that would materially reduce its GHG emissions is currently unfeasible. Instead, the company remains focused on advancing external carbon pricing policies that Cemex considers much more relevant and effective, particularly for heavy emitters. Cemex publicly supports cap-and-trade systems, which would provide more flexibility compared to a carbon tax, and has been vocal about options to address potential issues where operations would be relocated to regions where emissions are less costly—often referred to as carbon leakage.

Some ten years ago, an internal champion within the company began to study the issue and brief the company's executive leadership. The internal champion outlined the science of climate change, options for addressing the risks, and potential consequences for the business. Cemex was well-prepared when the EU ETS began and has leveraged the market to drive investments in alternative fuels and renewable energy (though the company notes that the ETS by itself is not sufficient to drive all necessary investments).

Cemex has also extended collaboration across its international operations and positioned itself to inform carbon pricing policies in other regions, particularly in the Americas. Representatives from the global headquarters and the company's six regions meet regularly to discuss related news, initiatives, and positions.

Cemex believes that the concept of common but differentiated responsibilities is crucial for the development of an effective global carbon pricing mechanism; it has found differences in the degree of interest, awareness, and feasibility regarding carbon pricing policies across its locations. Some markets are more ready for carbon pricing than others, so policies should fit the local context and institutional capacity.

Company A

Exploring carbon pricing as a means of building good will with customers

- **Carbon Pricing Approach:** shadow price
- **Industries:** transportation, energy

Company A has been a leader on climate change for years and had differentiated itself in this way with key customers. Those customers continue to encourage the company to take leadership positions, which has prompted the company's interest in carbon pricing debates.

Company A is actively reviewing options for setting a carbon price. It has identified several options, but is looking for a pricing option that can best represent its own challenges and opportunities. Its circumstances are such that direct regulations for part of its business is years away and energy prices are highly variable. A carbon price that is too low will not change investments and a price that is too high will be unrealistic in terms of preparing for future market signals. So far, the company has been using a carbon price mostly for discreet stress testing.

The company's desire to demonstrate that it is taking climate change seriously has also driven active engagement with governments. It is advocating for sensible policies, with a preference for a simple carbon tax or levy, along with complementary policies to address unique circumstances of its industries.

Company B

Opting to focus on annual GHG reductions without an explicit carbon price

- **Carbon Pricing Approach:** no explicit price
- **Industry:** conglomerate

Company B has looked closely at carbon pricing several times over the past 15 years, particularly when a cap-and-trade policy was being debated in the United States. In recent years the company has decided that its best option to achieve its objectives—hedging against policy impacts—will be to focus on its annual GHG reduction targets (3 percent each year).

Company B is subject to some external carbon pricing policies in the EU and regions of North America. However, it is not particularly energy- or carbon-intensive so the financial impact has been limited to date.

The main driver of GHG reductions is the company's 3 percent directive. Business units are very good at meeting targets and thus setting such goals is sufficient to drive necessary response and results.

Company B is also engaging in some advocacy on carbon pricing, sharing views on why carbon pricing revenues should be reinvested in energy efficiency. This requires internal coordination to understand what is good for one part of the business may be harmful to another, or importantly, to the company's customers. Company B's Sustainability Council takes on this role and creates talking points that different regions can use in carbon pricing policy dialogues with governments.

EDF

Building internal capacity and working through industry groups

- **Carbon Pricing Approach:** compliance with EU ETS
- **Industry:** electric power

As an electric power producer, EDF has a relatively long time horizon on its investments. The company is using expected real prices to incorporate the costs of future regulations, as well as assess changing technology options.

The development of a regulatory framework of the EU ETS has helped inform EDF's low-carbon vision for its future. In response to EU legislation, the company created a specific working group to feed the scenario steering committee, which presents different options to the Board or Directors on an annual basis. This working group includes approximately 10 people from a number of different divisions (R&D, generation, trading, strategy) and covers economic analysis of current and projected costs and technologies for different fuels. Through the working group, the company is able to develop a range of expected carbon prices to help assess priorities and profitability among those future investments.

