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Internal Carbon Pricing: A Strategic Tool for Organizational Sustainability and Profitability

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Executive Summary

The Internal Carbon Pricing (ICP) project aims to provide the companies with a comprehensive understanding of the benefits, implementation steps, and calculation methodologies associated with integrating carbon pricing into its operations. This initiative is essential for aligning the company's strategies with sustainability goals, regulatory requirements, and international best practices.

In addition to accelerating efforts to reduce greenhouse gas (GHG) emissions and investments in clean energy, the Internal Carbon Pricing (ICP) mechanism provides a voluntary way to value carbon emissions internally and future-proof assets against impending laws. The project lays out the essential processes for putting ICP into practice, starting with estimating GHG emissions and establishing reduction goals. Businesses can determine their carbon pricing using a variety of methods, such as internal investment data or external benchmarks like anticipated legislation or the cost of carbon offsets.

Rough estimations of the ICP are produced for a leading automotive sector company by calculating methods based on external benchmarks and sustainability statistics that are currently accessible. Effective communication tactics, including as training, creating narratives connected to the company's principles, and incorporating ICP talks into yearly reports, are essential for raising staff understanding and buy-in. Participating in programmes such as the Carbon Pricing Leadership Coalition (CPLC) also makes it easier to work together with stakeholders and peers in the business to push sustainability initiatives and carbon pricing regulations.

The organization can exhibit climate leadership, improve operational efficiency, and help India meet its Nationally Determined Contribution (NDC) targets by adopting ICP and utilizing powerful communication techniques. The project offers the organization a road map for smoothly incorporating carbon pricing into its business processes, guaranteeing its long-term viability and competitiveness in the automotive sector.

What is Internal Carbon Pricing (ICP)?

An internal carbon price, or ICP, is a voluntary price that an organization uses to estimate the cost of one unit of CO_2e emissions. The market prices in the areas where the company trades are typically reflected in this price, while other businesses may set their own prices based on various goals.

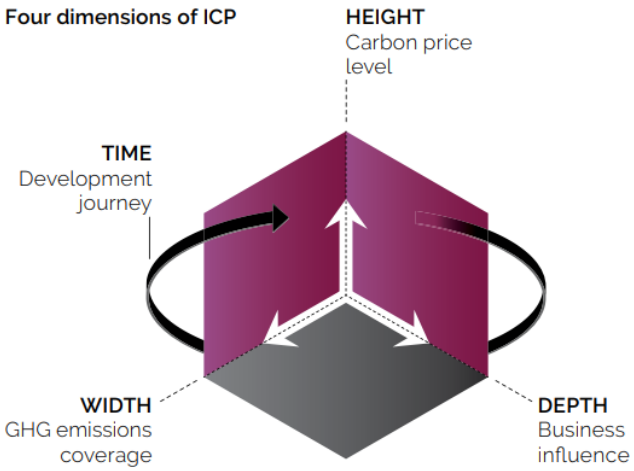

Figure 1: Dimensions of ICP

Four dimensions of an ICP

DIMENSION	ICP PARAMETER	BEST PRACTICE ICP APPROACH
Height	Price level per unit of GHG emitted (e.g. US$/t CO_2) that the company uses in business decisions	Rise to a carbon price capable of changing decision-making in line with the ICP objectives
Width	GHG emissions covered throughout the value chain by the ICP approach	Grow to cover all GHG emissions hotspots in the entire value chain that can be influenced
Depth	Influence the ICP approach has on the business decisions of a company and its value chain partners	Become increasingly influential to have a material impact on business decisions
Time	The development of the first three dimensions over time	Be evaluated regularly to bring the company's business strategy in line with a low-carbon economy

Table 1: Four Dimensions of ICP

Source: CDP Handbook India 2.0

Benefits of ICP

An organization will be able to do the following by implementing an ICP:

1. Demonstrate leadership in the fight against climate change by endeavouring to fulfil both India's Nationally Determined Contribution (NDC) and the Paris Agreement.
2. Future-proof investments and assets against impending legislation pertaining to climate change and carbon pricing.

3. Address concerns about climate change and your readiness for it with different stakeholders.
4. Launch the carbon pricing initiative and use ICP as a management tool to help in decision-making and have an impact on capital investment, risk management, and strategic planning choices.
5. To evaluate the risks of corporate investments under projected government policies that raise emissions-related costs, assign a notional value to carbon emissions.
6. Increase spending on green energy and the mitigation of greenhouse gas emissions.
7. Encourage and boost the adoption of low-carbon products and technologies by encouraging team innovation.
8. Promote a sustainable culture inside the organisation.

