Affordable and clean energy (SDG 7)

7.2. University measures towards affordable and clean energy

7.2.1. Energy-efficient renovation and building policies

Have a policy in place for ensuring all renovations or new builds are following energy efficiency standards

1. In 2021, Beni-Suef University Council has reviewed a set of General government's regulations and policies on environmental protection and energy and water conservation that have been implemented on campus for many years. They must be fully complied with when refurbishing old buildings or constructing new buildings on campus. They aim to save energy and improve energy efficiency standards for older buildings and all new buildings are required to meet energy efficiency standards. These policies and regulations stipulate the following;

a) Setting the necessary rules and procedures to develop and encourage the production and use of electricity from renewable sources, and raise the efficiency of use of electrical energy. (**Item 10 of Article 1 in Chapter Two of the Electricity Law issued by a Presidential Decree of Egypt by Law No. 87 of 2015**).
https://www.marefa.org/%D9%82%D8%A7%D9%86%D9%88%D9%86_%D8%A7%D9%84%D9%83%D9%87%D8%B1%D8%A8%D8%A7%D8%A1_%D8%A7%D9%84%D9%85%D8%B5%D8%B1%D9%8A_2015

b) When selecting work sites, establishments and their branches, and granting their licenses, the requirements of environmental protection shall be taken into account in accordance with the provisions of Legislation issued in this regard. (**Article 204 - Labor Law No. 12 of 2003**).
https://kanonmisr.com/ar/%D9%82%D8%A7%D9%86%D9%88%D9%86-%D8%A7%D9%84%D8%B9%D9%85%D9%84-pdf-%D8%A7%D9%84%D9%82%D8%A7%D9%86%D9%88%D9%86-%D8%B1%D9%82%D9%85-12-%D9%84%D8%B3%D9%86%D8%A9-2003-%D8%A8%D8%B5%D9%8A%D8%BA%D8%A9-pdf

c) Rationalizing consumption is a collective societal behavior and a sustainable life system that extends to all aspects of life as long as it hurts in the interest of the citizen and the state at the same time. (**Egypt's strategy for sustainable development until 2030**)
https://www.mwri.gov.eg/water-staretgy-2050/

d) Coal-traded companies and establishments and port authorities are subjected to the provisions of environmental monitoring and the environmental record stipulated (**in Articles No. 22 and 24 of the Environmental Law promulgated by Law No. 4 of 1994**).
https://wipolex-res.wipo.int/edocs/lexdocs/laws/ar/eg/eg033ar.pdf

2. The University Council for Environmental Service and Community Development is responsible for studying and proposing the general policy, plans and programs that ensure the achievement of the university's role in community service and environmental development (**As stipulated in Article 35 repeated A of the Universities Organizing Law and its executive regulations in accordance with the latest amendments**)
https://www.du.edu.eg/files/%D9%82%D8%A7%D9%86%D9%88%D9%86%20%D8%AA%D9%86%D8%B8%D9%8A%D9%85%20%D8%A7%D9%84%D8%AC%D8%A7%D9%85%D8%B9%D8%A7%D8%AA%20%D8%A7%D9%84%D9%85%D8%B5%D8%B1%D9%8A%D8%A9.pdf

Accordingly, BSU has formulated a set of energy-saving and carbon-reduction practices to be followed by all users of the buildings, facilities, and equipment on campus. These include, but are not limited to, the following points;

a) The university is directed to restore the old buildings with better insulation.
b) Finding alternative environmentally friendly modes is one of the most important concerns for all parts of the organization.
c) The periodic supervision of the University's administrative security for all offices, research laboratories and halls after the end of the official working hours, to ensure that all light sources are closed.
d) The use of light – colored paints inside college buildings.
e) Distribution of ventilation holes in halls, offices, roads and building entrances.
f) Using of energy-saving and self-battery research devices.
g) Providing energy-saving air conditioners and refrigerants.
h) The solar energy project is circulated within different parts of Beni-Suef University.
i) Increasing of the green space.
j) Rationalizing the consumption of the daily amount of water contributes to save the energy.
k) The strict instructions for smoking reduction/
l) Directing to replace petrol and diesel tanks with cars and buses running on natural gas or biofuel.
m) Periodic maintenance of the vehicles (buses, minibuses, transport vehicles and private cars) at the university
n) Presence of chimneys and hoods in the places of food preparation and services at the university,
o) Presence of programs for university waste recycling and reducing the use of paper and plastic in the university.

Affordable and clean energy (SDG 7)

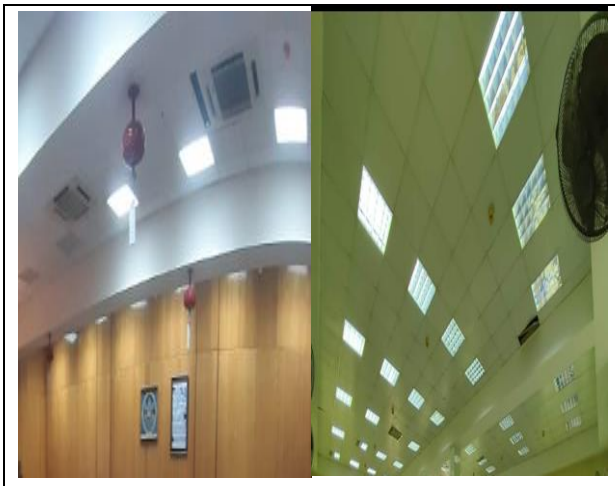
7.2. University measures towards affordable and clean energy

7.2.2. Upgrade buildings to higher energy efficiency

Have plans to upgrade existing buildings to higher energy efficiency

1. BSU arranges a budget for energy-saving improvement projects annually and it pays a great attention to rationalize energy consumption through;
   1.1. Restoring the old buildings with better insulation.
   1.2. The older models of energy-consuming air-conditioning equipment are updated to new high-efficiency air-conditioning equipment.
   1.3. Finding alternative environmentally friendly modes is one of the most important concerns for all parts of the organization. Hence, the ordinary filament bulbs are replaced with LED bulbs at all parts of Beni-Suef University. LED bulbs are the most environmentally friendly bulbs that save more than 85 % of electrical energy compared to filament bulbs. In addition, light poles at the campus are equipped with automatic sensors that work as soon as the sun goes down and turn off at sunrise.
   1.4. The periodic supervision of the University's administrative security for all offices, research laboratories and halls after the end of the official working hours, to ensure that all light sources are closed.
   1.5. The use of light – colored paints inside college buildings to increase lighting during daytime periods reducing the use of the artificial light.
   1.6. Distribution of ventilation holes in halls, offices, roads and building entrances to help natural lighting at the university during daytime periods.
   1.7. The university uses energy-saving and self-battery research devices to control the amount of the electricity for devices.
   1.8. Giving strict instructions for all university employees and students not to use electric boilers and instead, providing special places as buffets that are powered with natural gas or cooking cylinders
   1.9. Rationalizing the consumption of the daily amount of water contributes to save the energy needed to pump. Hence, water efficient appliances are used such as water taps with automatic sensors.
   1.10. All buildings of the university apply passive cooling means that help in improving the indoor thermal comfort with low or no energy consumption. These means are for example proper sized shading of glass when heat gains are being avoided and the use of light or reflective colored materials for the building envelope and roof.