EDF's experience also informs the positions it is taking as an individual company and the positions it is helping to create in its industry groups (e.g., UFE and Eurelectric). They are advocating for a higher carbon price in the EU ETS in order to reduce emissions at the least cost. EDF is aligning positions to ensure it is sending this consistent, constructive message to governments. The company has also found that engaging with government and other companies in the industry has helped accelerate internal learning. The company is now familiar with concepts regarding carbon pricing and has established a common language with which it can discuss policy options internally and externally.

Eskom Holdings Soc Limited

Following and learning from international carbon pricing experiences

- **Carbon Pricing Approach:** shadow price
- **Industry:** electric power utility

In 2007, Eskom realized that a carbon price was likely to affect its business operations and potential investments in the future. For this reason, it developed a shadow price for carbon. The purpose of developing a shadow price was to use it in Eskom's investment evaluations, mainly focusing on asset creation investments such building power stations and lines. One of the objectives for its shadow price is to demonstrate carbon constraints associated with increased operational emissions (i.e., cost penalty) and benefits of emissions reduction interventions (i.e., value in certified emission reductions and avoidance of domestic carbon tax liability).

Eskom initially set its shadow price at half of the market price of the European Union Allowance (EUA), €26, in the EU ETS at the time. This fifty percent indexed price became €13, as the Eskom shadow price value. However, the subsequent collapse of the carbon price in the EU prompted the company to consider revisiting that benchmark under the new market conditions in 2015. It is currently exploring alternative pricing approaches, looking at the pricing policies in other countries including domestic and foreign carbon tax policy approaches.

Eskom is very active in participation and advocacy in the domestic carbon pricing policies in South Africa. It is working with other public and private sector stakeholders to contribute towards development of a balanced public policy that is sensitive to the unique characteristics of global carbon market, domestic policy, and value chain.

Eskom is actively seeking to collaborate and learn the following from other relevant entities, such as electric utilities:

- How have other companies established "internal carbon price" and measured its implementation success over time?
- How have they have kept up with ever changing carbon market conditions and legislation (e.g., domestic carbon taxes)?
- Have other companies done any costing work on "adaptive measures" required by their businesses? And how can this work can be linked to carbon pricing?

IDEAcarbon and The Carbon Rating Agency

Establishing independent benchmarks for a geo-sector carbon price indices and long term international carbon price driven by its INDC Ratings Methodology

- **Industry:** independent ratings agency

IDEAcarbon and its Carbon Ratings Agency are working with others to apply its rigorous ratings tools to apply consistent methodology for pricing carbon across geographies. The company is benchmarking bottom up carbon pricing initiatives and working with others to build the institutional framework for INDC ratings to deliver an effective long-term carbon price finance ministers and the private sector can use.

In 2015, both organisations established consortium structures to include sovereign wealth funds, corporations (through a strategic alliance with the Global Compact) long-term investors, and foundations. The consortium is active in developing:

1. *Geo Sector carbon price benchmarks and an international carbon currency index*. With a transparent and rigorous methodology, these benchmarks and indices frame each corporate sector and each jurisdiction's intended actions (country, region, state, etc) in a consistent and comparative manner. They are meant to help companies, investors, shareholders and others measure carbon pricing actions against peers in the industry and across global locations with various carbon pricing policies.
2. *International carbon price index*. To meet expected demand for an institutional framework, the consortium is building the necessary structure to pilot its International Carbon Reserve design to measure and set benchmark carbon pricing and market value across different countries.