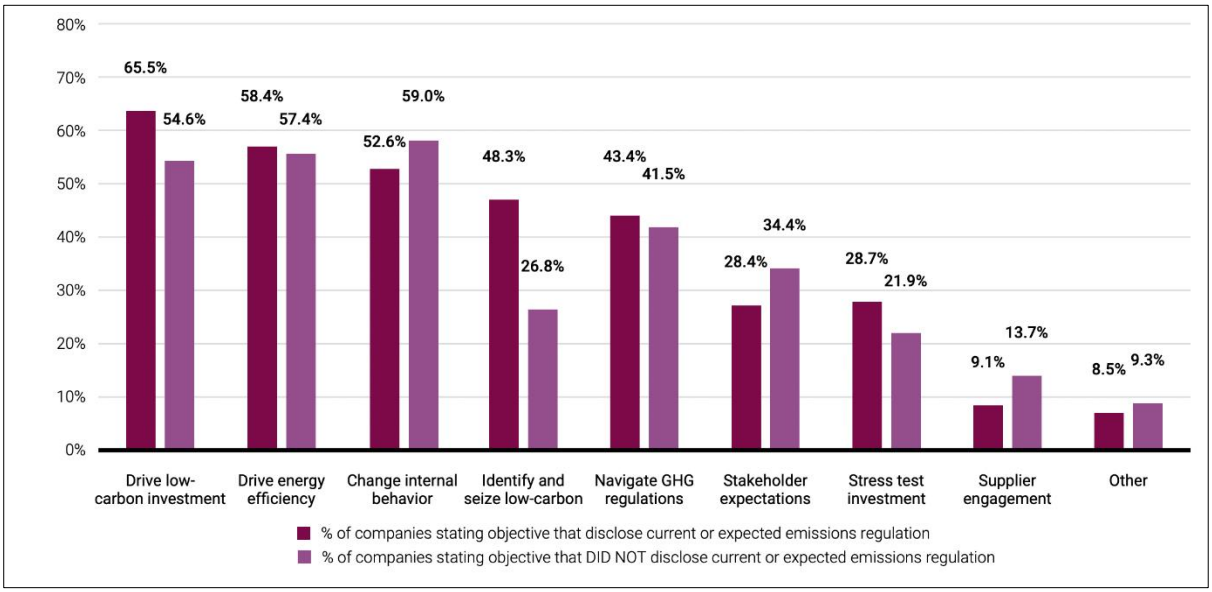

Figure 2: Objectives for Internal Carbon Pricing (Company Survey)

Source: Putting a price on carbon report

ICP as a tool has the potential to influence corporate behaviour and reduce the global GHG emissions. However, It needs to be adopted across the spectrum and it has to have a well-designed pricing structure to be effective. Here is a breakdown of their inherent limitations as well.

1. Limited scope, large potential: As ICP is still voluntary and has not been universally adopted, with a significant number of companies employing it in their decision making, the collective impact could be high.
2. Uncertain effectiveness: Here again, the impact depends on the price effectiveness for carbon within the program. There is a trade-off between setting a high or a low price. While a low carbon price might not bring substantial changes, a high price could inflict financial strain on companies.

Currently, there is lack of publicly available data on the global impact of ICP programs on GHG emissions. Since the ICP programs are new and continuously evolving policy instruments, they are implemented in various measures in companies across the globe. It is also not easy to isolate the impact of ICP programs from other factors which may affect emissions.

The graph below is meant to visually represent the Internal Carbon Pricing (ICP) programs' impact on GHG emissions. This is estimated and not based on actual data.

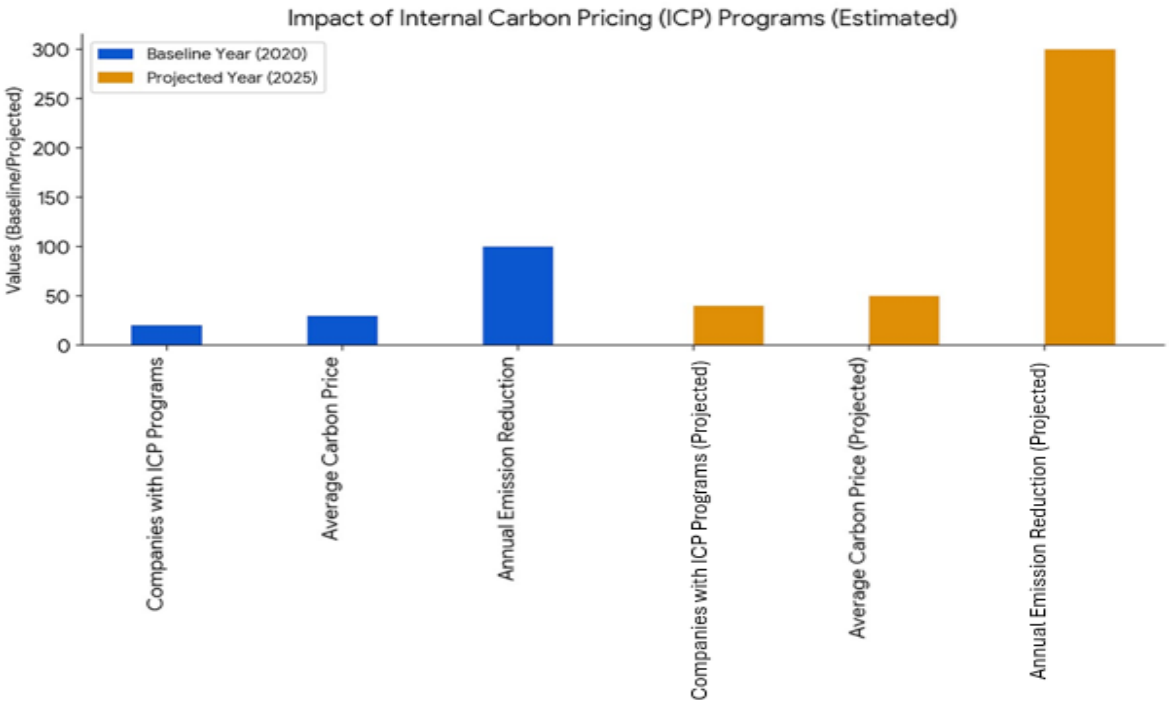

Figure 3: Impact of ICP programs (Estimated)

Source: Authors

Carbon Pricing Benchmarks for the Paris Agreement

The Paris Agreement has come up with a clarion call to limit global warming well below 2°C, preferably to 1.5°C, as compared to pre-industrial levels. Carbon pricing plays a key role in achieving this goal by taking a stringent view on polluting activities and rewarding cleaner alternatives. Below table gives a breakdown of pricing benchmarks (USD per tonne CO_2) by the High-Level Commission on Carbon Prices (HLCCP), International Energy Agency (IEA) and the world bank for the target years 2030 and 2040. This table presents a simplified representation and does not consider any specific regional variations.

