

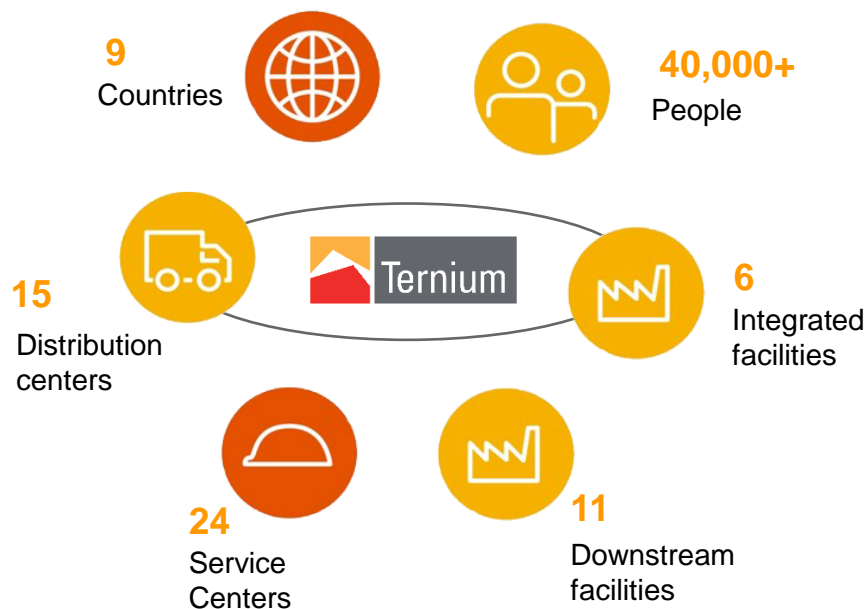
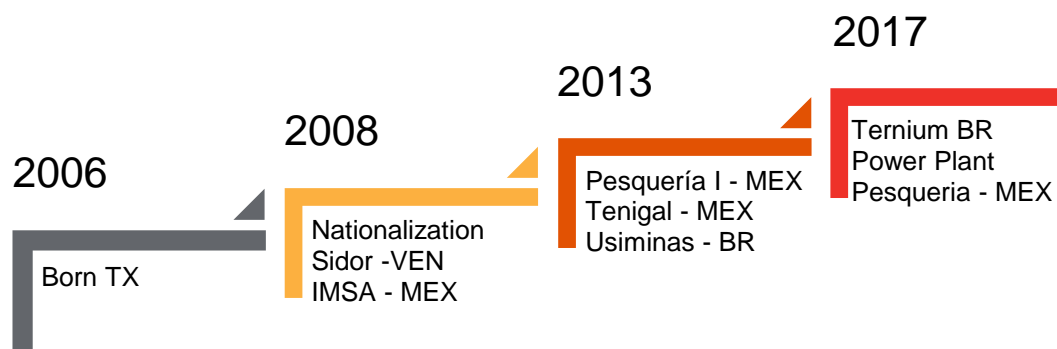
American Steel Experts' Dialogue in the framework of the IEA Global Sustainable Technology Roadmap for Iron & Steel

