

Shatt Al-Arab University

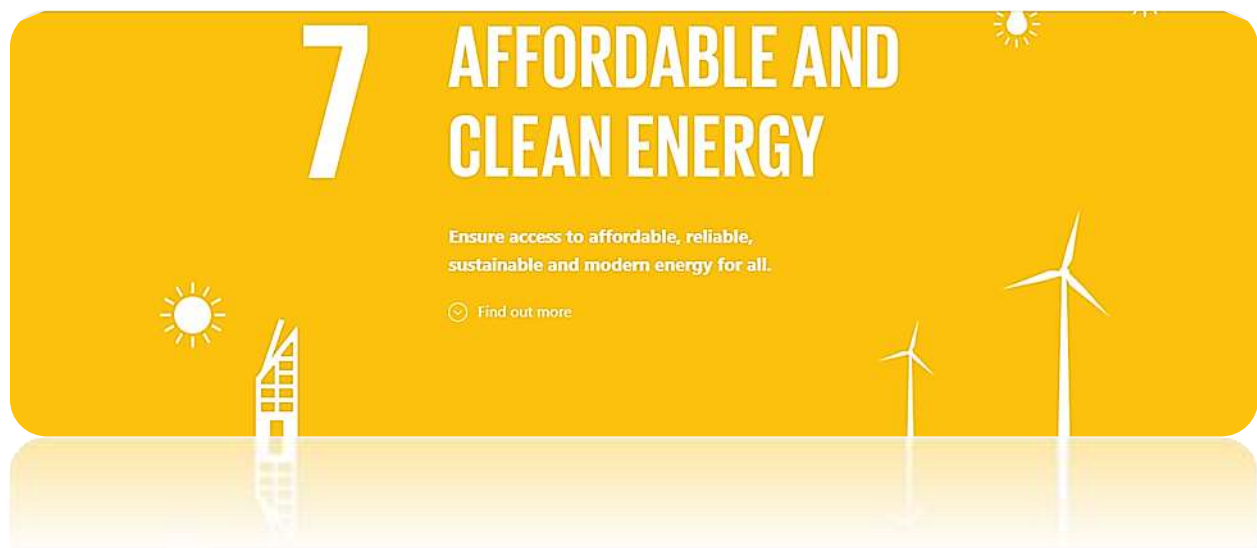


SDG

7

Affordable and
Clean Energy





SDG7-AFFORDABLE AND CLEAN ENERGY

Everyone can help to make sure that we meet the Global Goals. Use these five targets to create action to ensure universal access to sustainable energy.



TARGET 7.2**INCREASE GLOBAL PERCENTAGE OF RENEWABLE ENERGY**

By 2030, increase substantially the share of renewable energy in the global energy mix.

TARGET 7.3**DOUBLE THE IMPROVEMENT IN ENERGY EFFICIENCY**

By 2030, double the global rate of improvement in energy efficiency.

TARGET 7.4**PROMOTE ACCESS TO RESEARCH, TECHNOLOGY AND INVESTMENTS IN CLEAN ENERGY**

By 2030, enhance international cooperation to facilitate access to clean energy research and technology, including renewable energy, energy efficiency and advanced and cleaner fossil-fuel technology, and promote investment in energy infrastructure and clean energy technology.

TARGET 7.5



EXPAND AND UPGRADE ENERGY SERVICES FOR DEVELOPING COUNTRIES

By 2030, expand infrastructure and upgrade technology for supplying modern and sustainable energy services for all in developing countries, in particular least developed countries, small island developing States and landlocked developing countries, in accordance with their respective programmes of support.

ENSURE ACCESS TO AFFORDABLE, RELIABLE,

SUSTAINABLE AND MODERN ENERGY FOR ALL

RESOURCES

Renewable energy solutions are becoming cheaper, more reliable, and more efficient every day. Our current reliance on fossil fuels is unsustainable and harmful to the planet, which is why we have to change

the way we produce and consume energy. Implementing these new energy solutions as fast as possible is essential to counter climate change, one of the biggest threats to our survival.

