

## **GAZIANTEP UNIVERSITY SUSTAINABILITY REPORT, 2021**





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#### 1. INTRODUCTION

Higher education in Gaziantep started in 1973 with the Department of Mechanical Engineering of Middle East Technical University, which gained the legal entity of a university in 1987. Gaziantep University is at the forefront of scientific publication rankings among universities in Turkey. Keeping up with the information age, transforming knowledge into production and creating the structure to adapt to emerging technology, scientific, technological, cultural, artistic, sport, production, communication and interaction through educational and research-development functions, and raising Turkish society to the level of contemporary civilizations are the main



aims of our university. Gaziantep University, where education is carried out in a peaceful and safe environment, has adopted the basic principle of offering the best social and academic services to our country's youth with the "From Tradition to the Future" motto.

## [1] Setting and Infrastructure (SI)

#### 1.3. Number of Campus Sites



Gaziantep University Main Campus



Gaziantep University Islahiye Economics and Administrative Sciences



Gaziantep University Nizip Education Faculty



Gaziantep University Oğuzeli Vocational School



Gaziantep University Araban Vocational School



Gaziantep University Nurdağı Vocational School



Gaziantep University Naci Topçuoğlu Vocational School



Gaziantep University Nizip Vocational School



Gaziantep University Islahiye Vocational School

#### Other Faculties and Vocational Schools

#### **Islahiye Faculty of Economics and Administrative Sciences**

Indoor Area: 6.125 m2 (20 Classrooms, 2 Laboratories, 1 Library, 250-Person Conference Hall, 42 Offices)

Total Campus Area: 188.753 m2

In İslahiye Faculty of Economics and Administrative Sciences, there are Economics, Business Administration, Public Administration and International Relations Departments, 131 students in the active Economics Department, 67 students in the Business Department, 214 students in the Public Administration Department. In İslahiye Faculty of Economics and Administrative Sciences, there are 1 Professor, 1 Associate Professor, 12 Doctor Lecturers, 7 Lecturers and 1 Research Assistant. There are 1 faculty secretary, 1 department director, 4 officers, 3 permanent workers (office personnel), 5 permanent workers (servant) personnel, totally 14 people.

#### **Nizip Education Faculty**

Gaziantep University Nizip Faculty of Education, within the indivisible integrity of the State of the Republic of Turkey with its country and nation, has acquired basic knowledge and skills with the universal and self-values of the 21st century, has gained basic knowledge and skills with the understanding of teaching required by the age, knows different teaching methods and techniques, produces and implements knowledge in its field, follows the world, and prepares teachers who produce scientific solutions with academic perspective to the problems related to education of the country and its region. Our faculty was established in the 2011-2012 academic year and continues its educational activities (around Samandöken Village of Nizip District) since the 2011-2012 academic year. Since its opening, a new training building, new libraries, cafeterias, classrooms and offices of 350 people have been established in the campus. In addition, Nizip district, where the campus is located, is a modern district with its social life, cultural and social activities with a central population of over 150,000.

Our campus area consists of two separate buildings on an open area of 710.856 square meters and a closed area of 6240 square meters.

Our faculty has a total of 27 academic staff members. There are 1 Prof. Dr, 8 Assoc. Prof. Dr, 15 Dr. Lecturer, 1 Instructor, 2 Research Assistants.

In our faculty, 1 Faculty Secretary, 4 Computer Operators, 1 Officer, 1 Protection and Security Officer, 1 Staff are working.

#### **Oğuzeli Vocational School**

Gaziantep University Oğuzeli Vocational School was established in Gaziantep province Oğuzeli district on 24.12.2002 with the decision of the Higher Education Executive Board. Educational activities continue in 5 departments of the Vocational School and, accordingly, 10 programs in I. Education (daytime).

Computer Technologies, Accounting and Tax, Management and Organization Departments were opened within the body of our Vocational School, which was established by the Higher Education Executive Board Decision dated 24.12.2002 under Gaziantep University. The Property Protection and Security Division was established in 2009, and the Transportation Services Division was established in 2010.

There are Computer Programming in the Computer Technology Department, Accounting and Tax Applications in the Accounting and Tax Department, Business Management in the Management and

Organization Department, and Private Security and Protection Program in the Property Protection and Security Department.

In 2011, the Postal Services Program was opened in the Transportation Services department, but no students have been admitted yet. In 2011, the Justice Program under the Law Department, and the Occupational Health and Safety Program within the Property Protection and Security Department were launched in 2012.

In 2017, students were admitted to the Social Security Program within the Property Protection and Security Department, and education activities were started. On 12.04.2018, he started his education activities by taking students to the Criminal Execution and Security Services Program within the Law Department.

As of the end of 2020, 1460 students continue their education in our Vocational School. There are 1 professor, 8 Dr. Lecturer, 19 Lecturers, in total, 28 Academic staff in our campus.

Oğuzeli Campus

Open area: 19.834,94 m<sup>2</sup> Indoor area: 5.650,00 m<sup>2</sup>

#### **Araban Vocational School**

Gaziantep University Araban Vocational School was established by the decision of the Higher Education Board dated 30 June 2009. In the 2010-2011 academic year, the Department of Crop and Animal Production started education with the Organic Agriculture Program.

In our Vocational School; Crop and Animal Production Department, Organic Agriculture, Veterinary Department, Laboratory and Veterinary Health and Child Care and Youth Services Department, Child Development Programs are active and open to student admission.

In addition, Crop and Animal Production Department, Plant Protection and Computer Use Department, Information Management Program has been opened and it is passive in YÖKSİS.

Araban Vocational School, Soil Analysis Application and Research Laboratory carries out soil analysis with the authority it received on 23.07.2018.

#### Indoor area:

3.600 m<sup>2</sup> (9 Classrooms, 2 Computer Laboratories, 4 Laboratories, 41 Offices, 1 Library, 1 Meeting Room for 30 persons, 110-Person Conference Hall, 1 Dining Hall, 1 Cafeteria)

#### **Total Campus Area:**

12.231 m<sup>2</sup> (There is an application area of 6.000 m<sup>2</sup> in the school garden.)

#### **Nurdağı Vocational School**

Our Vocational School was established on April 22, 2009 in accordance with the Higher Education Law No. 2547. Nurdağı Vocational School is located in Nurdağı district centre and continues its educational activities with 5000 m2 open area and 2100 m2 closed area.

There is a modern greenhouse of 5000 m2 to be used in research and development activities on the 471 decare application area of our school. In addition, all equipment used in agricultural activities is available and our students are offered the opportunity to apply in the field.

The main purpose of our school is to be a specialized vocational school and to train qualified intermediate staff for the agriculture and livestock sector in this direction. In addition, our school aims to

lead the cultivation of agricultural products with high added value in the region, to bring different products to the regional economy and to conduct research and development activities in this direction.

Our school still has 2 departments and 3 programs actively.

These:

- 1- Plant and Animal Production Department
- Medicinal Aromatic Plants Program
- Organic Agriculture Program
- 2- Park and Garden Plants Department
- Landscape and Ornamental Plants Breeding Program

#### Naci Topçuoğlu Vocational School

Our school in Gaziantep 2. Organized Industrial Zone has a closed area of 10.535m² built on a 31.349,77m² area. As of 2019, Naci Topçuoğlu Vocational School has 34 academic staff, 7 general administrative services staff, 1 technical staff, 2 services staff and 19 permanent workers. In the 2007-2008 academic year, it started education by taking students to Plastic Technologies and Carpet Weaving Programs.

The school continues its education and training in a total of 14 programs including Architectural Decorative Arts, Textile and Carpet Machines, Machine program, Shoe Design and Production, Office Management and Executive Assistant, Foreign Trade, Food Technology, Carpet and Rug Making, Business Management, Logistics, Accounting and Tax Applications, Flour and Bakery Products Technology, Chemical Technology, Occupational Health and Safety.

As of the 2019-2020 academic year, 1107 students are studying at the school. In addition, it is thought that the increase of young people in higher education will contribute to the absorption of contemporary and cultural values by the people of the region. Naci Topçuoğlu Vocational School is a first in Turkey, unlike other vocational schools, where the students are taught for a total of 6 semesters. 4 semesters of these period are spent at school and 2 semesters with workplace training in enterprises.

#### **Nizip Vocational School**

Our school was opened in 1997-1998 academic year and continued its activities in the temporary building until 30 June 2008. It was moved to the new service building, which belongs to our university on 01 July 2008. Since the 2008-2009 academic year, the education activity (around Samandöken Village of Nizip District) continues in the new campus area. Our campus area consists of two separate buildings on an open area of 710.856 square meters and an indoor area of 6240 square meters (education building 5250 square meters, administrative building 990 square meters). There are 15 classrooms, 2 computer labs, 1 microbiology and 1 chemistry lab, 2 archive rooms, 1 printing machine room and 2 (male, female) masjids in our school. On the ground floor of the administrative building; there are 1 Multi-Purpose hall, 3 warehouses, and 1 warehouse on the ground floor of the Education building.

#### **İslahiye Vocational School**

İslahiye Vocational School continues its education and training activities with a closed area of 2509 m² in a newly constructed building consisting of a single block, located on a large area and located in the İslahiye Campus of our university. Our school has a library of 40 square meters built by its own means. The section of the books in our library is general and there are 2450 Books in total. There are also 6 desktop computers in the library for students to prepare their assignments.

İslahiye Vocational School is one of the best education institutions in the region with its strong teaching staff, distinguished students and infrastructure facilities. Associate Degree diploma is given in Vocational School. It is arranged on a semester basis in the Vocational School of Education and Training. One academic year consists of fall and spring semesters. If deemed necessary, the summer semester can

also be opened. The semester is 15 weeks long. Education style continues in the form of formal education.

The language of instruction is Turkish. According to the data of 2020, the number of students enrolled in our school is 554.

#### 1.4. Campus Setting

Gaziantep University Main Campus is located in the city centre of Gaziantep city which is located in the South-eastern region of Turkey with a population of 2.110.751. Our students do not have any problems in transportation to the university or from the university to any part of the city. There are minibuses, municipal buses and public buses from almost every district of Gaziantep to the university. There are tram services to the central campus of our university on two separate lines. In addition, there is not much density on these lines and it is possible to reach the city centre in 10 minutes.

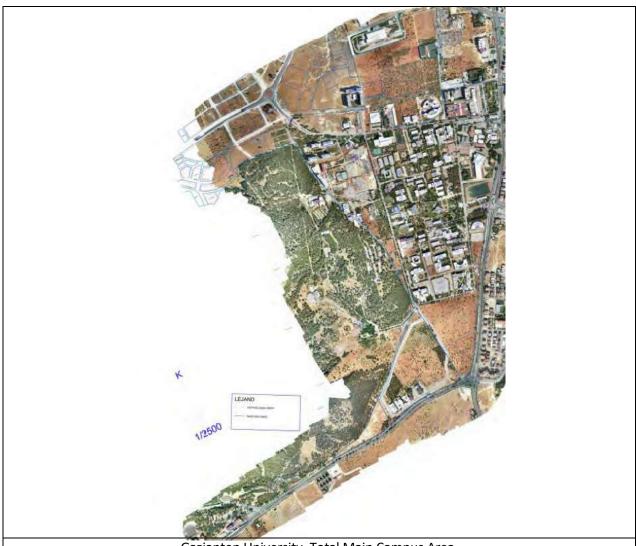






Gaziantep University, Gaziantep/Turkey

## 1.5. Total Campus Area (meter²)



Gaziantep University, Total Main Campus Area







Nurdağı Vocational School

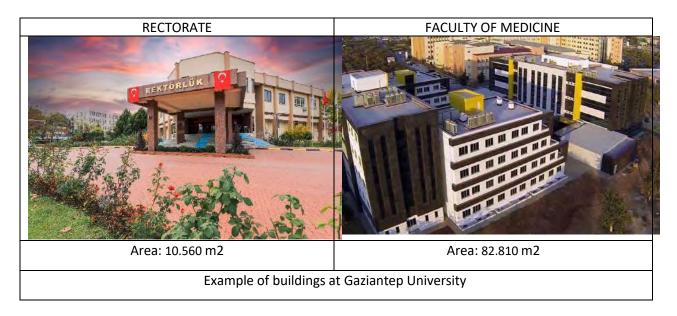


#### **Description:**

Main Campus area: 1.636.682,25 m2

Total area including other campuses: 3062276,49 m2

## 1.7. Total campus buildings area



#### **Description:**

| Table 1.2. Distribution of Gaziantep University Indoor Areas *   |            |  |  |  |
|--|------------|--|--|--|
| CAMPUS NAME  | TOTAL (m²) |  |  |  |
| Main Campus  | 460,604.00 |  |  |  |
| Oncology Hospital  | 8,182.00   |  |  |  |
| Naci Topçuoğlu Vocational School   | 10,535.00  |  |  |  |
| Oğuzeli Vocational School  | 5.650,00   |  |  |  |
| Nurdagi Vocational School  | 2.100.00   |  |  |  |
| İslâhiye Vocational School (3810 m2) + G.U. İslahiye Faculty of Economics and Adm. Sciences (5650 m2) + Student cafeteria (500 m2) | 9.960.00   |  |  |  |
| Araban Vocational School   | 3.600.00   |  |  |  |
| Nizip Vocational School (6250)+ G.U. Nizip<br>Education Faculty (5650 m2) + Student cafeteria<br>(500 m2)                          | 12.400.00  |  |  |  |
| TOTAL  | 513,031.00 |  |  |  |

<sup>\*\*</sup> To Main Campus; Cenani Mansion 1=707 m², Cenani Mansion 2 = 530 m² closed areas are also included.