Microsoft

Pioneering and publicizing a carbon fee approach

- **Carbon Pricing Approach:** internal fee
- **Industry:** technology

Microsoft has created one of the most well-recognized examples of an internal carbon fee. Over the past three years the company has used the fee to help meet its carbon neutrality goal and fund investments that have resulted in more the purchase of more than 10 billion kilowatt hours of green power, reduced emissions by 7.5 million $MTCO_2e$ and impacted more than 6 million people around the world through carbon offset projects. Microsoft has shared its story, both publicly and privately, with companies and governments and has published white papers that include:

- A step-by-step overview of the approach
A review of the impact of the carbon fee program

Novartis

Using a carbon price to achieve sustainability goals

- **Carbon Pricing Approach:** shadow price
- **Industry:** pharmaceuticals

For Novartis, an internal carbon price is serving as a tool for the company to fulfill its newly launched sustainability strategy. Specifically, the company has set a target to reduce GHG emissions 30 percent from a 2010 baseline by 2020—and 50 percent by 2030—through increased energy efficiency, use of renewable energy, and carbon sequestration by its own forestry carbon-sink projects.

To set a carbon price, Novartis looked to see how other companies, NGOs, and government agencies valued carbon emissions. Internal sustainability staff engaged the CEO, CFO, and finance colleagues, explaining the value and approach of shadow pricing. Realizing that too low a price would not have a material effect, the company ultimately settled on US$100 per $MTCO_2e$, based on the estimated cost of climate change to society as indicated by the World Bank. Adopting this carbon price provides clearer financial incentives for reducing energy use and emissions, and also allows for better comparison of project benefits across the company's international operations. The company hopes to build on initial learning to eventually explore applications of a carbon price in its supply chain.

Drawing on its own internal experiences, the company is also finding opportunities to be more involved with public policy dialogues. Novartis plans to engage governments via coalitions like UN Global Compact and World Business Council for Sustainable Development.

Royal DSM

Seeking business growth and global leadership positions with carbon pricing

- **Carbon Pricing Approach:** shadow price
- **Industries:** health, nutrition and materials

DSM is dedicated to reducing GHG emissions across the various value chains in which it is active. The company develops and sells "ECO+" solutions: profitable products and innovations that have a significantly smaller environmental footprint than existing alternatives. In 2014, 95 percent of products in the company's innovation pipeline and about half of the running business were ECO+. Sustainability has been a key business growth driver for the company.

Simultaneously, the company has been driving GHG efficiency in its own operations. Ahead of the New York Climate Week in 2015, DSM committed to source 50 percent of its electricity from renewable sources by 2025 and announced an internal carbon price of €50 per $MTCO_2e$ when reviewing large investment decisions that require significant capital expenditure. The internal carbon price serves as a useful model for redirecting and scaling up investments towards low-carbon technologies, driving operational efficiencies, especially in markets with a carbon price or in regions where a carbon price is expected to emerge. It can help to spot energy and cost saving opportunities at an early stage and better anticipate and understand future implications of the general trend of increased carbon pricing around the world. At the same time this enhances environmental awareness inside DSM.

As part of its broader climate advocacy, DSM is involved in carbon pricing dialogues as well. Together with a handful of peers, DSM's CEO Feike Sijbesma is spearheading private sector support for the high level panel (which includes several Heads of State) of the *Carbon Pricing Leadership Coalition*. DSM also demonstrates leadership by advocating a progressive agenda in discussions about climate and energy in industry associations and other industry initiatives, sharing its views on various related topics, including carbon pricing.

Statoil

Updating an internal approach and advocacy for carbon pricing in multiple markets

- **Carbon Pricing Approach:** shadow price
- **Industry:** energy

Statoil has been operating in a market where an external carbon price has existed since the early 1990s. The company has built considerable internal capacity on carbon pricing, but actively updates its approach based on the emergence of carbon pricing in other markets. The company's aim is to understand the carbon costs it will face in operating and reducing emissions in various markets around the world, as well as which impact these costs would have on stimulating fuel switching from coal to gas and development of low-carbon technologies.

