



SDG7 - AFFORDABLE AND CLEAN ENERGY

SDG 7 Affordable and Clean Energy aims to ensure access to affordable, reliable, sustainable, and modern energy for all. Within the framework of this goal, the United Nations prioritizes increasing the share of renewable energy sources, improving global energy efficiency, and promoting investments in clean energy technologies.

By 2030, the United Nations seeks to significantly increase the proportion of renewable energy in the global energy mix, double the global rate of improvement in energy efficiency, and enhance access to clean energy infrastructure, particularly in developing countries. In this context, reducing dependence on fossil fuels, limiting greenhouse gas emissions, and contributing to the fight against climate change are among the primary objectives.

Furthermore, SDG 7 emphasizes minimizing the environmental impacts of energy production and consumption, supporting low-carbon and innovative energy technologies, and expanding sustainable energy solutions through cooperation among public institutions, the private sector, and academia. The development of energy efficiency policies and the promotion of awareness-raising activities aimed at encouraging sustainable energy use across all segments of society are also considered integral components of this goal.

Within this framework, Üsküdar University's activities related to the SDG 7 label are presented below.

7.2.1 - Does your university as a body have a policy in place for ensuring all renovations / new builds are following energy efficiency standards? (relevant standards to be indicated)

Üsküdar University follows national energy efficiency policies, government guidelines, and strategic plans, and has clearly articulated its commitments to energy efficiency in its 2024–2028 Strategic Plan. This plan emphasizes the efficient use of energy resources, the promotion of environmental awareness, investments in sustainable energy sources, and the reduction of reliance on fossil fuel-based energy systems to limit carbon emissions.

The university ensures that all new construction and renovation projects comply with the legal and technical requirements established by local municipalities, particularly the standards set by the Üsküdar Municipality with regard to environmental sustainability, climate considerations, and energy efficiency. Close coordination and collaboration with local authorities are maintained to ensure that building activities align with these principles and support sustainable urban development.

In addition, Üsküdar University has established a Sustainability Coordination Office to monitor, support, and promote all activities related to the Sustainable Development Goals, including those focused on energy efficiency, supported by published institutional policies and guidelines.

Link1:https://enerji.gov.tr/Media/Dizin/BHIM/tr/Duyurular/T%C3%BCrkiyeninEnerjiVerimlili%C4%9Fi2030StratejisiVeUlusalEnerjiVerimlili%C4%9FiEylemPlan%C4%B1_202401161407.pdf

Link2:<https://www.mevzuat.gov.tr/mevzuat?MevzuatNo=5627&MevzuatTur=1&MevzuatTertip=5>

Link3:<https://uskudar.edu.tr/en/icerik/8342/energy-efficiency-at-work-at-home-on-the-road>

Link4:<https://uskudar.edu.tr/assets/uploads/sayfa/526/file/uskudar-universitesi-stratejik-plan-2024-2028.pdf>



Link5:[https://www.uskudar.bel.tr/userfiles/files/S%C3%BCrd%C3%BCr%C3%BClebilir%20Enerji%20ve%20I%CC%87klim%20Deg%CC%86is%CC%A7iklig%CC%86i%20Plan%C4%B1%20\(2023-2030\).pdf](https://www.uskudar.bel.tr/userfiles/files/S%C3%BCrd%C3%BCr%C3%BClebilir%20Enerji%20ve%20I%CC%87klim%20Deg%CC%86is%CC%A7iklig%CC%86i%20Plan%C4%B1%20(2023-2030).pdf)

Link6:<https://vizyon2050.uskudar.bel.tr/temalar/cevre>

Link7:<https://atolyeuskudar.com/category/cevre/>

Link8:<https://uskudar.edu.tr/assets/uploads/sayfa/18/file/uskudar-universitesi-surdurulebilirlik-koordinatordugu-yonergesi.pdf>

Link9:<https://cdn.kalite.uskudar.edu.tr/content/files/surdurulebilirlik-politikasi-251006044428.pdf>

7.2.2 - Does your university as a body have plans to upgrade existing buildings to higher energy efficiency?