2. Finding alternative sources of electricity such as solar energy, helps saving energy and reducing climate changes. Believing in the big role of the renewable energy next periods;
   2.1. Solar energy project is circulated within different parts of Beni-Suef University. As exemplified by using light poles working with solar energy and operating many buildings with solar energy.
   2.2. Directing to Generalizing the use of lamps and lighting poles with light sensors inside all different buildings of the university to allow the automatic lighting and closing in response to sunlight.
   2.3. The Electrical Engineering Department at Faculty of Engineering has an energy factory as one of the modern laboratory in the college. This lab is a miniature form for generating electricity from new and renewable energy. The lab includes small sets for generating electricity from wind and solar energy to be a fixed energy.
   2.4. The presence of a plan to generate electricity using solar energy at the Faculty of Postgraduate Studies for Advanced Sciences.
   2.5. BSU is planning to install new roof-mounted photovoltaic panels on the various buildings in 2023.
   2.6. The energy lab at Faculty of Postgraduate Studies for Advanced Sciences, is concerned with manufacturing materials used in energy storage and conversion with engineering manufacturing of energy tools from solar energy, batteries and fuel cells. It aims to find alternative solutions for electricity and fuel.
   2.7. The Faculty of Postgraduate Studies for Advanced Sciences has a 5kw roof top grid connected PV system and a specialized lab for generating the electricity from the solar energy.

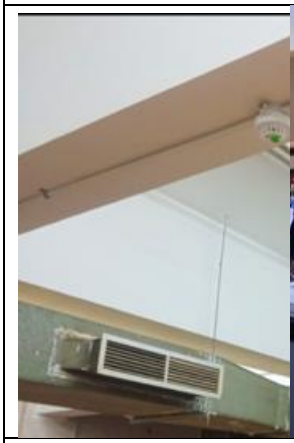
	
1. Example of replacing the ordinary light bulbs with economically friendly ones (LED lamps) (Faculty of Pharmacy, Beni-Suef University , Beni-Suef)	2. Example of using light-colored paints inside the college buildings (Laser Institute for Research and Applications and Faculty of Pharmacy, Beni-Suef University , Beni-Suef)



3. Example of generating electricity using solar energy (Faculty of Engineering and Faculty of Postgraduate Studies for Advanced Sciences, Beni-Suef University, Beni-Suef)

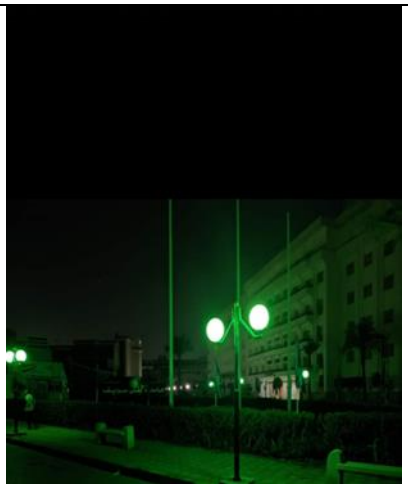

4. Example of distribution of ventilation holes and glass windows in different university buildings (Faculty of Earth Science and Faculty of Mass Communications, Beni-Suef University , Beni-Suef)


5. Energy lab (Faculty of Postgraduate Studies for Advanced Sciences, Beni-Suef University, Beni-Suef)




6. Example of presence of chimneys with filters for research devices (Faculty of Pharmacy, Beni-Suef University, Beni-Suef)

7. Using water taps that operate with sensors (Beni-Suef University , Beni-Suef)

	
8. proper sized shading of glass and Light colored paints in Laser Institute for Research and Applications)	9. Sensitive light poles in Campus
	
10. PVC strip curtains in Faculty of Earth Science	11. PVC curtains in Faculty of Pharmacy

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9. https://www.facebook.com/advancedsciences/videos/437018341678633/
10. https://onedrive.live.com/?authkey=%21ACSsZACPjy8IKhQ&cid=A7313899D7BABF6E&id=A7313899D7BABF6E%21116&parId=root&o=OneUp
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15. https://gate.ahram.org.eg/News/3163694.aspx
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Affordable and clean energy (SDG 7)

7.2. University measures towards affordable and clean energy

7.2.3. Carbon reduction and emission reduction process

Have a process for carbon management and reducing carbon dioxide emissions

Greenhouse gas is emitted during energy production and consumption and CO_2 is the most harmful gas to the environment. BSU has key implementation points to promote energy conservation and carbon reduction that focus on management measures for power and water conservation, energy saving for lighting and air conditioning, and environmental education.

Overview of Green Strategies and Technologies implemented at Beni-Suef University (Beni-Suef University, Beni-Suef)

1. BSU achieves electricity saving annually, thereby effectively reducing the amount of carbon dioxide emissions.

2. Using LED lamps (economically friendly bulbs) are one of the easiest ways to reduce the production of CO_2 (Carbon footprint).

3. The use of light-colored paints inside the college buildings to increase lighting during daytime periods reducing the use of artificial lighting that in turn reduces the greenhouse gas emission.

4. With renewable energy, there are no gas emissions and allow clean air and a safe energy solution. Hence, the solar energy project is circulating within the different university parts.

5. Cement manufacture contributes greenhouse gases and cement sector is the third largest industrial source of pollution, emitting more than 500,000 tons per year of greenhouse gases. Hence, the Faculty of Postgraduate studies for Advanced Sciences offers cement chemistry and technology program as a distinct and unique program that is the only one in Egyptian universities. This program aims to improve cement characters and to put different pathways for low-carbon cement production.

Cement chemistry and technology lab (Faculty of Postgraduate Studies for Advanced Sciences, Beni-Suef University, Beni-Suef)

6. Faculty of Postgraduate studies for Advanced Sciences has a strong infrastructure of integrated devices and laboratories that helps in conducting advanced researches and studies to solve environmental problems and to achieve sustainable development goals such as reducing carbon dioxide emissions.

Environment and water and Energy laboratories (Beni-Suef University –Faculty of Postgraduate Studies for Advanced Sciences, Beni-Suef)

https://www.facebook.com/advancedsciences/videos/437018341678633/
https://onedrive.live.com/?authkey=%21ACSsZACPjy8IKhQ&cid=A7313899D7BABF6E&id=A7313899D7BABF6E%21116&parId=root&o=OneUp
https://www.facebook.com/advancedsciences/videos/459802619399287/
https://www.psas.bsu.edu.eg/ContentSide.aspx?section_id=11742&cat_id=18
https://www.psas.bsu.edu.eg/Content.aspx?section_id=5745&cat_id=18
https://www.psas.bsu.edu.eg/Content.aspx?section_id=5780&cat_id=18

7. Presence of chimneys with filters for research devices and distribution of aspirators in all laboratories to protect the laboratory environment.

