

A Two Beers Bet on the Implementation Measures for Capacity Replacement in the Chinese Steel Industry

(Draft for Comments) — October 2025

Not necessarily an Expert Explanation for my Alumni and now Metallurgy Professionals and industrial friends and former colleagues and, perhaps, for my Italian academic colleagues and former friends

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Introduction

This document provides a critical and pragmatic explanation of the October 2025 draft issued by China's Ministry of Industry and Information Technology (MIIT), *Implementation Measures for Capacity Replacement in the Steel Industry*. It is written for former Udine metallurgy students (now professionals with a much longer experience in the industry than what I have had), many of whom are in their 40s and 50s, working in Italy's steel and plant-making sectors.

Since 2000, I have supervised around 300 master-level students in metallurgical subjects at Udine. Today, about 200 are active in the regional steelmaking ecosystem, including major players: Danieli (plant manufacturing), Ferriere Nord (Gruppo Pittini), and ABS Acciai (Danieli Group). These firms are leaders in EAF (electric-arc furnace) steelmaking.

As most of my students know, I have been working for a while a Steelmaking Plant metallurgist in the same company where most of my former students work. So here, I offer my personal analysis — more from a personal than academic perspective — and frame two professional “bets”: - **Beer Bet No. 1** (plant-making): high growth potential
- **Beer Bet No. 2** (steelmaking): more challenging outlook

Due to Italian government that has decided to postpone the future retirement of people around the 70 years of age, I believe that your future as professionals will likely span much more than my own decade. So wishing you to happily spend your personal life and of course your professional one, I propose you these two bets on long-term industry trajectories. But

I would hope to have a beer or a glass of wine together, possibly much earlier, say before Christmas time!!

1 What the MIIT Draft Proposes

1.1 Policy Goals and Legal Basis

The draft aims to:

- shrink total steel capacity while improving production quality
- accelerate industry restructuring and low-carbon transformation
- enforce regional and environmental constraints in “key regions”
- favor EAF and hydrogen-based metallurgy

The legal justification draws on several sources:

- Chinese Communist Party and State Council directives on “carbon peak / carbon neutrality”
- The State Council’s Action Plan for Carbon Peaking Before 2030
- Previous State Council notices on excess capacity (steel industry)

1.2 Key Provisions

Capacity Replacement Ratio - A national minimum of **1.5:1** (retired:constructed) for most projects. - A relaxed ratio (**1.25:1**) for capacity acquired via M&A (after June 1, 2021). - *Equal replacement (1:1)* allowed in specific circumstances (e.g., EAF, hydrogen metallurgy, Qinghai/Tibet).

End of Inter-Enterprise Trading - After 2027, capacity trading between separate legal entities is phased out. - Only structural MA remains eligible for replacement.

Regional Restriction - “Key regions” (per air-quality plan) are subject to strict rules: no capacity increases, no inter-region transfers. - Examples: Beijing–Tianjin–Hebei, Yangtze River Delta, Fen-Wei Plain.

Low-Carbon Incentives - EAF and hydrogen projects are explicitly encouraged. - If hydrogen metallurgy reduces emissions by 60- Within-group capacity conversion (e.g., retiring blast furnace + building EAF) is feasible under certain rules.

Administrative Procedures - Firms must submit detailed “replacement plans” (equipment, capacity, timeline) for approval. - Cross-province replacement allowed, but subject to verification, public notice, and strict timelines. - Retired equipment must be demolished (or rendered permanently inactive) before replacement. - Acceptance and verification procedures are set: provincial authorities audit, MIIT monitors annually.

2 Implications for Udine-Area Alumni

As someone deeply embedded in both academia and the regional steel system, these rules raise two major scenario bets:

2.1 Bet 1 — Plant Makers (Danieli, etc.)

I see very strong upside:

- Demand for EAFs, hydrogen-ready plant, modern DRI units could surge globally.
- Chinese capacity replacement rules create a large market for cutting-edge plant, modernization, and retrofit.
- Strategic positioning now could generate export opportunities and long-term contracts.

2.2 Bet 2 — Steelmakers (Local EAF, Mini Mills, Producers)

The picture is more challenging:

- Increased competition, especially if Chinese groups repurpose capacity to low-carbon routes.
- High CapEx risk: transformation requires major investment in new furnace tech + emissions control.
- Uncertainty over scrap supply, hydrogen feedstock, and energy costs could squeeze margins.

These are not speculative side bets — they reflect my reading of China’s policy trajectory and what it means for European plant makers and metallurgical engineers.

3 Policy Risks and Uncertainties

Some of the key risks to monitor:

- Will provincial/local enforcement be consistent?
- Can hydrogen metallurgy scale up cost-effectively?

- Will cross-border capacity transfers or M&A lead to concentration or distortions?
- Does the policy sufficiently align with global climate frameworks — or is it more about industrial control?
- What if clean-steel premiums (or CBAM-like measures) radically shift economics again?

4 Conclusion

The 2025 MIIT draft is a major tightening of China’s capacity governance — signaling serious intent to decarbonize, consolidate, and modernize.

- For *plant makers*, this is likely a long-term structural opportunity. - For *steel producers*, the future seems more complex: high reward, but also high risk.

Over the next 10 years, your professional horizon may well be shaped by how this policy evolves — and so I raise a “two-beer toast” to your ability to navigate it wisely.

References

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Sitography

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