



# SETTIMANA DELLA SOSTENIBILITÀ

25-28 MARZO 2025



**CONFINDUSTRIA  
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Area Metropolitana  
Venezia Padova Rovigo Treviso



## How financial institutions evaluate C&E profiles of the companies

*The integration of C&E factors into banks' strategies and their business plans*

March 25th, 2025

*Fabio Verachi, FRM – Enterprise Risk Management*



# Climate change risk at a glance

2

## An evolving context

The world is at an inflection point towards a resource efficient economy – Europe as first mover yet other regions following



**European Union**

**Front-runner in enforcement mode**

EU green deal, EU Taxonomy, Green funding



**United States**

**Fast-follower with new political focus**

Net zero emissions by 2050 and 100% carbon-free electricity by 2035



**China**

**Leap-frogging with rigorous execution power**

Carbon neutrality target by 2060, but ability to move fast on policies promoting efficiency



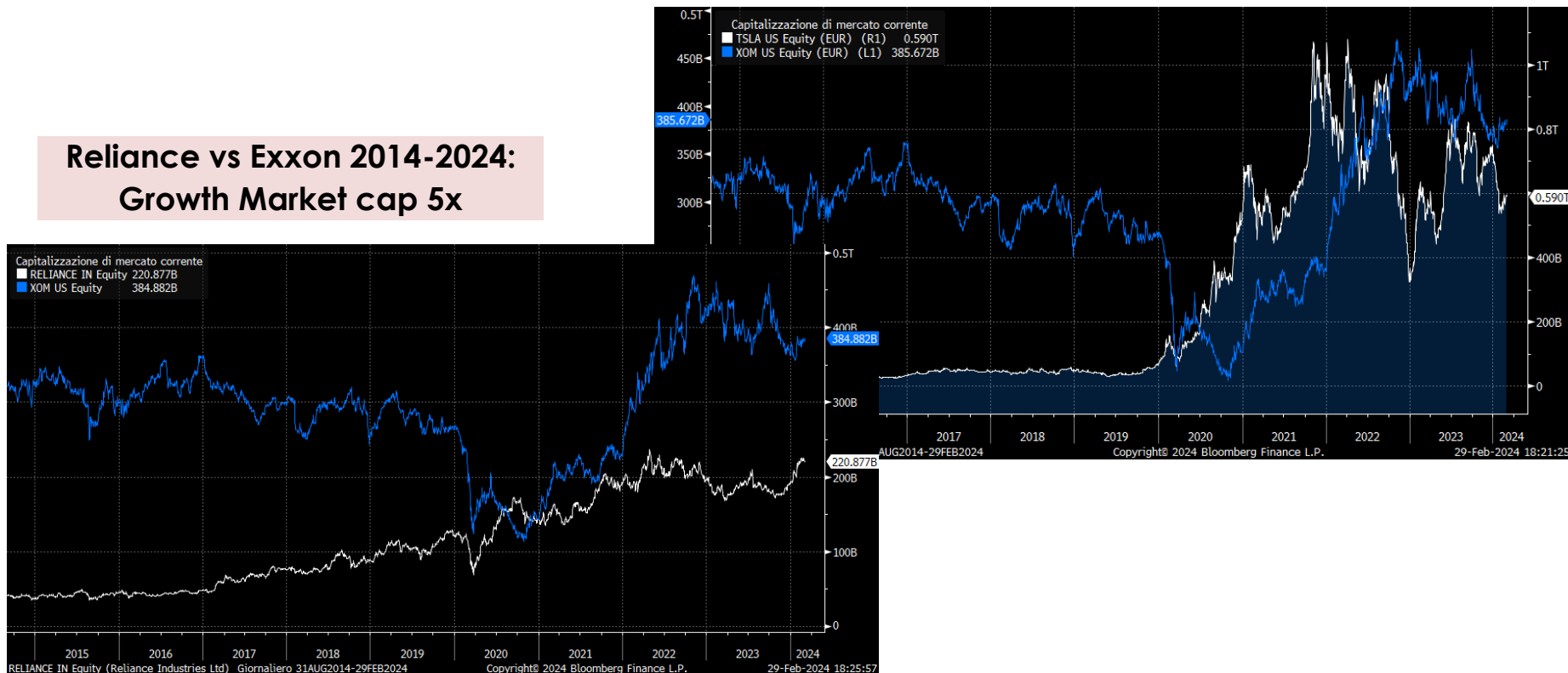
# But what is Mr. Market is telling us?