Üsküdar University's 2024–2028 Strategic Plan positions energy efficiency as a key element of its overall sustainability strategy. The objective of achieving LEED certification reflects the university's commitment to international green building standards, ensuring that both existing and new buildings are designed and upgraded for higher energy performance. The inclusion of the measurable indicator "PG5.4.1 Energy Efficiency Investment (TL)" demonstrates that these goals are supported by concrete financial planning and practical implementation.

In line with this strategy, the university increases energy efficiency in new buildings through the use of high-insulation materials and window systems. Solar Power Plant (SPP) projects established on campus generate 392,827 kWh of electricity annually, providing an 18% reduction in total energy consumption. In addition, feasibility studies for new solar power installations have been completed, with solar-powered lighting and camera systems already in operation in designated areas.

Link 1: <https://uskudar.edu.tr/assets/uploads/sayfa/526/file/uskudar-universitesi-stratejik-plan-2024-2028.pdf>

Link 2: <https://uskudar.edu.tr/en/new/uskudar-university-is-at-the-top-of-turkiyes-green-universities/57821>

Link 3: <https://uskudar.edu.tr/haber/surdurulebilirlik-ve-dijitallesme-odakli-5inci-vizyon-toplantisi-gerceklesti/44351>

Link 4: <https://sdg.uskudar.edu.tr/>

7.2.3 - Does your university as a body have a process for carbon management and reducing carbon dioxide emissions?

Üsküdar University monitors its carbon footprint and implements energy-saving measures in order to minimize greenhouse gas emissions. With the "Directive on Smoke-Free Campus Practices," which entered into force in 2022, smoke-free air policies have been implemented and are still actively maintained across the campus. In order to strengthen social responsibility and community engagement, smoke-free campus objectives have been incorporated into the 2024–2028 Strategic Plan within the framework of efficient use of energy resources and the promotion of environmental awareness. In



addition, the university has adopted hybrid engine technology for its internal vehicle fleet, thereby reducing fossil fuel consumption and carbon dioxide emissions.

Link 1: <https://uskudar.edu.tr/assets/uploads/sayfa/18/file/dumansiz-kampus-uygulamasi-yonergesi.pdf>

Link 2: <https://cdn.kalite.uskudar.edu.tr/content/files/dumansiz-hava-sahasi-politikasi-251009025526.pdf>

Link 3: <https://cdn.kalite.uskudar.edu.tr/content/files/uskudar-universitesi-surdurulebilirlik-raporu-2023-2024-egitim-ogretim-yili-251002053806.pdf>

7.2.4 - Does your university as a body have an energy efficiency plan in place to reduce overall energy consumption?

Üsküdar University is committed to improving energy efficiency and sustainability across all campuses through a combination of technological upgrades, operational controls, and institutional policies. Energy consumption is reduced through measures such as the installation of 14,667 LED lighting units, automatic shut-off programming of smart boards, and the removal of high-energy-consuming electric heaters. Regular inspections, maintenance of elevators, pumps, generators, and air-conditioning systems, as well as preventive technical monitoring, are carried out to avoid unnecessary energy use and emissions.

The university also conducts internal audits through dedicated commissions and administrative units, systematically reporting outcomes and developing action plans aligned with national energy efficiency policies. These guidelines are shared across academic and administrative units to ensure institution-wide participation in sustainable energy management.

As a concrete example of applied energy efficiency, Üsküdar University Health Campus Energy Efficiency Flow Diagrams demonstrate the use of an automated hot water production system in which solar collectors, condensing natural gas boilers, and electric heaters operate autonomously in staged scenarios based on demand, season, and predefined schedules, ensuring optimized energy use.