Facing multiple carbon pricing policies, Statoil has recently simplified a previous approach that focused on building scenarios and modelling to anticipate prices. Now, the company applies a shadow price of $50 per MTCO$_2$e in markets where an external carbon price is lower or does not exist. It applies the existing carbon price in markets where the price is greater than $50 per MTCO$_2$e. For example, Statoil assesses potential investments at the Norwegian continental shelf based on an explicit CO$_2$ tax of 420 NOK per MTCO$_2$e (approx. $48 per MTCO$_2$e as of 17.11.2015) and the EU Emissions Trading Scheme market price of approximately €8.5 per MTCO$_2$e (approx. $9 per MTCO$_2$e as of 17.11.2015)

Statoil is actively advocating for carbon pricing as well. It has for many years been calling for an ambitious EU climate target and significant strengthening of the EU ETS. The company is engaging with others, through coalitions such as the *Carbon Pricing Leadership Coalition* and the International Emissions Trading Association. These groups provide a platform for engaging in business-to-business and business-to-government dialogues. Statoil is also one of the six major oil and gas companies that sent a joint letter to the United Nations Framework Convention on Climate Change and French Government to initiate a dialogue on carbon pricing ahead of COP21 in Paris.

SUEZ environnement

Testing multiple approaches and sharing insights with government

- **Carbon Pricing Approach:** shadow price
- **Industries:** water treatment, waste management

Carbon pricing is an issue that is personally important to SUEZ environnement's CEO. It is also of material interest to those among the company's customers that have compliance obligations in the EU Emissions Trading Scheme (EU ETS).

Over the past few years, SUEZ environnement pursued leadership on carbon pricing as a strategy to differentiate itself and create new value by helping customers comply with GHG regulations. It provides an opportunity to support new business models where the price of carbon can be incorporated into the value proposition for products and services the company sells to customers. SUEZ environnement seeks to create and capture value by helping customers reduce compliance costs.

Customers in the company's two distinct business lines each have different needs when it comes to compliance with carbon regulations. One set of customers will need to invest in new technologies that harness cleaner energy sources. The other set of customers have large opportunities to manage and reuse waste streams in a way that will reduce GHG emissions.

To account for these differences, SUEZ environnement created two separate approaches for carbon pricing to test in 2015. Both are methods for shadow pricing, but adapted slightly differently based on the customers' needs and the company's solutions. A team within the company, composed of representatives from all functional units (finance, strategy, mergers and acquisitions, sustainability, etc.), consulted with economists to develop two parallel sets of pilot tests. One set of three pilots for one customer segment and one set of three for the other.

As the pilot tests proceed, SUEZ environnement has also started advocating for public policy action. It does not specify what type of system a government should implement (tax or trading system). Rather the company is sharing its own experiences and learnings, particularly those demonstrating that current external carbon prices are not sufficient to shift its or its customers' long-term investments toward low-carbon technologies.

Tata Cleantech Capital Ltd

Managing carbon prices across multiple markets

- **Carbon Pricing Approach:** policy advocacy
- **Industry:** conglomerate

Tata Cleantech Capital Ltd (TCCL), the joint venture of Tata Capital and International Finance Corporation (IFC), has presented the work on carbon pricing being pursued by IFC to companies in the Tata group. Unlike other large global corporations, Tata companies in different sectors are listed independently in stock exchanges and operate in diverse businesses markets throughout the world. Thus each Tata company has been managing different policy drivers as they emerge in different countries. The common objective across companies is to ensure that they are well-positioned for future carbon pricing regulations across the globe.

The emergence of the EU ETS helped Tata companies build internal awareness on carbon pricing and build additional capacity for GHG reductions. Because of the geographical spread of Tata companies, it was able to complete trades internally whereby emissions reductions generated in India helped meet compliance obligations in the EU.

Tata companies expect that GHG regulations will continue to emerge in markets where they operate over the coming years. Internal teams that are following developments are advising senior leadership with the message "we should be ready" for this. It is challenging to track all developments happening in individual countries, and not all business units support a carbon price, but overall such external market signals might provide essential clarity for strategic planning process.