TAKE ACTION

The work on energy should focus on four areas:

- ➡ Improving understanding of science and the links between energy and the environment.
- ➡ Providing Governments with environmentally sound policy advice.
- ➡ Catalyzing public and private finance for clean energy.
- ➡ Supporting the uptake of clean energy technologies.

THINGS TO DO

- ➡ Governments to improve energy efficiency.
- ➡ Increase the use of renewables in their countries and cities.
- ➡ Aim for sustainable energy approaches.
- ➡ Lay the foundation for resilient and low-emission economies.

PRESERVE YOUR ENERGY

STEP 1	Switch off your appliances at the socket. Turn off the lights when you're not using them.
STEP 2	Turn off your air conditioning, especially for sleeping – open a window or use a fan.
STEP 3	Buy rechargeable electronics. Don't buy or use one-use batteries.
STEP 4	Don't use multiple devices at the same time. Be mindful about this and only several devices when necessary.
STEP 5	Use solar energy sources. Install solar panels in your home for your heating and electricity. Use solar technology – radio, charger, lights etc...

SUSTAINABLE ENERGY, CHALLENGES & OPPORTUNITIES

The objective of achieving sustainable economic/social and ecological growth comes from the UN's definition of sustainable development.

The Target:	Together, we need to provide energy access to billions of people without electricity or clean cooking, double the rate of improvement in energy efficiency,
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	and substantially increase the share of renewables in the energy mix.
The aim:	The work on sustainable energy is designed to improve access to affordable and clean energy for all and help reduce greenhouse gas emissions and the carbon footprint of the energy sector in the region.
Sustainable Development Objectives	Every day, renewable energy options become more affordable, dependable, and effective. We must alter how we create and use energy because our current reliance on fossil fuels is unsustainable and bad for the environment. We must address climate change, one of the greatest challenges to human survival, by implementing these new energy options as soon as feasible.

SUSTAINABLE ENERGY ENGINEERING: A PROMISING

FUTURE

Development of clean and efficient technologies	The field of energy engineering aims to develop new technologies to use energy more efficiently and in cleaner ways, such as energy storage, improved fuel efficiency,
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	and the development of renewable energy sources.
Contribute to sustainability	Energy engineers develop and implement technological solutions that enhance environmental sustainability and reduce harmful emissions, contributing to the protection of the environment and natural resources.
Innovation & scientific research	The study of energy engineering gives the opportunity to participate in innovative research and the development of new technologies, contributing to the progress of society and the improvement of the quality of life.

HOW WOULD YOU DEVELOP YOUR ENERGY

START LEARNING

Discover the World's Largest Lesson and wide-ranging activities and materials. All are designed to motivate young people and inspire them to become informed and active citizens.

START PLANNING

Whether you're a business or employee, at the start of your sustainability journey or developing your next set of commitments, we've got useful resources to support your contribution to the Global Goals.

ECONOMIC ASPECTS OF SUSTAINABLE ENERGY

DEVELOPMENT

To assess the efficacy of wind, solar, and geothermal power, along with other alternatives, the sustainable energy development benefits and demerits of the various types. Moreover, it still provides an overview of various economic benefits of more environmentally friendly resources.

The decision to increase construction capacity hinges on choosing the right time frames. It is widely acknowledged that the time it takes to complete installations is often too long to make direct decisions based on current market observations. Therefore, long-term decisions rely on predictions of future prices, dependent on model-based and other indicators. Accurate information and the construction process itself are crucial factors in determining the price structure in future energy markets, which depends on the market situation.