8. Launching the Bicycle Festival at the main campus as well as the 320 acres complex campus and industrial complex campus in East Nile each academic year.
https://www.elbalad.news/3060482

9. Entering the private cars only three times a week helps reducing the gases emission to the environment by about an amount of up to two tons annually.

Reducing the number of days allowed for private cars to enter the campus (Beni-Suef University, Beni-Suef)

10. About 3200 trees of various types were planted at the university in 2020 -2021. Increasing the green space helps facing the climate changes and global warming.
https://www.elwatannews.com/news/details/4496620

11. Different articles and posters are always published on the official page of Beni-Suef University to help reduce the environmental pollution.

12. Rationalizing the consumption of the daily amount of water contributes to save the energy needed to pump that in turn will reduce greenhouse gas emission.
https://gate.ahram.org.eg/News/3163694.aspx
https://www.elbalad.news/3192479
https://www.bsu.edu.eg/News.aspx?NID=49313&cat_id=1
13. The university put strict instructions for smoking reduction such as; distribution of warning signs prohibiting smoking in the different university buildings and periodic following up of the behavior of students inside the buildings to prevent smoking.

14. Many projects aim to reduce carbon dioxide emissions and global warming. For example;
    a) Finishing and implementing of the funded research project entitled ((invention of a new catalyst for the economic CO_2 conversion into fuel).
    b) Performing a project entitled ((Carbon sequestration by genetically modified microalgae for Biofuel production)). The project aims to develop an algae strain capable of fixing carbon dioxide with a higher efficiency. Cultivating these algae in highly polluted areas helps to reduce global warming.
    https://climateinarabic.com/%D8%A7%D8%AD%D8%AA%D8%AC%D8%A7%D8%B2-%D8%A7%D9%84%D9%83%D8%B1%D8%A8%D9%88%D9%86-%D8%A8%D9%88%D8%A7%D8%B3%D8%B7%D8%A9-%D8%A7%D9%84%D8%B7%D8%AD%D8%A7%D9%84%D8%A8-%D9%85%D8%B4%D8%B1%D9%88%D8%B9-%D8%B1/
    https://edu.see.news/2022/04/20/%D8%B9%D9%84%D9%88-%D8%A8%D9%86%D9%8A-%D8%B3%D9%88%D9%8A%D9%81-%D8%B5%D9%86%D8%AF%D9%88%D9%82-%D8%B1%D8%B9%D8%A7%D9%8A%D8%A9-%D8%A7%D9%84%D9%85%D8%A8%D8%AA%D9%83%D8%B1%D9%8A%D9%86/

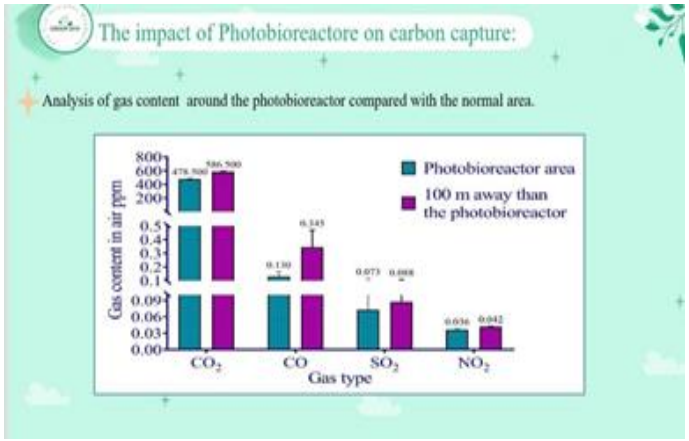

Photo bioreactor analysis

15. Presence of chimneys and hoods in the places of food preparation and services at the university.

16. Periodic maintenance of the vehicles (buses, minibuses, transport vehicles and private cars) at the university.

17. The Excellence Center for the economic production of approved nanometric materials, at Faculty of Postgraduate Studies for Advanced Sciences helps energy saving and reducing greenhouse gas emission.
    https://www.coenano.bsu.edu.eg/Albums.aspx?cat_id=372
    https://www.gomhuriaonline.com/Gomhuria/473336.htm

18. There are many campaigns, initiatives, seminars, workshops and conferences that are frequently held at BSU aiming to raise the awareness about climate changes and how to combat them, for example;

Programs	Short Description
The "Green Environment" initiative launched by Faculty of Postgraduate Studies for Advanced Sciences in cooperation with the Drinking Water and Sanitation Company, and a number of charitable institutions. https://www.bsu.edu.eg//News.aspx?NID=60336&cat_id=1	The initiative includes educating the outside community from villages, centers and cities affiliated with the governorate and schoolchildren through lectures and seminars to rationalize water and energy.
Many initiatives are launched by the participated faculties during the activities of the environmental week at BSU each academic year. https://ahlmasrnews.com/828545	The Environmental Week for 2019-2020 witnessed ten initiatives including; the "Our Environment is the Beginning of Our Journey" initiative for the Faculty of Pharmacy, “Conserve Water..Save Energy” for the Faculty of Social Work, and “With Our Hands We Cultivate It” for the Faculty of Environmental Agriculture.
Inauguration of a family within the student union of Beni-Suef University under the name of “Environmental Protection Family” with the generalization of this name to the rest of the university’s faculties and institutes. https://www.shorouknews.com/news/view.aspx?cdate=30122019&id=36c467d7-79a1-4175-aba6-c0916629b697	The family's work and activities are through the University's Center for the Development of Means of Preserving the Environment.
A workshop within the activities of the "Clean Energy Storage Devices" project https://www.bsu.edu.eg/News.aspx?NID=146358&cat_id=1	Faculty of Postgraduate Studies for Advanced Sciences organized a workshop within the activities of the "ENERGY STORAGE DEVICES: CHALLENGES AND PERSPECTIVES" project funded by the Science and Technology Fund.
The Conference of "Waste to Energy″ https://www.bsu.edu.eg/News.aspx?NID=53078&cat_id=1	The themes of the conference revolve around how to benefit from waste and convert it into energy. That includes food waste and how to convert it into energy, the feasibility of using alternative fuels in the cement industry, waste management and sustainability and carbon electrodes derived from waste for energy storage systems. The conference also dealt with a review of the most important Modern means and technology used in this field.
Awareness campaigns for students to plant rooftops https://www.elbalad.news/4414088	Launching the rooftop cultivation initiative among university students during the summer vacation in an attempt to spread the culture of agriculture in general and rooftop cultivation in particular, in cooperation between the Faculty of