In addition, within the framework of the Climate Change Mitigation Strategy and Action Plan (İDASEP), the university contributes data and reports to the Higher Education Council, supporting national efforts to reduce carbon emissions and promote sustainable transformation in higher education.

Link 1: <https://uskudar.edu.tr/assets/uploads/sayfa/18/file/uu-kalite-gelistirme-ve-guvencesi-yonergesi.pdf?1>

Link 2: <https://uskudar.edu.tr/assets/uploads/sayfa/18/file/uskudar-universitesi-surdurulebilirlik-koordinatorlugu-yonergesi.pdf>

Link 3: <https://uskudar.edu.tr/sbe/kalite-programi-kalite-guvence-sistemi>

Link 4: [https://iklim.gov.tr/db/turkce/icerikler/files/%C4%B0klim%20De%C4%9Fi%C5%9Fikli%C4%9Fi%20Azalt%C4%B1m%20Stratejisi%20ve%20Eylem%20Plan%C4%B1%20\(2024-2030\).pdf](https://iklim.gov.tr/db/turkce/icerikler/files/%C4%B0klim%20De%C4%9Fi%C5%9Fikli%C4%9Fi%20Azalt%C4%B1m%20Stratejisi%20ve%20Eylem%20Plan%C4%B1%20(2024-2030).pdf)



Link 5: <https://uskudar.edu.tr/sifir-atik-belgelerimiz>

7.2.5 - Does your university as a body undergo energy reviews to identify areas where energy wastage is highest?

Within our university, authorized units conduct inspections and prepare reports to identify areas with the highest levels of energy waste. The findings are presented to the senior management, enabling the implementation of necessary energy-saving measures. University staff are also informed about these efforts and are made aware of their individual responsibilities within the scope of energy conservation practices.

Üsküdar University has signed an “Environmental Management Consulting Agreement” with an authorized consulting firm to ensure that activities are carried out in compliance with environmental regulations, environmental impacts are monitored, and ecosystems are protected on its campuses. Under this agreement, environmental management services are regularly performed, environmental performance reports are prepared, and necessary improvement measures are implemented.

Link 1: <https://cdn.kalite.uskudar.edu.tr/content/files/uskudar-universitesi-surdurulebilirlik-raporu-2023-2024-egitim-ogretim-yili-251002053806.pdf>

7.2.6 - Does your university as a body have a policy on divesting investments from carbon-intensive energy industries especially coal and oil?

Üsküdar University does not hold any investments in carbon-intensive energy industries. Instead, the university actively invests in solar energy systems to reduce the use of fossil fuels across its campuses and buildings, thereby supporting the transition toward cleaner and more sustainable energy sources.

In addition, Üsküdar University has entered into a formal agreement for the conversion of waste cooking oil generated on campus into biodiesel, contributing directly to the use of renewable energy sources. The university has contracted Kolza Biodiesel, a company licensed by the Turkish Energy Market Regulatory Authority (EPDK) under a Biodiesel Processing License that authorizes biodiesel production activities for a period of twelve (12) years starting from 2016.

This license provides definitive and verifiable evidence that 770.00 kilograms of waste oil collected from the university cafeterias in 2024 are legally processed and converted into biodiesel, a renewable energy source, rather than being disposed of as waste. The conversion of waste oil into biodiesel contributes to environmental protection by preventing soil and water pollution and supports the transition to renewable energy by reducing fossil fuel consumption and helping to mitigate climate change.

Link 1: <https://www.kolza.com.tr/biodizel.asp>

7.3 Energy use density

Total energy used 27.396 GJ

University floor space 170.395 m²



7.4.1 - Does your university as a body provide programmes for local community to learn about importance of energy efficiency and clean energy?

In 2024, Üsküdar University placed strong emphasis on media engagement, seminars, and community outreach activities at both local and national levels to promote awareness of energy efficiency and clean energy. University academics shared expert opinions in national media on topics such as the use of clean energy, combating climate change, proper use of energy-efficient devices, and energy security in electric vehicles.