Latest trends of Tesla and O&G companies

3

**Tesla vs Exxon 2014-2024:**  
**Growth Market cap 6x**

**Reliance vs Exxon 2014-2024:**  
**Growth Market cap 5x**



# Bank risk management in a nutshell

## Balance sheet and Capital concepts

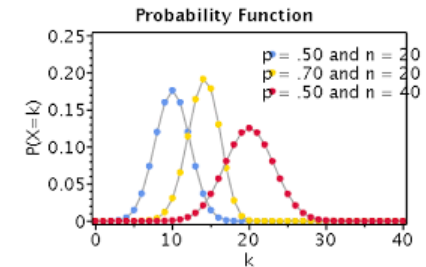
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Assets	Liabilities
<ul style="list-style-type: none"><li>✓ <b>Loans to:</b> Retail, Mortgages, SME Corporates, Banks, PSE &amp; Sovereigns</li><li>✓ <b>Sovereigns bond</b></li><li>✓ <b>Others Bonds</b></li><li>✓ <b>Equities</b></li><li>✓ <b>Derivatives / Currencies</b></li><li>✓ <b>Commodities</b></li><li>✓ <b>Real Estate</b></li><li>✓ <b>Liquidity</b></li></ul>	<b>Equity / Tier 1</b>
	<b>Subordinated / Tier 2</b>
	<b>Senior Bonds</b>
	<b>Banks loans</b>
	<b>Deposit accounts</b>

**Capital as a buffer against risks => 8% RWA**

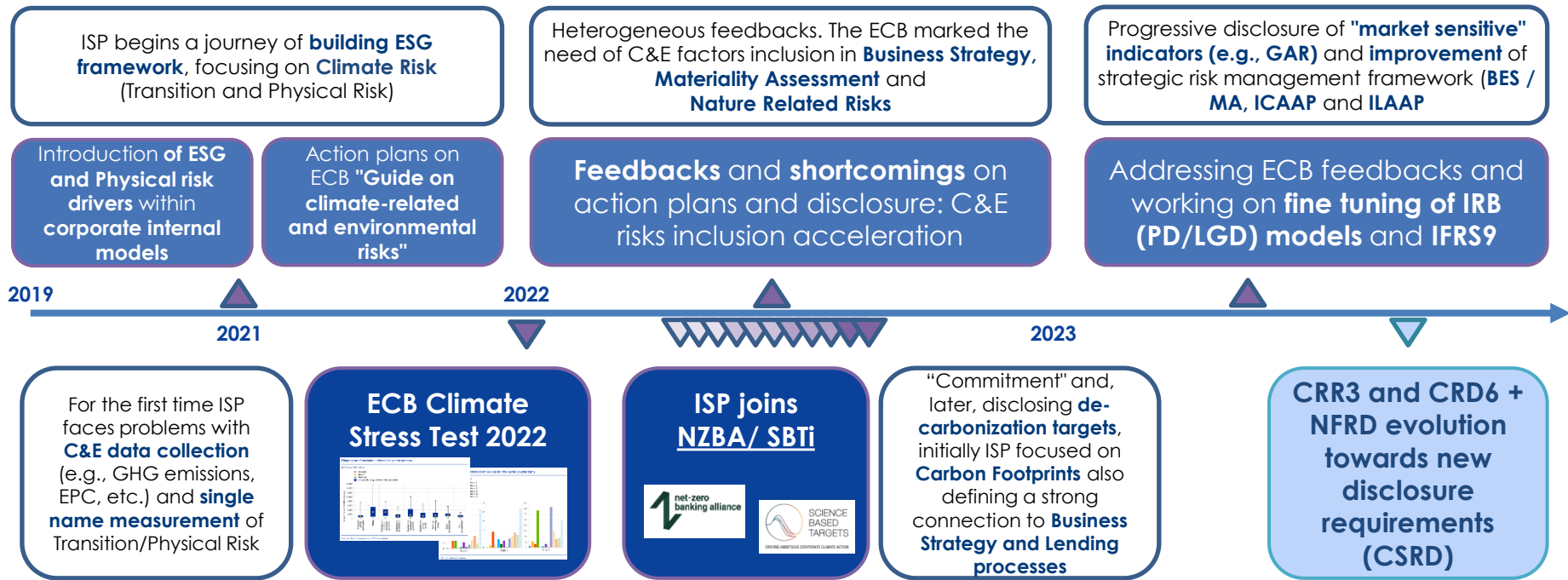
### Many risks.....