| Table 1.3. Distribution of Indoor Spaces by S  | ervice Areas *(m²) |
|--|--------------------|
| UNITS  | TOTAL              |
| ADMINISTRATIVE UNITS   |                    |
| RECTORATE  | 4.200.00           |
| ENGINEERING FAC. DEAN.   | 1.663.00           |
| FACILITY MANAGEMENT MANAGEMENT+WORKSHOP= 3600 M2 BUILDINGS+VEHICLE MANAGEMENT MANAGEMENT+HEATPLANT | 11,194,00          |
| D. DEPARTMENT OF INFORMATION TECHNOLOGIES  | 3.500.00           |
| DIRECTORATE OF HEALTH AND CULTURE, FINANCE   | 2.100.00           |
| LIBRARY AND DOCUMENTATION  | 6.910.00           |
| ADMINISTRTIVE AND FINANCIAL MANAGEMENT BRANCH (Printing)   | 865.00             |
| LAND APPLICATION ENGINEERING   | 280.00             |
| ADMINISTRATIVE BUILDING  | 6.654,00           |
| TOTAL  | 37.366.00          |
| FACULTIES  |                    |
| BASIC MEDICAL SCIENCES   | 14,400,00          |
| FACULTY OF ARTS AND SCIENCE  | 12.540.00          |
| FACULTY OF EDUCATION   | 10,560,00          |
| ECONOMIC AND ADMINISTRATIVE<br>SCI. FAC.(5300 m²) and NEW BUILDING (5650 m²)                       | 10.950.00          |
| İSLAHİYE ECONOMIC AND<br>ADMINISTRATIVE SCI. FAC   | 5.650,00           |
| FACULTY OF DENTISTRY   | 16.500.00          |
| VOCATIONAL SCHOOL OF HEALTH +<br>CONSTRUCTION WORKS AND TECHNICAL<br>DEPARTMENT                    | 6,520,00           |
| COMMUNICATION FAC.   | 1.350.00           |
| BIOLOGY DEPARTMENT + ADDITIONAL<br>BUILDING  | 4,590,00           |
| FAC. OF THEOLOGY   | 8.000.00           |
| FACULTY OF ARCHITECTURE  | 11,359.00          |
| FACULTY OF LAW   | 12,760,00          |
| SPORTS SCIENCE FACULTY   | 4.900.00           |

| EINE ADTS EACH TV (Control on a)  | 600.00     |
|---|------------|
| FINE ARTS FACULTY (Gastronomy)  | 600,00     |
| NIZIP EDUCATION FAC.  | 5.650,00   |
| TOTAL   | 126,329.00 |
| FACULTIES OF ENGINEERING  |            |
| CIVIL ENGINEERING + LABORATORY  | 8.450,00   |
| MECHANICALENGINEERING   | 15,400,00  |
| MECHANICAL ENGINEERING CLASSROOM<br>BUILDING  | 1.100.00   |
| INDUSTRIALENGINEERING   | 1.750.00   |
| TEXTILE ENGINEERING   | 4.250.00   |
| SPACE AND AVIATION DEPARTMENT. AIRCRAFT ASSEMBLY WORKSHOP                             | 1.700.00   |
| AVIATION AND ASTRONAUTICS HANGAR  | 1.976.00   |
| FOOD ENGINEERING(3625m2) + FOOD<br>ADDITIONAL BUILDING(2060m2) FOOD<br>LAB. (2400 m2) | 8,085.00   |
| PHYSICS ENGINEERING   | 3.100.00   |
| PHYSICS ENG. ADDITIONAL BUILDING  | 1.370.00   |
| ELECT - ELECTRONIC ENGINEERING  | 6.850.00   |
| TOTAL   | 54,031.00  |
| HIGHER SCHOOLS  |            |
| FOREIGN LANGUAGES   | 7.650,00   |
| HEALTH (2800m2), 5-storey building 3750m2   | 6.550.00   |
| TURKISH STATE MUSIC CONSERVATORY  | 3.700.00   |
| TOTAL   | 17,900,00  |
| VOCATIONAL SCHOOLS  |            |
| GAZIANTEP VOC SCHOOL  | 19.405.00  |
| TOURISM AND HOTEL MANAGEMENT<br>Vocational School + APPLICATION HOTEL                 | 8.300.00   |
| NURDAĞI Vocational School   | 2.100.00   |
| Islahiye Vocational School  | 3.810.00   |
| NACI TOPCUOGLU Vocational School  | 10,535.00  |
| ARABAN VOCATIONAL SCHOOL  | 3.600.00   |
| NIZIP VOCATIONAL SCHOOL   | 6.250.00   |
| OĞUZELİ VOCATIONAL SCHOOL   | 5.650,00   |
| TOTAL   | 59,650,00  |
| HOSPITALS   |            |
| FACULTY OF MEDICINE HOSPITAL  | 82,810,00  |
| CHILDREN'S HOSPITAL   | 30,440,00  |
| ONCOLOGY HOSPITAL   | 8,182.00   |
| TOTAL   | 121,432.00 |

| CENTRAL CLASSROOMS   |           |
|--|-----------|
| 75th YEAR CENTRAL CLASSROOM  | 2.600.00  |
| TOTAL  | 2.600.00  |
| CENTRALLABORATORIES  |           |
| ULUG BEY CENTRAL LABORATORY  | 5.898,00  |
| GAUNDAM  | 2.940.00  |
| PROTON ACCELERATION AND RADIOPHARMACEUTICAL MANUFACTURING FACILITY | 1.300.00  |
| CHEMISTRY ADDITIONAL LAB.  | 440,00    |
| TOTAL  | 10,578.00 |
| SPORTS FACILITIES  |           |
| SPORTS COMPLEX (SPORIUM)   | 9.700.00  |
| WATER SPORTS CENTER  | 1.450,00  |
| XYSTUS   | 1.373.00  |
| TOTAL  | 12,523,00 |
| CAFETERIAS   |           |
| CENTRAL CAFETERIA  | 7.230,00  |
| NIZIP STUDENT CAFETERIA  | 500,00    |
| ACADEMIC AND ADMINISTRATIVE<br>STAFF DINING HALL                   | 4.450,00  |
| ISLAHIYE STUDENT CAFETERIA   | 500,00    |
| BESYO CAFETERIA  | 250,00    |
| TOTAL  | 12,930,00 |
| MEETING AND CONFERENCE   |           |
| ATATÜRK CULTURAL CENTER  | 3,090,00  |
| 80th YEAR CULTURE CENTER   | 2.800.00  |
| MAVERA CONGRESS CULTURAL CENTER                                    | 14,782.00 |
| AMPHITHEATRE   | 3,655.00  |
| TOTAL  | 24.327.00 |
| SHELTER  |           |
| PATIENT ACCOMPANYING HOUSE   | 950.00    |
| LODGINGS   | 9.200.00  |
| ÇAMLITEPE FACILITIES (Guesthouse)                                  | 440,00    |
| TOTAL  | 10,590,00 |
| OTHERS   |           |
| INNOVATION CENTER  | 1.300.00  |
| COMMUNITY HEALTH CENTER  | 1,202,00  |
| SEYIRTEPE  | 1.250.00  |
| COBANEVI   | 570,00    |
| NURSERY AND KINDERGARTEN BUILDING                                  | 2,428,00  |
| *CENANI MANSION 1  | 707.00    |

| *CENANI MANSION 2         | 530,00     |
|---------------------------|------------|
| TECHNOPARK + NEW BUILDING | 9.150.00   |
| BAZAAR COMPLEX            | 4.500.00   |
| GASOLINE STATION (OPET)   | 198.00     |
| MOSQUE                    | 810.00     |
| SQUARE BACKSTAGE BUILDING | 130.00     |
| TOTAL                     | 22,775.00  |
| GRAND TOTAL               | 513,031.00 |

## 1.8. The ratio of open space area to total area





Ratio of open space towards total area: 91%

| Open space name                            | Total area             | Duration (in Hours per Weeks) |
|--|------------------------|-------------------------------|
| Gaziantep University Forest and Open Space | 900.000 m <sup>2</sup> | 25                            |

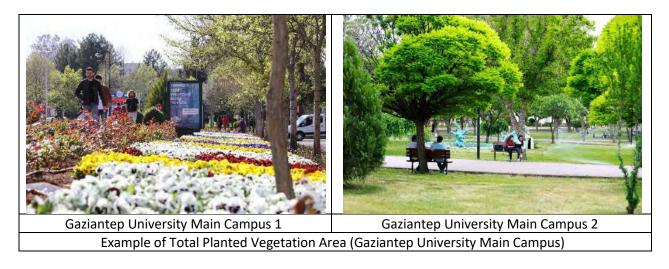
### 1.9. Total Area on Campus Covered in Forest Vegetation (meter<sup>2</sup>)

Ormanlık Alan: Forest Area Yeşil Alan: Green Field

Total area: 900.000 m<sup>2</sup> (The forest area within our campus belongs to the Ministry of Agriculture and

Forestry; however, it is located within the campus borders.

### 1.10. Total area on campus covered in planted vegetation (meter<sup>2</sup>)



Total planted vegetation area: 216.530 m<sup>2</sup>

Total Area: 1.353.312 m<sup>2</sup> Percentage area: 16%

# 1.11. Total area on campus for water absorption besides the forest and planted vegetation (meter<sup>2</sup>)



Example of **Total area on campus for water absorption besides the forest and planted vegetation** (Gaziantep University Main Campus)

Total water absorption area: 200.000 m<sup>2</sup>

Total Area: 1.353.312 m<sup>2</sup> Percentage area: 16%

- **1.12.** The current number of regular students in Gaziantep University is 48.854
- **1.13.** The total number of online students in Gaziantep University is 691
- **1.14.** The total number of academic and administrative staff is 3550.
- **1.15.** Estimated annual total population is 53095.

## 1.18. University budget for sustainability effort (in US Dollars)

|                          | 2018 | 2019        | 2020        | Average     |
|--------------------------|------|-------------|-------------|-------------|
| <b>Budget Total</b>      | \$   | \$ 53430245 | \$ 66734320 | \$ 57421192 |
| Sustainability<br>Budget | \$   | \$ 272480   | \$ 990900   | \$ 751426   |
|                          |      |             | Percentage  | 1,3 %       |

The average percentage university budget for our university is 1,3%.

# 1.20. Percentage of operation and maintenance activities of building in one year period



Example of operation and maintenance activities in Gaziantep University (Engineering Faculty, Sport centre, Congress Centre, Faulty of Dentistry Water reservoir and Pipes)

#### **Description:**

- Total campus buildings area
   Total operated building
   Percentage building that operated and maintained
   75,3%
- 1.21. Campus facilities for disable, special needs and or maternity care





1. Disabled pathway and braille in faculties (Gaziantep University)

2. Disabled Ramp (Gaziantep University)





#### Disabled Toilet /Lactation Room (Gaziantep University)

#### **Description:**

- 1. Disabled parking for disabled people to park their car which located at the nearest space building
- 2. Accessible toilet for disabled people.
- 3. Lactation room is private room for staff who are breasfeeding can pump breast milk in private

#### 1.22. Security and safety facilities





Emergency Exit and Evacuation Plan (Gaziantep University)

#### **Description:**

- CCTV at Gaziantep University gate
   Fire Hidrant at Gaziantep University
   Emergency Exit and Evacuation Plan at Gaziantep University

# 1.23. Health infrastructure facilities for students, academics and administrative staffs' wellbeing



1. University Hospital (Gaziantep University)



2. Oncology Hospital (Gaziantep University)



3. Palliative Care and Hope House (Gaziantep University)



4. Faculty of Dentistry and Hospital (Gaziantep University)

#### **Description:**

Gaziantep University provides health services with comprehensive service support for the entire academic community with its facilities.

Gaziantep University Şahinbey Research and Application Hospital, which has adopted the basic principle of being the address of trust in health since the day it was opened, has become the largest and most equipped hospital in the region serving the Southeastern Anatolia Region by increasing its service quality a little more every day. Our hospital has shown a rapid development process since 1989. Today, it continues to operate with 208 faculty members, reaching a bed capacity of 1026. Equipped with the latest technology, Gaziantep University Şahinbey Research and Application Hospital continues to realize its dreams in the health sector with its staff and service quality. It carries the determination to walk towards greater success without giving up on the principles of pioneering and leadership. Gaziantep University Şahinbey Research and Application Hospital also has health tourism certificate.

Gaziantep University Oncology Hospital, the foundation of which was laid in 1999 with the leadership of the Turkish Cancer Foundation Gaziantep Branch, is a regional hospital and was built on an area of 24 thousand square meters with a closed area of 10 thousand square meters and 5 floors. Our hospital has a bed capacity of 102 and is equipped with modern devices. Our hospital, which has been serving as the only equipped oncology center in the region since its opening, includes medical oncology outpatient clinic, adult outpatient chemotherapy unit, patient education program, pediatric hematology outpatient clinic, pediatric oncology outpatient clinic, pediatric oncology service, pediatric hematology-pediatric oncology service, adult hematology service, radiation oncology outpatient clinic and service.

Gaziantep University Faculty of Dentistry was established on 31 October 200. As of September 2009, the faculty has been serving in the Departments of Prosthodontics, Orthodontics, Oral and Maxillofacial Surgery, Periodontology, Pedodontics, Endodontics, Restorative Dentistry and Oral and Maxillofacial Radiology. In 2012, it moved to its new location equipped with high-tech medical devices and started to serve as a Regional Hospital. Our faculty, which continues its physical development rapidly, shows this success in education and scientific activities. Our faculty, which was deemed worthy of many scientific awards in national and international meetings, attracts the attention of local and national media. Our faculty started education with 20 students in the 2009-2010 academic year, and has a total of 399 students as of today. Gaziantep University Faculty of Dentistry has 3 Professors, 4 Associate Professors, 10 Dr. Instructor, 73 Research Assistants and 25 permanent staff – 48 permanent workers.

#### 2. ENERGY AND CLIMATE CHANGE

#### 2.1. Energy Efficient Appliances Usage



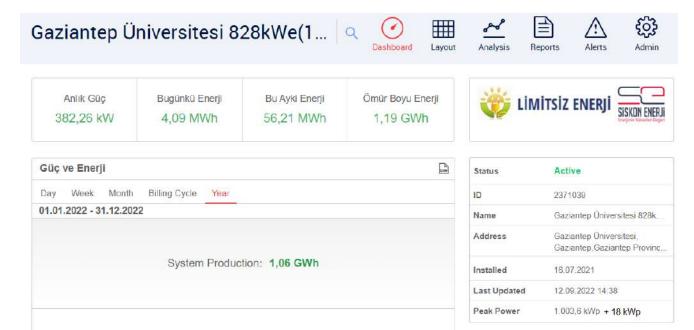


Example of Energy Efficient Appliances Usage: Use of LED lighting and lamps with light detection (Gaziantep University)

Gaziantep University prioritizes the energy efficiency for reduction of energy consumption, as well as for other benefits or multiple benefits, such as reducing climate change impact, reducing air pollution and improving health, improving indoor conditions, improving energy security etc. Gaziantep University equipped nearly most of its offices with modern appliances that use less energy than older appliances (a detailed list of those equipment are provided in the proofs).

Buildings are an important field for energy efficiency improvements around the world because of their role as a major energy consumer. However, the question of energy use in buildings is not straightforward as the indoor conditions that can be achieved with energy use vary a lot. The measures that keep buildings comfortable, lighting, heating, cooling, and ventilation, all consume energy. Adopting a balanced approach to use energy efficiently in buildings, Gaziantep University focuses on quality of indoor environment and efficiency of space use.