https://www.bsu.edu.eg/News.aspx?NID=104680&cat_id=1	Agriculture and one of the environmental services companies.
The university's plan to educate students to rationalize water consumption, during the University Council No. 155. https://www.elbalad.news/3192479	Awareness of rationalizing water consumption among young people, explaining that the plan includes holding workshops, educational seminars and lectures on how to conserve water.
Conference of the Faculty of Postgraduate Studies for Advanced Sciences entitled "The Fifth International Conference on Advanced Sciences (ICASS). 9-12 November 2019 Hurgada, Egypt" https://www.shorouknews.com/news/view.aspx?cdate=11112019&id=d0931a3a-5f0d-4c3f-9851-a83bb78c2435	in cooperation with Misr International University and Prais Sud University in France, in the presence of a group of scholars and researchers from various Egyptian universities. European and Arabic. The activities of the International Conference on Advanced Sciences discussed the use of nanometric applications in water purification and desalination, energy storage, and in the treatment of cancer diseases.
Holding a workshop entitled ″Recent advances in Renewable Energy technologies IV″ https://www.facebook.com/advancedsciences/posts/1912098568902141	It is an example of the annual workshops in the renewable energy field at Faculty of Postgraduate Studies for Advanced Sciences
Different faculties launched an initiative for afforestation. For example, that of Faculty of Special Needs Sciences in preparation for the new academic year, in cooperation with the Department of People with Disabilities Affairs in the governorate. The Faculty of Agriculture launched the initiative to afforestation of the campus in a complex of 300 acres. https://www.eldyar.net/213841 https://www.youm7.com/story/2020/6/29/%D8%B2%D8%B1%D8%A7%D8%B9%D8%A9-%D8%A8%D9%86%D9%89-%D8%B3%D9%88%D9%8A%D9%81-%D8%AA%D8%B7%D9%84%D9%82-%D9%85%D8%A8%D8%A7%D8%AF%D8%B1%D8%A9-%D8%AA%D8%B4%D8%AC%D9%8A%D8%B1-%D8%AD%D8%B1%D9%85-%D8%A7%D9%84%D9%83%D9%84%D9%8A%D8%A9-%D8%A8%D9%85%D8%AC%D9%85%D8%B9-300/4851295	The initiative is important in encouraging members of the university community to pay attention to the culture of afforestation, which is one of the important behaviors that bear an environmental and aesthetic return for the community.
Participation of the Center for the Development of Means of Preserving the Environment at BSU in the "We Are All One" initiative	The initiative aims to raise awareness not to throw waste, and to dispose of used masks in a safe manner, by making awareness posters and distributing them to all railway stations with the participation of the Ministry of Transport, in

https://edu.see.news/new/2020/09/22/%D8%AC%D8%A7%D9%85%D8%B9%D8%A9-%D8%A8%D9%86%D9%8A-%D8%B3%D9%88%D9%8A%D9%81-%D9%85%D8%B4%D8%A7%D8%B1%D9%83%D8%A9-%D9%85%D8%B1%D9%83%D8%B2-%D8%A7%D9%84%D9%85%D8%AD%D8%A7%D9%81%D8%B8%D8%A9/	addition to recycling agricultural waste for use with the participation of the Egyptian Agricultural Bank and the Directorate of Veterinary Medicine.
Participation of Beni-Suef University in the National Committee for Sustainable Development and Governance https://www.elbalad.news/4810693	This participation allows the Academy of Scientific and Technological Research in Egypt to provide the university with the necessary financial and technical support. Hence, Beni-Suef University can participate in global research projects and improve ranking of the university among different universities in the field of sustainable development
The university won the first place at the level of Egyptian universities in the Sustainable Development Forum competition in designing an initiative model to protect the environment https://www.bsu.edu.eg/News.aspx?NID=52963&cat_id=1	This initiative was with the participation of Beni-Suef University with different organizations interested in environmental affairs and 18 Egyptian universities.
"Save and Preserve Your Country" initiative https://www.shorouknews.com/news/view.aspx?cdate=22032017&id=84155a0e-35d8-4024-8584-7bf85ee547e0	It aims to instill the concepts of conservation of electricity and water energy, spread awareness of energy consumption, and how to rationalize by changing the patterns and habits of daily consumption, and to provide practical solutions for rationalization.
The "Be Prepared for Green" campaign, in cooperation with the Waste Management Regulatory Agency of the Ministry of Environment for university youth. https://gate.ahram.org.eg/News/2942904.aspx	E-waste has become an environmental problem in light of technological progress and youth modernization of the devices they own and the accumulation of old and invalid devices in their homes or disposal in a non-environmental way. And dispose of the rest of the components of the device by burning or dumping them in landfills. Hence. It is important to Introduce university youth to this important issue and train them on the safe disposal of electronic waste.

19. The Water Studies and Research Center at the Faculty of Earth Sciences is conducting an environmental assessment for laboratories and workshops at the university. It has many appliances that can help monitoring the environment, maintaining air quality and reducing climate changes.
https://www.facebook.com/100024024607600/videos/1330582720708432/
https://www.earthsc.bsu.edu.eg/Content.aspx?side_id=1611&cat_id=50
https://www.earthsc.bsu.edu.eg/Backend/Uploads/PDF/%D9%85%D8%B7%D9%88%D9%8A%D9%87%20%D8%A7%D9%84%D9%85%D8%B1%D9%83%D8%B2-%D9%85%D8%AD%D9%88%D9%84.pdf

جامعة بنى سويف – كلية علوم الارض
مركز الدراسات وبحوث المياه

كلية الهندسه

ا بنى التقرير الفنى لبعض القياسات البيئية التى أجريت لبعض النقاط داخل الكلية يوم الثلاثاء الموافق 2021/5 بمعرفة مركز الدراسات وبحوث المياه بكلية علوم الارض جامعة بنى سويف.

اولا: قياسات الغازات

• نقطة القياس	CO 2 mg/m3	CO mg/m3	SO2 mg/m3	NO2 mg/m3	VOC mg/m3	H2S mg/m3
معمل الطرق	322	3.22	0.00	0.02	2.10	0.00
معمل الخراسانة	523	1.96	0.00	0.55	3.11	0.00
(1)		10(2)	150	150	-	-

(1) المواصفة القياسية المصرية لقيمة الحد الاقصى لجودة الهواء المحيط على النحو المنصوص عليه في القانون 4/1994 وتعديله (قانون 9/2009).

(2) متوسط 8 ساعات

ثانيا: قياسات المواد الغير غازية

اماكن القياس	PM_{10} µg/m3
معمل الطرق	0.737
معمل الخراسانة	0.616
(1)	150

(1) المواصفة القياسية المصرية لقيمة حد الاقصى لجودة الهواء المحيط على النحو المنصوص عليه في القانون 4/1994 وتعديله (قانون 9/2009).

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جامعة بنى سويف – كلية علوم الارض
مركز الدراسات وبحوث المياه

ثالثا: بعض القياسات البيئية Environmental measurements

اماكن القياس	Noisy (dp)	Illumination intensity (lux)	Heat stress (°C)
معمل الطرق	111	165	32
معمل الخراسانة	103	72	31
(1)	90		

الملاحظات و التوصيات:

شدة الإضاءة تحتاج لتعديل في ورشة النجارة لتحقيق الرؤية المطلوبه.
سجلت شدة الصوت قيم جميعها أعلي من الحد الأقصى المسموح به للوردية الواحدة (8 ساعات) وهو 90 dp
سجلت قيم درجة الحرارة متقاربة.
المعملان في مكان ضيق مقارنة بنسبة الصوت وبنفصهما التهوية ولا يوجد شفاطات بالمكان.
الأخصائي في المعمل يحتاج ضروريا لأدوات حماية شخصية وخاصة سماعات الأذن والكمامات.
قياسات الإنبعاثات الهوائية تمت في ظروف عادية ونوصي بالقياس في ظروف أخري يصفها العمال بتواجد غازات كثيفه.
المكان بحاجة ماسه للوحات ارشادية علي كل الأجهزة واللوحات الكهربائية وتحديد مسار الخروج أو الهروب.
توفير أمان لصوت جهاز كسارة تفتيت الركام ووجوب الكشف الدوري للسمع للعاملين.

