



CLIMATE  
POLICY  
INITIATIVE

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## **Enabling Mitigation in Iron and Steel**

### **Regional Experiences**

**Saarthak Khurana**

# Inadequate flow of climate finance to industries

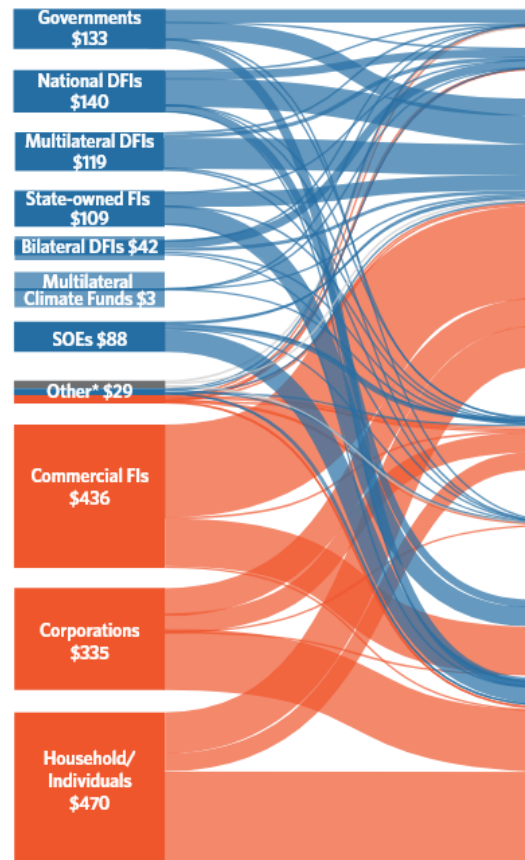
## LANDSCAPE OF CLIMATE FINANCE IN 2023

Values are in USD billion



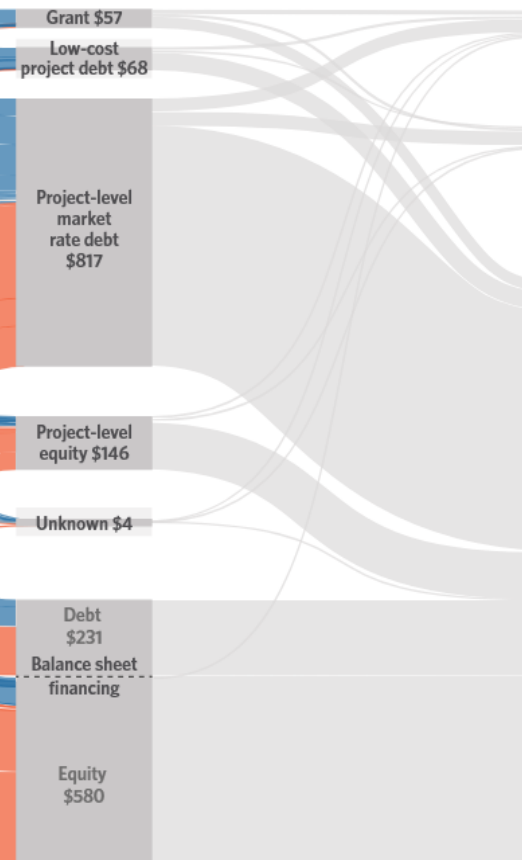
### SOURCES AND INTERMEDIARIES

Which types of organizations are sources or intermediaries of capital for climate finance?



### INSTRUMENTS

What mix of financial instruments is used?



### USES

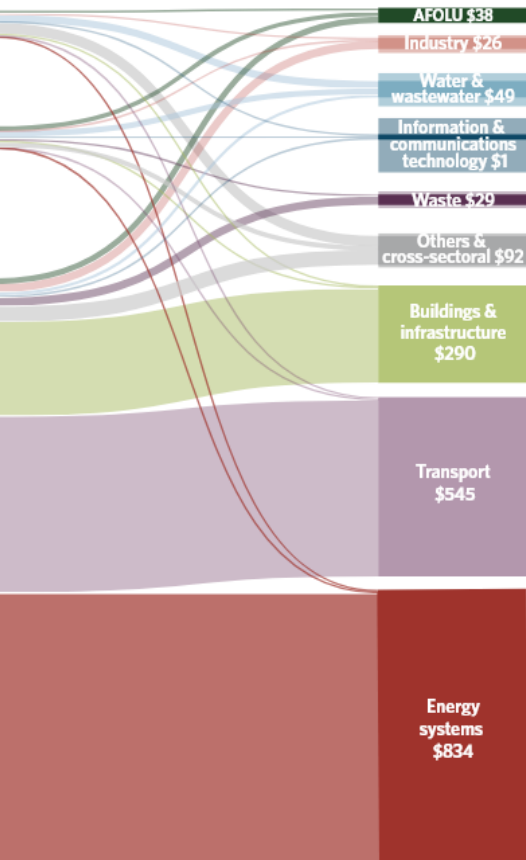
What types of activities are financed?