In addition, the university reached diverse segments of society through informative content published on its official website, providing guidance on energy conservation, renewable energy sources, and environmentally friendly technologies. The academic events and public awareness activities carried out demonstrate the university's commitment to promoting an environmentally responsible and sustainable energy approach across the wider community.

Link 1: <https://uskudar.edu.tr/haber/turkiye-enerji-ve-ekonomik-ihityaclarini-dikkate-alan-bir-yaklasimi-temsil-etti/43850>

Link 2: <https://uskudar.edu.tr/haber/hirosimaya-atilan-bombanin-40-milyon-kati-enerjiye-sahip/43509>

Link 3: <https://uskudar.edu.tr/haber/yapay-zekayi-sogutmada-kullanilan-su-cevre-acisindan-endise-veriyor/44571>

Link 4: <https://uskudar.edu.tr/haber/kendi-kendini-programlayan-dusuk-enerji-ile-calisan-noromorfik-bilgisayarlar-geliyor/44653>

Link 5: <https://uskudar.edu.tr/haber/uskudar-universitesi-turkiyenin-yesil-universiteleri-arasinda-ust-siralarda/57812>

Link 6: <https://uskudar.edu.tr/haber/klimalarin-bakimi-hayati-onem-tasiyor/48373>

Link 7: <https://www.aa.com.tr/tr/gundem/elektrikli-araclarin-yaydigi-radyasyon-ongorulen-limitlerin-altinda-cikti/3333253>

Link 8: <https://uskudar.edu.tr/haber/elektrikli-araclarin-yaydigi-radyasyon-ongorulen-limitlerin-altinda-cikti/56907>

Link 9: <https://www.milliyet.com.tr/gundem/kullanmiyorsan-fisi-prizden-cek-7062813>

7.4.2 - Does your university as a body promote a public pledge toward 100% renewable energy (petitions, meetings, discussions, events) beyond the university?

Üsküdar University continues to support public commitments toward renewable energy at both local and international levels. By extending awareness, education, and research activities on sustainable



energy solutions beyond the university, the institution encourages broad societal engagement in line with the goal of achieving 100% renewable energy.

Within this framework, renewable energy-focused projects were promoted during the 9th edition of the Science and Ideas Festival, where high school students' projects on solar energy, nanomaterials, and energy transformation were recognized and awarded. These activities played an important role in motivating younger generations to engage with clean energy technologies.

In addition, students participated in visits to the Turkish Energy and Nuclear Research Institute (TENMAK), where awareness-raising activities were conducted on the future of energy technologies, clean energy policies, and safe energy use. University faculty members, particularly through youth-oriented events, emphasized the importance of renewable energy sources in combating the climate crisis and contributed to increasing public awareness.

Throughout this process, Üsküdar University strengthened collaborations with public institutions and non-governmental organizations, supporting energy transition initiatives with scientific knowledge and actively contributing to the promotion of public commitments toward renewable energy.

Link 1: <https://uskudar.edu.tr/haber/9-bilim-ve-fikir-festivalinde-derece-giren-projeler-umut-vaat-ediyor/48173>

Link 2: <https://uskudar.edu.tr/haber/nukleer-teknoloji-ve-radyasyon-guvenligi-ogrencileri-tenmaki-ziyaret-etti/44691>

Link 3: <https://uskudar.edu.tr/haber/prof-dr-ibrahim-ozdemir-new-york-genclik-meclisi-programinda-mizani-anlatacak/48430>

7.4.3 - Does your university as a body provide direct services to local industry aimed at improving energy efficiency and clean energy (energy efficiency assessments, workshops, research renewable energy options)

Üsküdar University has strengthened its applied research capacity in the fields of energy efficiency and clean energy by developing direct collaborations with local industry. Through these partnerships, the university provides practical research, measurement, and consultancy services that support the industrial transition toward sustainable energy systems.