Low Carbon Energy cases at Ternium

August 22th, 2018



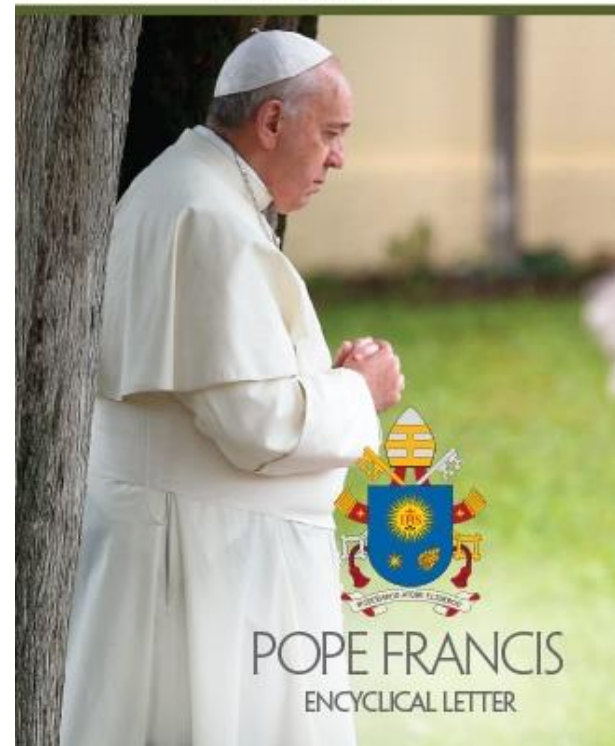
Ternium



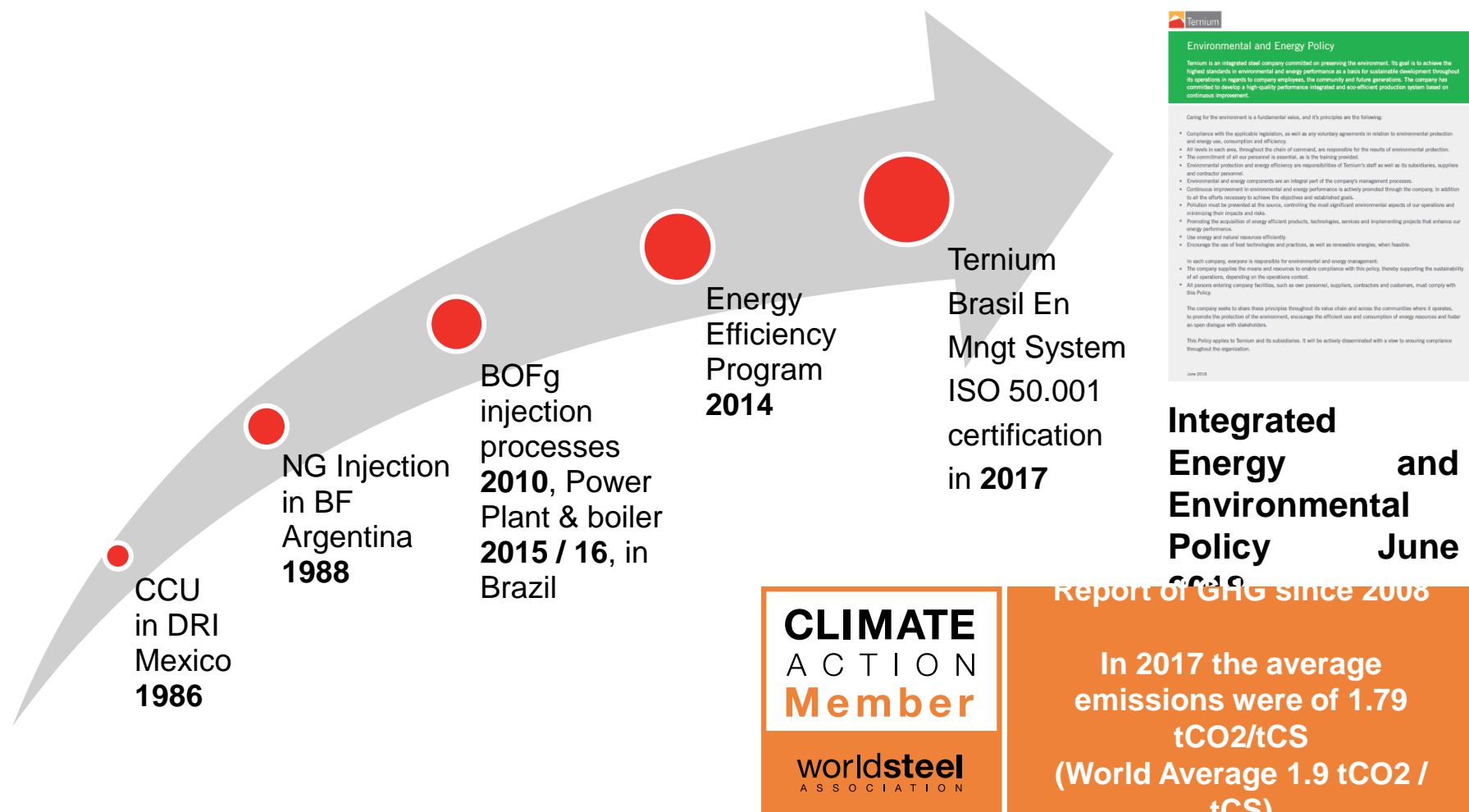
OUR HOME



ON CARE FOR OUR
COMMON HOME
LAUDATO SI'

