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**WHAT IS SUSTAINABLE DEVELOPMENT**

Sustainable development is the balanced progress that meets the needs of the present without compromising the ability of future generations to meet their own needs. It integrates environmental, social, and economic considerations, aiming for lasting harmony between human prosperity and the health of the planet. Sustainable development, a crucial global goal, seeks to harmonize economic progress with environmental stewardship and social equity.

**WHAT ARE SDGS**

SDGs, or Sustainable Development Goals, are a set of 17 interconnected global objectives established by the United Nations (UN) in 2015 as part of the 2030 Agenda for Sustainable Development. The SDGs aim to address a wide range of social, environmental, and economic challenges, with the ultimate goal of creating a more equitable, prosperous, and sustainable world for both current and future generations.

**SDG RELATED TO ENERGY**

The 7th Sustainable Development Goal (SDG) is "Affordable and Clean Energy." Its primary objective is to ensure access to reliable, sustainable, and modern energy for all while promoting energy efficiency, renewable sources, and infrastructure development. This goal recognizes the critical role of energy in eradicating poverty, supporting economic growth, and mitigating climate change.

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**WHAT ARE ALTERNATIVE FUELS??**

Alternative fuels refer to non-traditional energy sources used as substitutes for conventional fossil fuels like gasoline, diesel, and natural gas. They play a vital role in addressing environmental, economic, and energy security challenges. These fuels include biofuels (e.g., ethanol, biodiesel), hydrogen, natural gas, electricity, and synthetic fuels.

**IMPORTANCE:**

**Environmental Benefits**: Alternative fuels often produce fewer greenhouse gas emissions and pollutants, contributing to cleaner air, reduced climate change impact, and decreased dependence on fossil fuels.

**Energy Security**: Diversifying energy sources reduces reliance on finite and geopolitically sensitive fossil fuels, enhancing a nation's energy security and reducing vulnerability to supply disruptions.

**Sustainability**: Renewable alternatives like biofuels derived from organic matter offer a sustainable and circular approach, mitigating the depletion of non-renewable resources.

Energy Independence**: Expanding the use of domestically produced alternative fuels can decrease dependence on imported oil and enhance national energy independence.**

**Economic Growth**: A transition to alternative fuels fosters new industries, job creation, and markets, stimulating economic growth and investment in cutting-edge technologies.

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**ETHANOL**

Ethanol is a type of alcohol that is commonly used as a biofuel, a recreational beverage, and an industrial solvent. It is a renewable fuel made from plant materials, primarily corn and sugarcane, through a fermentation process.

**Sources of ethanol in india**