The Power and Machines Laboratory, established within the Department of Electrical and Electronics Engineering, enables both academic and industrial research on renewable energy systems, energy management, and electromagnetic field measurements. The laboratory offers services to industrial partners including electromagnetic environmental impact assessments, energy measurements, and project-based technical consultancy. In addition, graduate-level research conducted within the laboratory focuses on the economic and environmental analyses of energy systems.

The university is directly involved in projects related to wind power plant development, electromagnetic field measurement and simulation studies, smart grid management, and energy efficiency assessments, facilitating effective knowledge transfer to industry. Outcomes of these projects include contributions to sustainable energy production and healthy living environments, scientific support for wind power plant installation reports, electromagnetic pollution analyses in buildings, electromagnetic compatibility



(EMC) solutions for electronic device manufacturers, and electromagnetic radiation measurement and reporting services within the scope of occupational health and safety.

Link 1: <https://uskudar.edu.tr/mdbf/elektrik-elektronik-muhendisligi-laboratuvarlari>

Link 2: <https://tez.yok.gov.tr/UlusalTezMerkezi/tezSorguSonucYeni.jsp>

Link 3: <https://uskudar.edu.tr/en/academic-staff/hamza-abunima>

Link 4: <https://uskudar.edu.tr/tto/uploads/site/30/content/files/2024-faaliyet-sunumu.pdf>

Link 5: <https://cdn.uskudar.dev/site/1/content/files/elektromanyetik-dalga-yayilim-paketi-gelistirilmesi-ve-elektromanyetik-olcum-verileri-ile-karsilastirilmesi-250903094438.pdf>

7.4.4 - Does your university as a body inform and support government in clean energy and energy-efficient technology policy development?

Üsküdar University organizes meetings, academic events, and produces scientific publications led by its academic staff to support policy development in the fields of clean energy and energy-efficient technologies. The university's Application and Research Centers contribute to policy-making processes by conducting scientific studies on clean energy, energy efficiency, electromagnetic environmental management, and sustainable technologies, providing evidence-based input for public institutions and relevant stakeholders.

The Electromagnetic Research Group carries out research on electromagnetic field propagation, exposure analysis, and environmental impact assessments related to renewable energy systems, offering technical reporting and scientific guidance to public authorities. The Artificial Intelligence and Smart Systems Application and Research Center (YAZAMER) focuses on developing intelligent systems and data analytics solutions that enhance energy efficiency, while the Medical Radiation Application and Research Center (ÜSMERA) indirectly contributes to energy technology policies through its work on nuclear energy technologies and radiation safety.

Furthermore, through national congresses, scientific meetings, and outreach activities such as the Science and Ideas Festival, the university brings the ethical, sustainability, and societal dimensions of clean energy policies to the forefront, raising awareness among young people and the wider public. The Sustainability Coordination Office strengthens this role by implementing renewable energy practices across the campus, increasing energy generation through solar panels, and promoting a transition away from carbon-intensive energy sources. Collectively, these activities demonstrate Üsküdar University's active contribution to the development and promotion of energy efficiency and clean energy policies for public institutions and society at large.

Link 1: <https://uskudar.edu.tr/en/application-and-research-centers>



Link 2: <https://uskudar.edu.tr/elektromanyetik-arastirma-grubu>

Link 3: <https://bilimvefikirfestivali.com/2024/on-degerlendirme-sonuclari>

Link 4: <https://uskudar.edu.tr/haber/9-bilim-ve-fikir-festivalinde-liseli-gencler-projeleriyle-yaristi/48029>

7.4.5 - Does your university as a body provide assistance for start-ups that foster and support a low-carbon economy/technology?

Üsküdar University provides institutional and structural support to start-ups in order to foster the development of low-carbon economies and sustainable technologies. Through its Technology Transfer Office, incubation centers, and entrepreneurship units, the university offers start-ups access to office spaces, mentoring, research and laboratory infrastructure, project development support, funding opportunities, and commercialization pathways. These support mechanisms encourage the growth of enterprises working on low-carbon technologies, energy efficiency solutions, clean production systems, and digital innovations.

