

Green Steel Pricing Engine: Presenter Cheat Sheet

Narrative Flow, Live Demo & Technical Defense

1. Narrative & Demo Flow

0:00 - 0:15 The Hook (Problem/Solution)

Start: The hurdle isn't making green steel—it is **pricing** it.

Goal: Move from **arbitrary markups** to a **transparent, market-linked engine**.

0:15 - 0:45 The Methodology (Two Pillars)

1. **Lifecycle-Based:** No upfront shock. Costs are amortized over project life.

2. **Segment-Smart:** We distinguish Automotive (High WTP) from Construction.

0:45 - 1:15 The Live Demo (Web App)

1. **Setup** Select HRC + Automotive. Note Baseline Emission (2.36).

2. **Inputs** Enter Green Emission (**1.50**) → Savings = 0.86. Add Abatement (**₹5,000**).

3. **Logic** We don't charge 5000 upfront. We amortize it over 15 years. Verify cost (₹200/ton) added.
Apply multipliers (WTP: 1.3, Segment: 1.2, Allocation: 1.15 = 1.794).

4. **Export** Select EU (CBAM). Carbon Price loads (₹6,500).

5. **Result** Domestic: ₹873 | Export Component: ₹5,590 | Export Premium: ₹6,463/ton

2. The Math (Technical Notes)

1. CO2 Savings

$$\Delta E = E_{\text{baseline}} - E_{\text{green}} \text{ Ex: } 2.36 - 1.50 = 0.86 \text{ tCO2 saved.}$$

2. Amortized Abatement (The Floor)

$$C_{\text{abate}} = \frac{P_{\text{cost}} \times \Delta E}{L_{\text{years}}} \text{ Ex: } (\text{₹}5,000 \times 0.86) / 15 = \text{₹}287/\text{ton.}$$

3. Verification Cost

$$C_{\text{ver}} = \frac{C_{\text{fixed}}}{V_{\text{annual}}} \text{ Ex: } \text{₹}20M / 100k \text{ tons} = \text{₹}200/\text{ton. Base} = \text{₹}287 + \text{₹}200 \\ = \text{₹}487.$$

4. The Multiplier (Compound)

$$M_{\text{total}} = M_{\text{wtp}} \times M_{\text{seg}} \times M_{\text{alloc}} \text{ Ex: } 1.3 \times 1.2 \times 1.15 = 1.794. \\ \text{Domestic} = \text{₹}487 \times 1.794 = \text{₹}873.$$

5. Export Component (CBAM)

$$P_{\text{exp}} = \Delta E \times P_{\text{carbon}} \times (1 - f_{\text{free}}) \text{ Ex: } 0.86 \times \text{₹}6,500 = \text{₹}5,590. \\ \text{Export Premium} = \text{₹}873 + \text{₹}5,590 = \text{₹}6,463.$$

3. Anticipated Q&A

Q: Why is the premium for HRC different than TMT?

A: It is based on 'Baseline Emissions' and 'Willingness to Pay'. HRC has a higher baseline (more savings potential) and goes into Automotive (higher margin).

Q: Why are you compounding the multipliers? Isn't that inflating the price?

A: Multiplicative factors reflect exponential complexity. Delivering 'Physical' green steel to an 'Automotive' client is significantly harder than a certificate for construction.

Q: How does the model handle the 'Export' price difference?

A: It maintains parity. If a client buys dirty steel, they pay the CBAM tax. If they buy Green Steel, they pay us. The 'Total Cost of Ownership' is identical.

Q: Is the verification cost fixed? What if volume drops?

A: It is dynamic. Formula = Fixed Cost / Annual Volume. If volume drops, the per-ton premium rises to cover the fixed certification overhead.