Appendix A: Key terms and company interests related to carbon pricing

KEY TERMS

Carbon pricing is a mechanism to integrate the social and economic costs of climate change into financial decisions. It attaches a value to investments that reduce such costs. In the context of public policy, many carbon pricing systems are using market drivers to allocate capital to those solutions that reduce GHGs at least cost, making them more efficient than other instruments such as traditional command-and-control regulations. Meanwhile, companies are finding ways to adapt the concept for their own strategic response to climate change risks and opportunities. Carbon pricing will mean different things depending on this context.

GOVERNMENTS ARE PUTTING A PRICE ON CARBON WITH MECHANISMS SUCH AS:

- A **carbon tax** is a per-unit fee typically imposed on fossil fuels, and other products (e.g., refrigerants), based on the amount of greenhouse gases (GHGs) they emit. A carbon tax may be implemented as a fee on coal, for example, based on the amount of carbon dioxide (CO_2) that is released when coal is burned. The tax creates a cost for emitting GHGs into the atmosphere (for example, US$25 per $MTCO_2e$) and in doing so provides a financial incentive for reducing GHG emissions. A carbon tax policy may also include tax credits for activities that remove GHGs from the atmosphere.
- A **cap-and-trade programme or emissions trading system** sets a maximum limit, or a "cap," on GHG emissions from facilities and sectors covered by the regulation. Those covered under the cap must:
  - Measure, monitor, and report emissions.
  - Show enough "allowances" at the end of each compliance period to match reported emissions (allowances give the holder the right to emit a specified amount of GHG emissions).
  - The cap limits the total amount of allowances available below business-as-usual levels. This scarcity creates a market price for the allowances based on supply and demand. "Regulated" emitters—those subject to the cap on emissions—may buy and sell allowances to meet their compliance obligations. Depending on how allowances are allocated (e.g., by auction or based on historic emissions), companies may choose to meet their obligations by reducing their own emissions or buying allowances.

CORPORATE PRACTICES: IN SIMPLE TERMS, THERE ARE THREE APPROACHES COMPANIES ARE USING TO PRICE CARBON.

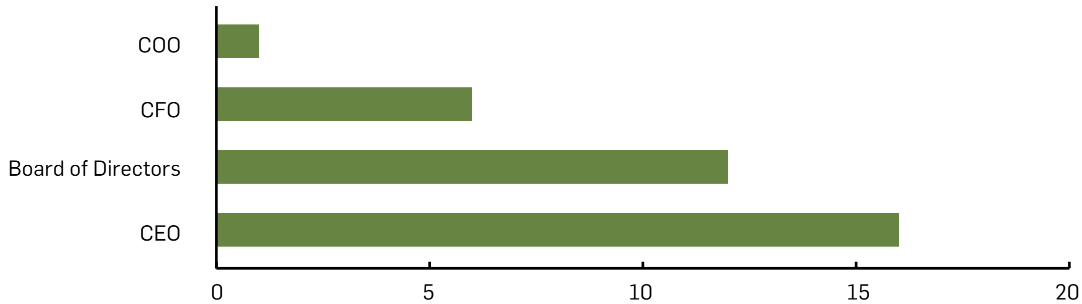
- **Shadow price.** Some companies have created a "shadow price" to evaluate potential investments. This approach attaches an estimated price—for example US$30 per $MTCO_2e$—to better understand the potential impact of external carbon pricing on the profitability of a project.
- **Internal taxes, fees, or trading systems.** Some companies are creating formal internal financial incentives and programmes. Some have created an internal tax or fee—for example, US$10 per $MTCO_2e$—that is assessed on various activities or expenditures. Others have set up internal trading programmes where business units or facilities buy and sell credits to meet GHG targets.
- **Implicit price (corporate policies, practices, or investments that indirectly establish a price carbon)**. Some companies do not establish an explicit carbon price, but can calculate the cost per $MTCO_2e$ based on how much the company spends to reduce GHG emissions. For example, a company may have set an aggressive GHG reduction target and is allocating internal capital to energy efficiency or renewable energy to achieve it.