1.9 TRILLION USD IN 2023

### SECTORS

What is the finance used for?



**PUBLIC** **PRIVATE** "Other" public sources include export credit agencies and unknown public funds  
 "Other" private sources include institutional investors, funds, philanthropies, and unknown

"AFOLU" stands for agriculture, forestry, other land use, and fisheries.

- Industries are major emitters, yet decarbonization funding lags at USD26 billion.
- The steel industry alone needs an estimated USD290 billion in additional global investment by 2050 to develop and implement clean technologies. (Source: *Mission Possible Partnership*)

## What is TF and why do we need it?

The steel sector does not have commercially viable net-zero technologies which locks it out of the green finance market.

	Green Finance	Transition Finance
<b>Definition</b>	Financing technologies that are zero/near-zero emissions and are aligned with the Paris Agreement	Reducing emissions for hard-to-abate sectors or sectors that are important for emissions reductions in other sectors (as enablers). In most cases, these activities are not Paris Aligned but are important due to lack of suitable 'green' alternatives.
<b>Sector</b>	Power, Passenger Mobility, etc.	Steel, Cement, Shipping, Aviation, etc.

### Core Transition Finance Enablers



# Leveraging Novel Instruments in HTA Sectors

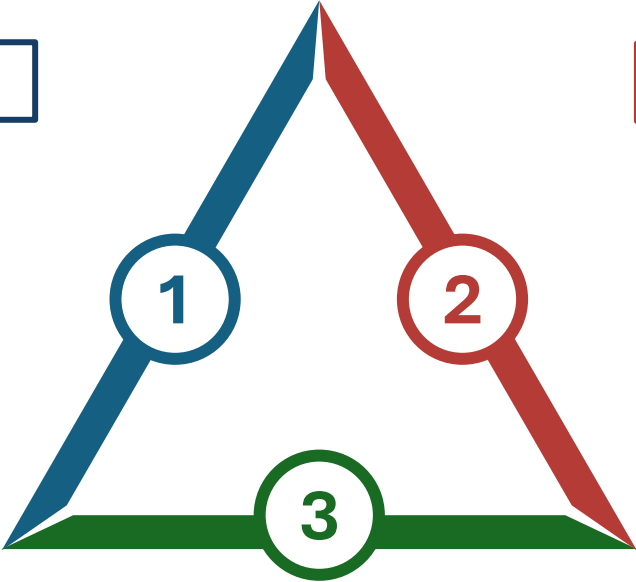
Conventional financial instruments often do not factor in specific requirements of the hard-to-abate sectors such as steel and cement – specially regarding their decarbonization needs.

## Long Term Capital

Transition projects need long-term capital investment, yet their benefits materialize progressively over time. Conventional financial instruments are not ideally suited to this dynamic.

## Risk Perception

Transitional activities, especially those with low TRLs, carry higher technical and financial risks – and require innovative risk-sharing mechanisms.

