



Figure 1: Emission reduction strategies in ferrous metallurgy. The figure shows a flowchart where 'Emission Reduction' leads to 'Sustainable Practices' and 'Green Technology'. 'Sustainable Practices' includes 'Energy Efficiency' and 'Waste Management'. 'Green Technology' includes 'Renewable Energy' and 'Carbon Capture'. 'Energy Efficiency' leads to 'Renewable Energy' and 'Carbon Capture'. 'Waste Management' leads to 'Renewable Energy' and 'Carbon Capture'. 'Renewable Energy' and 'Carbon Capture' both lead to 'Emission Reduction'. 'Emission Reduction' also leads to 'Green Technology'.

Figure 2: R&D investment trends in ferrous metallurgy. The figure shows a line graph with 'R&D Investment' on the y-axis and 'Year' on the x-axis. The investment shows a steady upward trend from 2010 to 2020. The data points are approximately: 2010: 1.2, 2011: 1.5, 2012: 1.8, 2013: 2.1, 2014: 2.4, 2015: 2.7, 2016: 3.0, 2017: 3.3, 2018: 3.6, 2019: 3.9, 2020: 4.2. The trend is consistent with the text's claim of a 15% increase over the period.

Table 1: Comparison of traditional and sustainable practices in ferrous metallurgy. The table compares 'Traditional Practices' and 'Sustainable Practices' across 'Energy Efficiency', 'Waste Management', and 'Emission Reduction'. 'Traditional Practices' are characterized by 'High Energy Consumption', 'Significant Waste', and 'High Emissions'. 'Sustainable Practices' are characterized by 'Energy Efficiency', 'Waste Management', and 'Emission Reduction'. The table also includes a 'Notes' section.

Table 2: Environmental impact of ferrous metallurgy. The table compares 'Traditional Practices' and 'Sustainable Practices' across 'CO2 Emissions', 'Energy Consumption', and 'Waste Generation'. 'Traditional Practices' result in 'High CO2 Emissions', 'High Energy Consumption', and 'Significant Waste'. 'Sustainable Practices' result in 'Reduced CO2 Emissions', 'Energy Efficiency', and 'Waste Management'. The table also includes a 'Notes' section.

Table 3: Economic impact of ferrous metallurgy. The table compares 'Traditional Practices' and 'Sustainable Practices' across 'Production Costs', 'Energy Costs', and 'Waste Costs'. 'Traditional Practices' result in 'High Production Costs', 'High Energy Costs', and 'Significant Waste Costs'. 'Sustainable Practices' result in 'Reduced Production Costs', 'Energy Efficiency', and 'Waste Management'. The table also includes a 'Notes' section.

Table 4: Social impact of ferrous metallurgy. The table compares 'Traditional Practices' and 'Sustainable Practices' across 'Job Creation', 'Community Development', and 'Environmental Stewardship'. 'Traditional Practices' result in 'Limited Job Creation', 'Limited Community Development', and 'Limited Environmental Stewardship'. 'Sustainable Practices' result in 'Increased Job Creation', 'Community Development', and 'Environmental Stewardship'. The table also includes a 'Notes' section.