Carbon pricing is meant to be a tool for achieving GHG reductions, reducing risk, and capturing opportunity. Companies should be looking to create their own path, but can learn from others who are doing the same.

Company Interests

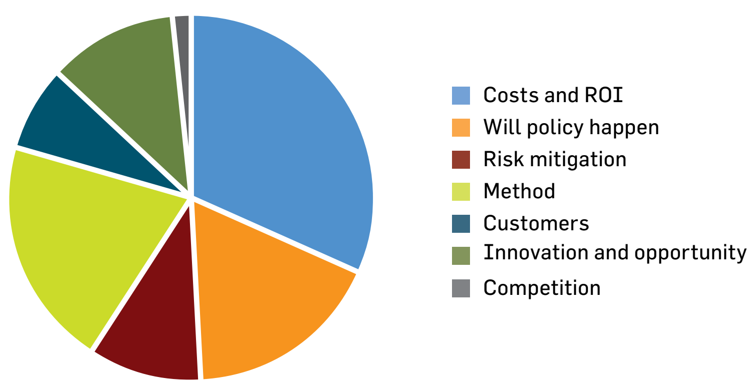
The majority of those surveyed for this guide were exploring carbon pricing with the intention of informing or seeking support from the CEO or Board of Directors (Figure 5).

FIGURE 5 **Who is involved in the final decision on carbon pricing? (drawn from responses to C4C/WRI survey)**



However, there are different topics of interest when it comes to carbon pricing (Figure 6). A few companies suggested taking advantage of a very short window of opportunity (3-5 seconds by one estimate) to capture the CEO's or board's attention. They led with an honest assessment of costs and benefits to the business, leaving the explanations of climate science and greenhouse gas accounting for a follow-up discussion with anyone that may be interested in those details. They explained carbon pricing in the context of the company's growth markets or impending compliance costs.

FIGURE 6 **What is the topic of most interest to your senior leadership (CEO, board)?**



Notably, the information of most interest seems to differ across different types of sectors. There is more of an interest in helping leadership understand the methods for carbon pricing among executives at industrial and energy-intensive companies (Figure 7). Executives at other types of companies, meanwhile, are focused on getting their CEOs and Boards information on the costs and likelihood of policy (Figure 8).

Further investigation would be needed, but this might be an indication that senior leaders at industrial and energy-intensive companies are already convinced that carbon pricing should be part of their strategy or they are already familiar with carbon pricing because they are subject to a price in other geographies. Thus, their focus is on what method is most appropriate and what opportunities exist to drive innovation.

Similarly, these differences might suggest that senior leaders at companies that are not industrial or energy-intensive will be most interested in the business case for carbon pricing. It seems, according to this sample at least, that these types of companies will first want to understand the costs, savings, policies, and risk mitigation opportunities.

FIGURE 7 **Topics of most interest among respondents from industrial and energy-intensive sectors**