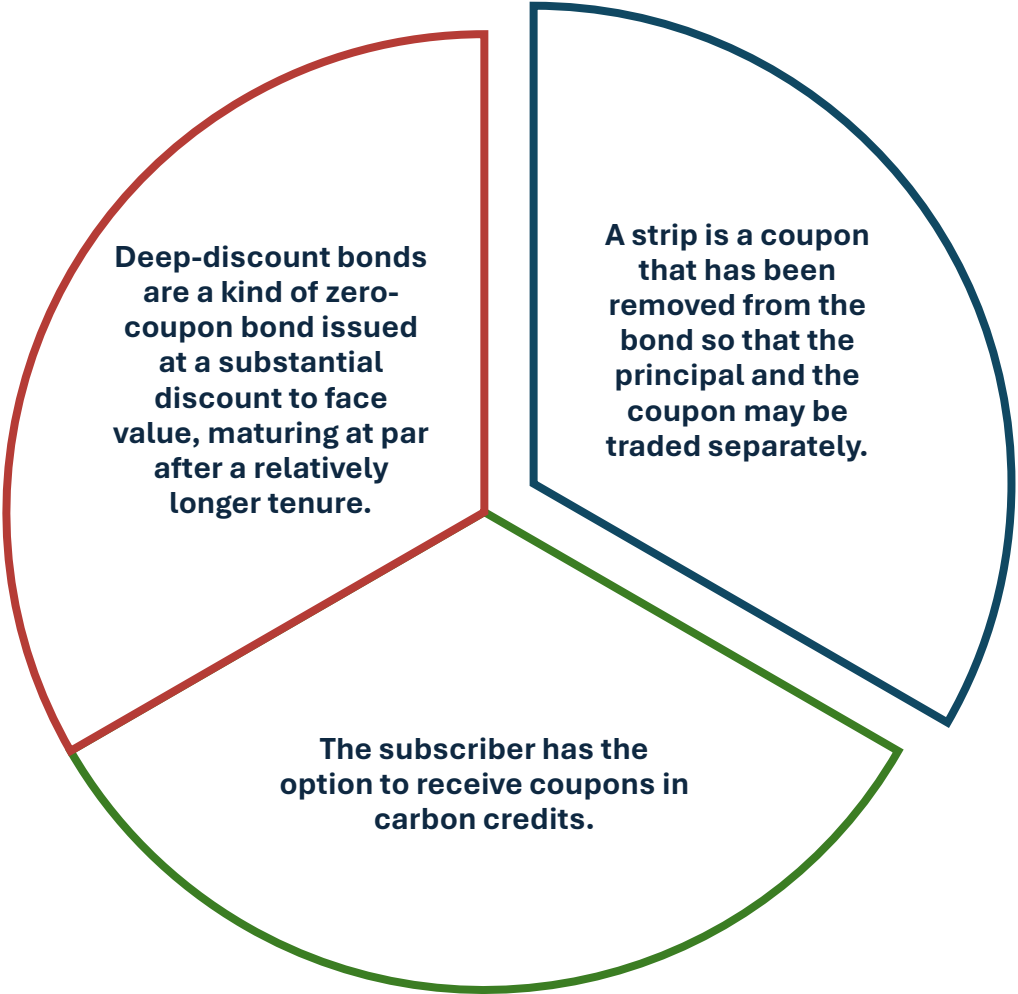


## Evolving Climate Landscape

The evolving policy landscape around climate mitigation gives rise to new opportunities to innovate in financing mechanisms – such instruments which unlock upfront capital for transition projects – backed by future carbon credit revenue.

# Novel Instrument - Research

- Partial deep-discount
  - Long-term time horizon
  - Exit option
- Deep-discount bonds**

