

An aerial photograph of the King Fahd University of Petroleum & Minerals (KFUPM) campus. The image shows modern buildings, a large water feature, and palm trees. A semi-transparent green banner is overlaid across the middle of the image, containing the title 'KFUPM Climate Action Plan' in white, bold, sans-serif font.

# KFUPM Climate Action Plan

## Introduction

KFUPM is creating a climate action plan to reduce greenhouse gas emissions and limit the negative impacts of climate change. It is an important tool for addressing climate change, building resilience, inspiring action, saving costs, improving public health, and meeting international commitments. We can set an example for others to follow and inspire action on a larger scale.

Our goal is to have a sustainable campus by 2060. To reach this goal we have aligned with Saudi Arabia's vision 2030 plan. The Kingdom of Saudi Arabia has long played a central role in the international energy market, helping drive global economic growth and development.

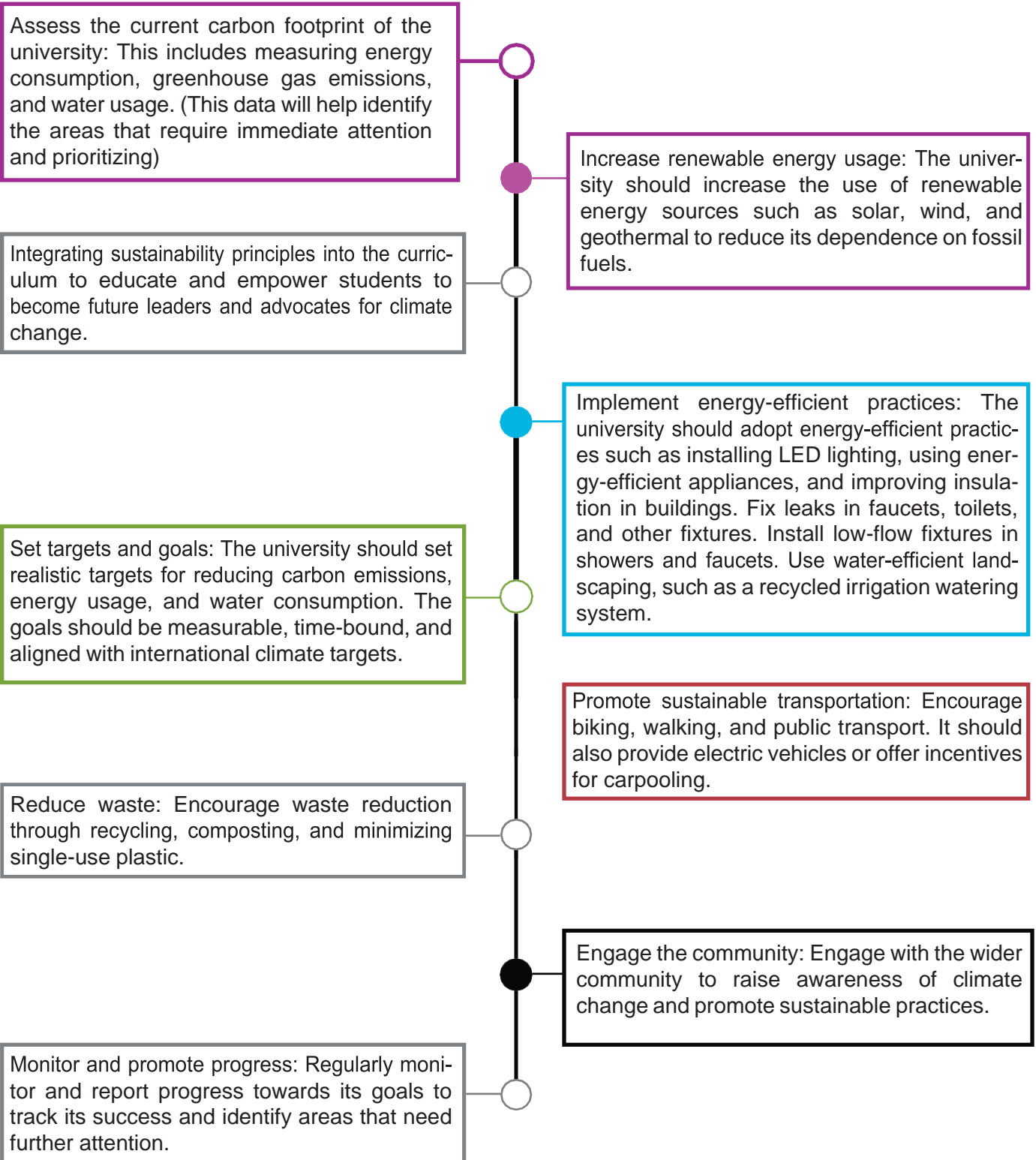
Vision 2030 is a sustainable vision for the future of Saudi Arabia with sustainability at the heart of everything the Kingdom does, from policy development and investment to planning and infrastructure. By creatively and responsibly addressing today's energy and climate challenges, Vision 2030 inspires others worldwide to share in building a sustainable tomorrow.