Year	HLCCP - 2°C Target Range	HLCCP - 1.5°C Target (Estimated)	IEA (Power Sector)	World Bank Range (2°C Target)
2030	$40-80	>$80	$75	$50-100
2040	$50-100	Higher	Higher	Higher

Table 2: Carbon Price Benchmarks for Paris Agreement Goals (USD per tonne CO_2)

Source: High-Level Commission on Carbon Prices (https://elibrary.worldbank.org/doi/abs/10.1596/32419), International Energy Agency (https://www.iea.org/reports/net-zero-by-2050), World Bank (https://carbonpricingdashboard.worldbank.org/)

ICP Trends – India and Global

The use of ICP is progressively increasing. Globally, the price of carbon has increased by 17% between 2018 and 2019; in India, it has increased by 43%. The Manufacturing sector is setting the global standard for carbon pricing adoption. In India, the manufacturing sector comes in second, after the materials sector. This accurately illustrates the necessity for these high-emitting sectors to significantly reduce their emissions in order to comply with the Paris Agreement.

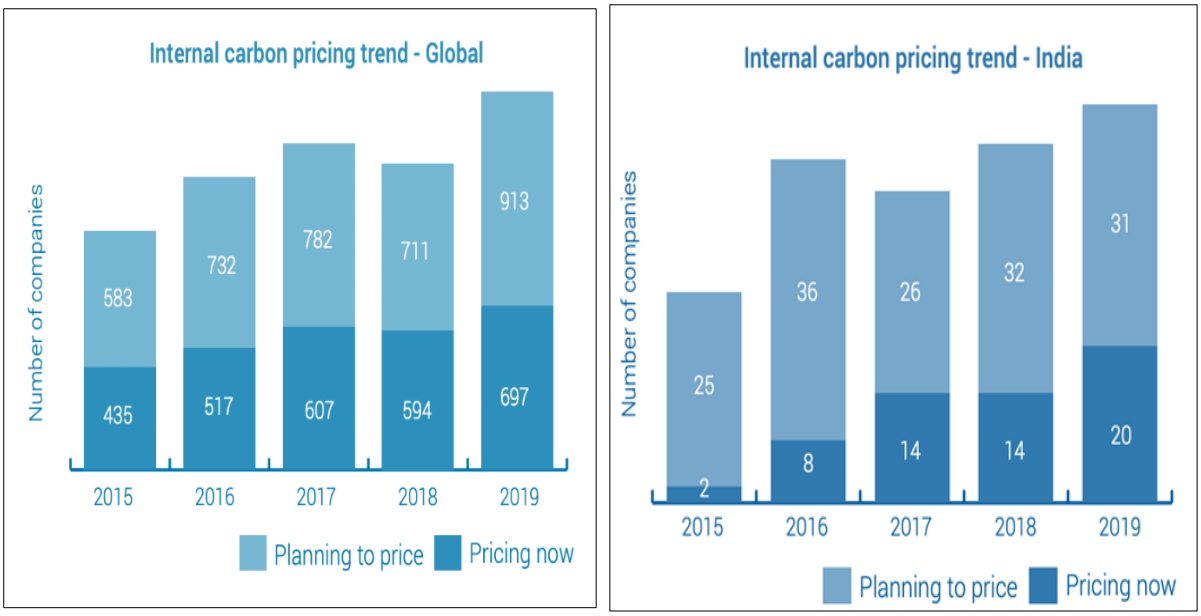

Figure 4: No. of companies using ICP

Source: CDP Handbook India 2.0

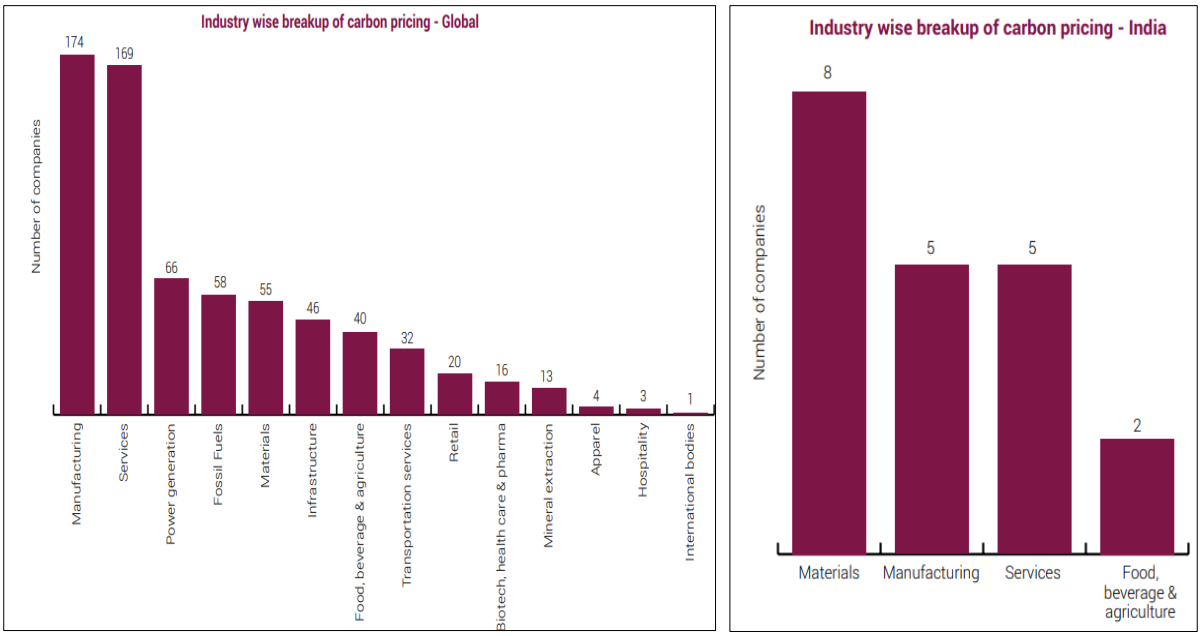

Figure 5: Industry wise breakup of carbon pricing

Source: CDP Handbook India 2.0

Close to 120 Indian companies have voluntarily disclosed GHG emissions and although a definitive list is not available and continuously evolving, as on 2023, around 40 Indian companies have incorporated ICP in their decision making. The table below provides a list of some prominent energy/carbon intensive Indian companies based on news reports and articles.

Company	Sector	Internal Carbon Price (USD/ton)
Mahindra & Mahindra Ltd (M&M)	Manufacturing	10
UltraTech Cement	Cement	10.82
Ambuja Cement	Cement	33.36
Adani Green Energy	Energy	10.82
Adani Ports and SEZ	Shipping	20.51
Dr Reddy's Laboratories	Pharmaceutical	12.67
Godrej Consumer Products	FMCG	10.82
HCL Technologies	IT	3.33
Hindustan Zinc	Mining, milling, and smelting	14.65
Infosys Limited	IT	14.25
JSW Cement limited	Cement	22.16
JSW Energy	Energy	11.56
ACC	Cement	50.76
JSW Steel limited	Iron and Steel	20.29
ReNew Energy Global PLC	Energy	22.22
Sanyo Special Steel Mfg	Steel	10.17
Shree Cement	Cement	20.7
Tata Chemicals	Chemicals	20
Tata Metaliks Limited	Steel – Medium/Small	43.28
TCS	IT	15.3
Tata Power Company	Power	16.92
Tata Steel	Steel	36.79
Tech Mahindra	IT	14
Wipro	IT	50.11
Yes Bank Limited	Banking and financial services	13.12
Hero Motocorp	Automotive	Has introduced ICP but not disclosed the quantum
Indian Oil	Energy	Has introduced ICP but not disclosed the quantum

Table 3: Indian companies incorporating ICP in decision making

Source: https://www.newindianexpress.com/xplore/2023/Sep/23/india-inc-responding-to-decarbonising-call-by-putting-a-price-on-ghg-emissions-2617433.html