وتفضلوا بقبول فائق الإحترام

د./ محمد عبدالوهاب عطاالله
مدير مركز الدراسات وبحوث المياه

أ.د./ علي قرني سليم
رئيس مجلس إدارة مركز الدراسات وبحوث المياه

٩ / ٥ / ٢٠٢١

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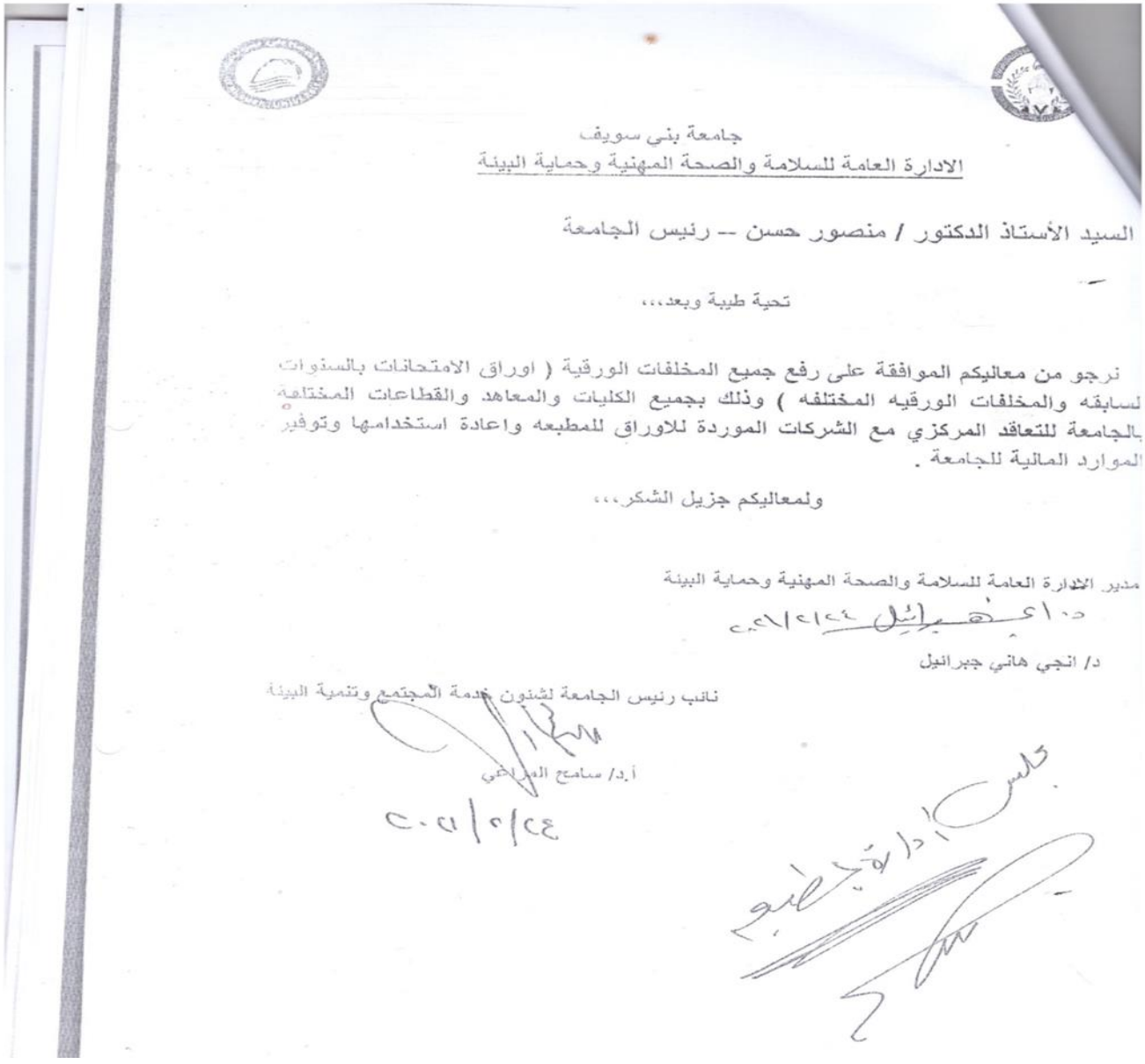
Technical report of some environmental measurements for some points within the Faculty of Engineering on 4/5/2021 by The Water Studies and Research Center

20. BSU pays a great attention to wastes recycling, hence all faculties, institutes and departments place recycling bins for paper and plastic within offices, halls and laboratories to implement recycling. Wastes recycling reduces water and energy consumption and reduces the production

of gas methane and carbon dioxide in the atmosphere. BSU also has contracts with companies supplying wastes for different places for reuse purpose and provide financial resources to the university. For example, supplying paper wastes for the printing press for reuse purpose.



جامعة بني سويف
الادارة العامة للسلامة والصحة المهنية وحماية البيئة

السيد الأستاذ الدكتور / منصور حسن -- رئيس الجامعة

تحية طيبة وبعد،،،

نرجو من معاليكم الموافقة على رفع جميع المخلفات الورقية (اوراق الامتحانات بالسنوات السابقه والمخلفات الورقيه المختلفه) وذلك بجميع الكليات والمعاهد والقطاعات المختلفة بالجامعة للتعاقد المركزي مع الشركات الموردة للاوراق للمطبعه واعادة استخدامها وتوفير الموارد المالية للجامعة .