Business & Strategy,  
Credit, Market, ALM,  
Liquidity, Operational &  
Cyber risk, Reputational  
and.... **Climate risk**



# A short "history" of Climate & Environmental risks and opportunities: ISP started in 2019 its journey

5



**Credit risk:** the possibility of suffering a **loss** as a result of **insolvency** (i.e., failure to repay a debt as per contractual obligations)

*Key variable of credit risk:*

➡ **Expected Loss («EL»):** Estimation of the loss that is most likely to occur in a year

Analytically:  **$EL = PD * LGD * EAD$**

**PD** = Probability of Default

**LGD** = Loss Given Default

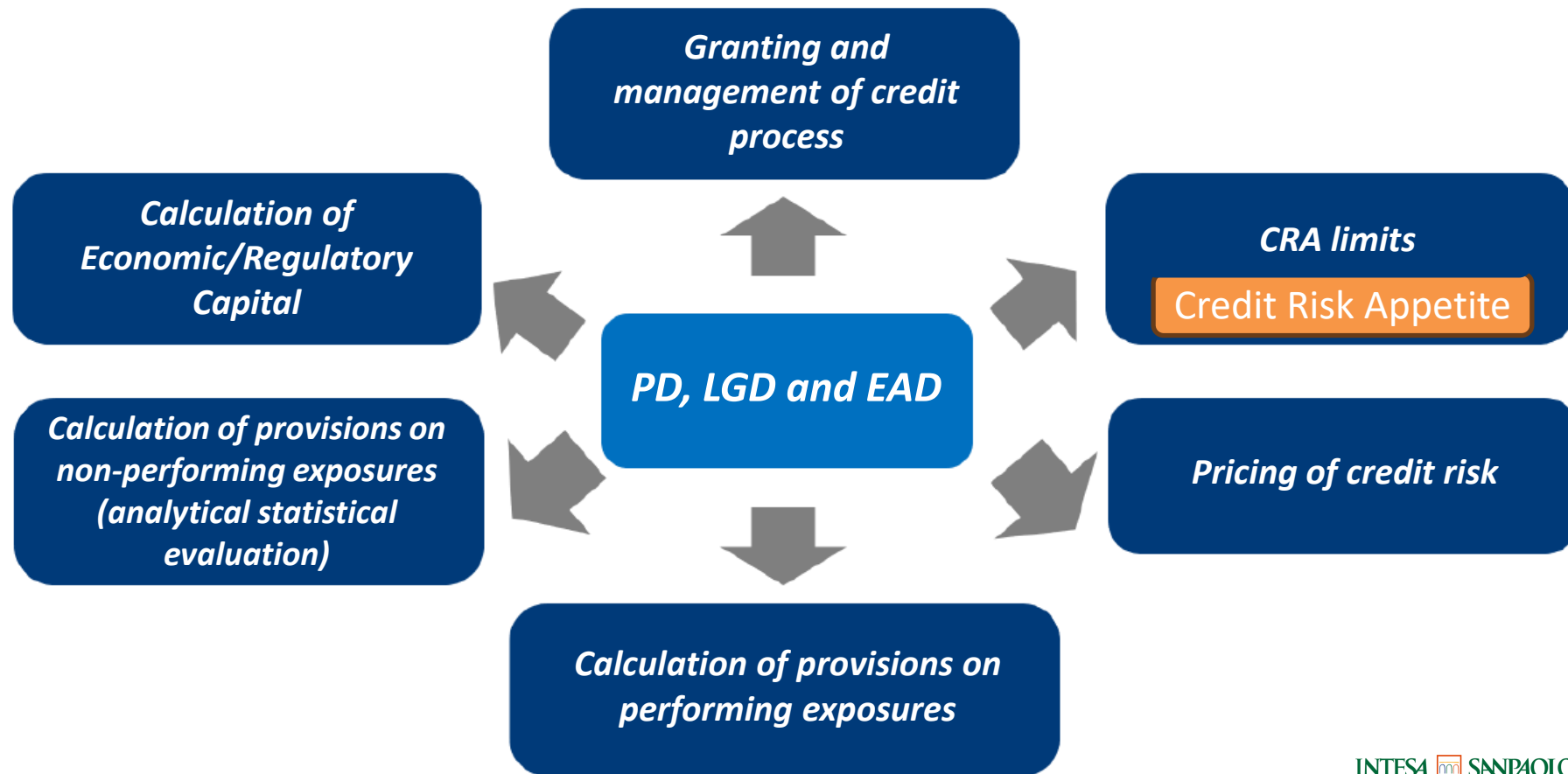
**EAD** = Exposure At Default

Customer

Debt Financing

# Credit risk: Basic concepts of the process

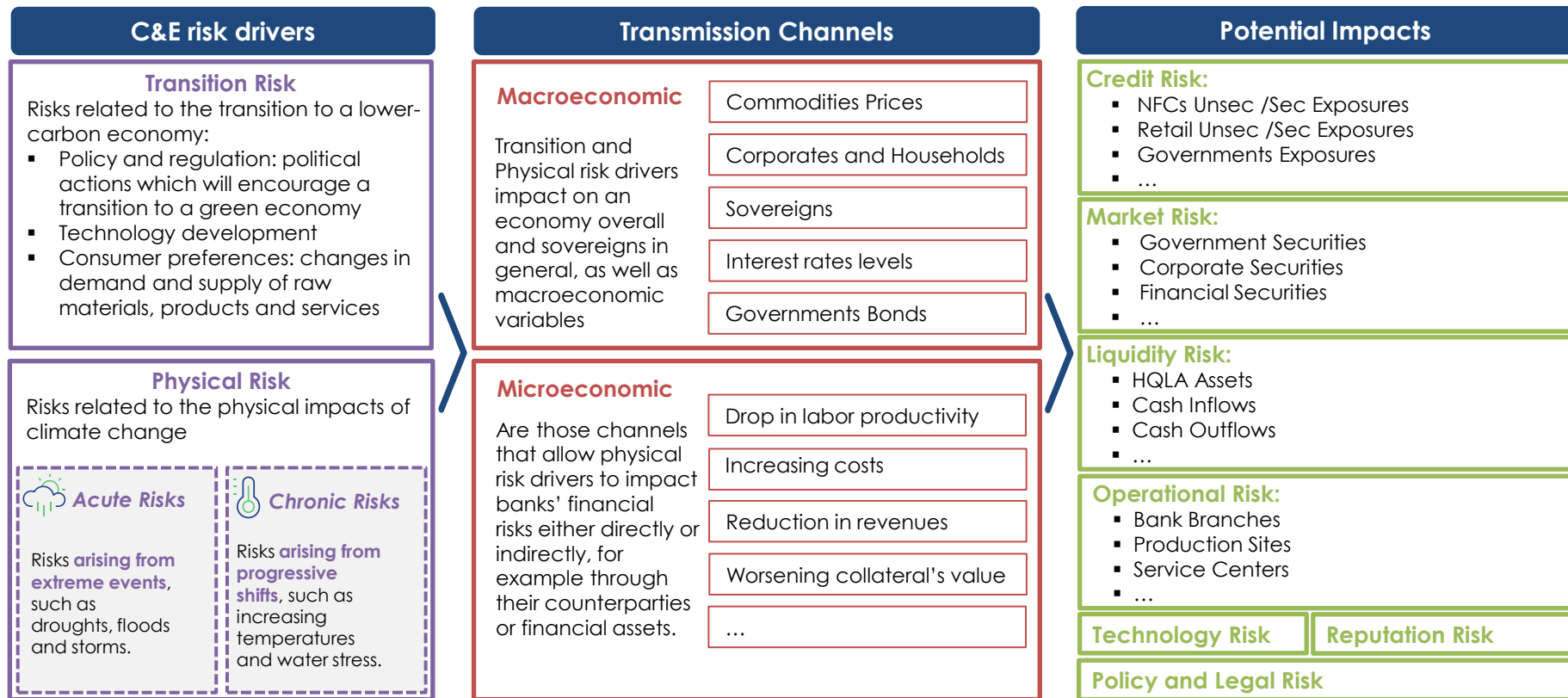
7





# Need for a new holistic Risk Inventory for C&E risks

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# Application of forward looking Transition Risk on Mortgages?

