

Close to  
**\$2 billion** worth  
of aluminum cans end  
in landfills each year  
in USA!



**Dr Subodh Das**  
CEO, Phinix LLC

**“We are witnessing a paradigm shift towards the concept of ‘Reduce, Reuse, Remanufacture and Recycle’ as a strategy for building a low energy, low carbon, and low environmental impact future.”**

**AL Circle: Globally, we are witnessing an endeavour within the aluminium industry to focus on recycling. How much positive impact will it bring over the next few years?**

**Dr Subodh Das:** The Paris Agreement aimed to keep global warming below 2 degrees Celsius over the 21st century. It also recognized the need to reduce global emissions substantially to achieve the goals. Meanwhile, it was claimed that circular economy strategies could reduce emissions by 40% in 2050 in the production process of key materials. Hence, the growing focus on aluminium recycling is a part of the greater goals of the circular economy and reducing global warming.

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According to the International Aluminium Institute’s (IAI) Material Flow Model, 20 million tons of post-consumer scraps were recycled in 2019, about 60% of scrap intake – equivalent to saving 300 million tonnes of GHG emissions. Global aluminium demand is expected to increase by 80% by 2050. The industry is looking at meeting this with a 50/50 balance of recycled and primary metal to achieve net zero emissions by 2050.

**AL Circle: According to you, which regions will better adapt to Recycling in the Aluminium industry?**

**Dr Subodh Das:** All regions will be involved in adapting to aluminium recycling. China is working on its environmental goals to reduce carbon emissions through technology adaptation and

increased recycling. India has started aggressively on a vehicle scrappage policy to boost recycling.

Meanwhile, European Aluminium is developing its Circular Aluminium Action Plan to develop a roadmap to facilitate 50% of Europe's aluminium demand through recycled aluminium by 2050 and reduce CO2 emissions by up to 39 million tons.

In the United States, in 2022, the country recovered 3.4 million tonnes of aluminium from scrap (old and new). Aluminium recovered from end-of-life scrap was equivalent to about 29% of apparent consumption. The country is working aggressively towards increasing aluminium recycling, especially for used aluminium cans (UBC).

**AL Circle: What are the potential challenges towards achieving net zero for the Aluminium industry? How to overcome them?**

**Dr Subodh Das:** The clash between economic viability and environmental sustainability remains challenging in achieving net zero for the aluminium industry. Switching to low carbon power, retrofitting to new technology, expanding the secondary production base, and establishing an

The US landfills contain about **90 million** tons of aluminum



effective closed-loop-recycling model for aluminium products need planning, investments, and implementation.

We will continue to see significant investments in the research, development, and commercialization of low-carbon technologies. Approximately \$1 trillion of investment is needed over the coming 30 years to deliver the low-carbon transition for the primary aluminium sector (IAI, Mission Possible Partnership).

**AL Circle: What do you think is the role of the various regulatory bodies and certification agencies in promoting net zero within the aluminium industry?**

**Dr Subodh Das:** Regulatory bodies and certification agencies have a deciding role in realizing net zero goals for the aluminium industry.

Regulatory laws can pressure industries to shift to sustainable materials and processes across all economies. Further, global certification bodies such as Aluminium Stewardship Initiative (ASI) are driving industry efforts toward responsible production, sourcing, and

stewardship in the global aluminium value chain. Additionally,

industry associations can establish the right collaboration between industries and policymakers to bring about the necessary transitions.

**AL Circle: Please let our readers know about the areas of work of Phinix, LLC, and its role in promoting sustainability.**

**Dr Subodh Das:** Phinix, LLC is a high-impact small entrepreneurial company serving global primary, fabrication, and secondary aluminium and light metals industries and rare earth materials. We are also developing and commercializing aluminium scrap processing disruptive technologies. Several R&D contracts have been awarded to Phinix by key organizations in the U.S. and Europe.

But most importantly, we provide unbiased, objective information, marketing-free awareness, and data-based policy statements on key industry issues through regular article/paper publications and LinkedIn posts.