ولمعاليكم جزيل الشكر،،،

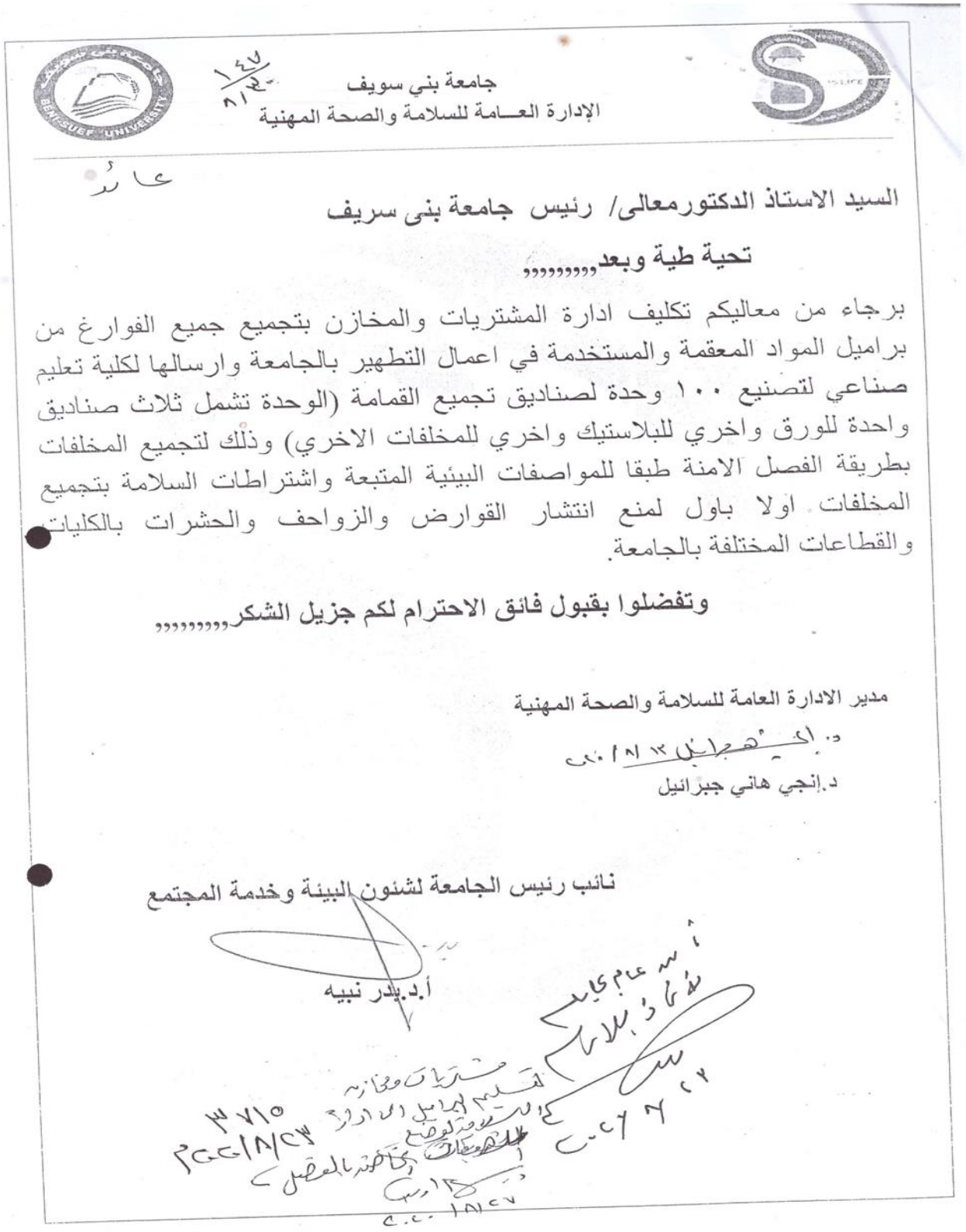
مدير الادارة العامة للسلامة والصحة المهنية وحماية البيئة

د/ انجي هاني جبرانيل

نائب رئيس الجامعة لشئون خدمة المجتمع وتنمية البيئة

أ.د/ سامح المرضي

The contract with companies supplying paper wastes for the printing press for reuse purpose



جامعة بني سويف
الإدارة العـــامة للسلامة والصحة المهنية

السيد الاستاذ الدكتورمعالى/ رئيس جامعة بنى سريف

تحية طية وبعد,,,,,,,,,

برجاء من معاليكم تكليف ادارة المشتريات والمخازن بتجميع جميع الفوارغ من براميل المواد المعقمة والمستخدمة في اعمال التطهير بالجامعة وارسالها لكلية تعليم صناعي لتصنيع ١٠٠ وحدة لصناديق تجميع القمامة (الوحدة تشمل ثلاث صناديق واحدة للورق واخري للبلاستيك واخري للمخلفات الاخري) وذلك لتجميع المخلفات بطريقة الفصل الامنة طبقا للمواصفات البيئية المتبعة واشتراطات السلامة بتجميع المخلفات اولا باول لمنع انتشار القوارض والزواحف والحشرات بالكليات والقطاعات المختلفة بالجامعة.

وتفضلوا بقبول فائق الاحترام لكم جزيل الشكر,,,,,,,,,

مدير الادارة العامة للسلامة والصحة المهنية

د.إنجي هاني جبرائيل

نائب رئيس الجامعة لشئون البيئة وخدمة المجتمع

أ.د.بدر نبيه

Example of a document for separation of wastes in a safe manner in accordance with the applicable safety and followed environmental specifications.

21. In the upcoming periods, BSU is planning to the following;

a) Replacing petrol and diesel tanks with cars and buses running on natural gas or biofuel.
b) Expanding in the green space in all campuses of BSU.
c) Generalizing the use of lamps and lighting poles with light sensors inside all different buildings of the university. This allows the automatic lighting and closing in response to sunlight and hence, energy saving and reducing climate change.
d) Providing different buildings with more modern and energy-saving means such as smart outlets that allow the passage of sunlight with keeping the atmosphere cool leading to a reduction in the use of air conditioners.

Affordable and clean energy (SDG 7)

7.2. University measures towards affordable and clean energy

7.2.4. Plan to reduce energy consumption

Have an energy efficiency plan in place to reduce overall energy consumption

1. The university holds periodic meetings with different BSU centers and units to promote environmental sustainability and to discuss the energy-saving plans for the upcoming academic years and regularly supervise and review the implementation of the campus plans. For example;
    a) Meeting with the Office of International Ranking and Sustainable Development to discuss its reports and discuss proposed recommendations about the goals of sustainable development for the university according to the vision of Egypt 2030 for the following year.
    b) Meeting with Center for the Development of Means of Preserving the Environment to identify environmental problems, to combat their causes, and to show monitoring reports and referring violations of the environment.

https://www.shorouknews.com/news/view.aspx?cdate=26082020&id=dc23f069-d73e-4ff9-b907-cbcdeee013b3
https://www.elwatannews.com/news/details/4316926?t=mpush
https://www.bsu.edu.eg//News.aspx?NID=151567&cat_id=1
https://www.bsu.edu.eg/Content.aspx?section_id=11198&cat_id=1
https://www.facebook.com/env.bsu/
https://www.science.bsu.edu.eg/ContentSide.aspx?section_id=6392&cat_id=10

Beni-Suef University
Vice President
For Community Service affairs

جامعة بنى سويف
مكتب نائب رئيس الجامعة
لشئون خدمة المجتمع وتنمية البيئة

مذكرة للعرض على

أ.د / رئيس الجامعة

وافق مجلس الجامعة رقم (١٧١) بتاريخ ٢٠١٩/٥/٢٢ على انشاء مركز لتدوير النفايات بتبع ادارة الجامعة ومعهد أبحاث النباتات العطرية وكلية الدراسات العليا المتقدمة وكلية الزراعة

وافق مجلس شئون خدمة المجتمع وتنمية البيئه الجلسة رقم ١٥١ الأحد ١٦يونيو ٢٠١٩ على المقترح المقدم من أ.د/ وكيل معهد أبحاث النباتات الطبية والعطرية على تغيير مسمى تدوير النفايات الى مركز تطوير أساليب المحافظة على البيئة (وحدة ذات طابع خاص) وذلك لاطلاق دور الجامعة الريادى فى تفعيل دور البحث العلمى فى تطوير طرق المحافظة على البيئة بشكل علمى .