However, it is not easy to quantify the exact relationship between ICP and a company's energy/carbon intensity. Since ICP programs have been conceptualised recently, a comprehensive dataset on the implementation and impact is not available. Some companies have different pricing structures and scopes to implement ICP. Therefore, it is not easy to make comparisons. Besides, there are several external factors beyond ICP which can influence a company's energy/carbon intensity, such as, industry type, production processes, and access to clean energy sources. There is however, a corelation between ICP and increased investment in low-carbon technologies and practices, leading to lower energy/carbon intensity.

Current Regulatory Landscape

India **does not currently have an explicit carbon price.** At present, India is considering the creation of a national carbon market to encourage climate mitigation, expedite the nation's progress towards net-zero emissions, and make it carbon neutral by 2070. The following two schemes and taxes that exist are:

- Implicit carbon pricing: **Fuel excise taxes and coal cess**. These taxes and fees add to the cost of fossil fuels, which can incentivize companies to reduce their emissions.
- Perform, Achieve and Trade (PAT) scheme: Under the scheme, energy-intensive industries are given specific **energy efficiency targets**. If a company meets or exceeds its target, it can earn energy efficiency credits (EECs). EECs can then be traded with other companies to help them meet their targets.
- NITI Aayog draft framework for emission trading schemes: This framework could also pave the way for future ICP regulations.

Business Case: Reasons for Implementation

- **Guiding Capital Investment Decisions:** Develop a framework for evaluating the carbon implications of different business decisions, ensuring alignment with sustainability goals.
- **Driving Low-Carbon Investment:** Provide financial incentives to encourage investments in low-carbon technologies, renewable energy, and sustainable practices.
- **Achieving GHG reduction Targets and driving energy efficiency:** Incentivize energy efficiency measures meet their greenhouse gas (GHG) reduction targets.
- **Scenario and Transition Risk Analysis:** Conduct scenario analysis and assess transition risks, helping in adaption to changing market conditions, regulations, and industry trends.
- **Engaging Employees:** Motivate employees to actively participate in sustainability efforts by tying their performance evaluations, compensation, or bonuses to emission reduction targets.
- **Preparing for Regulations:** Prepare for regulations using a framework for compliance with future environmental regulations.
- **Gaining Competitive Advantage:** Demonstrate commitment to sustainability and use it as a unique selling point to attract customers and investors.

