

# The role of Green Alumina in Green Aluminium

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## **Abstract**

Environmental stewardship is central to RUSAL's manufacture of green aluminium. Approximately 80% of RUSAL's aluminium is produced using environmental-friendly hydropower, generated without any harmful emissions. Green alumina also has a key role to play in creating green aluminium. This paper is a comprehensive review of the production of green alumina at Aughinish and the environmental sustainability of the refinery. This sustainability is multi-faceted and includes bauxite residue disposal management, continuous monitoring to ensure there is no impact on the local environment and the minimisation of CO<sub>2</sub> emissions. The "Carbon Footprint" of Aughinish is among the lowest in the industry and has been accomplished through sustained improvements in energy consumption and the conversion of all thermal and electrical energy generation to Natural Gas. The performance of Aughinish in terms of CO<sub>2</sub> emissions is benchmarked against the industry and in particular against Chinese performance. It will be clearly shown that Aughinish is indeed a world leader in this area and a benchmark against which other refineries can be compared. The paper focuses primarily on Greenhouse Gas emissions. Other areas of environmental sustainability of the refinery such as residue management, water emissions and community relations are also reviewed.

**Keywords:** Green alumina; carbon footprint; greenhouse gases; environmental sustainability