SUSTAINABILITY PRACTICES IN CLEAN ENERGY

We can review some applications of how to practice sustainability in Iraqi universities in general and Shatt Al-Arab University College in particular through the following three practices:

1. ENERGY EFFICIENT APPLICATIONS USAGE

Shatt Al-Arab University College continues its strong commitment to realizing further energy savings through proactive energy management. All parts of the organization are empowered to assess their energy consumption and realize their energy-saving potential.

Following the successful implementation of our previous initiatives, where all our air conditioners, LCDs, heaters, printers, and fridges were upgraded with inverter technology for enhanced energy efficiency, and over 90% of our lighting transitioned to LED technology, we are proud to announce new advancements for this year:

- **Optimized Inverter Technology:** We are undertaking a comprehensive review and optimization of all existing inverter-equipped appliances (ACs, LCDs, heaters, printers, fridges, and fans) to ensure they are operating at peak energy efficiency, leveraging their smart features for adaptive energy consumption based on usage patterns.
- **Renewable Energy Integration - Phase 1:** We are installing solar panels on select rooftops of the college buildings. This initial phase aims to offset a significant portion of our daytime electricity consumption, particularly for common areas and administrative offices, marking our first step towards renewable energy self-sufficiency.
- **Enhanced Smart Lighting Controls:** While over 90% of our lighting is already LED, we are now implementing dimmable LED systems in key areas, allowing for fine-tuned light levels based on natural light availability and occupancy.

- **Advanced Occupancy and Daylight Harvesting Sensors:** Expanding on our previous success, we are now installing advanced occupancy and daylight harvesting sensors in all classrooms and offices. These intelligent sensors not only detect presence but also measure ambient light, automatically adjusting artificial lighting to supplement natural light only when necessary, further reducing energy waste.
- **Behavioral Change Campaigns:** We are launching a college-wide "Energy Savers Pledge" campaign to encourage all students and staff to adopt energy-saving habits, such as unplugging chargers, turning off lights when leaving rooms, and reporting energy inefficiencies. Educational workshops on personal energy conservation will be regularly conducted.
- **Energy-Efficient Computing Upgrades:** Building on our previous move to all-in-one and LED displays, we are now prioritizing the procurement of "Energy Star" certified desktop PCs and laptops across all new acquisitions and replacements, ensuring that our computing infrastructure is as efficient as possible.

2. SUSTAINABLE ENVIRONMENT

To preserve the environmental sustainability of Basra governorate, an exhibition titled "Innovations in Oil Extraction and Fuel Conversion for Environmental Sustainability" was conducted in by Shatt Al-Arab University College and held at Basra Governorate Building on 06/03/2025. This year, the exhibition was entirely organized and presented by students, under the supervision of their professors,

showcasing various setups and tools designed to meet sustainable environmental goals. A talk titled "Climate Change and its Effects on the Environment" was also part of the exhibition.



3. ENGINEERING APPLICATIONS OF CLEAN AND SUSTAINABLE ENERGY

In March 2025, the college hosted a renewable energy systems workshop, offering hands-on training in the installation and maintenance of small-scale renewable technologies such as residential solar panels and mini-wind turbines. This practical workshop was open to engineering students and local community members, bridging academic learning with real-world application.

In addition, the college launched a new industry initiative on energy efficiency, partnering with a South Refineries Company to provide expert consultation aimed at optimizing energy use in manufacturing processes. This initiative not only supported local industry but also gave students valuable exposure to applied energy solutions in a real-world industrial setting.



4. SUSTAINABLE ENERGY: A PROMISING FUTURE

In 2025, the college took significant steps to engage students in sustainable energy initiatives. In April, it launched the first annual Student Energy Innovation Challenge, inviting students from all faculties to propose creative solutions to local energy challenges. The competition offered seed funding for winning projects, fostering innovation and real-world impact.

Earlier, in February, students established the Sustainable Energy Club, a student-led session aimed at promoting energy awareness, organizing campus-wide sustainability initiatives, and building connections between students and industry professionals. Together, these initiatives highlight

the college's commitment to empowering students in the transition to a sustainable energy future.