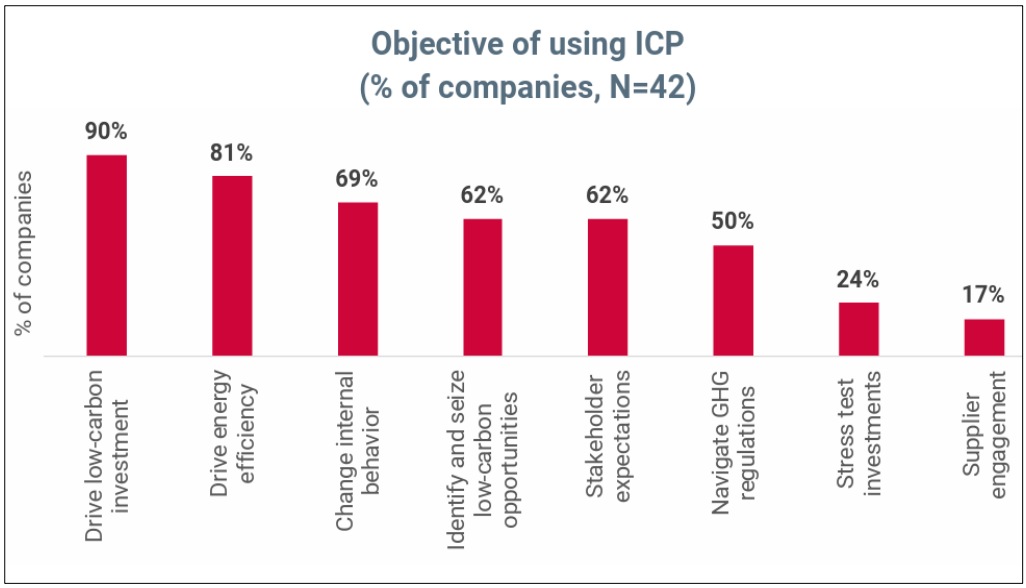

Figure 6: Reasons for ICP implementation specific to India

Source: CDP India Disclosure Report 2022

Examples of how companies are using ICP

1. **E.I. du Pont de Nemours and Company**

   Setting Internal carbon price

   Goal - Guide emissions, capital investments and analyse risks.

   - Incorporate a scenario with varying carbon prices into the procedures for assessing the financial viability of capital expenditures over $7 million (USD) and other ventures that may have noteworthy effects on greenhouse gas emissions.
   - Promote thinking about situations where a price on carbon might apply in the present or the future.

2. **National Grid**

   Integration of Carbon Data into Cost Estimation Tool

   Goal - Align financial decision-making with sustainability objectives.

   - Uses a carbon price along with carbon data integrated into the cost estimation tool used by investment engineers to measure carbon impact for new infra investments.
   - A carbon database aligns data with specific assets, facilitating the monetization of carbon impact to influence investment decisions.

3. **Disney**

   Created ´Climate Solutions Fund´

   Goal - To invest in natural climate solutions and reduce GHG.

   - Places an internal tax on carbon emissions.

- Make investments with the funds raised in ventures that align with company's goals.

4. **Garanti Bank**

   Shadow Price of Carbon

   Goal - Prioritize low-carbon investments.

   - The bank applies a hypothetical price of carbon to the expected emissions of a project, product, or service, and compares it with the baseline scenario.

Types of ICP

1. Shadow Price

It enables businesses to simulate or test the effects of varying carbon prices on their business units, capital projects, and other ongoing initiatives. It's comparable to making predictions using a range of energy costs.

Formula:

$$Cost\ of\ abatement\ /\ annual\ emissions\ tCO_2e$$

Use case:

- It can assist an organisation in internal strategy planning as well as risk management.
- It enables businesses to simulate or test the effects of varying carbon pricing on their capital projects, divisions, and other planned initiatives.

Advantages/Disadvantages:

- Incorporate if comprehending and accounting for the effects of upcoming emissions laws on business operations is the primary objective.
- Easier to implement, does not involve any payments, just encourages better investment decisions.
- However, does not create direct incentives.

Example:

Indorama Ventures Limited, Thailand

At this point, IVL uses an internal shadow cost of carbon mainly for scenario analysis of potential financial risks to the company from the growing number of carbon tax and cap-and-trade systems throughout the world. The shadow cost of carbon used by IVL is now $15 USD per tonne of CO_2 e. For this reason, the company is assessing site-level risks using a global shadow pricing.

2. Carbon Fee

A carbon fee is a charge per unit (e.g., INR 700 per tCO_2 e) linked to the quantity of greenhouse gases the enterprise emits. It makes it possible to establish internal funds for projects involving renewable energy or energy efficiency in an effort to reduce energy expenses.

Formula:

Yearly funding required by Initiatives i.e cost of abatement/Annual GHG emissions

Use case:

- It raises awareness of the significance of emission reductions among various business units.
- It permits the development of internal funds to invest in energy efficiency or renewable energy projects in order to decrease energy expenses.

Advantages/Disadvantages:

- If achieving cost certainty and driving carbon reductions through present operational choices and future investments is the primary objective, then implement.
- Might be tricky for departments to pay this with their current tight budgets.
- Can be varied also, per emission activities but should start from a standard fee.
- Gives immediate signals on price for GHG emissions.

Example:

Microsoft

Microsoft started charging different company groups an additional fee based on their carbon emissions as of July 2012. The money gathered is placed into a central fund, which is then used to finance programmes that increase internal efficiency, purchase green energy, and offset carbon emissions in order to help Microsoft eventually become net carbon neutral.

3. Implicit Pricing

It helps companies in comprehending their original carbon footprint and serves as a standard for implementing an internal price that is more strategically chosen.

Formula:

Cost of abatement / procurement by the tonnes of CO_2e abated

Use case:

- An implicit price estimate helps quantify the capital investments required to accomplish climate-related targets.
- This is utilised to arrive at a shadow price or an internal fee.