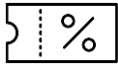


**STRIPS Framework**

**Stripping the coupon from the principal**

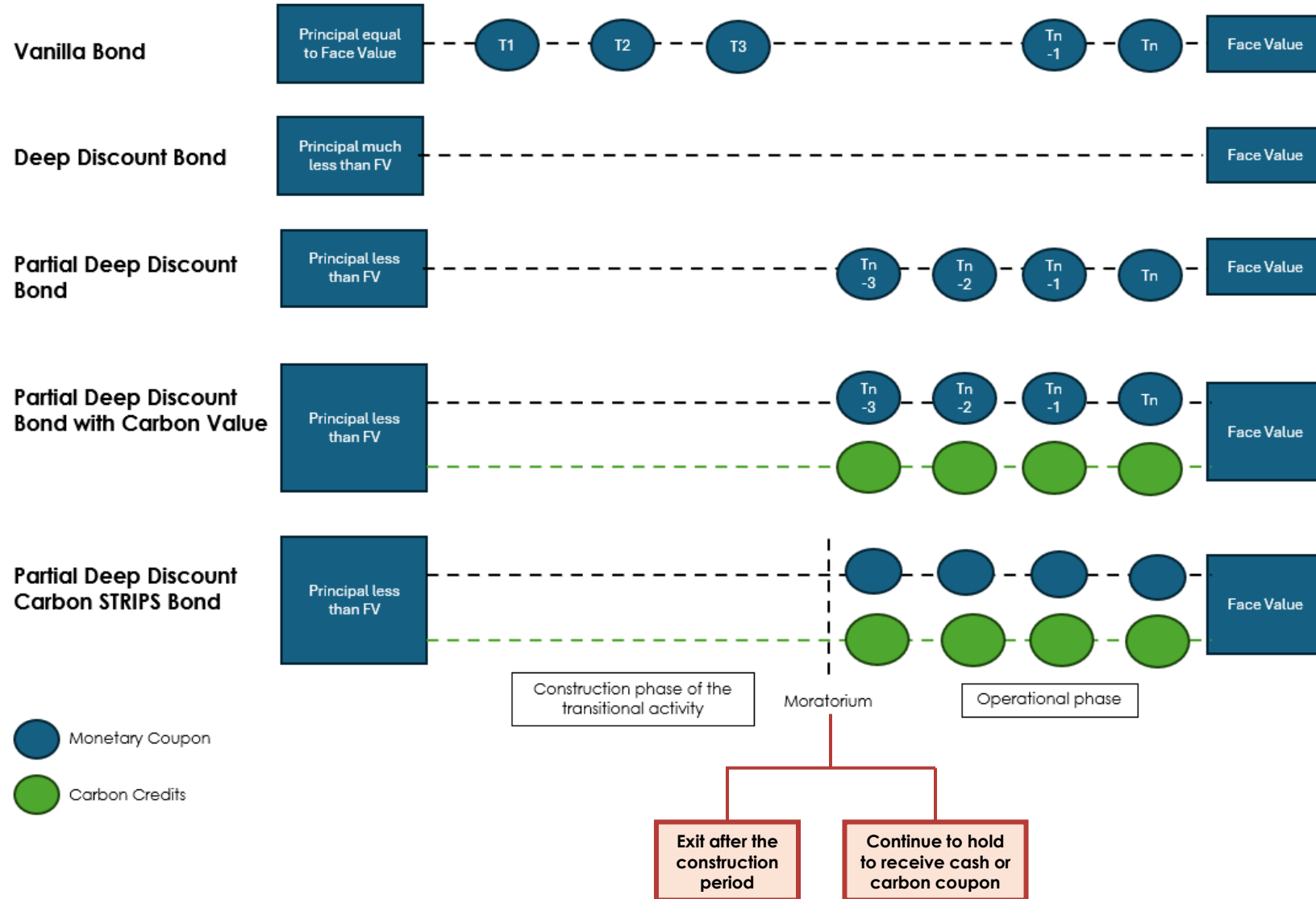


← **IFC Forest Bond** →



Jena, L. P., Khurana, S., & Puri, P. (2025). **Financing Climate Action.**

# Ideating Partial Deep-discount Carbon STRIPS Bond (PDDCS)



The PDDCS are long-term partial deep discount bonds that could provide debt capital for 25-30 years to account for the longer life cycles of steel plants, specifically targeting transitional activities.

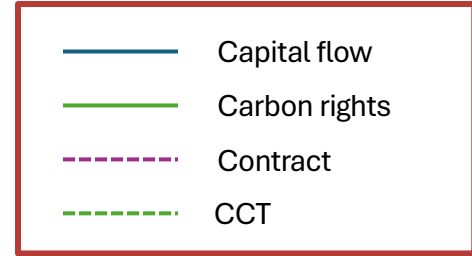
These bonds will integrate the partial deep discount feature with assured coupon payments after x years in cash or carbon rights

The coupon holder will have the option to be paid either in the form of carbon credit or cash, and the choice of payment will be driven by the prevailing carbon credit price in the market.

For year C+n, where C is the construction period and  $n \leq T$

# PDDCS

**Potential Investors:**  
Impact Investors  
Climate-focused investors  
DFIs



**Bond Subscriber**

**Carbon Market**

**Emission offset buyer**

**Scenario A** – Would prefer coupon in carbon credits.

**Scenario B** – Would prefer coupon in cash (0 credits).

Capital flow (PDDCS)  
Coupon and principal repayment

**Iron and Steel Company**

**Scenario A** – The entity would exercise its right to the minimum promised quantum as per the contract to capitalise on the higher carbon price.

**Scenario B** – Would provide the price floor for the credits as a hedge. Can use these credits for its own obligation.

Contract

Capex

Carbon rights

**Scenario A:**  
Carbon price > coupon in year n.  
  
**Scenario B:**  
Carbon price < coupon in year n.

**Scenario A** – Generated carbon credits would help in coupon repayment obligation.

**Scenario B** – The floor price would hedge against price shocks and guarantee a minimum cash inflow.

Generates revenue and carbon credits.

**Transition Project**

**Iron and Steel Company**

**Transition Project**

CC Trade

CC Trade

CC Trade

Capex

Carbon rights

Contract

CC Trade

CC Trade

Capex

Carbon rights

Contract

CC Trade

CC Trade

CC Trade

CC Trade

Capex

Carbon rights



# Consultations

## Dialogues

Stakeholders



Discussion Points

Intricacies of such a bond under the CCTS – current and future readiness.

Historical issuance of bonds which deal with carbon value.

Perspective on credit ratings, potential investors, current regulatory constraints.

## Contact –

**CPI:** [www.climatepolicyinitiative.org](http://www.climatepolicyinitiative.org)

**The Lab:** [www.climatefinancelab.org](http://www.climatefinancelab.org)

**USICEF:** [www.usicef.org](http://www.usicef.org)

**Global Landscape of Climate Finance:**  
[www.climatefinancelandscape.org](http://www.climatefinancelandscape.org)

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# Thank You