#### [2.5] Renewable Energy Sources in Campus



## GAZIANTEP UNIVERSITY SOLAR POWER PLANT PROJECT FEASIBILITY REPORT

| Genel Bilgiler     |                       |                              |                            |           |
|--------------------|-----------------------|------------------------------|----------------------------|-----------|
| Proje Adi          | GAUNGES1              |                              | Tarih                      | 3.08.2022 |
| Lokasyon           | Gariantep-Araban-Doga | an Mah-91 parsel- 128.138 M2 | Sozle me Siiresi (Ay)      | 72Ay      |
| GESTipi            | Arazi                 |                              | TahmhiKurulumSiiresi       | 12 Month  |
| Kurulu Gii         | 11872 kWp (DC)        | 9900 kWe (AC)                | Baglant1Tipi               | ebeke     |
| Kamu / Ozel Sektor | Kamu                  |                              | Tiiketlm (Aym/Farkh Nokta) | Farkh     |
| PanelGiid/Adedi    | 530                   | 22400                        | Operasyona Balama Tarihi   | 1.08.2023 |

| Genel Bilgiler      |                      |   |                            |           |
|---------------------|----------------------|---|----------------------------|-----------|
| Proje Adi           | GAUNGES 2            |   | Tarih                      | 3.08 2022 |
| Lokasyon            | Gaziantep-Araban-Dog | Gaziantep-Araban-Dogan Mah-34/48 parsel- 166.800 M2 |                            | 72 Ay     |
| GES Tipi            | Arazi                |   | TahminiKurulumSiiresi      | 12 Month  |
| KuruluGii           | 11734 kWp (DC)       | 11734 kWp (DC) 9780 kWe (AC)                        |                            | ebeke     |
| Kamu / Ozel Sektor  | Kamu                 |   | Tiiketim (Aym/Farkh Nokta) | Farkh     |
| PanelGiicii / Adedi | 530                  | 22130   | Operasyona Balama Tarlhi   | 1.08.2023 |



|             | GAUN   | SOLAR POWER   | PLANT       | INITIAL II       | NVESTME           | NT COST |
|-------------|--|---|-------------|------------------|-------------------|---------|
| NO          | EQUIPMENT  | MANUFACTURER AMOUN  | IT<br>PIECE | UNIT<br>COST(\$) | TOTAL<br>COST(\$) |         |
| 1 PV N      | MODULE<br>530 watts                                  | HT-SAAE, Phono Solar,<br>Smart Solar, CW Energy,<br>Schmid Pekintas, GTC,           |             |                  |                   |         |
|             | 23,606 kWP (DC)                                      | Elin Energy and Equivalent<br>Producers   | 44.530      | 247              | 10,998,910        |         |
| 2 INV<br>kW | ERTER 100  | Huawei, Fimer, SMA, sunrow, goodwe, Fronius, Kaco and Equivalent Producers          | 236         | 3.70<br>5        | 874,380           |         |
| 3           | CARRIER SYSTEM GALVANIZED COATED CAROT CONCRETE 4X28 | Isotec, Alustar, Arkat,<br>Scheletter, Deger Enerji and<br>Equivalent Manufacturers | 398         | 3,382            | 1,346,036         |         |
| 4 SOL       | AR DC CABLE Prysmia                                  | n, Ege, HIS, HEPP   | 4,552 SETS  | 72               | 327,750           | 10/0    |

| 5  | AC, MV CABLE   | Prysmian, Öznur, HEPP, Vatan,<br>Nexans and Equivalent Manufacturers                  | 236 SETS      | 5500                          | 1,298.000          |         |
|----|--|---|---------------|-------------------------------|--------------------|---------|
| 6  | TRANSFORMER BUILDING SWITCH MATERIAL AND BOARDS                  | ABB, Schenider, Siemens, Phoenix Contact, Equivalent Manufacturers and Local Partners | 2 TEAMS       | 570,000                       | 1,140,000          | PROMI B |
| 7  | ENERGY   | AIR FROM 10KM   | 10KM          | 40,000                        | 400,000            |         |
| 2  | TRANSMISSION LINE EXPENSE  | s   |               |                               |                    |         |
| 8  | SINGLE-<br>DUAL LIGHTING AND<br>CAMERA SYSTEMS                   |   | 10            | 15,000                        | 150,000            |         |
| 9  | PROJECT ENGINEERING AND ACCEPTANCE EXPENSES                      |   | 23 MW         | 5,000                         | 115,000            |         |
| 10 | FIELD CONST.  ASSEMBLY AND CONSTRUCTION MACHINE SITE PREPARATION |   | 23            | 30,000                        | 690,000            |         |
|    |  | T   | OTAL CO       | OST (\$) 17,34                | 40,076             |         |
|    |  | тот   | AL COST (TL): | 3 <b>12,034,668</b> 1 \$=17,9 | 995 TL (CBRT-04.08 | .2022)  |

|            | 202               | 21           | 2022              |              |  |
|------------|-------------------|--------------|-------------------|--------------|--|
| MONTHS     | Consumption (kWh) | Payment (TL) | Consumption (kWh) | Payment (TL) |  |
| JANUARY    | 1,878,194         | 1,755,249    | 2,680.293         | 2,832,830    |  |
| FEBRUARY   | 1,653,772         | 1,537,112    | 2,304,958         | 2,753,052    |  |
| MARCH      | 1.860.743         | 1.784.804    | 2.709419          | 7,859,425    |  |
| APRIL      | 1,693,617         | 1,593,017    | 2,123,360         | 5,262,364    |  |
| MAY        | 1.903.010         | 1.823.401    | 1,936,826         | 4,634,030    |  |
| JUNE JULY  | 2,307,613         | 2,238,839    | 3,382,000         | 9.876.181    |  |
| AUGUST*    | 2,957,389         | 3,089,469    | 2,635,905         | 8,180,561    |  |
| SEPTEMBER* | 3,067,972         | 3,293,479    | 3,067,972         | 9,510,713    |  |
| OCTOBER*   | 2,341,618         | 2,465,197    | 2,341,618         | 7,259.016    |  |
| NOVEMBER*  | 1,932,179         | 2,261,341    | 1,932,179         | 5,989,755    |  |
| DECEMBER*  | 2,470,931         | 3.155.022    | 2,470,931         | 7.659.886    |  |
|            | 3.155.022         | 3,015,245    | 3.155.022         | 9,780,568    |  |
| TOTAL      | 27,222,060        | 28.012.175   | 30,740,483        | 81,598,381   |  |

<sup>\*2022</sup> AUGUST-SEPTEMBER-OCTOBER-NOVEMBER-DECEMBER INVOICES HAVE BEEN CALCULATED WITH CONSUMPTION AMOUNT OF THE PREVIOUS YEAR AND JULY 2022 UNIT ELECTRICITY PRICE.

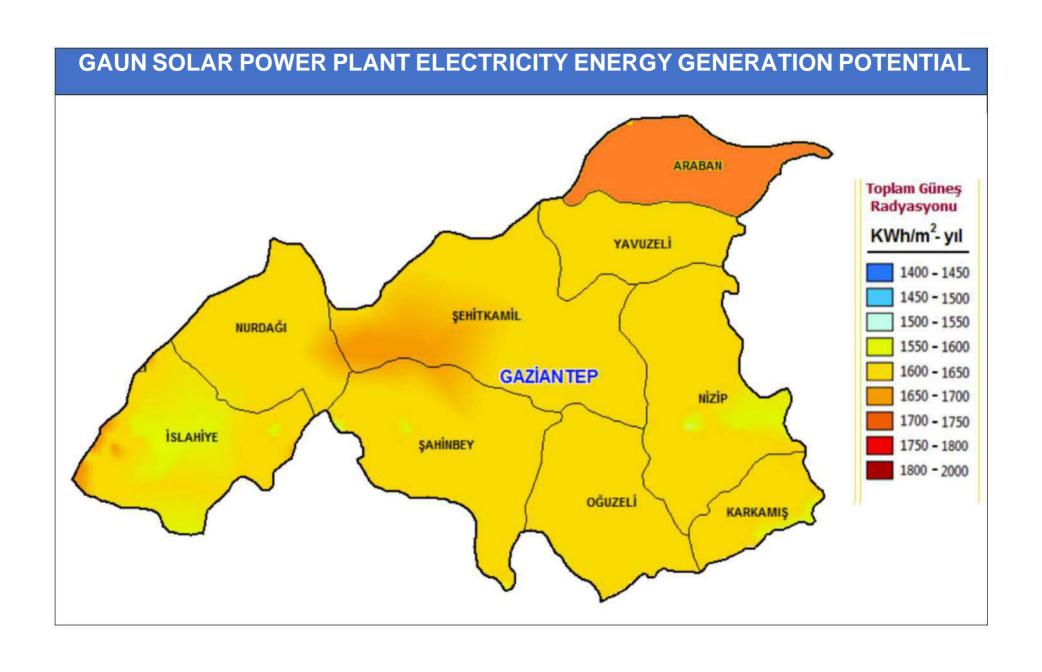
| GAUN ALL INSTALLATIONS ELECTRICITY CONSUMPTION BY MONTH |                   |              |                   |              |
|---|-------------------|--------------|-------------------|--------------|
|   | 2021              |              | 2022              |              |
| MONTHS  | Consumption (kWh) | Payment (TL) | Consumption (kWh) | Payment (TL) |
| JANUARY   | 1,878,194         | 1,755,249    | 2,680.293         | 2,832,830    |
| FEBRUARY  | 1,653,772         | 1,537,112    | 2,304,958         | 2,753,052    |
| MARCH   | 1.860.743         | 1.784.804    | 2.709419          | 7,859,425    |
| APRIL   | 1,693,617         | 1,593,017    | 2,123,360         | 5,262,364    |
| MAY   | 1.903.010         | 1.823.401    | 1,936,826         | 4,634,030    |
| JUNE  | 2,307,613         | 2,238,839    | 3,382,000         | 9.876.181    |
| JULY  | 2,957,389         | 3,089,469    | 2,635,905         | 8,180,561    |
|   | 3,067,972         | 3,293,479    | 3,374,769         | 10,461,785   |
| AUGUST*   | 2,341,618         | 2,465,197    | 2,575,780         | 7,984,917    |
| SEPTEMBER*  OCTOBER*                                    | 1,932,179         | 2,261,341    | 2.125.397         | 6.588.730    |
| NOVEMBER*   | 2,470,931         | 3.155.022    | 2,718.024         | 8.425.875    |
| DECEMBER*   | 3.155.022         | 3,015,245    | 3.470.524         | 10,758,625   |
| TOTAL   | 27,222,060        | 28.012.175   | 32,037,255        | 85.618.75    |

2022 AUGUST-SEPTEMBER-OCTOBER-NOVEMBER-DECEMBER INVOICES HAVE BEEN CALCULATED BY INCREASING THE CONSUMPTION AMOUNT 10% IN THE SAME MONTHS OF THE PREVIOUS YEAR AND CONSIDERING THE UNIT ELECTRICITY PRICE OF 2022 JULY.

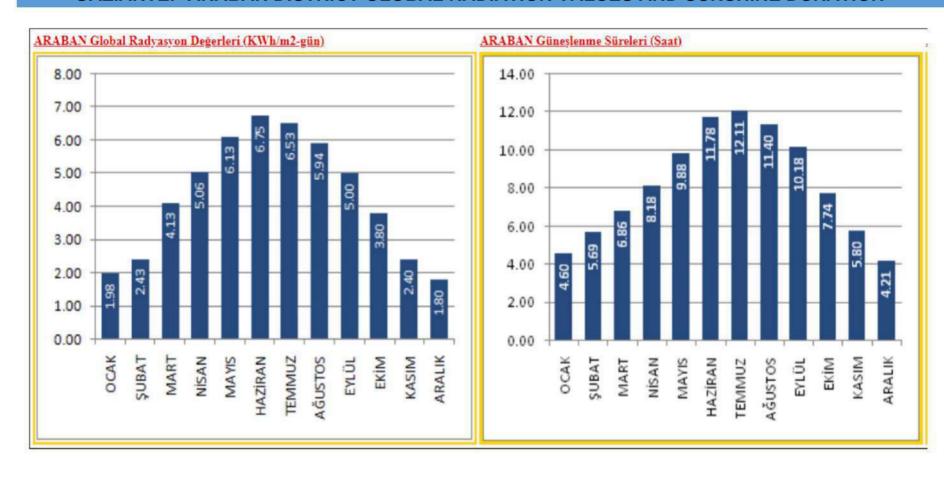
| GAUN A    | GAUN ALL INSTALLATIONS ELECTRICITY CONSUMPTION BY MONTH |                                    |                   |              |  |  |  |
|-----------|---|------------------------------------|-------------------|--------------|--|--|--|
|           | 20  | 23                                 | 2024              |              |  |  |  |
| MONTHS    | Consumption (kWh)                                       | Payment (TL)                       | Consumption (kWh) | Payment (TL) |  |  |  |
| JANUARY   | 2,948,322   | 10,967,759                         | 3,243,155         | 14,464,469   |  |  |  |
| FEBRUARY  | 2.535.454   | 9,431,888                          | 2,788,999         | 12,438,936   |  |  |  |
| MARCH     | 2,980,361   | 11,086,943                         | 3,278,397         | 14,621,651   |  |  |  |
| APRIL     | 2,335.696   | 8,688,789                          | 2,569,266         | 11,458,925   |  |  |  |
| MAY       | 2.130.509   | 7,925,492                          | 2,343,559         | 10,452,275   |  |  |  |
| JUNE      | 3,720,200   | 13,839.144                         | 4,092,220         | 18,251,301   |  |  |  |
| JULY      | 2,899,496   | 10,786.123                         | 3,189,445         | 14,224,925   |  |  |  |
| AUGUST    | 3,712,246   | 13.809.555                         | 4,083,470         | 18.212.278   |  |  |  |
| SEPTEMBER | 2,833,358   | 10.540.092                         | 3,116,694         | 13,900,454   |  |  |  |
| OCTOBER   | 2,337,937   | 8.697.125                          | 2,571,730         | 11,469,917   |  |  |  |
| NOVEMBER  | 2,989,826   | 11.122.154                         | 3,288,809         | 14,668.088   |  |  |  |
| DECEMBER  | 3,817,576   | 14,201,384                         | 4,199,334         | 18.729.030   |  |  |  |
| TOTAL     | 35.240.981 131.096.44                                   | <b>7 38.765.079</b> INVOICES FOR 2 | 023 WERE CALCULED | 172,892,250  |  |  |  |

BY INCREASING THE CONSUMPTION AMOUNT OF THE PREVIOUS YEAR AND THE SAME MONTHS by 10% AND THE UNIT ELECTRICITY PRICE IN DECEMBER 2022 INCREASED 20% ON AN YEAR BASIS.

INVOICES FOR 2024 ARE CALCULATED BY INCREASING CONSUMPTION AMOUNT 10% IN THE SAME MONTHS OF THE PREVIOUS YEAR AND INCREASING THE UNIT ELECTRICITY PRICE FOR 2023 DECEMBER BY 20% ON AN ANNUAL BASIS.



#### GAZIANTEP ARABAN DISTRICT GLOBAL RADIATION VALUES AND SUNSHINE DURATION



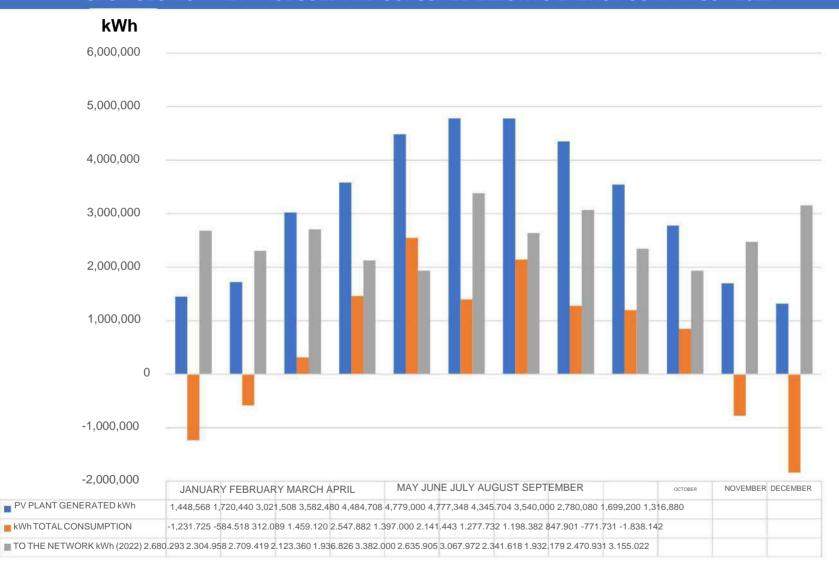
## GAUN GES CAR 23.6 MWh MONTHLY ELECTRICITY GENERATION

|                         | Radiation value<br>(kwh/m2)-Day | Day       | Radiation value<br>(kWh)-Month | 23.6 kWh/ Month plant<br>Radiation value |
|-------------------------|---------------------------------|-----------|--------------------------------|--|
| JANUARY                 | 1.98                            | 31        | 61,380                         | 1,448,568                                |
| FEBRUARY                | 2.43                            | 30        | 72,900                         | 1,720,440                                |
| MARCH                   | 4.13                            | 31        | 128,030                        | 3,021,508                                |
| APRIL                   | 5.06                            | 30        | 151,800                        | 3,582,480                                |
| MAY                     | 6.13                            | 31        | 190,030                        | 4,484,708                                |
| JUNE                    | 6.75                            | 30        | 202,500                        | 4,779,000                                |
| JULY                    | 6.53                            | 31        | 202,430                        | 4,777,348                                |
| AUGUST                  | 5.94                            | 31        | 184,140                        | 4.345.704                                |
| SEPTEMBER               | 5.00                            | 30        | 150,000                        | 3,540,000                                |
| OCTOBER                 | 3.80                            | 31        | 117,800                        | 2,780,080                                |
| NOVEMBER                | 2.40                            | 30        | 72,000                         | 1,699,200                                |
| DECEMBER                | 1.80                            | 31        | 55,800                         | 1,316,880                                |
| ANNUAL TOTAL PRODUCTION |                                 | 1,588,810 | 37,495,916                     |  |