Advantages/Disadvantages:

- Execute if the primary objective is to assess the viability and efficacy of continuing mitigating efforts.
- Easier to implement but does not create direct incentives to shift operations or investments.

Example:

DGB Financial Group, Republic of Korea

It serves as a tool for risk assessment in the development of corporate strategies and the appraisal of investments. The company can give GHG emissions an economic value by utilising the internal carbon price, and it is useful to assess the potential and risk associated with climate change issues in terms of money.

4. Internal Trading

Permits corporate business units to exchange the carbon credits they have been assigned based on their own emissions.

Formula:

Price set as per Shadow Price

Use case:

- An internal trading system with internal allowances and a cap on the overall GHG emissions can be established.
- Business units with higher emissions than allowed may purchase credits from those with lower emissions. The price of the allowance can be determined by its supply and demand.
- The trading component may also serve as a financial incentive to reduce emissions in the most economical manner.

Advantages/Disadvantages:

- Execute if the primary goal is to guarantee the amount of emissions reduction that the plan will accomplish.
- Difficult to implement the system right from the start, price can be similar to Shadow Price/Carbon Fee
- Can come eventually after some other method.

Example:

BP, England

The task group for central emissions trading was formed with the primary responsibility of formulating the grand strategy, which included granting permits, monitoring compliance, and establishing scheme rules. Each of BP's four business segments produced a member for the task force. Additionally, a trading platform was created, which served as a conduit for bids and market clearing between buyers and sellers.

Steps to implement ICP

A corporation must follow several procedures when implementing internal carbon pricing (ICP) to guarantee its efficacy and integration with other organisational functions. This is a thorough methodology:

1. **Evaluating current emissions and Establishing Objectives:**

- Evaluate the company's present carbon footprint from all of its operations, including the direct emissions from its buildings and the indirect emissions from things like transportation and electricity purchases.
- Establish precise targets for cutting carbon emissions. These aims ought to be in line with more general sustainability goals and be both challenging and attainable.

2. **Engaging Stakeholders:**
    - Involve important organisation stakeholders, such as CEOs, heads of departments, and sustainability teams, to secure support and buy-in for the implementation of ICP.
    - Inform staff members of the value of carbon pricing and how it helps to achieve environmental objectives.
3. **Select a Mechanism for Carbon Pricing:**
    - Examine several approaches to carbon pricing, including internal carbon fees, cap-and-trade schemes, and carbon taxes.
    - Considering the company's size, industry, and sustainability goals, choose the best mechanism.
4. **Determine the Price Structure and Carbon Baseline:**
    - Establish a carbon emission baseline that will be used to gauge future reductions.
    - Create a pricing mechanism for carbon emissions taking into account elements like the price of carbon, the intensity of emissions from various activities, and the possible influence on business operations.
5. **Combining Financial Systems with Integration:**
    - To guarantee reliable tracking and reporting of carbon expenses, incorporate the carbon pricing mechanism into the business's financial processes.
    - Create procedures for distributing carbon expenses among several divisions or company units.
6. **Interaction and Instruction:**
    - Employees at all organisational levels should be informed on the ICP's implementation strategy and justification.
    - Employees should receive training on how the price of carbon will affect their daily tasks and decision-making.
7. **Observation and Documentation:**
    - Put in place reliable monitoring mechanisms to keep tabs on carbon emissions and related expenses over time.
    - Provide updates on a regular basis regarding carbon emissions, expenses, and the advancement of reduction goals.
    - Make educated judgements regarding the distribution of resources and investments in carbon reduction initiatives by using this data to pinpoint areas that require improvement.
8. **Rewards and Incentive Systems**:
    - Provide departments or individuals who successfully lower carbon emissions or develop sustainable practices with incentives and awards.
    - Acknowledge and celebrate successes in lowering carbon emissions to keep the organisation moving forward and inspire everyone.
9. **Constant Enhancement:**

- Review and improve the ICP framework on an ongoing basis in response to stakeholder input, modifications to business processes, and outside influences.
- To ensure compliance and adaptation, keep up with changes to rules and policies pertaining to carbon pricing.

10. **Outside Participation:**
    - Interact with external parties to encourage cooperation and transparency in cutting carbon emissions all the way through the supply chain, including partners in the industry, suppliers, and consumers.

Calculating the price of carbon

The carbon price is calculated using below formula:

$$\text{price on carbon } (\$/tCO_2e) = \frac{\text{yearly funding required for initiatives } (\$)}{\text{annual GHG emissions in boundary } (tCO_2e)}$$

Source: Carbon pricing: Seven things to consider when establishing a carbon pricing program

Before translating to an automotive sector company's context, we also check few examples of how exactly companies have calculated their carbon price. Here are a few of them:

1. **Microsoft** (Carbon Fee)
   Price of carbon is = (Investment pool required/GHG ($mtCO_2e$))
2. **Mahindra and Mahindra** (Hybrid: Shadow Pricing, Implicit) – covers only Scope 1 & 2
   - Implicit Price: Investments that were made at that point of time that can be attributed to reducing carbon footprint for per ton of carbon emitted came around **$6 - $7 per ton.**
   - Shadow Price: The ambition is to reduce carbon footprint by 25% over next 3 years, analyzed investments required for this. Overall, this led to a number close to **$10 per ton of carbon emitted**.