The start-ups supported by the university primarily operate in the fields of health, biotechnology, software, and digital technologies. Through remote service models, smart systems, and resource-efficient solutions, these initiatives contribute indirectly to the reduction of carbon emissions. In addition, the university promotes the development of clean energy and low-carbon technologies through research and development activities and patent-driven innovation.

Furthermore, applied research projects conducted within the university address areas such as the environmental impact assessment of renewable energy systems, energy transformation technologies, and safe energy system design. These activities support the scientific advancement of sustainable energy solutions and demonstrate Üsküdar University's commitment to supporting start-ups that contribute to a low-carbon economy and energy-efficient technologies.

Link 1: <https://uskudar.edu.tr/tto/>

SIRA	GİRİŞİM ADI	GİRİŞİMCİ ADI		Ö.K./K.	OFİS TÜRÜ
1	Alcago	Alihan Marulcu	REKLAM/YAZILIM	K	KAPALI OFİS
2	HİDNA	Cihan TAŞTAN	BİYO TEK	K	KAPALI OFİS
3	Ung Sağlık Teknoloji Ürünleri ve Hizmetleri LTD.	Hacer Fulya Üçem	ÇENE EKLEM APARATLARI	K	KAPALI OFİS
4	Rejenerasyon	Sedat BALCIOĞLU	BİYO TEK/İLAÇ/GIDA TAK	K	KAPALI OFİS
5	EBEBUL	Tuğba Yılmaz ESENCAN	YAZILIM	K	AÇIK OFİS
6	Dalen Pharma Kozmetik ve İlaç San.Tic.LTD.	Emrullah Dalmış	KOZMETİK	K	AÇIK OFİS
7	META-TIP	Mustafa ŞANVERDİ	TIP TEKNOLOJİLERİ	Ö.K.	AÇIK OFİS
8	Codeg	Gülfer YOLAY	BİYO TEK.	K	KAPALI OFİS
9	Neomx	Tahsin Eren Efe Erdemci	GIDA TAK. KOZMETİK İLAÇ	K	KAPALI OFİS
10	Markatim	Mert Ege Ceren	YAZILIM	K	AÇIK OFİS
11	Prinot	Mehmet Kaan İldiz	TASARIM	K	KAPALI OFİS
12	Beezsoft	Günalp Uysal	YAZILIM	K	AÇIK OFİS
13	ADAXy Teknoloji	Aksel Deniz Akgül	YAZILIM	K	KAPALI OFİS
14	Neuromarketing Laboratory	Selami Varol	YAZILIM/PAZARLAMA	K	AÇIK OFİS



Başvuru No	Başvuru Tarihi	Koruma Tipi	Başvuru Sahibi	Buluş Sahipleri	Buluş Başlığı	Bölüm
2024/001896	16.02.2024	Patent	T.C ÜSKÜDAR ÜNİVERSİTESİ	Dr. Öğr. Üyesi IHAB ELAFF	Uzaktan kumandalı insansız su altı aracı.	MDBF
2024/004003	4/1/2024	Patent	T.C ÜSKÜDAR ÜNİVERSİTESİ	Dr.Öğr. Ayhan Özşahin Kaan Özşahin	İnsansız su altı koruma aracı	Tıp Fakültesi
2024/011229	8/26/2024	Patent	T.C ÜSKÜDAR ÜNİVERSİTESİ	Öğr.Gör. Kübra Akkalay Öğr.Gör. Dilek Aker	GAZ YOĞUNLUĞU TESPİTLİ RENKLİ UYARI CİHAZI	SHMYO

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7.5 – Low-carbon energy use

Total energy used in Gigajoule (GJ) for the year 2024- 27,396 Gigajoules (GJ).

Energy used from low-carbon sources in 2024 - 1,414 Gigajoules (GJ).