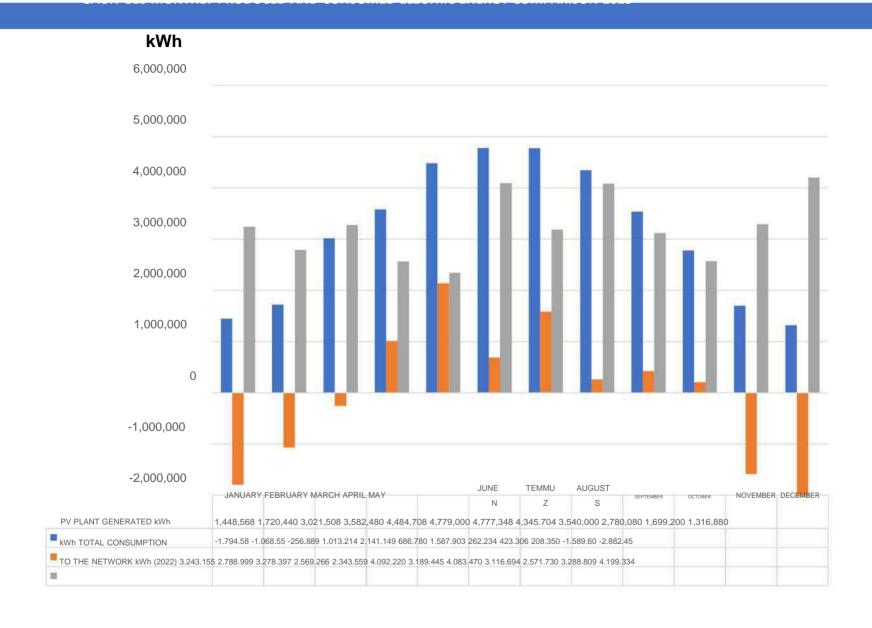
### GAUN GES MONTHLY PRODUCED AND CONSUMED ELECTRIC ENERGY COMPARISON (2022)

| DATE      | PV PLANT GENERATED kWh | kWh TRANSMITTED TO THE NETWORK | TOTAL CONSUMPTION kWh (2022) |
|-----------|------------------------|--------------------------------|------------------------------|
| JANUARY   | 1,448,568              | -1,231,725                     | 2,680.293                    |
| FEBRUARY  | 1,720,440              | -584,518                       | 2,304,958                    |
| MARCH     | 3,021,508              | 312,089                        | 2,709,419                    |
| APRIL     | 3,582,480              | 1,459,120                      | 2,123,360                    |
| MAY       | 4,484,708              | 2,547,882                      | 1,936,826                    |
| JUNE      | 4,779,000              | 1,397,000                      | 3,382,000                    |
| JULY      | 4,777,348              | 2,141,443                      | 2,635,905                    |
| AUGUST    | 4.345.704              | 1,277,732                      | 3,067,972                    |
| SEPTEMBER | 3,540,000              | 1,198,382                      | 2,341,618                    |
| OCTOBER   | 2,780,080              | 847,901                        | 1,932,179                    |
| NOVEMBER  | 1,699,200              | -771.731                       | 2,470,931                    |
| DECEMBER  | 1,316,880              | -1.838.142                     | 3.155.022                    |
| TOTAL     | 37,495,916             | 6.755.433                      | 30,740,483                   |

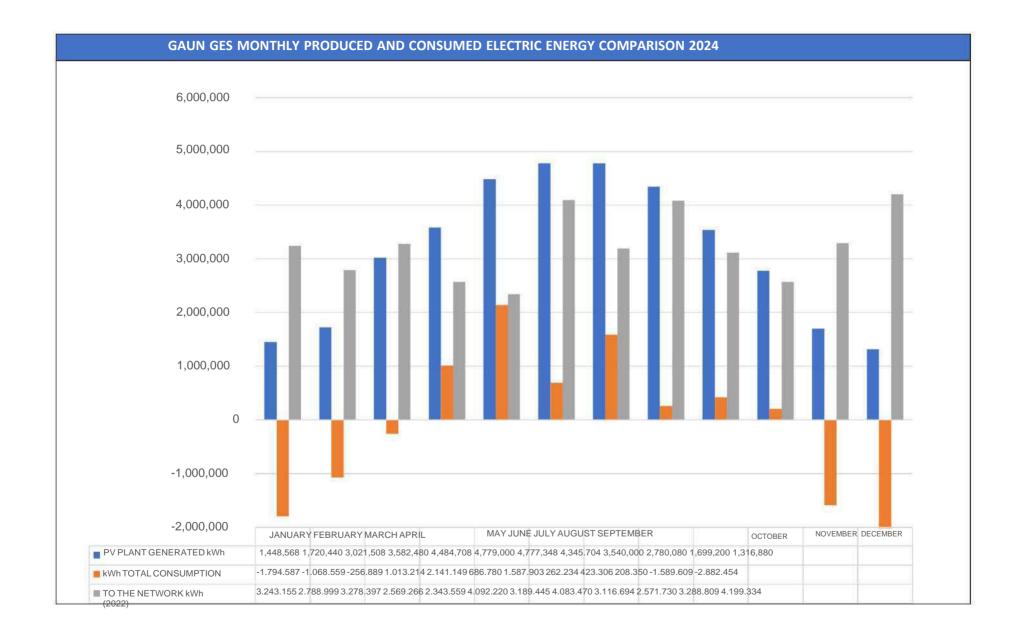
#### GAUN GES MONTHLY PRODUCED AND CONSUMED ELECTRIC ENERGY COMPARISON 2022



|           | GAUN GES MONTHLY PRODUCED AND CONSUMED ELECTRIC ENERGY COMPARISON 2023 |                                |                              |  |  |  |  |  |
|-----------|--|--------------------------------|------------------------------|--|--|--|--|--|
| DATE      | PV PLANT GENERATED kWh   | kWh TRANSMITTED TO THE NETWORK | TOTAL CONSUMPTION kWh (2023) |  |  |  |  |  |
| JANUARY   | 1,448,568  | -1,499,754                     | 2,948,322                    |  |  |  |  |  |
| FEBRUARY  | 1,720,440  | -815,014                       | 2.535.454                    |  |  |  |  |  |
| MARCH     | 3,021,508  | 41,147                         | 2,980,361                    |  |  |  |  |  |
| APRIL     | 3,582,480  | 1,246,784                      | 2,335.696                    |  |  |  |  |  |
| MAY       | 4,484,708  | 2,354,199                      | 2.130.509                    |  |  |  |  |  |
| JUNE      | 4,779,000  | 1,058,800                      | 3,720,200                    |  |  |  |  |  |
| JULY      | 4,777,348  | 1,877,852                      | 2,899,496                    |  |  |  |  |  |
| AUGUST    | 4.345.704  | 633,458                        | 3,712,246                    |  |  |  |  |  |
| SEPTEMBER | 3,540,000  | 706.642                        | 2,833,358                    |  |  |  |  |  |
| OCTOBER   | 2,780,080  | 442,143                        | 2,337,937                    |  |  |  |  |  |
| NOVEMBER  | 1,699,200  | -1,290,626                     | 2,989,826                    |  |  |  |  |  |
| DECEMBER  | 1,316,880  | -2,500,696                     | 3,817,576                    |  |  |  |  |  |
| TOTAL     | 37,495,916   | 2,254,935                      | 35.240.981                   |  |  |  |  |  |



|           | GAUN GES MONTHLY PRODUCED AND CONSUMED ELECTRIC ENERGY COMPARISON 2024 |                                |                              |  |  |  |  |
|-----------|--|--------------------------------|------------------------------|--|--|--|--|
| DATE      | PV PLANT GENERATED kWh   | kWh TRANSMITTED TO THE NETWORK | TOTAL CONSUMPTION kWh (2024) |  |  |  |  |
| JANUARY   | 1,448,568  | -1,794,587                     | 3,243,155                    |  |  |  |  |
| FEBRUARY  | 1,720,440  | -1,068,559                     | 2,788,999                    |  |  |  |  |
| MARCH     | 3,021,508  | -256.889                       | 3,278,397                    |  |  |  |  |
| APRIL     | 3,582,480  | 1,013,214                      | 2,569,266                    |  |  |  |  |
| MAY       | 4,484,708  | 2.141.149                      | 2,343,559                    |  |  |  |  |
| JUNE      | 4,779,000  | 686,780                        | 4,092,220                    |  |  |  |  |
| JULY      | 4,777,348  | 1,587,903                      | 3,189,445                    |  |  |  |  |
| AUGUST    | 4.345.704  | 262,234                        | 4,083,470                    |  |  |  |  |
| SEPTEMBER | 3,540,000  | 423,306                        | 3,116,694                    |  |  |  |  |
| OCTOBER   | 2,780,080  | 208,350                        | 2,571,730                    |  |  |  |  |
| NOVEMBER  | 1,699,200  | -1.589.609                     | 3,288,809                    |  |  |  |  |
| DECEMBER  | 1,316,880  | -2,882,454                     | 4,199,334                    |  |  |  |  |
| TOTAL     | 37,495,916   | -1,269,162                     | 38,765,078                   |  |  |  |  |



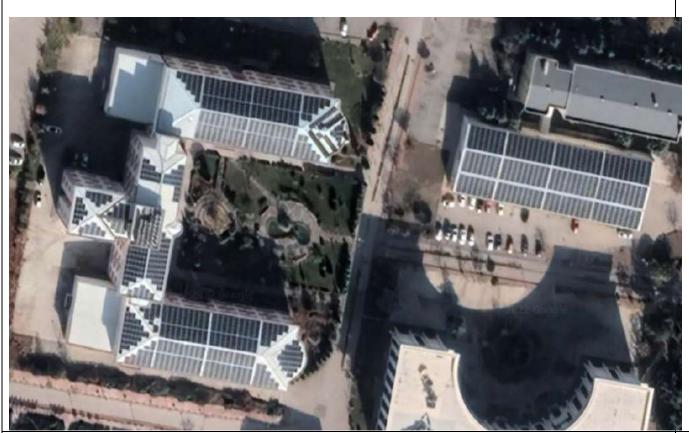
#### [2.6] Electricity Usage per Year (in Kilowatt hour)

|                           | GAZÍANTEP UNIVERSITY  Main Campus Energy Consumption |                  |                           |                     |                         |                |                |                  |                       |
|---------------------------|--|------------------|---------------------------|---------------------|-------------------------|----------------|----------------|------------------|-----------------------|
|                           |  |                  |                           |                     |                         |                |                |                  |                       |
|                           | .,   | Number of Active | Total                     | Electricity Consump |                         | Fuel Co        | nsumption      |                  | TOTAL                 |
| Building<br>Group<br>Name | Year   | Employee<br>S    | Construction<br>Area (m2) | tion<br>(kWh)       | Natural<br>gas<br>(sm3) | Petrol<br>(It) | Diesel<br>(It) | Fuel-Oil<br>(It) | CONSUMP<br>TION (TEP) |
|                           | 2022   |                  |                           |                     |                         |                |                |                  |                       |
|                           | 2021   | 5,249            | 460,564                   | 24,814,28           | 5,293,7<br>53           | 4,995          | 93,625         | 177,210          | 6,772                 |
|                           | 2020   | 5,247            | 428,614                   | 25,139,92<br>5      | 6,026,8<br>94           | 4,951          | 81,689         | 228,920          | 7,442                 |
| MAIN                      | 2019   | 4,961            | 428,566                   | 26,760,54<br>9      | 6,450,9<br>28           | 5,137          | 94,835         | 239,610          | 7,956                 |
| CAMPUS                    | 2018   | 4,861            | 398,000                   | 25,163,27<br>1      | 5,007,7<br>32           | 4,895          | 115,754        | 150,620          | 6,563                 |
|                           | 2017   | 2,925            | 373,000                   | 26,209,13<br>9      | 5,405,1<br>35           | 9,781          | 150,990        | 230,600          | 7,099                 |
|                           | 2016   | 2,915            | 358,000                   | 28,266,32           | 5,131,0<br>62           | 9,801          | 119,168        | 179,750          | 6,968                 |
|                           | 2015   | 2,915            | 358,000                   | 26,714,92<br>8      | 6,441,3<br>79           | 10,81<br>2     | 118,343        | 204,090          | 7,940                 |
|                           | AVERA<br>GE  |                  |                           | 26,588,41<br>5      | 5,496,3<br>27           | 8,822          | 126,064        | 191,265          | <u>7,142</u>          |

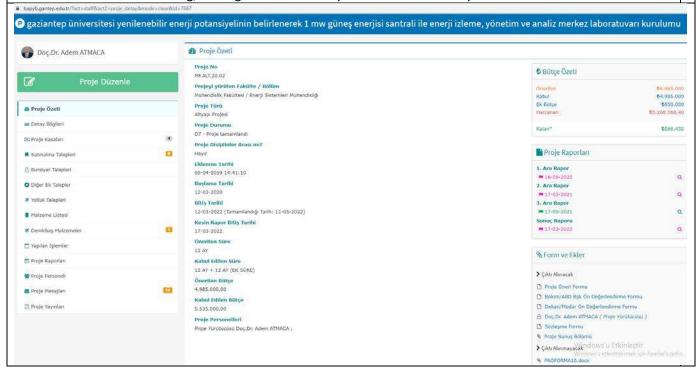
#### **Description:**

The total electricity usage of Gaziantep University in 2021 is 24814283 kWh. On the main campus area of Gaziantep University, electricity is used for lighting, cooling, heating, and laboratory appliances.

#### [2.8] Renewable Energy Sources in Campus



Gaziantep University Renewable Energy Potential Determination and 1 mW Solar Power Plant and Energy Monitoring, Management and Analysis Central Laboratory Establishment



#### **Description:**

| No | Renewable Energy | Production (in kWh) |
|----|------------------|---------------------|
| 1  | Solar panel      | 1498783             |
|    | Total            | 1498783             |

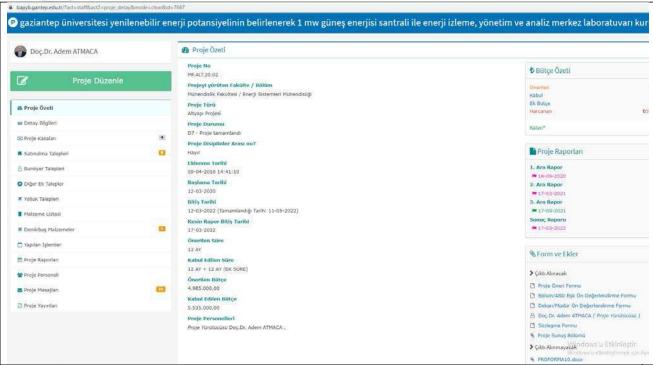
### [2.10] Greenhouse gas emission reduction program



Gaziantep University Renewable Energy Potential Determination and 1 mW Solar Power Plant and Energy Monitoring, Management and Analysis Central Laboratory Establishment







#### **Description:**

| No | Renewable Energy | Production (in kWh) |
|----|------------------|---------------------|
| 1  | Solar panel      | 1498783             |
|    | Total            | 1498783             |

1,498,783/24,814,293 = %6.04

#### Additional evidence link:







## **ENERGY MANAGEMENT CENTRAL DIRECTORATE**

2021-2024

# **ENERGY STRATEGIC PLAN**

Associate Professor. Adem ATMACA

October 2020

### Reason for Establishment

- Energy Efficiency Law (Energy Efficiency dated 18.04.2007 and numbered 5627)
- Efficiency in Energy Resources and Use of Energy Regulation and Ministry of Energy and Natural Resources Regulation No. 28097).
- Efficiency in Energy Resources and Use of Energy
  Regarding the Amendment to the Regulation on
  Regulation (In the Official Gazette No. 31019 dated 25 January 2020)

## Reason for Establishment

- PUBLIC INSTITUTIONS that meet the following conditions
- Assignment of an Energy Manager is MANDATORY.
- Total construction area is at least 10,000 m2
- Annual energy consumption is 250 TEP and above

Total construction area of our university is 428,000 m2
 Annual energy consumption is 6200 TOE.

