RARE EARTH TECHNOLOGY ALLIANCE

WHAT ARE RARE EARTHS AND WHAT MAKES THEM ESSENTIAL TO THE ECONOMY?

The 17 rare earths are a series of chemical elements found in the Earth's crust that are vital to many modern technologies, including consumer electronics, computers and networks, communications, clean energy, advanced transportation, health care, environmental mitigation, national defense and many others.

Because of their unique magnetic, luminescent, and electrochemical properties, these elements help make many technologies perform with reduced weight, emissions, and energy consumption; or give them greater efficiency, performance, miniaturization, speed, durability, and thermal stability.

The rare earth industry directly contributes to the North American economy with

$795 MILLION

in shipments, employing nearly

1050 WORKERS

with a payroll of

$116 MILLION

The rare earth industry is supportive of

$329.6 BILLION

in economic output in "downstream" end-market products and technologies that employ

618,800 WORKERS

(with a combined payroll of $37.6 billion) in the United States and Canada.

HOW RARE EARTHS GO DOWNSTREAM

Rare earth products are essential inputs in **catalysts, metallurgical additives, magnets and magnetic powders, polishing powders, phosphors, glass additives, ceramics** and other engineered rare earth materials.

Batteries, motors and generators, lasers, drives, sensors, and other components and systems used in a variety of industries producing intermediate goods.

In turn, these products are used in **health care, clean energy, automotive, lighting, communications, audio equipment, defense technologies, other electronics, advanced optics, oil refining,** and a variety of other economic activities.

American Chemistry Council

Find out more at **rareearthtechalliance.com**