## Haircut based on EPC & “Granular heat-map”

In order to **comply with the expectations of the Regulator on mortgages**, we considered reasonable to imagine the creation of **Granular heat-map (ZIP code, EPC, Heating systems level)** that exploits the results of **bottom-up processing** on the bank's stock performed with a transition engine as part of ICAAP processes

### Granular Heat-map solution

#### Methodology

- **Analysis dimensions:** fixed geographical grid approach (ZIP Code) with breakdown by EPC and heating system
- **Measure:** Average % depreciation from transition risk event estimated on the stock
- **Scenario:** Orderly transition
- **Time horizon:** average residual maturity of the portfolio (ca. 13 years)

### How to & Results

- **Average haircut → impact on LTV** (the same for each analysis dimensions)

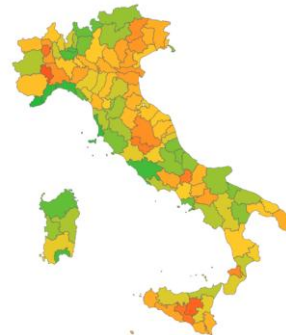
### Granular Heat-map illustrative application

#### ITALY

- **Average zip code level Depreciation: 7,9%**
- Given the **high dispersion** of the sample at the municipal level, it was decided to proceed with **ZIP code level maps**

Country	EPC Level	Average Depreciation (no A)
Italy	A	-
	B	3.4%
	C	5.1%
	D	5.8%
	E	5.0%
	F	8.9%
	G	12.9%

**Average level of depreciation against EPC A broken down, by province**



#### ZIP Code 10121 (TO)

- **Average zip code level Depreciation: 11,7%**
- The depreciation was calculated considering some **key features** such as the **level of EPC** and the **heating system**

Zip Code	EPC Level	Average Depreciation (no A)
10121	A	-
	B	0.7%
	C	4.4%
	D	6.6%
	E	4.8%
	F	9.4%
	G	9.0%



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The map is not directly comparable with the distribution by energy class because the average retrofitting costs are different depending on the geographical area

- ✓ **RAF Early Warning (EW) thresholds have been introduced** for **RRE portfolio** with the aim of improving the risk portfolio's profile
- ✓ EWs have been set on energy **classes F** and **G** with the objective of maintaining the quality of residential properties taken as collateral
- ✓ Commercially, benefits on pricing for energy classes A and B have been introduced and mortgages that include purchase and renovation have been excluded from limits monitoring

# Risk Appetite Limits on C&E: ISP experience

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Overall Risks and metrics														
Reputational and ESG Risks														
Rep. Risk	ESG Risk													
	Coal mining (€MM)	Oil&Gas (€MM)		Orange sectors (€MM)		High risk sovereign issuer duration>=5y (€MM)	RRE subject to physical / transition risk (new flow, €MM)		CO2 emission					
		lending	bond with best in class	bond w/o best in class	lending	bond	EPC classes	flow with maturity >20y in Very High Risk zones	Oil&Gas	Automotive	Iron&Steel	Pow. Gen.		
RAF 2023	Early Warning 2023				XX				XX	XX			Monitoring	
	RAF Limit 2023	Qualitative	XX	XX										
	Current Level (December '23)		XX	XX	XX	XX	XX	XX		XX	XX		XX	
RAF 2024	Early Warning 2024				XX	XX	XX	XX	XX	XX	XX	XX	Monitoring	
	RAF Limit 2024	Qualitative	XX	XX	XX	XX								
	RAF Limit '25		0											

Legend:

Hard metric

Soft metric

New RAF 2024

Limit introduced/reviewed for RAF 2024

# Grazie per l'attenzione!



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