## ADMINISTRATIVE FINE

- From the Ministry of *Energy and Natural Resources* :
- ARTICLE 10 OF THE ENERGY EFFICIENCY LAW NO 5627 COMMUNIQUÉ ON ADMINISTRATIVE FINES TO BE IMPLEMENTED IN 2020

**(ORDER NUMBER: 2020/1)** 

### Enerji Yöneticisi Bulundurmama durumunda İdari Para Cezaları;

| 5627 Sayılı Enerji Verimliliği<br>Kanununun 10 uncu Maddesinin<br>birinci fikrasının | Kanunda Öngörülen<br>Para Cezaları (TL) | 2019 Yılında<br>Uygulanan Para<br>Cezaları (TL) | 2020 Yılında<br>Uygulanacak Para<br>Cezaları (TL) |  |
|--|---|---|---|--|
| (a) Bendinin (2) Numaralı Alt  | 10.000                                  | 27.901  | 34.201  |  |
| Bendindeki Ceza Miktarları   | 50.000                                  | 139.542   | 171.050   |  |

İdani Dana Caralam

- Educated in the field of engineering,
- Having serious knowledge, experience and experience in energy management
- Energy Management from an institution authorized by the Ministry, which has practical and theoretical studies in the market and in academia.
- Completed his education successful by taking the exam prepared by the General Directorate
- Right to receive the "Energy Manager Certificate"
- Appointment of a public institution as an energy manager is approved by the ministry.

## **Energy Manager**

Assoc. Prof. Dr. Adem ATMACA

Mechanical Engineering Energy

Department Member.

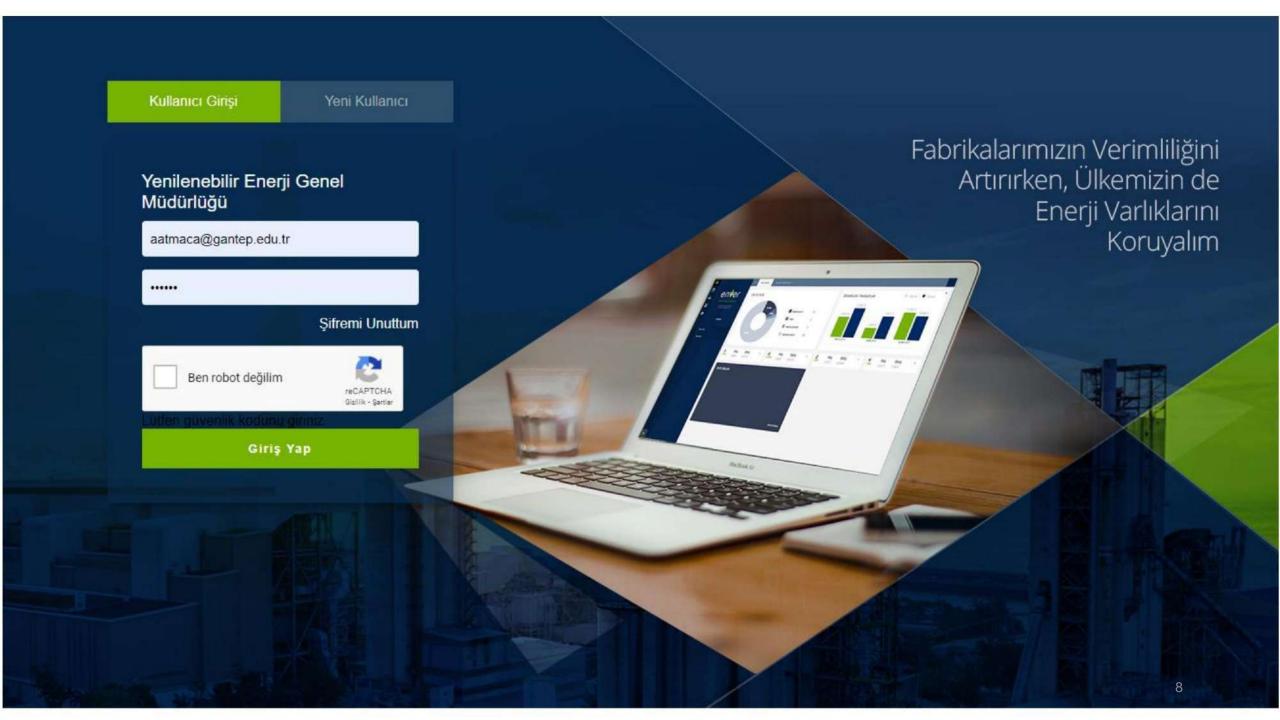
- He passed the exam prepared by the General Directorate in 2018 and was successful, and was awarded the "Energy Manager" by the General Directorate by obtaining the "Certificate.
- Appointed as Gaziantep University Energy Manager.

Assoc. Prof. Dr. Adam Atmaca

Energy Manager Certificate No: 2918

# Mandatory Notices

- Energy Manager
- Following the current energy consumption values of Gaziantep University by entering these values into the system prepared by the Ministry regularly and has to create projects on Energy Management and reduce the energy consumption values of the institution.



### **Energy Center Regulation**

 By the Prime Ministry Legislation Development and Publication General Directorate March 5, 2018 Official Gazette Number: 30351

 GAZIANTEP UNIVERSITY ENERGY MANAGEMENT IMPLEMENTATION AND RESEARCH CENTER REGULATION was prepared and published.

http://www.resmigazete.gov.tr/eskiler/2018/03/20180305-2.htm 1/3

## **Energy Center Building Project**

TR MINISTRY OF DEVELOPMENT

SOUTHEASTERN ANATOLIA PROJECT

REGIONAL DEVELOPMENT ADMINISTRATION

PROJECT NAME: Sustainable Green Prototype Building Application

## SUSTAINABLE GREEN PROTOTYPE BUILDING APPLICATION



- SANKO HOLDING
- Mr. Abdulkadir KONUKOGLU
- Ytong Wall elements were received as a grant.



- AUSTROTHERM
- Mr. Tolga CELAYER
- EPS Insulation Materials were received as a grant.





# The Center started its work as of 2019



# **Status of the University**

#### **GAZIANTEP UNIVERSITY Total Energy Consumption** Total Fuel consumption **TOTAL** Active Electric Electric Fuel Build Building Consumption CONSUMPTION Consumption Consumption Year Worker Gasoline Area Natural gas (kWh) (TEP) (TEP) (TEP) Number Diesel Fuel-Oil group (m2)(cm3) (lt) (lt) (lt) 2019 4,961 428,566 27,980.110 2,406 4,210,195 5,137 93.835 239,610 3,787 6.194 2018 4,861 398,000 25,164,271 2,164 4,232,477 4,895 115,754 230,000 3.815 5,979 CENTRAL 2017 2.925 373.000 26.209.139 2.254 5.405.135 9.781 150.990 230.600 4.816 7.070 **CAMPUS** 2016 2.915 358.000 28.266.322 2.431 4.744.827 9.801 119.168 179.750 4,196 6.627 2015 2,915 358,000 26,714,928 2,297 6,441,379 10.812 118,343 204,090 5.619 7,916 **AVERAGE** 26.866.954 2.311 5.006.803 8.085 119.618 216.810 4.447 6,757 5,676 AIM

|      | Gaziantep University Total Energy Expenses (TL) |             |          |            |           |            |  |  |
|------|---|-------------|----------|------------|-----------|------------|--|--|
|      | Electric  | Natural gas |          | -Fuel (TL) | ·         | TOTAL      |  |  |
| Year | TL  | TL          | Gasoline | Diesel     | Fuel-Oil  | (TL)       |  |  |
| 2015 | 9,558.009                                       | 6,716.285   | 47,205   | 443,514    | 375,804   | 17.140.816 |  |  |
| 2016 | 10.745.454                                      | 4,589,240   | 42,746   | 419,143    | 352,810   | 16.149.393 |  |  |
| 2017 | 10.479.112                                      | 4,217,231   | 51,166   | 707,295    | 728,547   | 16,183,351 |  |  |
| 2018 | 11,778,854                                      | 6,287,805   | 27,388   | 588,474    | 797,623   | 19.480.144 |  |  |
| 2019 | 20.583.968                                      | 7.915.078   | 34.231   | 562.621    | 1.798.874 | 30,894,771 |  |  |

# WHAT ARE WE DOING?

- For public buildings that are obliged to appoint energy managers in accordance with the Energy Efficiency Law No. 5627, within the scope of the "Saving Target and Implementation Guide in Public Buildings" published by the Ministry of Energy and Natural Resources in accordance with the Circular of the **Presidency** dated 15/08/2019 and numbered 2019/18
- Our university is requested to achieve a minimum of 15% energy savings until the end of 2023.

- In this context;
- The energy consumption of our university in terms of TEP for the years 2016, 2017 and 2018 was **investigated**, and the **reference consumption was calculated** by taking the arithmetic average of these values.
- The first notification was made to the Ministry in March 2020.

- Realization rates of energy saving targets will be submitted to the
   Presidency by the Ministry in the first half of 2024 and
- Those who save **less** than 14% are **considered unsuccessful**",
- Those who save between 14% and 16% are considered "successful",
- Those who save more than 16% are considered "super successful".

- Unsuccessful ones submit their reasoned reports to the **Ministry** until the end of 2024.
- For institutions and organizations whose justifications are deemed appropriate, monitoring will be carried out to achieve the 18% energy saving target, without changing the reference consumption, until the end of 2026.

• Institutions and organizations that fail and whose justifications are not deemed appropriate will be reported to the Presidency for final evaluation.

## What to do in future;

Gaziantep University

- Considering the annual energy consumption data,
- Increasing energy efficiency,
- Projects that will play an important role in reducing consumption.

## Project 1 (2020)

Energy Monitoring and Management System
 Installation • (Approximately 2,000,000 TL) • BAP
 (GAUN)

## 2. Project (2021)

- Boiler room, hot water line insulation and revision.
- (Approximate cost 5.000.000 TL)
- Ministry

## 3. Project (2022)

- 2 MW Solar power plant installation on university roofs.
- (Approximate cost 8.000.000 TL)
- Ministry

## 4. Project (2022)

- 10 MW Araban Solar Power Plant Project
- In the 5th article of the letter dated 25.01.2017 and numbered 74587075-010.99-922 sent to the Universities by the Ministry of Finance; "Providing the energy needed for heating, cooling and lighting from renewable energy sources such as solar, wind and geothermal is important in terms of both saving the current expenditures and reducing the current account deficit, as well as protecting the natural environment.
- TO MINISTRY OF FINANCE
- Ref: Our 2 letters dated 17.02.2017 and numbered 92244702/602.07.03/3369.
- Subject: Solar Power Plant Project
  - Application has been made for 8 MW + 2 MW,
  - We are waiting for approval for 8 MW.

## 5. Project (2023)

- Building insulation
- (Approximate cost 10.000.000 TL)
- Ministry

## Important!

- With the aim of realizing the energy saving targets to be submitted to the Presidency in 2023, saving over 16% and entering the "super successful" classification.
- Relevant projects, which are of great importance in the 2021 program, are expected to reduce our energy consumption by approximately 50 %.
- With the energy efficiency investments to be made, it is anticipated that an annual average of **15 million TL** savings will be achieved as of 2024.

# ONGOING ACTIVITIES

## 1- 1 MW SPP

• 1 MW Rooftop Solar Power Plant Installation (BAP). • The tender process has been completed for the project with a project cost of 4,050,000 TL.

- 15% energy consumption of the central campus will be reduced.
- Annual profit of 1,200,000 TL will be obtained.

• Project payback will be less than 4 years .

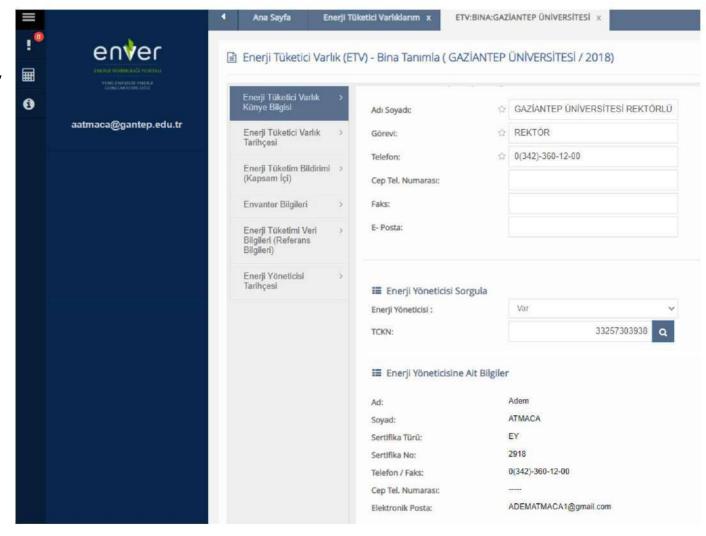
## 2- Compensation

- Project for the elimination of compensation faults in campus transformers.
   (BAP).
- The annual fine of 500,000-1,000,000 TL due to energy fluctuations will be eliminated.

• The project with a project cost of approximately 380,000 TL has been accepted and the procurement process has been initiated.

## 3- Ministry notifications

 Making regular notifications to the Ministry



## 4- Tubitak 1001 project

• The project prepared within the scope of "Investigating the life cycle energy consumption and carbon dioxide emissions of residential buildings in Turkey by calculating the national embedded energy values for different cement types" was submitted to Tübitak.

# 5- International Energy and Engineering Congresses (IEFC)

- An international congress was held for the first time in 2016.
- In 2019, more than 500 participants from 11 different countries participated in the 4th IEMK 2019.

• Our international congress, which has become the tradition of our university, was postponed to 2021 due to the Covid-19 outbreak in 2020.

## 6- Tübitak Dergipark International Journal (IJEES)

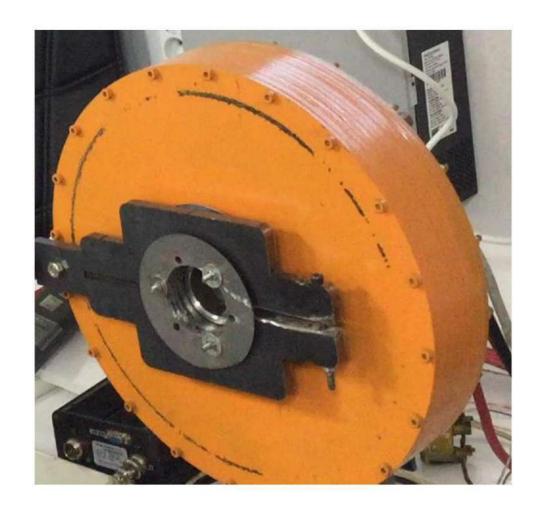
 Established in 2016 as "The International Journal of Energy and Engineering Sciences", our journal has been published within DergiPark for 5 years.

 It is an international journal established for the publication and dissemination of original works that form the basis of machinery, construction, food, industry, textiles, computers, electricity and electronics.