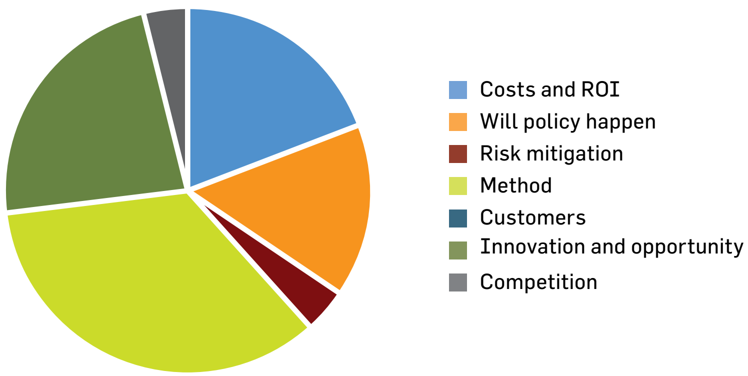
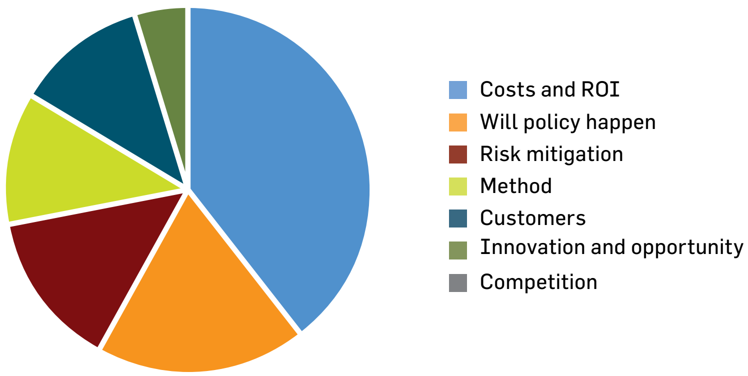


FIGURE 8 **Topics of most interest among respondents from non-industrial, non-energy intensive sectors**



Appendix B: Making Carbon Pricing Fair

Well-designed carbon pricing can provide positive benefits for consumers[i], but policies can potentially create equity challenges when energy prices increase for low-income communities. People with lower incomes typically use less energy, but energy expenditures usually constitute a larger proportion of their budgets.[ii]

Recent research[iii] found that while lower-income and other disadvantaged groups in the UK contribute least to causing change, they are most negatively affected by its impacts, and they pay, as a proportion of income, the most towards implementing certain policy responses and benefit least from those policies. In British Columbia, Canada, income tax reductions were provided to low income residents to avoid the inequitable impacts of the regions carbon tax.

Given this context, integrating climate justice is critical in informing policies that result in better outcomes for both the environment and people by respecting human rights and sharing the burdens of benefits of climate change responses equitably.[iv]

In order to design fair carbon pricing policies, it is important to consider who will be subject to the tax, whether they are represented in the design of the policy and how the revenue generated will be spent. Furthermore, policy makers must consider the direct and indirect costs of the measure and how these costs will be distributed among the population. Finally, factors beyond income level, which may impact on a person's ability to cope with the increased cost, should be considered.

For more information on Principles of Climate Justice, please visit the Mary Robinson Foundation Climate Justice at www.mrfcj.org.

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i. Preston, et al. 2013. "Designing Carbon Taxation to Protect Low-Income Households." Joseph Rowntree Foundation, York, U.K. *http://www.jrf.org.uk/sites/files/jrf/carbon-taxationincome-full.pdf*

ii. Klinksy, et al. 2014. "Building Climate Equity." http://www.wri.org/sites/default/files/building-climate-equity-072014.pdf

iii. Banks, et al. 2014. "Climate change and social justice: an evidence review." *http://www.jrf.org.uk/publications/climate-change-and-social-justice-evidence-review*

iv. MRFCJ. 2015. "Principles of Climate Justice." http://www.mrfcj.org/principles-of-climate-justice/

Appendix C: Business & Investors Working Group on Carbon Pricing

COMPANIES
A.P. Moller — Maersk Group
Abengoa
Acciona
Braskem
Cálidda
EDF — Électricité de France
Engie
Eskom
Fortum
IDEAcarbon
LafargeHolcim
Nestlé
Novozymes
PepsiCo
Royal DSM
Royal Philips
Schnieder Electric
SEKEM
Sindicatum
Sinopec
SkyPower
Statoil
Suez Environnement
Tata
Total
Unilever

INVESTORS
AP4
Hermes EOS
Bâtirente
CalSTRS

PARTNERS
CDP
The Climate Group
Principles for Responsible Investment (PRI)
United Nations Foundation
UNEP Finance Initiative
World Bank Group
World Resources Institute (WRI)
Duke University

GLOBAL COMPACT LOCAL NETWORKS
Brazil
Canada
China
France
South Africa
United Kingdom
United States
Nordic Regional Network