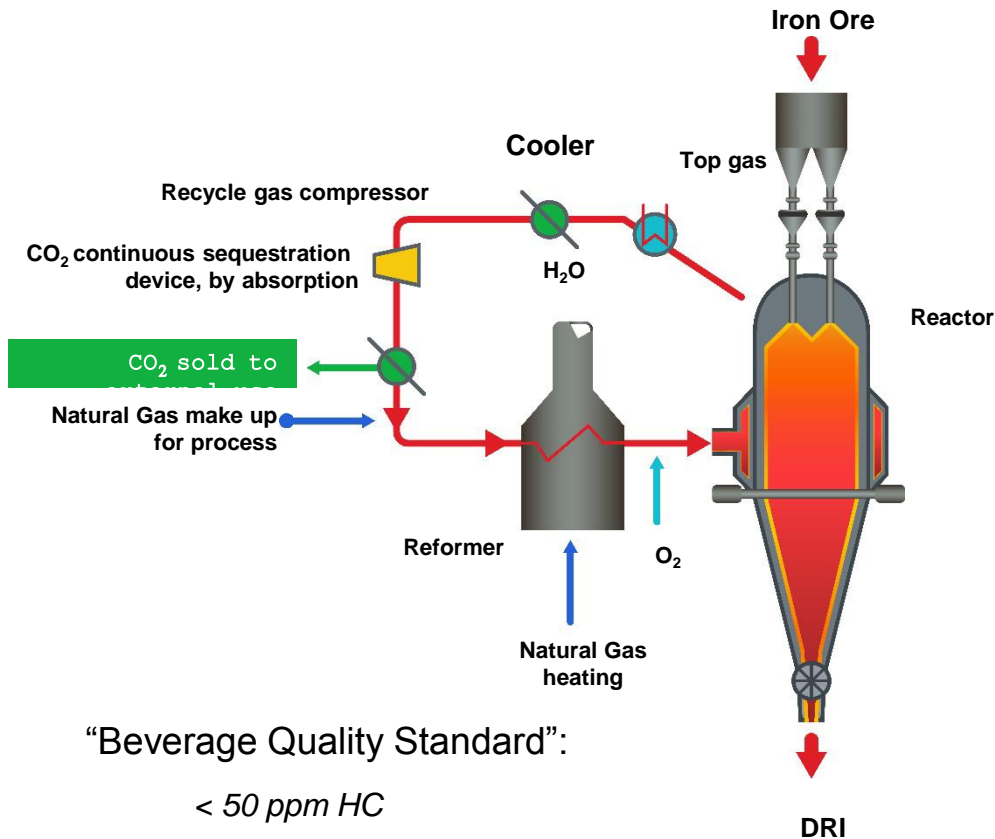


Ternium is committed to environmental and energy excellence since the 80's



CCU for the beverage industry

Puebla and Guerrero integrated facilities at MEXICO



“Beverage Quality Standard”:

< 50 ppm HC

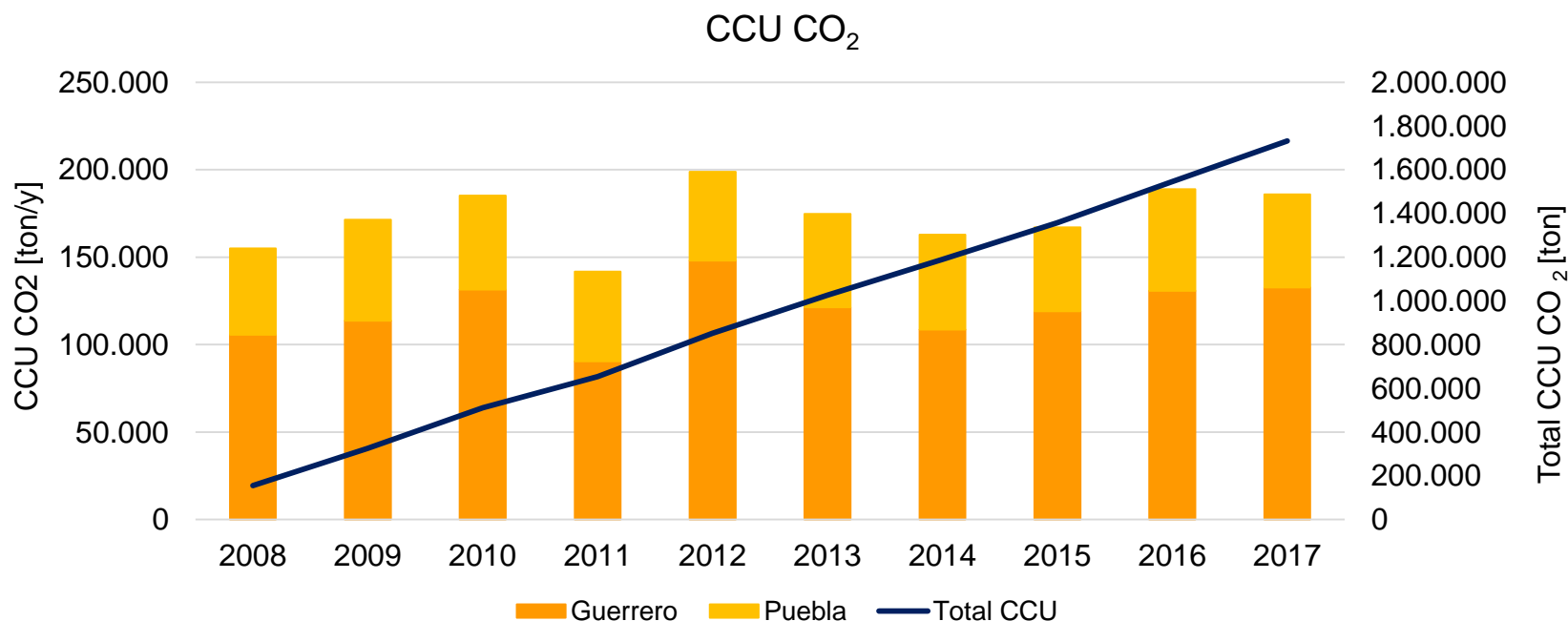
< 0,1 ppm H₂S

< 20 ppm Moist

So CO₂ is sold as a “by – product”

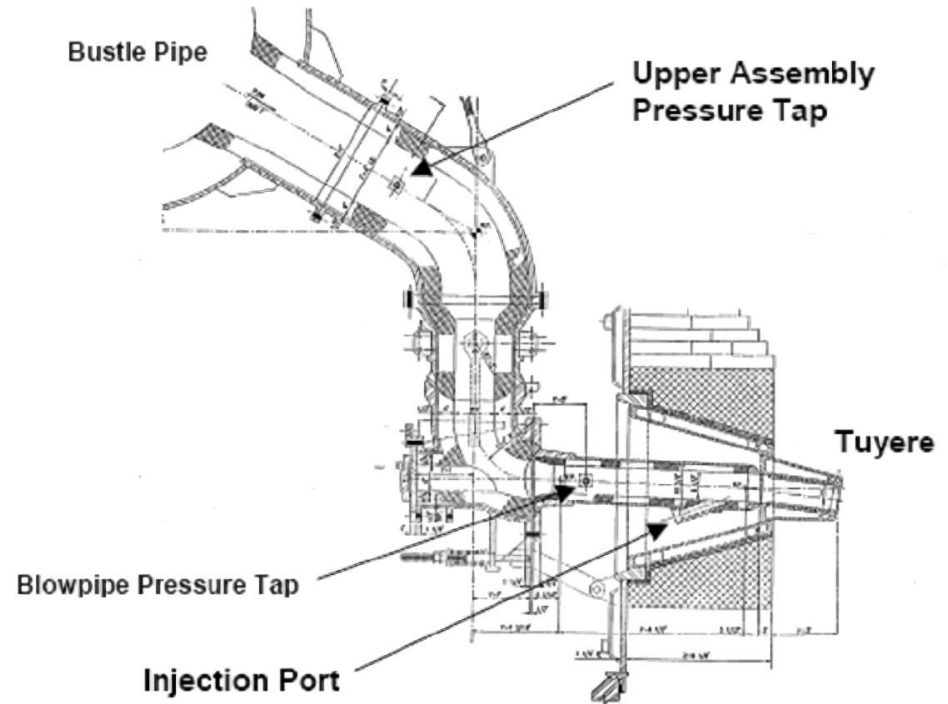


~ 1.7M tCO₂ recovered in past 10 years Puebla and Guerrero integrated facilities - MEXICO