## 7- Electric vehicle engine design

- Compact torus type brushless axial electric motor with high torque and power values
- Developed and applied for patent.

• PATENT NO: 2019/06733



## 8- Adsorption cooling system design

 The design of the new absorption cooling system, which was donated to our university in order to operate the cooling systems with solar energy independent of electricity, will be examined and the missing equipment will be supplied, the system will be commissioned and analyzed.



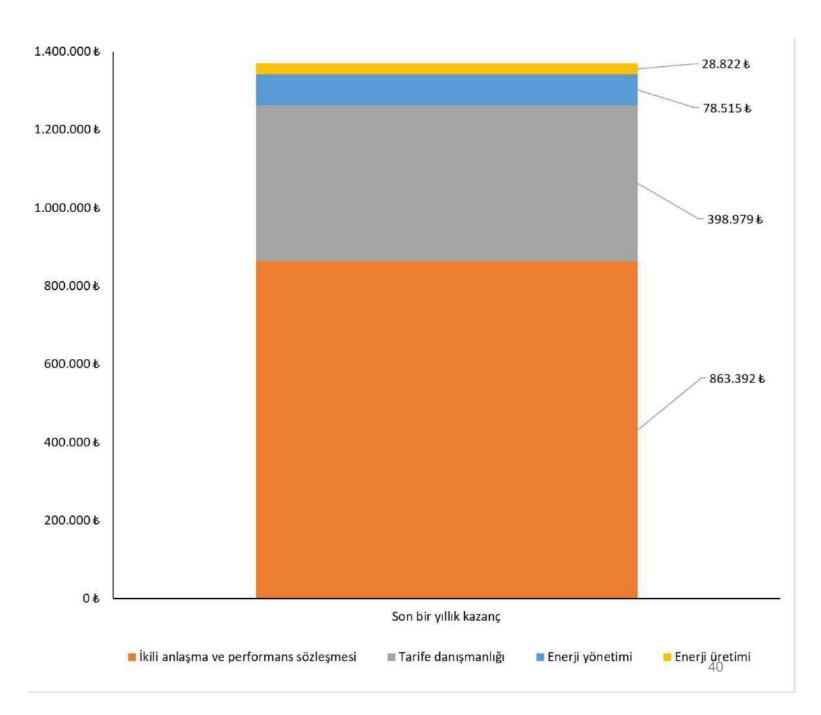
## FINANCIAL GAINS

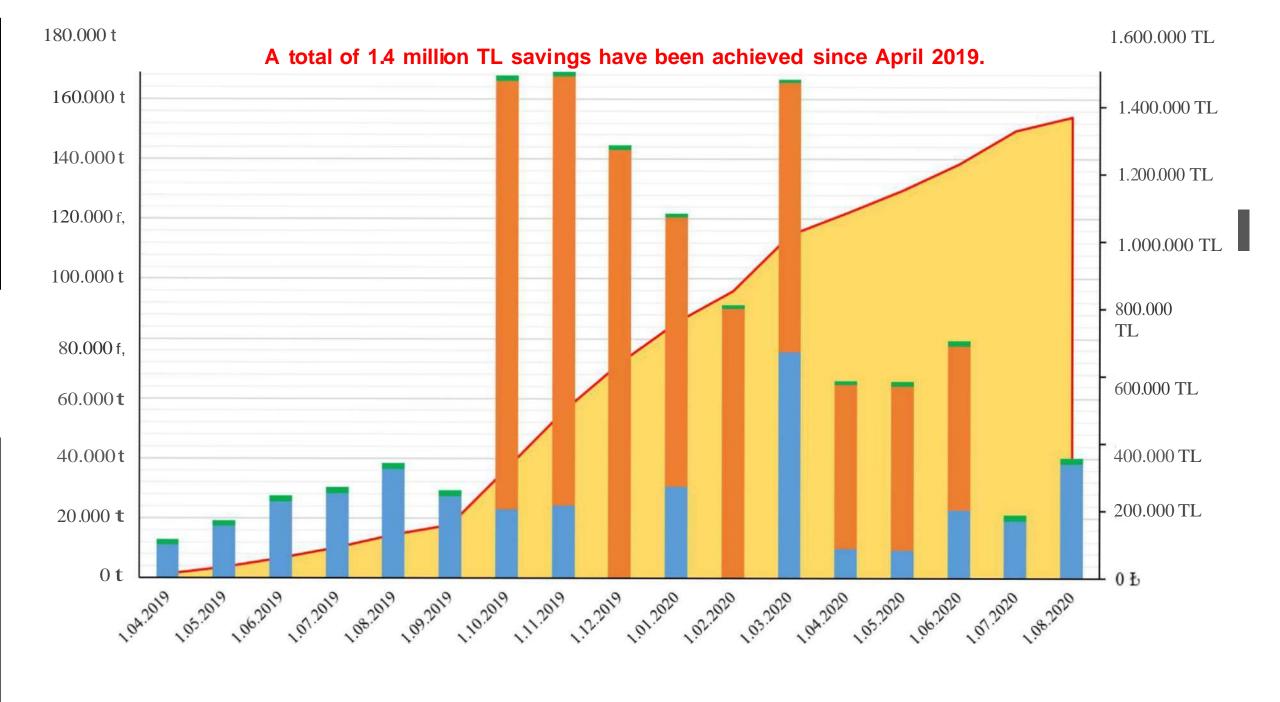
Last 1 year!

## Financial gains

Financialgain in the last1 year .

- TOTAL
- 1.4 MILLION TL.





## 2.11. Please Provide the Total Carbon Footprint (CO<sub>2</sub> emission in the last 12 months, in metric tons)

| Туре                                   | Consumption | Consumption<br>Unit | Conversion factor | Conversion factor unit | TOTAL<br>(CO2<br>metric<br>tons) |
|--|-------------|---------------------|-------------------|------------------------|----------------------------------|
| Electricity                            | 24,814,283  | kWh                 | 0.707             | kgCO2/MWh              | 17,543.70                        |
| Transportation per year (Bus)          | 77,976      | liter (diezel)      | 2.69              | kgCO2/liter            | 209.76                           |
| Transportation per year (Service car)  | 3,659       | liter (gasoline)    | 2.35              | kgCO2/liter            | 8.60                             |
| Transportation per year (Private cars) | 2,975       | liter (gasoline)    | 2.35              | kgCO2/liter            | 6.99                             |
| Natural gas                            | 5,293,753   | Sm3                 | 1.938             | kgCO2/m3               | 10,259.29                        |
|  |             |                     |                   | TOTAL                  | 28,028.34                        |

#### **Description:**

Electricity Consumption values were obtained from the notification page sent to the Ministry of Energy. Consumption values related to buses, shuttles and personal vehicles were taken from the notification page transmitted to the Ministry of Energy and from Gaziantep University Facility Operation Directorate. Conversion factors are taken from the official website.

The values related to fuel consumption were taken from Gaziantep University Security Control Directorate.

### [2.13] Number of innovative program(s) in energy and climate change

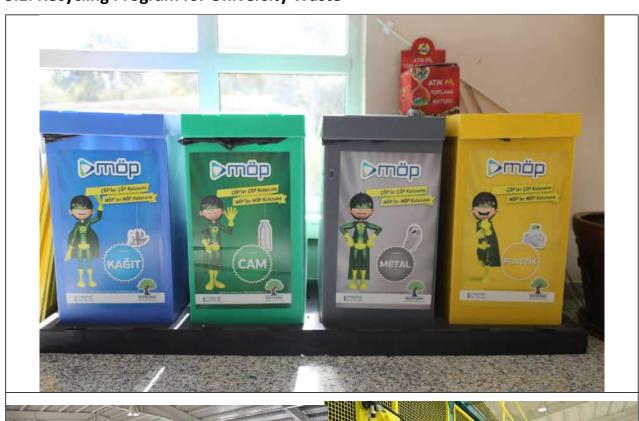
### GREEN TRANSFORMATION MENTORING PROGRAM

Gaziantep University, which also operates in the Gaziantep Organized Industrial Zone, cooperates with a team of academics who are at the international level in many disciplines and have a certain experience, competence and motivation in "university-industry collaborations", who conduct research, training or practice activities on the "Green Agreement". European Green Deal harmonization processes, carbon footprint calculation in the industry application program called "Green Deal" within the scope of the "Supporting Green and Digital Transformation for Employment" Project carried out in cooperation with the Chamber of Industry (GSO) and the German International Cooperation Organization (GiZ) PEP Program Mentoring services were provided for 16 weeks on supporting transformation processes . Mentoring Service Content;

- 1. Detailed information and training on the Green Deal
- 2. Calculation of Corporate Carbon Footprint in accordance with Scope 1-2 and ISO 14064 standard. Providing installation and application training of the related software.
- 3. Informing and guiding the processes of obtaining the Corporate Carbon Footprint ready for verification report.
- 4. waste management and symbiotic relationships in the enterprise
- 5. Green Energy Certificate and information and training on obtaining this certificate
- 6. Information and training on the processes related to the establishment of ISO 14001 Environmental Management System
- 7. Information and training on the subject of Water Footprint
- 8. Information and training on the Green Label issue

## 3. WASTE (WS)

## 3.1. Recycling Program for University Waste









#### **Description:**

There are 2 programs for recycle in Gaziantep University which reflects the current condition of our university efforts to encourage staff and students to recycle waste.

First of all, the wastes are collected according to their type; glass, paper, plastic, metal, and battery in Gaziantep University. Then, one of the city municipalities (Sehitkamil Municipality, <a href="http://mop.gen.tr/?page\_id=86">http://mop.gen.tr/?page\_id=86</a>) collect all these waste from all around the campus and treat them in their facility weekly. Besides, SEKA (a government organisation) collects all paper based wastes from all government institutions all around Turkey, and recycles the wastes.

### 3.2. Program to reduce the use of paper and plastic on campus

#### **Description:**

There are 4 programs for recycle in Gaziantep University which reflects the current condition of our university efforts to encourage staff and students to recycle waste.

First of all, the wastes are collected according to their type; glass, paper, plastic, metal, and battery in Gaziantep University. Then, one of the city municipalities (Sehitkamil Municipality, <a href="http://mop.gen.tr/?page\_id=86">http://mop.gen.tr/?page\_id=86</a>) collects all these waste from all around the campus and process them in their facility weekly. Besides, SEKA (a government organisation) collects all paper based wastes from all government institutions all around Turkey, and recycles the wastes.

Thirdly, The Electronic Document Management System enables a saving on paper, pencil, plastic etc. and is the system that enables the archiving and management of all kinds of documentation created by the institutions during their activities in the process from production to final liquidation. With EDMS, by ensuring that our correspondence between our internal units and other public institutions and organizations is made in computer environment;

- \* Standardization of correspondence,
- \* Shortening the delivery, initial and approval periods of correspondence,
- \* Saving on labour, time and stationery costs,
- \* It is aimed to archive the correspondence in a healthy way.

Lastly, Savings Measures taken by the Turkish Presidency are extensively implemented in Gaziantep University, in which it has been deemed necessary to take the measures in relation to saving from the expenses of public institutions and organizations, reducing bureaucratic procedures and effective use of official vehicles.

### 3.3. Organic Waste Treatment









### **Description:**

In accordance with the zero waste project, the organic and inorganic waste that can be recycled is collected separately with the boxes placed in various parts of the campus. It is collected and processed by the central waste system by the Gaziantep Metropolitan Municipality every day.

### 3.4. Inorganic Waste Treatment





### **Description:**

Inorganic Waste treatment in Gaziantep University is carried out with a comprehensive cooperation with Gaziantep Metropolitan Municipality and Şehitkamil District Municipality. The wastes are collected according to their type; such as glass, paper, plastic, metal, and battery, in Gaziantep University. Then, one of the city municipalities (i.e. Sehitkamil Municipality, <a href="http://mop.gen.tr/?page\_id=86">http://mop.gen.tr/?page\_id=86</a>) collect all these waste from all around the campus and treat them in their facility weekly.

### 3.5. Toxic Waste Treatment









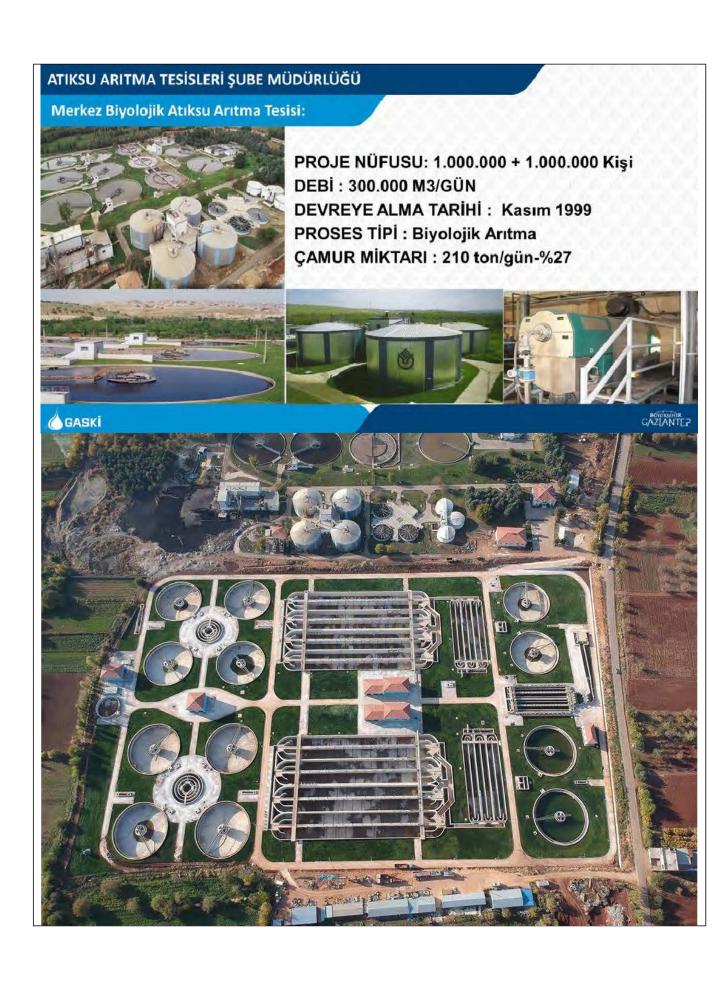
### **Description:**

The sources of toxic waste in Gaziantep University are hospitals and laboratories. The hospital stores hazardous waste at the temporary waste collection location near the hospital (See Figure) before sending it to the Municipality and related companies for processing in accordance with the Integrated Environmental Information System - Waste Management of the Ministry of Environment and Urbanization. These wastes are collected and processed within the scope of agreements made with Gaziantep Metropolitan Municipality and private companies.

## 3.6. Sewage Disposal







#### **Description:**

Sewage Disposal of our university is transferred via the main sewerage system to the main Sewage Treatment and Processing Plant of Gaziantep Metropolitan Municipality. There all the sewage of Gaziantep city is processed. Within the scope of this work, the capacity of the existing wastewater treatment plant has reached 400,000 cubic meters / day (2 million people), the newly built facility has been built as an advanced biological wastewater and sewage treatment plant and can also remove nitrogen and phosphorus.

### [4] Water (WR)

### 4.2. Water Recycling Program Implementation

Sewage Disposal of our university is transferred via the main sewerage system to the main Sewage Treatment and Processing Plant of Gaziantep Metropolitan Municipality. There all the sewage of Gaziantep city is processed. Within the scope of this work, the capacity of the existing wastewater treatment plant has reached 400,000 cubic meters / day (2 million people), the newly built facility has been built as an advanced biological wastewater and sewage treatment plant and can also remove nitrogen and phosphorus.