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Endnotes

1 CDP. 2015. *Putting a price on risk: Carbon pricing in the corporate world.* https://www.cdp.net/CDPResults/carbon-pricing-in-the-corporate-world.pdf

2 World Bank. 2014. *Put a Price on Carbon Statement.* http://siteresources.worldbank.org/EXTSDNET/Resources/carbon-pricing-supporters-list-UPDATED-110614.pdf

3 The Lima-Paris Action Agenda brings both state and non-state actors together on the global stage to accelerate cooperative climate action now and into the future in support of the new, universal climate change agreement which governments will reach in Paris. http://newsroom.unfccc.int/lpaa/lpaa/welcome-to-the-lpaa-website-learn-more-about-the-transformational-initiative/

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9 Investor Platform for Climate Actions: investorsonclimatechange.org

10 Rydge, J. 2015. Implementing Effective Carbon Pricing. New Climate Economy Working Paper. http://2015.newclimateeconomy.report/wp-content/uploads/2015/10/Implementing-Effective-Carbon-Pricing.pdf

11 CDP. 2015. Commit to Action. https://www.cdp.net/commit

12 There were not sufficient data to draw any insights or conclusions on implicit pricing approaches.

13 Caring for Climate, et al. 2014. *Where Do Companies Stand on Responsible Corporate Engagement in Climate Policy?* http://www.wri.org/sites/default/files/C4C_policy_engagement_2014_staus_update.pdf

14 CDP. 2015. *Putting a price on risk: Carbon pricing in the corporate world.* https://www.cdp.net/CDPResults/carbon-pricing-in-the-corporate-world.pdf

Caring for Climate wishes to recognize the following Carbon Pricing Champion companies that have committed to align with the Business Leadership Criteria on Carbon Pricing*

Abengoa
Acciona S.A.
AGL Energy
Atmoterra
Atos SE
Bank Australia
Barco NV
BG Group
Braskem
Broad Group
BT Group
Carrefour
Cálidda
Coca-Cola HBC AG
CPFL Energia
Danfoss
Ecotierra
EDF - Électricité de France
EDP - Energias de Portugal
Ekbd Consult
Enagás
Enel
Engie
Eni
Eskom
Fortum
Garanti Bank
Gas Natural Fenosa
Grupo Financiero Banorte SAB de CV
Hindustan Construction Company
IDEAcarbon
Infigen Energy
Keyassociados
LafargeHolcim
LATAM Airlines Group
National Bank Australia
Natura
Nature Bank
NEAS Energy
Nestlé
Nouveau Energy Management
Nordea Bank
Novartis
Novozymes
OHL Group
Origin Energy
Royal DSM
Royal Philips
Saint-Gobain
Schneider Electric
Sekem Group
Sindicatum
SkyPower
Solvay S.A.
SSE
Statkraft
Statoil
Suez Environnement
Total
Unilever plc
Veolia
Visão Sustentável
Zenith Bank

To view the list of Carbon Pricing Champions, please visit www.caringforclimate.org/carbonpricing.

** As of 28 November 2015.*

The Ten Principles of the United Nations Global Compact

HUMAN RIGHTS

Principle 1	Businesses should support and respect the protection of internationally proclaimed human rights; and
Principle 2	make sure that they are not complicit in human rights abuses.

LABOUR

Principle 3	Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining;
Principle 4	the elimination of all forms of forced and compulsory labour;
Principle 5	the effective abolition of child labour; and
Principle 6	the elimination of discrimination in respect of employment and occupation.

ENVIRONMENT

Principle 7	Businesses should support a precautionary approach to environmental challenges;
Principle 8	undertake initiatives to promote greater environmental responsibility; and
Principle 9	encourage the development and diffusion of environmentally friendly technologies.

ANTI-CORRUPTION

Principle 10	Businesses should work against corruption in all its forms, including extortion and bribery.

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