2017	Units	Puebla	Guerrero	Total
CO ₂ Emissions	ton	1.116.020	2.863.812	3.979.832
CO ₂ Specific Emissions	kg CO ₂ /ton cs	1.269	1.208	1.224
CO ₂ Sold to external use	ton	53.316	132.644	185.960
%CO ₂ Sold to external use	%	4,8%	4,6%	4,7%

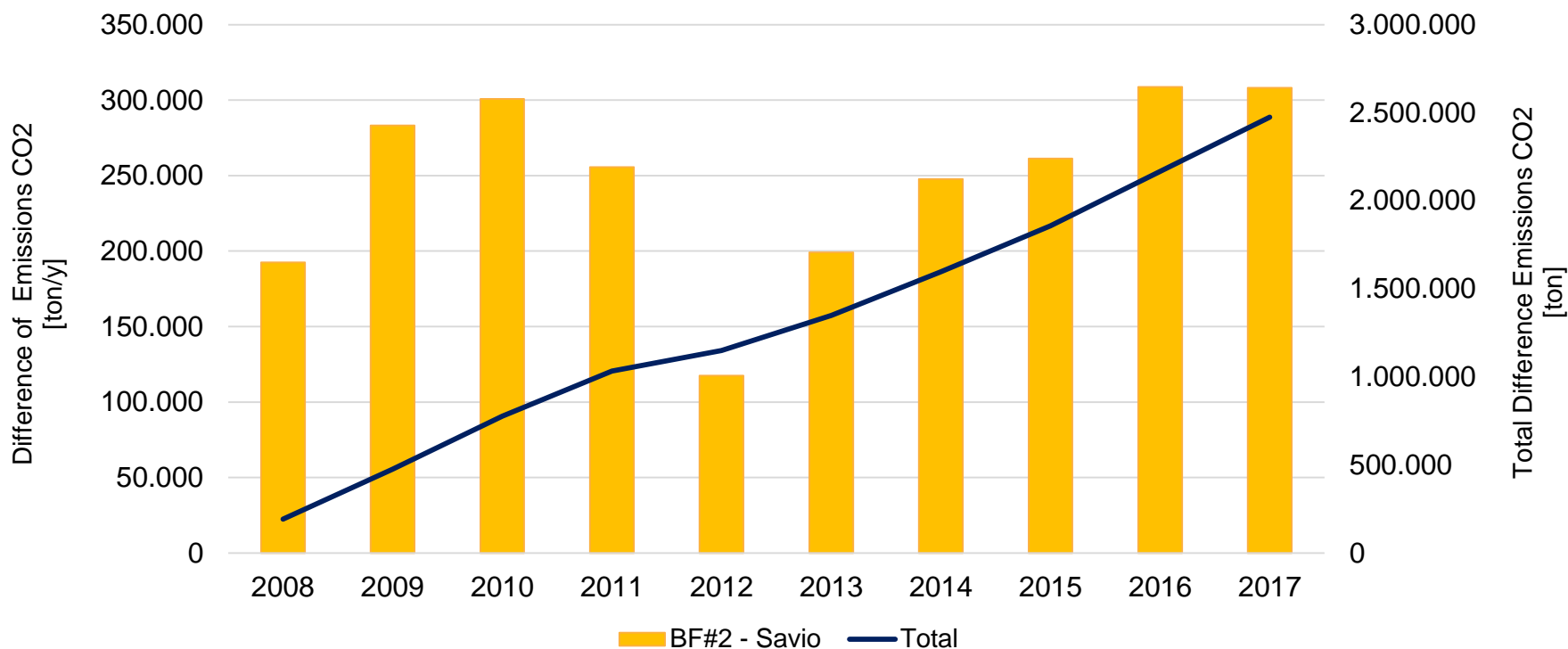
NG injection in BF Planta Savio Argentina



Detailed tuyere with NG
Injection Port



~ 2,5M tCO₂ Hypotetical GHG difference due to use NG instead of PCI – BF#2 Planta Savio - ARGENTINA