# Action Plan

Creating an action plan will require a holistic approach. All aspects of university operations should be involved. Operations, academic research, campus operations, and community outreach.

Steps we will consider:



# Race to Zero Carbon

Currently, the university only reports the carbon footprint from the energy use of the whole campus. The measurement was based on a standard developed by our faculty from studies done in the Interdisciplinary Research Center for Renewable Energy and Power Systems. 232,411.7 metric tons of Carbon measured. The university is planning to measure its carbon footprint from different sources (e.g. transportation, agriculture, and construction). In 2023, the university joined the [Race to Zero](#) campaign as a Signatory and we are planning to reach zero emissions by implementing the following plan:

- **2025: Energy efficiency measures and net greenhouse emissions reductions.**

The university has implemented a variety of strategies to reduce energy consumption and generate energy from renewable sources. [A plan was developed](#) to upgrade existing buildings and any new structure that will be constructed on campus to achieve high energy efficiency. All old buildings will have LED lights installed and light sensors to reduce the use of electric power, and also all small buildings like (bus stations, mosques, and security buildings) will be powered by solar panels. Moreover, greenhouse gas emissions on campus to be reduced by 25%.

- **2030: Achieve 50% renewable energy usage.**

KFUPM administration will launch a green initiative to substantially reduce carbon emissions by establishing its own microgrid power network that is significantly supplied by a mix of renewable energy resources. The administration has been advised that installing 80 MW of renewable energy should help KFUPM to meet at least 50% of its electricity needs in 2030 from clean sources. Also, all new buildings will operate at net zero carbon, and public transportation inside the campus will be provided by Electric vehicles and implement a zero-waste campus plan. Moreover, greenhouse gas emissions on campus to have a reduction of 50%.

- **2040: Achieve 100% renewable energy usage**

Expand the microgrid power network by significantly increasing the size of the renewable energy this new farm could be established outside KFUPM's main campus in KFUPM beach which ensures that this expansion should meet KFUPM's full electricity demand. Moreover, greenhouse gas emissions on campus is expected to have a reduction of 75%.

- **2050: Fossil fuel free by 2050.**

KFUPM's long-term goal is to be fossil fuel free by 2050, which means using renewable sources to operate and maintain KFUPM's campus. To do that, KFUPM's electricity supply will be 100% renewable and all vehicles and transportation will operate without fossil fuel. Also, the procurement of external services or activities should rely on as little fossil fuel as possible. Moreover, greenhouse gas emissions on campus is expected to reduce by 100%.

- **2060: Achieving carbon neutrality aligning with the Kingdom goal.**

KFUPM's long-term goal is to be carbon neutral by 2060, which means applying measures to eliminate various carbon emissions on the campus like:

- Eliminate direct emissions: emissions from facilities within the campus.
- Eliminate energy indirect emissions: emissions from electricity or water consumed.
- Eliminate other indirect emissions from commuting and business travel, transportation of materials, people, or waste.

This will be done by adopting smart technologies and achieving 100% renewable energy usage.



# Measures Toward Affordable and Sustainable Energy

Energy conservation has tangible effects that show results in various aspects of life, such as the economy, the environment, the individual, and society. For this reason, the university has sought to launch many initiatives and campaigns to rationalize energy consumption and renewable energy projects.

Interdisciplinary Research Center for Renewable Energy and Power Systems (IRC-REPS) KFUPM designed and implemented a training and awareness program - energy efficiency education, training, and short courses, focusing on energy savings resulting from changes in individual or organizational behavior and decision-making. IRC-REPS has made immense efforts to create awareness and training related to energy efficiency for the community both within and outside the organization. The training was delivered to KFUPM high school students, Asala College, and Dammam University. Moreover, the Center for Environment and Marine Studies (CEMS) serves in the kingdom in research areas related to the environment and water. For more than four decades, CEW has been in the lead, supporting the oil and gas industry by conducting numerous environmental impact assessments (EIA) and monitoring related projects. CEW also provides consultation work to various governmental and private entities.