كما وافق المجلس على مقترح تشكيل مجلس الادارة :

أ.د/ رئيس الجامعة		رئيسا
أ.د/ نائب رئيس الجامعة لشئون خدمة المجتمع		نائب رئيس
أ.د/ وائل سعد السيد	وكيل معهد النباتات الطبية	مدير للمركز
أ.د/ هشام بشرى محمود	أستاذ بكلية الطب البشرى	عضوا
أ.د/ ولاء عبدالرحمن مصيلحى	وكيل كلية الدراسات العليا للعلوم المتقدمة	عضوا
أ.د/ أحمد هلال	أستاذ بكلية الزراعة	عضوا

مع الاستعانة بمن يراه مجلس الادارة مناسبا .

والامر معروض على سعادتكم للتكرم بالعرض على مجلس الجامعة الموقر

نائب رئيس الجامعة

أ.د/ بدر نبيه أرسانيوس

Approval of the establishment of Center for the Development of Means of Preserving the Environment

2. Different campaigns, initiatives, workshops and seminars are always launched to raise the awareness of energy saving and to encourage youth to find innovative solutions for energy problems.

https://www.bsu.edu.eg/Backend/Uploads/PDF/SDG/SDG/University%20Report%202019_compressed.pdf
https://www.draminlotfyoffice.com/details/422

3. Getting funding for a large number of research projects in the energy field.
   https://www.bsu.edu.eg/News.aspx?NID=64075&cat_id=1
   https://www.youm7.com/story/2020/3/5/%D8%A7%D9%84%D9%85%D9%86%D8%AD-%D8%A7%D9%84%D8%AF%D8%B1%D8%A7%D8%B3%D9%8A%D8%A9-%D9%81%D9%89-%D9%85%D8%AC%D8%A7%D9%84-%D8%A7%D9%84%D8%B7%D8%A7%D9%82%D8%A9-%D8%A7%D9%84%D9%85%D8%AA%D8%AC%D8%AF%D8%AF%D8%A9-%D9%86%D8%AF%D9%88%D8%A9-%D8%A8%D8%AC%D8%A7%D9%85%D8%B9%D8%A9-%D8%A8%D9%86%D9%89-%D8%B3%D9%88%D9%8A%D9%81/4659002
   https://www.bsu.edu.eg/Content.aspx?section_id=4559&cat_id=290
   https://www.bsu.edu.eg/Content.aspx?section_id=4547&cat_id=290
   https://www.shorouknews.com/news/view.aspx?cdate=25072019&id=ddaaf821-f03d-4e6d-aa8f-eff2374df6b5

Affordable and clean energy (SDG 7)

7.2. University measures towards affordable and clean energy

7.2.5. Energy wastage identification

Undergo energy reviews to identify areas where energy waste is highest

1. Within the framework of implementing the directives of the Council of Ministers to follow up on procedures for rationalizing electricity consumption in public;
    a. The Secretary-General of the University and the specialists follow up the implementation of the decisions of the Prime Minister in the various places and facilities of the University.
    b. Each campus carries out energy review to detect the energy-intensive units and further implements energy management. https://m.akhbarelyom.com/news/newdetails/3847508/1/%D8%A8%D9%86%D9%8A-%D8%B3%D9%88%D9%8A%D9%81-%D8%AA%D8%A8%D8%AF%D8%A3-%D8%AA%D8%B1%D8%B4%D9%8A%D8%AF-%D8%A7%D8%B3%D8%AA%D9%87%D9%84%D8%A7%D9%83-%D8%A7%D9%84%D9%83%D9%87%D8%B1%D8%A8%D8%A7%D8%A1-%D9%81%D9%8A-

2. The General Administration for Environmental Projects Development and Community Service monitors the increases in electricity consumption for each building during each past year and ensures that all members practice electricity saving habits. It generates reports to display the cumulative energy consumption of all buildings in the entire campus on monthly and annual basis.
https://www.facebook.com/env.bsu/
https://www.bsu.edu.eg//ContentSide.aspx?section_id=14123&cat_id=411

جامعة بني سويف
الادارة العامة لتنمية المشروعات البيئية وخدمة المجتمع

- معدل استهلاك الكهرباء سنوياً بجامعة بنى سويف

بيان بمصادقات الانارة لشركة مصر الوسطى لتوزيع الكهرباء عن العام المالى ٢٠١٩/٢٠٢٠

يوليو ٢٠١٩	٦٩٨٦٩٨.٢٥
اغسطس ٢٠١٩	١٠٦٧٤٤٣.٢٥
سبتمبر ٢٠١٩	٨٢٧٩٣١.٢٥
اكتوبر ٢٠١٩	٩١٧٣٣٩.٢٥
نوفمبر ٢٠١٩	٩٢٠٤٠٣.٧٥
ديسمبر ٢٠١٩	٩٣٢١٥٩.٢٥
يناير ٢٠٢٠	٧٦٩٨٥٠
فبراير ٢٠٢٠	٨٤٧٥٤٥.٧٥
مارس ٢٠٢٠	٧٣١٤٣٠.٢٥
ابريل ٢٠٢٠	٧٠٧٣٠٦.٧٥
مايو ٢٠٢٠	٤٢٧٣٥٤
يونيه ٢٠٢٠	٦٨٥٢٥٧.٢٥
اجمالى المصادقات	٩٥٣٢٧١٩

Electricity consumption rate of Beni-Suef University for the year 2019-2020 done by General Administration for Environmental Projects Development and Community Service

جامعة بني سويف
الادارة العامة لتنمية المشروعات البيئية وخدمة المجتمع

المعيار رقم (٨):- جودة البيئة

- الشكل الجمالى داخل الحرم
- مرفق صور توزيع الحدائق بالمجمعات الخاصة بجامعة بني سويف

- جودة الهواء داخل المنشآت الجامعية
- تم أجراء تقييم بيئي بالمعامل والورش بالجامعة (مرفق التقييم البيئي).

- الضوضاء داخل المنشآت الجامعية

الجامعة تحرص علي أستخدام أجهزة بحثية أو عملية أو ماكينات بالورش ومركز الانتاج ودار الضيافة تتوفر بها المواصفات القياسية وتتخذ جميع السبل لتطبيق الحدود العتبية التي يتعرض لها العاملين والطلاب والباحثين علي أن لا تتعدى نسبة الضوضاء ٩٠ ديسيبل خلال فترة عمل ٨ ساعات خلال وردية العمل الواحدة.
(تم أجراء القياسات البيئية بالمعامل والورش المتواجدة بالجامعة ومرفق التقييم البيئي للضوضاء).