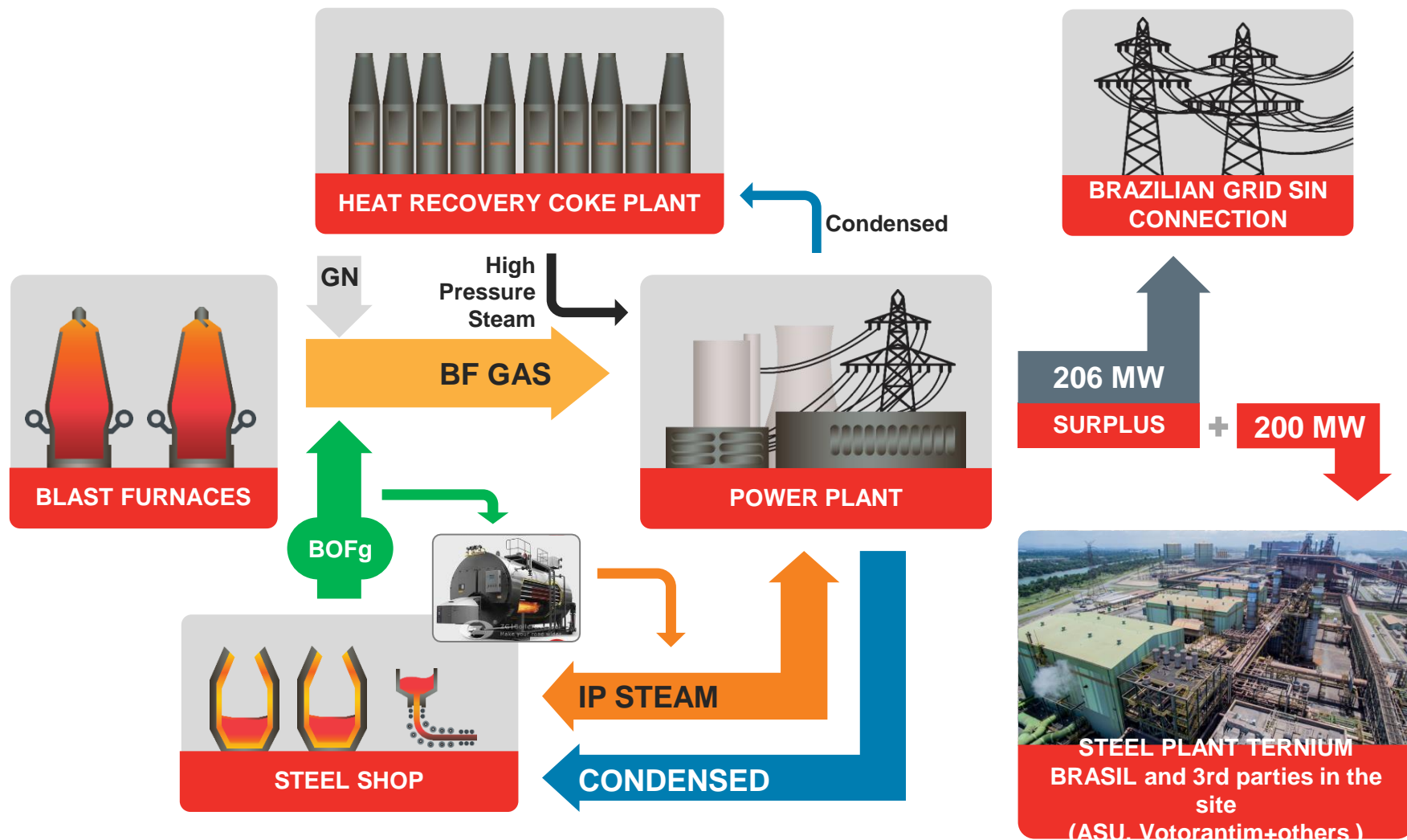


Premise 1 kg NG → 1,4 kg PCI

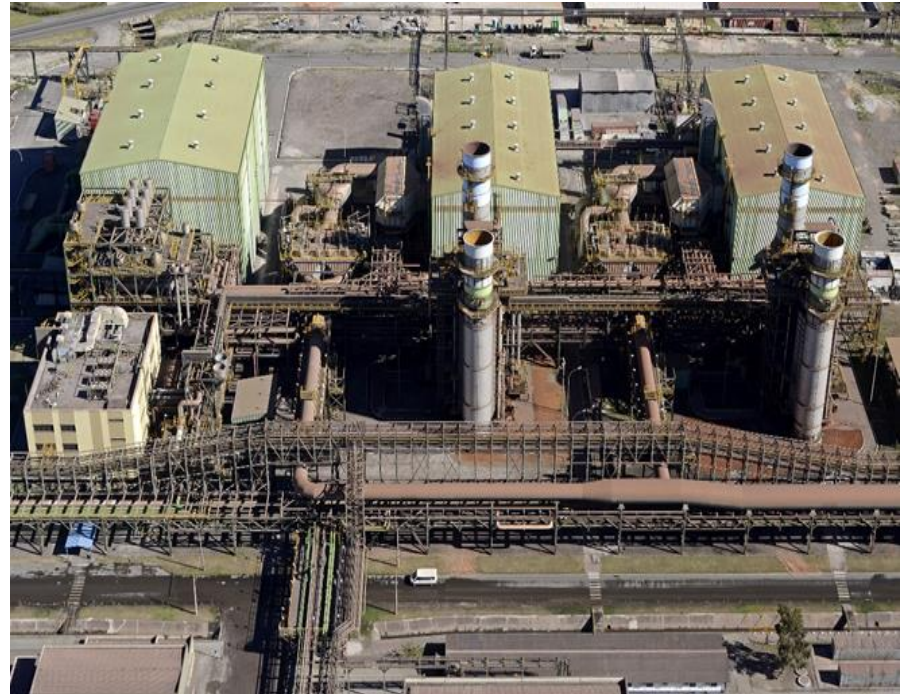
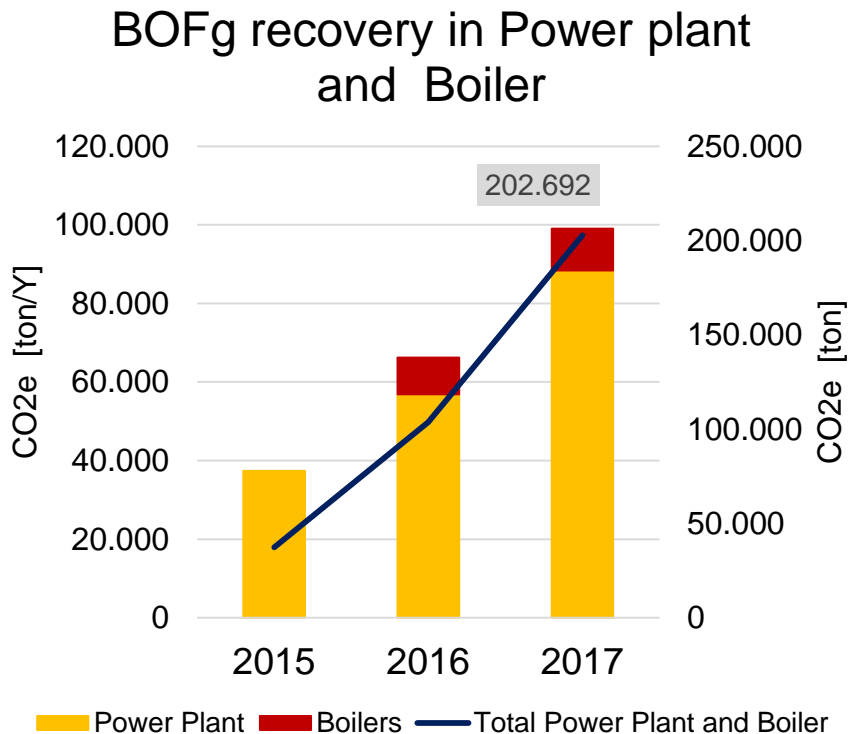
Ternium Brasil



~ 3.1 MtCO₂e were avoided to be burnt at Steel shop flare due to BOF gas recovery in processes



~0.3 MtCO₂e BOFG injection in Power plant and Boiler +
avoided GHG from NG substitution



And re-use of BOFG in substitution of NG at: Power plant and Auxiliary boiler
avoided **88.405 tCO₂e** from NG stationary combustion.

THE MAIN strategy for GHG Mitigation at Ternium: Energy Efficiency through Energy Management



- **Scope:** Mexico, Argentina Brasil, Colombia and USA
- **EE projects:** 226
- **Investments:** 6.4MMus\$
- **GHG reduction:** 133.400 tCO2



The 3 pillars of Energy Efficiency



GHG and ENERGY MANAGEMENT is a task for ALL!



**Ingrid Person Rocha e
Pinho**

ingrid.pinho@ternium.com.br
+55 21 99434-7291

Hernán Alberto Buralli

teabhw@ternium.com.ar
+54 9341 511 9585

Maria Eugenia Kloosterman

mklooste@ternium.com.ar
+54 114 01 88 375



www.ternium.com