   Worked with WRI India to structure its entire scheme.
3. **Tech Mahindra**
   This is calculated by dividing the overall capital investment in green initiatives by the total amount of emissions.
   US $9 per ton of CO_2e, plus business unit taxes proportional to the project resource allocations.(*Sources: Mahindra & Mahindra – Yale Article*)

ICP calculations for an organization

Consider the company has made the following key Investments into green projects:

1. **Rs. 3.65 Cr.** Investment into Energy Savings Project, 45,360 GJ (2.8%) saved.
2. **Rs. 5.8 Cr.** R&D into environment & social impact projects (1.11% of total R&D)
3. **Rs. 8 Cr.** Budgeted CapEx into water withdrawal reduction initiatives
4. **Rs. 0.5 Cr**. CapEx into environment & social impact projects (0.08% of total)

With the following total emissions profile:

1. **20k** Scope 1 emissions (tCO_2e)

2. **105.8k** Scope 2 emissions (tCO_2e)
3. **125.8k** Scope 1 + 2 emissions (tCO_2e)
4. **192.6k** Scope 3 emissions (tCO_2e)

Implicit Price Calculation (Using Internal Investments)

To calculate the Implicit Price, we need information on **Investment into Renewable Energy & Afforestation** undertaken in FY22-23. We have the total GHG emissions already.[1] *

Assuming investment as **₹17.95 Crores** (sum of all investments in Green Projects, as shown on slide 24). Total Scope 1+2 Emissions for the year is **~**125,800 **tCO_2e**. *ICP:* ***~₹1427***

Since the available investments only corresponds to Scope 1 & 2, we are using only these emissions for correct mapping of investments and emissions abated.

Shadow Price Calculation (Using External Benchmarks)

The Shadow Price depends on the future investment planned to reduce emissions. For this, we will need estimates of budgeted investment in abatement & sequestration measures along with R&D and CapEx to reach goals.

We can also use external benchmarks to take a shadow price and get started. Benchmarks can look as follows:

- Cost of buying a carbon offset for sequestration/abatement – can be Renewable Energy Credits or Carbon Credits (At which it is currently bought)
- Pricing based on expected regulations.
- Average ICP in India as per CDP Report, 2019: $25/$tCO_2e$ which translates to ~₹1712/tCO_2e (2019 exchange rate)
- Average ICP of companies in similar space:
    - Mahindra & Mahindra: ₹800
    - Average of Materials Companies: ₹1693
    - Average of Utilities Companies: ₹910

Carbon Fee

Carbon Fee is calculated with a similar formula. When you start imposing an actual financial fee (could be at the Shadow Price) to create a green fund, it becomes a carbon fee.

Communication: Aligning Stakeholder Expectations

It is necessary to openly communicate the company's internal carbon pricing strategy and actions in order to establish itself as a leader in the sector. The organization's commitment to combating climate change, advancing sustainability, and spurring innovation is highlighted in this communication. Through proficiently communicating the significance of ICP to all relevant parties, such as staff members, financiers, clients, and the general public, businesses may cultivate confidence, bolster their standing, and encourage others to emulate their sustainable practices. In its industry and beyond, ICP is a leader in promoting positive environmental change, which is reinforced by its clear and consistent messaging.

[1] * *Assuming that we are considering all scopes of emissions*

To secure buy-in from all stakeholders, and ensure effective implementation, following steps should be taken:

Internal Stakeholders: Training & Awareness

1. **Workshops** for all levels of management covering:
    - Benefits of ICP & how it will help reach Net Zero
    - Implementation Steps, impact on every department & unit, responsibilities & expectations
    - Why is it being implemented? Regulations, Industry trends etc.
2. Prepare an **employee handbook** with all the details to be circulated to all. Customized interpretation and implementation steps for each business unit added by the Business Heads.

External Stakeholders: Disclosures

Annual Reports & Presentations: Reporting progress on implementing ICP, and business benefits arising out of the same will be required.

Showing Commitment by joining Leadership Coalitions:

Carbon Pricing Leadership Coalition: Leaders from the public and commercial sectors, academia, and civil society are brought together by CPLC, which is **led by the World Bank**, to increase the application of carbon pricing systems. Indian companies including Tata Group, Mahindra, Dalmia Cement etc. are members.

UNGC Business Leadership Criteria for Carbon Pricing: Aimed at pushing businesses to the edge of climate performance and establishing a high standard for corporate commitment. Companies that join up promise to base their actions on the three pillars of Set, Advocate, and Communicate.