Next, the recycled water is transferred with a separate pipe system to all around the city and the university to be used for garden sprinkler system, toilet flush, cooling/heating systems, aquaponics and used in fish ponds.



## 4.3. Water Efficient Appliances Usage (e.g. hand washing taps, toilet flush, etc.)





### PRO AYARLANABILIR NOZULLAR

Herhangi bir açı ayarında optimum payzaj alanı kapsaması için Pro Ayarlanabilir Nozullar'ı seçin.

#### ÖNEMLİ AVANTAJLAR

- Maksımum tasarım esnekliği için 0 ° ila 360 ° arasında ayarlanabilir.
- Basit ayarlama için kavraması kolay üst bölüm
- Daha iyi rüzgər direncine sahip iyi biçimlendirilmiş güçlü kenarlar
- Büyük su damlacıkları sislemeyi en aza indirirken daha iyi bir üniformite sağlar

#### EK ÖZELLİKLER

- Her nozulda 8A ile 17A arasında eşleştirilmiş yağmurlama oranı
- · Eşif dağılım daha iyi kapsamayla sonuçlanır
- · Sahada kolay tarunması için renk kodlu

#### ALIŞMA TEKNIK ÖZELLIKLERI

- Önerilen çalışma basıncı: 2,1 bar, 210 kPa
- 2.1 bar'a kadar basınç ayan için Pro-Spray PRS30 ile kullanın
- · Garanti suresi: 2 yil







o Hunter

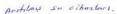
hunterindustries.com web sitesini ziyaret edin

### **Description:**

Some examples of water conservation measures include, cistermisers (automatic control of urinal flushing), waterless urinals, low flush WC's and low flo taps and automatic taps. Besides, all-purpose nozzles are set up all around the campus and the gardens, and grass and trees are watered with this automated nozzles, which are timely adjustable and water efficient. Attached is the water bills of the university for the last 2 years.

## 4.4. Treated water consumed







Artilmis su citualari

### **Description:**

25% of treated water is consumed in Gaziantep University. In the heating and cooling systems of our university, treated water is used both in the heat plant main centre and in the heat exchange stations under our 45 buildings

# [5] Transportation (TR)

# 5.4. The total number of vehicles (cars and motorcycles) divided by total campus' Population

| No. | Vehicle                             | Total Number |
|-----|-------------------------------------|--------------|
| 1   | Car managed by the university       | 75           |
| 2   | Cars entering the university        | 6400         |
| 3   | Motorcycles entering the university | 420          |
|     | Total                               | 6895         |

5.4 = 6895 / 51725 (population) = 0.13

## 5.5. Shuttle service



### Description

The Directorate of Vehicle Operations carries out the transportation of the university personnel between various districts and our campus, the transportation of the students for lessons, technical trips, sportive and cultural activities, the transportation of the units with ring services within the campus, and the services of the authorities.

- **5.6.** The number of shuttles operated in Gaziantep University is **13.**
- **5.7.** Average number of passengers of each shuttle is 27.
- **5.8.** Total trips of shuttle services each day is 2.

## [5.9] Zero Emission Vehicles (ZEV) Policy on Campus

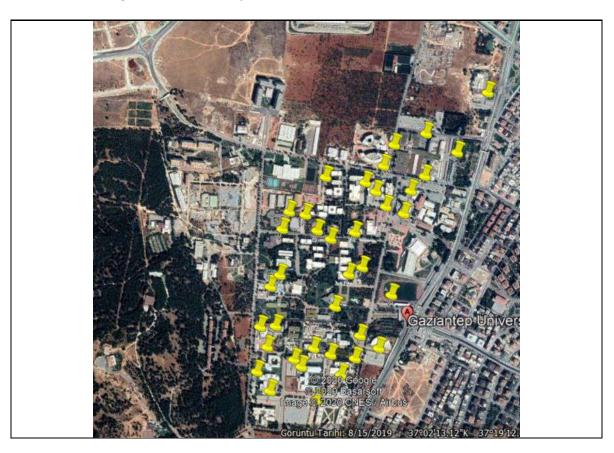


### **Description:**

There is 1 zero emission vehicle and it provides ring service within the university. It covers approximately 80 km daily. There are 500 bicycles and 1 electric minibus. They are all used actively.

## [5.13] Ratio of Parking Area to Total Campus Area

## [5.13] Ratio of Parking Area to Total Campus Area



## **Description:**

Total main campus area: 1425594 m²

Total parking area = 55000 m<sup>2</sup>

Ratio = 0.25

[5.14] Program to limit or decrease the parking area on campus for the last 3 years (from 2019 to 2021)

[5.15] Number of Transportation Initiatives to Decrease Private Vehicles on Campus

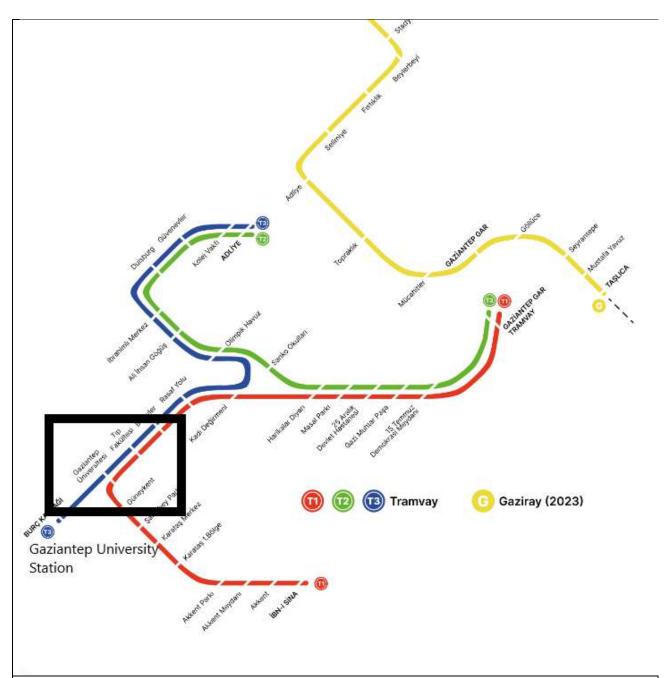




Campus Shuttle (Gaziantep University)



Plate Notification System (Gaziantep University)



Gaziantep Railway Map to Gaziantep University <a href="https://gaziulas.com.tr/hizmetler/tramvay-isletmesi/tramvay-hat-listesi">https://gaziulas.com.tr/hizmetler/tramvay-isletmesi/tramvay-hat-listesi</a>

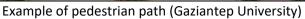
#### **Description:**

Gaziantep University benefits from 4 incentives to decrease the number of cars inside the campus. The first one is bikes which are available for all visitors and members of the university. Secondly, the campus shuttles which the campus academic and administrative staff take in commuting, and for the students, there is ring shuttles that tours inside the campus from entrances to faculties and dormitories. Thirdly, Gaziantep University has plate notification systems at all entrances, which unable the entry of other cars except members and students. Finally, the main railway system in Gaziantep provides access to Gaziantep University from all around the city, which enables commuters to arrive at the campus easily without a private vehicle.

**5.17.** Approximate daily travel distance of a vehicle inside campus only is 5 km.

# [5.16] Pedestrian Path Policy on Campus







Example of pedestrian path (Gaziantep University)



Solar Street lamps for pedestrians at night

# [6] Education and Research (ED)

# **6.1.** Number of Courses/Subjects Related to Sustainability Offered

| No | Course Name                           | Course Name                         |
|----|---------------------------------------|-------------------------------------|
| 1  | ALTERNATİF ENERJİ SİSTEMLERİ          | ALTERNATIVE ENERGY SYSTEMS          |
| 2  | ELEKTRİK ENERJİSİ ÜRETİMİ, İLETİMİ VE | ELECTRIC ENERGY GENERATION,         |
| 2  | DAĞITIMI                              | TRANSMISSION AND DISTRIBUTION       |
| 3  | ENERJİ YÖNETİMİ                       | ENERGY MANAGEMENT                   |
| 1  | FARKLI ÇEVRE KOŞULLARINDA             | EXERCISE IN DIFFERENT ENVIRONMENTAL |
| 4  | EGZERSİZ                              | CONDITIONS                          |
| 5  | İLERİ ÇEVRE BİYOLOJİSİ                | ADVANCED ENVIRONMENTAL BIOLOGY      |
| 6  | SPOR TURİZM VE ÇEVRE                  | SPORTS TOURISM AND ENVIRONMENT      |
| 7  | BİYOGÜVENLİK VE ÇEVRE SAĞLIĞI         | BIOSAFETY AND ENVIRONMENTAL HEALTH  |
| 8  | ÇEVREBİYOTEKNOLOJİSİ                  | ENVIRONMENTAL BIOTECHNOLOGY         |

| 9  | ÇEVRE EĞİTİMİ                                    | ENVIRONMENTAL EDUCATION                          |
|----|--|--|
| 10 | ÇEVRE KİMYASI                                    | ENVIRONMENTAL CHEMISTRY                          |
| 11 | ÇEVRE KORUMA                                     | ENVIRONMENTAL PROTECTION                         |
| 12 | ÇEVRESELFAKTÖRLER                                | ENVIRONMENTAL FACTORS                            |
| 13 | ÇEVRESEL RİSK DEĞERLENDİRMESİ                    | ENVIRONMENTAL RISK ASSESSMENT                    |
| 14 | ÇEVRESEL VE MESLEKSEL ETKENLER VE<br>AKCİĞERLER  | ENVIRONMENTAL AND OCCUPATIONAL FACTORS AND LUNGS |
| 15 | KENTLEŞMEPOLİTİKALARI                            | URBANIZATION POLICIES                            |
| 16 | KENTLEŞME POLİTİKASI                             | URBANIZATION POLICY                              |
| 17 | TARIMIN EKONOMİ POLİTİĞİ                         | ECONOMIC POLICY OF AGRICULTURE                   |
| 18 | KENTLEŞME VE KONUT POLİTİKALARI                  | URBANIZATION AND HOUSING POLICIES                |
| 19 | BÖLGESEL EKONOMİ POLİTİKALARI                    | REGIONAL ECONOMY POLICIES                        |
| 20 | SOSYAL POLİTİKA                                  | SOCIAL POLICY                                    |
| 21 | KENT EKONOMİSİ VE GELİŞME<br>POLİTİKALARI        | URBAN ECONOMY AND DEVELOPMENT POLICIES           |
| 22 | SÜRDÜRÜLEBİLİRLİK                                | SUSTAINABILITY                                   |
| 23 | MİMARLIK, SÜRDÜRÜLEBİLİRLİK VE<br>KENT           | ARCHITECTURE, SUSTAINABILITY AND THE CITY        |
| 24 | SÜRDÜRÜLEBİLİR TURİZM<br>UYGULAMALARI            | SUSTAINABLE TOURISM PRACTICES                    |
| 25 | SÜRDÜRÜLEBİLİR KALKINMA VE EĞİTİM                | SUSTAINABLE DEVELOPMENT AND EDUCATION            |
| 26 | SÜRDÜRÜLEBİLİRLİK VE LOJİSTİK                    | SUSTAINABILITY AND LOGISTICS                     |
| 27 | SÜRDÜRÜLEBİLİR KENTLEŞME                         | SUSTAINABLE URBANIZATION                         |
| 28 | SÜRDÜRÜLEBİLİR TURİZM<br>UYGULAMALARI            | SUSTAINABLE TOURISM PRACTICES                    |
| 29 | SÜRDÜRÜLEBİLİR TURİZM<br>UYGULAMALARI            | SUSTAINABLE TOURISM PRACTICES                    |
| 30 | SÜRDÜRÜLEBİLİRLİK VE ÇEVRE                       | SUSTAINABILITY AND THE ENVIRONMENT               |
| 31 | SÜRDÜRÜLEBİLİRKENTLEŞME                          | SUSTAINABLE URBANIZATION                         |
| 32 | TEKSTİL VE MODA TASARIMINDA<br>SÜRDÜRÜLEBİLİRLİK | SUSTAINABILITY IN TEXTILE AND FASHION DESIGN     |

## **Description:**

Above is a list of the courses that have had changes approved through Gaziantep University curriculum which aims to embed sustainability into all course and module content offered by the University.

## 6.2. Total Number of Courses/Subjects Offered

| 2019 | 3290 |
|------|------|
| 2020 | 3299 |
| 2021 | 5595 |
|      |      |

Total number of courses offered in 2021 = 5595 courses (not modules)

## 6.4. Total Research Funds Dedicated to Sustainability Research (in US Dollars)

Total research fund dedicated to sustainability research in 2019 = 544959 US Dollars

Total research fund dedicated to sustainability research in 2020 = 59331 US Dollars

Total research fund dedicated to sustainability research in 2021 = 80340 US Dollars

The averaged annum last 3 years of research fund dedicated to sustainability research = 228210 US Dollars

## 6.5. Total Research Funds (in US Dollars)

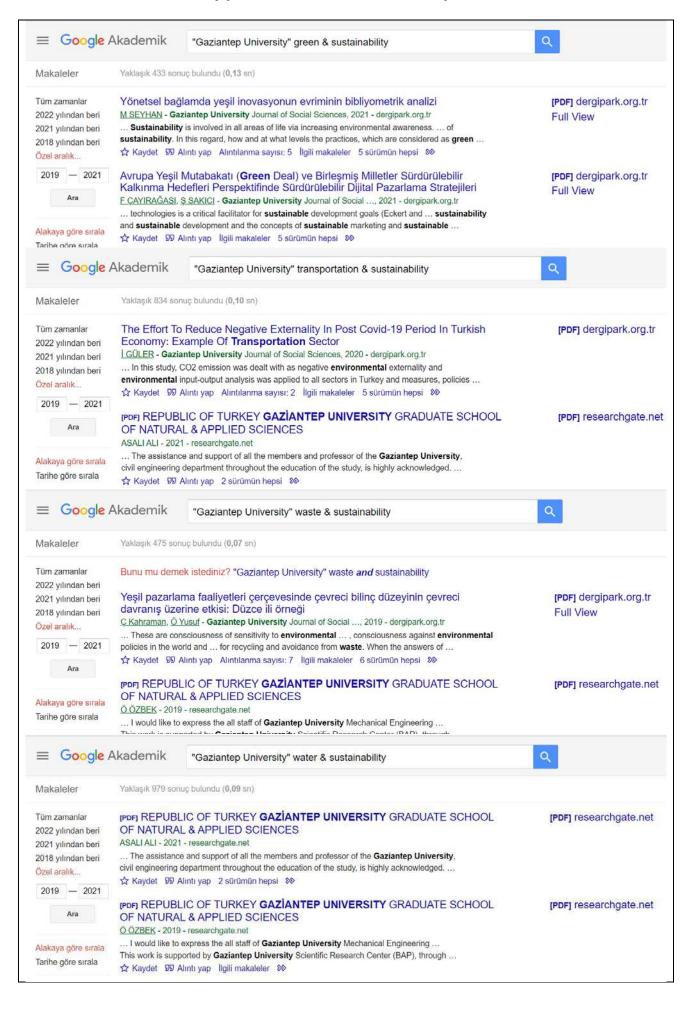
Total research fund in 2019 = 6024827 US Dollars

Total research fund in 2020 = 4359178 US Dollars

Total research fund in 2021 = 1611802 US Dollars

The averaged annum last 3 years of research fund = 3998602 US Dollars

## 6.7. Number of scholarly publications on sustainability





#### **Description:**

Example of events **scholarly publications on sustainability** in the academic year 2019-2021. A total average per annum over the last 3 years of **3821 publications** 

# 6.8. Number of Events Related to Sustainability





Examples of Events Related to Sustainability (Gaziantep University)



























Examples of Events Related to Sustainability (Gaziantep University)



Example of events related to environment and sustainability hosted or organized by Gaziantep University



Protect Your Water workshop at kindergartens organized by Gaziantep University Faculty Members

#### PROJECT NAME

**Consumption and Saving Habits in Youth Project** 

Cost research due to the disposal of household wastes (bottle, glass, tin, paper, packaging, plastic) in the Gaziantep Central Campus and their inability to bring them into the economy.

