

Steel is made from iron ore, coal, water, and other trace elements. Shipping both ore and coal to a third location is an inefficient use of the world's biggest bulk ships that return empty half the distance. Project "[Iron Boomerang](#)" puts an end to the empty load phenomenon with a double east-west Australian rail line that will save billions per year. The average iron in ore is 60% the rest is dirt 40% - the empty return trip ship and train efficiency is therefore around 30%.

Gross water use in integrated steel plants ranges from 50,000 to 500,000 liters per ton of steel ingots, and so a reliable source of water is another requirement of efficient production. Value-added production is economically important for Australia and its major world trading partners. For the trading partners that participate in the production of steel, the industrialization of the inland facilitated by a Bradfield Scheme offers a sustainable and competitive means of reducing the cost per tonne of metals produced, while reducing global environmental impacts.

The purpose-built transcontinental railway line will link Australia's two great ore bodies for steelmaking, iron ore from the west coast and metallurgical coal from the east coast with smelters at either end. A transcontinental railway will be dedicated to carrying resources efficiently from one side of the country to the other.