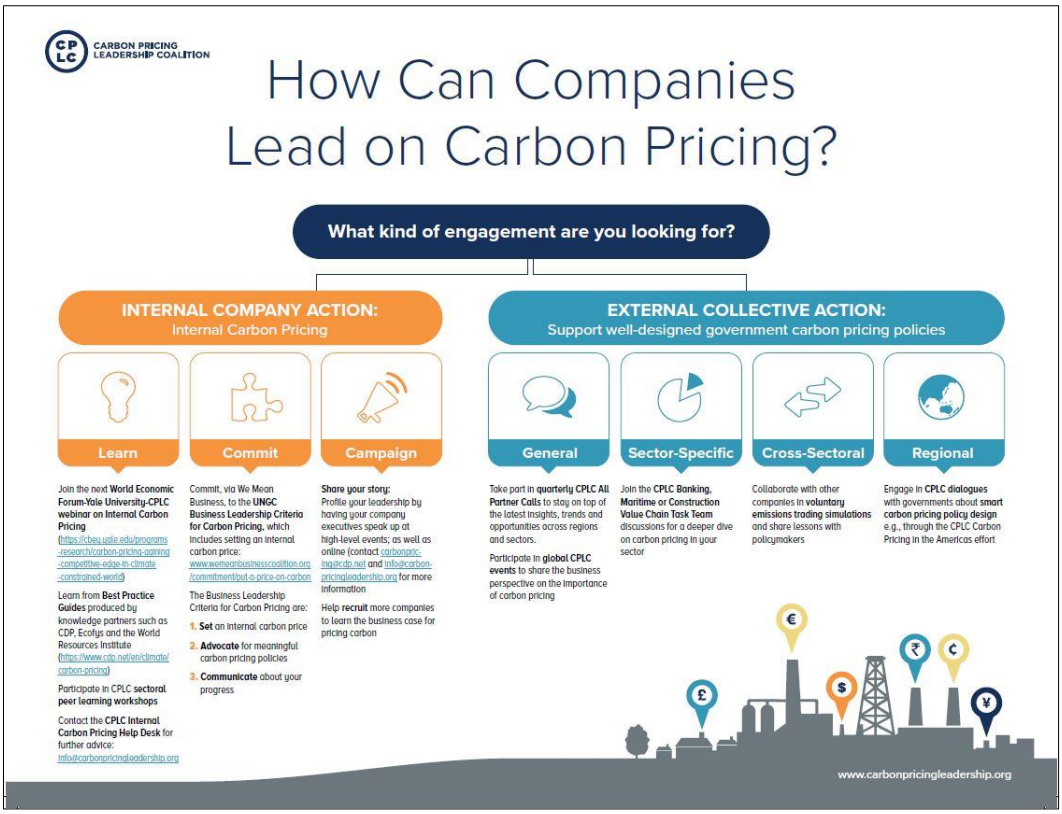

Figure 8: Internal & External actions to demonstrate climate leadership

***Source**: CPLC Website; Business Leadership Criteria on Carbon Planning*

Criteria for becoming a part of the CPLC: Carbon Pricing Leadership Coalition

To become a CPLC Partner, an organization needs to:

1. Support CPLC's vision and agree to advance the carbon pricing agenda by collaboratively working to advance carbon pricing as a tool towards achieving net-zero emissions by mid-century.
2. Submit a blog post to be published on the CPLC website outlining your organization's current or planned leadership actions on carbon pricing with one month of becoming a Partner.
3. Have one-to-one meetings between organization's decision-makers and CPLC Secretariat before or immediately after registration.
4. Assign a CPLC focal point in the organization.
5. Communicate on progress on carbon pricing actions through corporate reports or other periodic updates.
6. Participate in CPLC Partner calls and working groups.

Prospective partners are required to send a **Statement of Interest** letter detailing:

1. Interest in joining the CPLC, and what the organization's plans are for demonstrating leadership and actions within CPLC.

2. Current and future activities related to carbon pricing, including the level of carbon price if you apply one in your operations (this information will be kept confidential)
3. Do you have a net-zero target? If so, what net-zero targets have you set and what is the transition pathway to get to zero?
4. Nomination of an organizational focal point to receive CPLC communications.

Change Management: Varying incentives to get everyone involved

You can consider varying the price for different departments if they are well on the way to achieving their specific goals. This comes later on the in the journey, when ICP is well implemented.

Goals should be broken down in yearly achievements of CO_2 reduction or abatement and then if they are within a range of 10% of their targets, they are incentivized with lower fee while other departments are penalized with higher.

For Carbon Fee, this is helpful because the departments are incentivized to pay less then. But this could add complexity in deciding price and then monitoring. Varying this for Shadow Price or Implicit Fee will be of limited help.

To avoid creation of silos, we can get the departments who are incentivized to work with the other department and create innovative products to lower emissions together.

Manufacturing Sector with Production-Based Adjustments	
Region	Policy of the European Union which is industry specific.
Industry	Steel (Hard to abate)
Initial fee	€ 40 per tonne of CO_2
Data source	1. Production data reported electronically by the individual steel mills. 2. Industry benchmarks for CO_2 emissions per tonne of steel.
Dynamic fee adjustment	1. The base fee is € 40 per tonne. 2. When the steel mills exceed the industry benchmark for CO_2 emissions, ICP automatically increases (e.g., +€5 per tonne for every tonne above the benchmark). This would incentivize cleaner production process. 3. When the steel mills perform consistently below the benchmark, ICP could be slightly decreased (e.g., -€2 per tonne) to reward efficient process.

Table 4: Example of dynamic carbon fee

Implementation Challenges and Risks

- **Setting a carbon price:** One of the biggest challenges is setting an appropriate carbon price considering their current emissions levels, their industry peers, and their long-term climate goals.
- **Allocating the carbon price:** Once a carbon price has been set, companies need to decide how to allocate it to their different business units and products.
- **Tracking and reporting emissions:** Companies need to be able to track and report their emissions accurately in order to implement ICP effectively for large supply chains.
- **Changing internal culture:** ICP requires a change in internal culture, as it forces companies to think about the cost of carbon emissions in all of their business decisions.

In addition to these general challenges, **companies in India also face some specific challenges** when implementing ICP, such as:

- **Lack of guidance:** There is a lack of clear guidance from the Indian government on how to implement ICP. This can make it difficult for companies to know where to start and how to design an effective ICP system.
- **Limited data availability:** Many Indian companies do not have the data they need to track and report their emissions accurately. This can make it difficult to implement ICP effectively.
- **High cost of compliance:** The cost of implementing ICP can be high, especially for small and medium-sized enterprises (SMEs). This can be a barrier for SMEs that are considering implementing ICP.

References

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- CDP India Second Handbook on ICP
- CDP Technical note on carbon pricing