A Literature Search Project About A Single Recyclable Material Compiled From Articles About Waste Recycling

**One Sapling One Forest Project** 

Park Universe Project

**Awareness Raising Project on Water Consumption** 

**Clean Living Space Project** 

**Sustainable Development Goals Project** 

**Awareness Raising Project on Reducing Food Waste** 

**Clean Environment Project with Gaziantep University** 

**Sapling Planting and Forestation Project** 

Don't Let The Future Be Without Water Project

Water is the Future, Protect Your Future Project

Nurdagi is Turning Green Project

I Have a Planted Tree Project

You Plant a Sapling Project

**Tree Planting Project** 

**Sapling Planting Project** 

Your Name is Nature Project

**Sapling Planting Campaign Project** 

**Individual Sapling Planting Project** 

**Community and Environmental Awareness Project** 

**Stay at Home Grow Flowers Project** 

My Rose Garden Project

Let's Keep Our Environment Clean Project

**Prevention of Water and Food Waste Project** 

**Consumption Awareness Project** 

**No Life Without Water Project** 

You Plant a Sapling Project

**Prevention of Water and Food Waste Project** 

**Clean Campus Project** 

**Grow Sapling, Be a Breath to the Future Project** 

**One Sapling One Breath Project** 

Our Water is Our Life Project

**Environmental Awareness Development Project** 

**Tree Planting Project** 

Giving Garbage a Chance of Life by Creating Zero Waste and Recycling Awareness Project

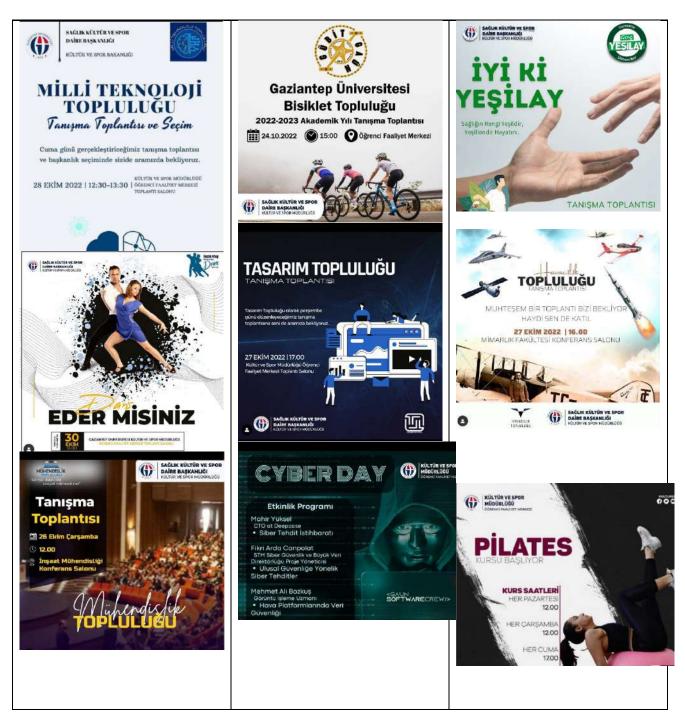
Example of events related to environment and sustainability hosted or organized by Gaziantep University in the academic year 2018-2020.

Total number of sustainability/environment related events in:

2019: 30 2020: 32 2021 42

A total average per annum over the last 3 years of **76 events** (e.g. conferences, workshops, awareness raising, practical training, etc.).

### 6.9. Number of student organizations related to sustainability





Examples of student organizations (daziantep oniversity

#### Description

To provide all kinds of contributions and opportunities for Gaziantep University students and employees to come together and work in the fields of interest, knowledge and skill, and to organize the exhibition and promotion of the products that emerge as a result of these studies.

#### **VISION**

To direct each individual under the roof of Gaziantep University to at least one socio-cultural field and to ensure that they are equipped in social areas in addition to their professional development.

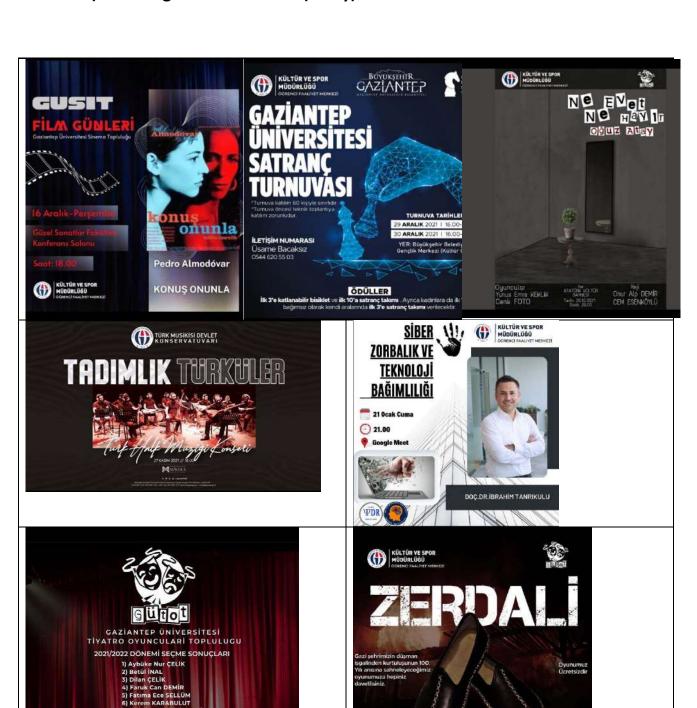
#### AIM

The aim of Gaziantep University 80th Year Student Culture Directorate can be summarized as meeting the socio-cultural needs of the individuals under the roof of the university, preparing suitable environments for them to carry out individual or organized activities in line with these needs, and providing all kinds of opportunities within the possibilities in order to carry out the activities in a healthy way.

- **6.10.** There is a University-run sustainability website, which is available, accessible, and updated regularly.
- **6.11.** Sustainability report is published annually.

http://kalite.gantep.edu.tr/

# **6.13.** Number of cultural activities on campus (e.g. Cultural Festival) including virtual activities (if any)



Examples of cultural activities on campus (Gaziantep University)

KÜLTÜR VE SPOR MÜDÜRLÜĞÜ ÖĞRENCI FAALIYET MERKEZI 28 SAAT M AKS



#### **Description:**

Example of Total number **cultural activities on campus** organized by Gaziantep University: more than 3 **events** 

## [6.14] Number of university program(s) to improve teaching and learning





Online Teaching Methods (<a href="http://uzem.gantep.edu.tr/">http://uzem.gantep.edu.tr/</a>) (Gaziantep University, Turkey)

#### **Description:**

#### Gaziantep University Distance Education Application and Research Centre

Our centre attempts to keep two different aspects of distance education in a creative balance. On the one hand, the expectation from online education is to provide an equivalent quality education experience for both students and instructors as rigorous as traditional or face-to-face education, on the other hand, it supports the use of different pedagogical methods and interaction tools for face-to-face and online courses. Our centre sees it as a necessity to benefit from distance education platforms in order to provide a rich learning environment for the learner in coeducation. In this context, it aims to transform the learning experience into a permanent structure independent of time and place, sensitive to individual learning speed and self-control. Without looking at distance education as a substitute for formal education, both are perceived as complementary to each other and as a result, act parts of a whole that improves learning experiences. From this point of view, Gaziantep University's Distance Education Policy are:

"To use modern education technologies by blending them in distance/blended education programs and thus developing learning at the highest level in a qualified, permanent and technology compatible manner." While preparing the Distance Education Policy, focus group meetings were held. Our centre sees distance education means as opportunities, and tries to make use of modern technology opportunities available to our students.

It is aimed to determine a student-centered, competency-based, user-friendly sustainable policy for students and instructors. This policy has been prepared to ensure that distance education services not only maintain the same standard as formal education services, but also integrate them. It was announced to our stakeholders on the GAUZEM Distance Education Application and Research Center web page and our institution's web page. Monitoring reports for monitoring and improving our policy in an integrated manner with the internal quality assurance system will be followed up in 6-month periods with the coordination of the Quality Assurance Unit, and will be finalized at the end of the year, and the management of our institution will be informed.

Instructors and students are informed about alternative teaching approaches and methods that can be used in distance/co-education practices, and the use of these methods and approaches is encouraged. In addition, there is a live lesson group room application where group work can be done to increase student participation and interaction (Adobe Connect). For the same purpose, there are also opportunities that allow the implementation of extracurricular/social interaction such as forums and blogs. The Moodle LMS system used by GAUZEM offers extensive opportunities for assessment and evaluation. System exam in terms of variety of exam questions (Multiple choice, True/false, Matching, Short answer, Numeric, Written) and limitation settings (Timing, Note-application permission, Layout, Question behaviour, Feedback and Limitations-password, network address). It offers a practical exam tool for students and instructors in their applications. In terms of exam security, the opportunity to use a secure exam navigator is provided. In addition, Live Proctoring exam applications were preferred in the units that requested, and in this way, the student's identity verification and live proctoring of the exam were made by the proctors.

# **6.14.** Number of sustainability community services project organised and/or involving students

| PROJECT NAME   | Participants | Duration | Project Area |
|--|--------------|----------|--------------|
| Consumption and Saving Habits in Youth<br>Project      | 8            | 1 Term   | EC           |
| Cost research due to the disposal of                   |              | 1 Term   | EC, WS       |
| household wastes (bottle, glass, tin, paper,           |              |          | -, -         |
| packaging, plastic) in the Gaziantep                   | 8            |          |              |
| Central Campus and their inability to                  |              |          |              |
| bring them into the economy.                           |              |          |              |
| A Literature Search Project About A                    |              | 1 Term   | ED, WS, SI   |
| Single Recyclable Material Compiled                    | 8            |          | ,,           |
| From Articles About Waste Recycling                    |              |          |              |
| One Sapling One Forest Project                         | 8            | 1 Term   | EC           |
| Park Universe Project                                  | 46           | 1 Term   | EC           |
| Awareness Raising Project on Water                     | 28           | 1 Term   | WR           |
| Consumption  |              |          |              |
| Clean Living Space Project                             | 29           | 1 Term   | EC,          |
| Sustainable Development Goals Project                  | 34           | 1 Term   | ED, SI       |
| Awareness Raising Project on Reducing<br>Food Waste    | 36           | 1 Term   | WS           |
| Clean Environment Project with<br>Gaziantep University | 50           | 1 Term   | EC, WR       |
| Sapling Planting and Forestation Project               | 18           | 1 Term   | EC           |
| Don't Let The Future Be Without Water<br>Project       | 11           | 1 Term   | WR           |
| Water is the Future, Protect Your Future<br>Project    | 25           | 1 Term   | WR           |
| Nurdagi is Turning Green Project                       | 10           | 1 Term   | EC           |
| I Have a Planted Tree Project                          | 10           | 1 Term   | EC           |
| You Plant a Sapling Project                            | 5            | 1 Term   | EC           |

| Tree Planting Project  | 45 | 1 Term | EC         |
|--|----|--------|------------|
| Sapling Planting Project   | 26 | 1 Term | EC         |
| Your Name is Nature Project  | 26 | 1 Term | ED, EC     |
| Sapling Planting Campaign Project  | 80 | 1 Term | EC         |
| <b>Individual Sapling Planting Project</b>   | 40 | 1 Term | EC         |
| Community and Environmental<br>Awareness Project   | 36 | 1 Term | ED, SI, EC |
| Stay at Home Grow Flowers Project  | 30 | 1 Term | EC         |
| My Rose Garden Project   | 28 | 1 Term | EC         |
| Let's Keep Our Environment Clean<br>Project  | 35 | 1 Term | EC         |
| Prevention of Water and Food Waste<br>Project  | 35 | 1 Term | WR, WS     |
| <b>Consumption Awareness Project</b>   | 40 | 1 Term | ED         |
| No Life Without Water Project  | 51 | 1 Term | WR         |
| You Plant a Sapling Project  | 25 | 1 Term | EC         |
| Prevention of Water and Food Waste<br>Project  | 25 | 1 Term | WR, WS     |
| Clean Campus Project   | 55 | 1 Term | EC         |
| Grow Sapling Be a Breath to the Future Project   |    | 1 Term | ED, EC     |
| One Sapling One Breath Project   | 47 | 1 Term | EC         |
| Our Water is Our Life Project  |    | 1 Term | WR         |
| Environmental Awareness Development<br>Project   | 40 | 1 Term | ED         |
| Tree Planting Project  |    | 1 Term | EC         |
| Giving Garbage a Chance of Life by<br>Creating Zero Waste and Recycling<br>Awareness Project | 45 | 1 Term | WS         |

# **6.16.** Number of sustainability-related startups

| No. | Information  |
|-----|--|
| 1   | Startup name: Rehabilitation of Clear Lake project* Startup area in UI Greenmetric questionnaire (SI, EC, WS, WR, TR, ED): SI URL: <a href="https://resources.ca.gov/Initiatives/Blue-Ribbon-Committee-for-the-Rehabilitation-of-Clear-Lake">https://resources.ca.gov/Initiatives/Blue-Ribbon-Committee-for-the-Rehabilitation-of-Clear-Lake</a> * |
| 2   | Startup name: EFELYUM ELEKTRONİK YAZILIM SANAYİ VE TİCARET LTD.ŞTİ. Startup area in UI Greenmetric questionnaire (SI, EC, WS, WR, TR, ED): URL: info@efelyum.com Description: Solar Panels Photos:   |
| 3   | Startup name: ACZ ENERJİ İNOVASYONVE ARGE SANAYİ VE TİCARET LİMİTED ŞİRKETİ Startup area in UI Greenmetric questionnaire (SI, EC, WS, WR, TR, ED): URL: aczinovasyon@gmail.com Description: LTO battery, electricity saving Photos:  |
| 4   | Startup name: Seyf Ar-Ge Otomasyon Mühendislik Danışmanlık San. Tic. Ltd. Şti. Startup area in UI Greenmetric questionnaire (SI, EC, WS, WR, TR, ED): URL: bozbas@gantep.edu.tr Description: Air Purifier Photos:  |
| 5   | Startup name: KK TEKNOLOJİ ELEKTRONİK ELEKTROMEKANİK VE SOLAR TEKNOLOJİ AR-GE SAN TİC. LTD. ŞTİ Startup area in UI Greenmetric questionnaire (SI, EC, WS, WR, TR, ED): URL: kkteknoloji@gmail.com Description: Air Purifier Photos:  |
| 6   | Startup name: NOVEL ENERJİ DANŞ.MÜH.SAN.VE TİC.A.Ş. Startup area in UI Greenmetric questionnaire (SI, EC, WS, WR, TR, ED): URL: aguven@gantep.edu.tr Description: Waste water Photos:  |
| 7   | Startup name: BKRC ENDÜSTRİYEL ENERJİ ISI SAN.TAAHHÜT PAZ.TİC.VE LTD.ŞTİ. Startup area in UI Greenmetric questionnaire (SI, EC, WS, WR, TR, ED): URL: info@endustriyelenerji.com Description: Heat recovery Photos:  |
| 8   | Startup name: GAZİANTEP BİLİŞİM VE AKILLI KENT TEKNOLOJİLERİ ANONİM ŞİRKETİ Startup area in UI Greenmetric questionnaire (SI, EC, WS, WR, TR, ED): URL: bilgi@gaziantepbilisimcom.tr   |

**Description:** Debris Management and Information System

**Photos:**