Environmental quality is as an example of standards of General Administration for Environmental Projects Development and Community Service

صادر الادارة: ٤٩٥
٢٠٢٢/٥/١٨

جامعة بني سويف

قطاع خدمة المجتمع وتنمية البيئة
الادارة العامة للمشروعات البيئية

السيد الأستاذ / مدير عام المدن الجامعية

تحية طيبة .. وبعد

بناء على تعليمات معالى أ.د/سامح المراغى نائب رئيس الجامعة لشئون خدمة المجتمع وتنمية البيئة وفى اطار مشاركة جامعة بنى سويف فى مسابقة تصنيف الجامعات كجامعة خضراء لذا نرجوا من سيادتكم توفير البيانات الخاصة بادارتكم الموقرة لتسهيل استكمال ملف المشاركة كما نامل ذكر اللينك الخاص بموقعكم الرسمى أو صفحة الفيس بوك مع توضيح البيانات المطلوبه وفى حالة عدم وجود البيانات لديكم نرجوا سرعة موافاتنا بالرد بعدم توافرها أو ترشيح الجهه المختصة فى موعد أقصاه ٢٠٢٢/٥/١٥ مع الأخذ فى الاعتبارأن الأمر هام وعاجل فى تو فير متطلبات المعيار الثالث (النفايات)١٨%كما يلى:

٣-١برنامج إعادة تدوير مخلفات الجامعة
٣-٢برنامج للحد من استخدام الورق والبلاستيك في الحرم الجامعي
٣-٣معالجة المخلفات العضوية
٣-٤معالجة المخلفات غير العضوية
٣ -٥تداول المخلفات السامة
٣-٦ الصرف الصحي

شاكرين حسن تعاونكم معنا،،،

مدير الادارة العامة للمشروعات البيئية

أ./ زينب رجب

Addressing a letter from General Administration for Environmental Projects Development and Community Service to the General Director of the BSU Cities to provide the third standard (waste) for environmental quality

3. The Water Studies and Research Center at the Faculty of Earth Sciences is conducting an environmental assessment for laboratories and workshops at the university. https://www.earthsc.bsu.edu.eg/Backend/Uploads/PDF/%D9%85%D8%B7%D9%88%D9%8A%D9%87%20%D8%A7%D9%84%D9%85%D8%B1%D9%83%D8%B2-%D9%85%D8%AD%D9%88%D9%84.pdf

جامعة بنى سويف – كلية علوم الارض
مركز الدراسات وبحوث المياه

ثالثا: بعض القياسات البيئية Environmental measurements

Heat stress (°C)	Illumination intensity (lux)	Noisy (dp)	اماكن القياس
33	480	86	ورشة الخراطة
33	380	73	ورشة اللحام
34	104	65	ورشة النجارة
		90	(1)

الملاحظات و التوصيات:

شدة الإضاءة تحتاج لتعديل في ورشة النجارة لتحقيق الرؤية المطلوبه.
سجلت شدة الصوت قيم جميعها أقل من الحد الأقصى المسموح به للوردية الواحدة (8 ساعات) وهو 90 dp
سجلت قيم شدة الإستضاءة فيما تحقق الرؤية المطلوبة أثناء العمل لباقي الأماكن.
سجلت قيم درجات الحرارة متقاربة.
معظم الورش في مكان واحد واسع ينقصه التهوية والشفاطات المتواجده صغيره مقارنة بحجم المكان.
الورش لا يوجد بينها عوازل ولا حواجز. ولذلك أي تلوث سينتشر في كل المكان.
المكان بحاجة ماسه للوحات ارشادية علي كل الأجهزة واللوحات الكهربائية ومسار الخروج أو الهروب.
الوصلات الكهربائية تحتاج لترميم لتحقيق السلامة للجميع.

وتفضلوا بقبول فائق الإحترام

د./ محمد عبدالوهاب عطاالله
مدير مركز الدراسات وبحوث المياه

أ.د./ علي قرني سليم
رئيس مجلس إدارة مركز الدراسات وبحوث المياه

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جامعة بنى سويف – كلية علوم الارض
مركز الدراسات وبحوث المياه

ثالثا: بعض القياسات البيئية Environmental measurements

Heat stress (°C)	Illumination intensity (lux)	Noisy (dp)	اماكن القياس
32	165	111	معمل الطرق
31	72	103	معمل الخراسانة
		90	(1)

الملاحظات و التوصيات:

شدة الإضاءة تحتاج لتعديل في ورشة النجارة لتحقيق الرؤية المطلوبه.
سجلت شدة الصوت قيم جميعها أعلي من الحد الأقصى المسموح به للوردية الواحدة (8 ساعات) وهو 90 dp
سجلت قيم درجة الحرارة متقاربة.
المعملان في مكان ضيق مقارنة بنسبة الصوت وينقصهما التهوية ولا يوجد شفاطات بالمكان.
الأخصائي في المعمل يحتاج ضروريا لأدوات حماية شخصية وخاصة سماعات الأذن والكمامات.
قياسات الإنبعاثات الهوائية تمت في ظروف عادية ونوصي بالقياس في ظروف أخري يصفها العمال بتواجد غازات كثيفه.
المكان بحاجة ماسه للوحات ارشادية علي كل الأجهزة واللوحات الكهربائية وتحديد مسار الخروج أو الهروب.
توفير أمان لصوت جهاز كسارة تفتيت الركام ووجوب الكشف الدوري للسمع للعاملين.

وتفضلوا بقبول فائق الإحترام

د./ محمد عبدالوهاب عطاالله
مدير مركز الدراسات وبحوث المياه

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Example of checking of light intensity besides other environmental measurements for Faculty of Engineering and Faculty of Industrial Education by The Water Studies and Research Center

Affordable and clean energy (SDG 7)

7.2. University measures towards affordable and clean energy

7.2.6. Divestment policy

Have a policy on divesting investments from carbon-intensive energy industries notably coal and oil

1. The university's administration fund has no relevant transfer investments and no investment has been made in carbon-intensive energy.

2. However, the University Council for Environmental Service and Community Development is responsible for studying and proposing the general policy, plans and programs that ensure the achievement of the university's role in community service and environmental development (**As stipulated in Article 35 repeated A of the Universities Organizing Law and its executive regulations in accordance with the latest amendments**)
   https://www.du.edu.eg/files/%D9%82%D8%A7%D9%86%D9%88%D9%86%20%D8%AA%D9%86%D8%B8%D9%8A%D9%85%20%D8%A7%D9%84%D8%AC%D8%A7%D9%85%D8%B9%D8%A7%D8%AA%20%D8%A7%D9%84%D9%85%D8%B5%D8%B1%D9%8A%D8%A9.pdf

Accordingly, BSU has formulated a set of energy-saving and carbon-reduction practices that include;

a. Directing investments and efforts in renewable energy and focusing on energy raising measures.
b. Avoiding any investments in coal and oil related industries if such opportunities become available in the future

3. In 2021, Beni-Suef University Council has reviewed a set of General government's regulations and policies on environmental protection and energy and water conservation. One of the policies that is adopted by the university and is subjected to, stipulates the following;

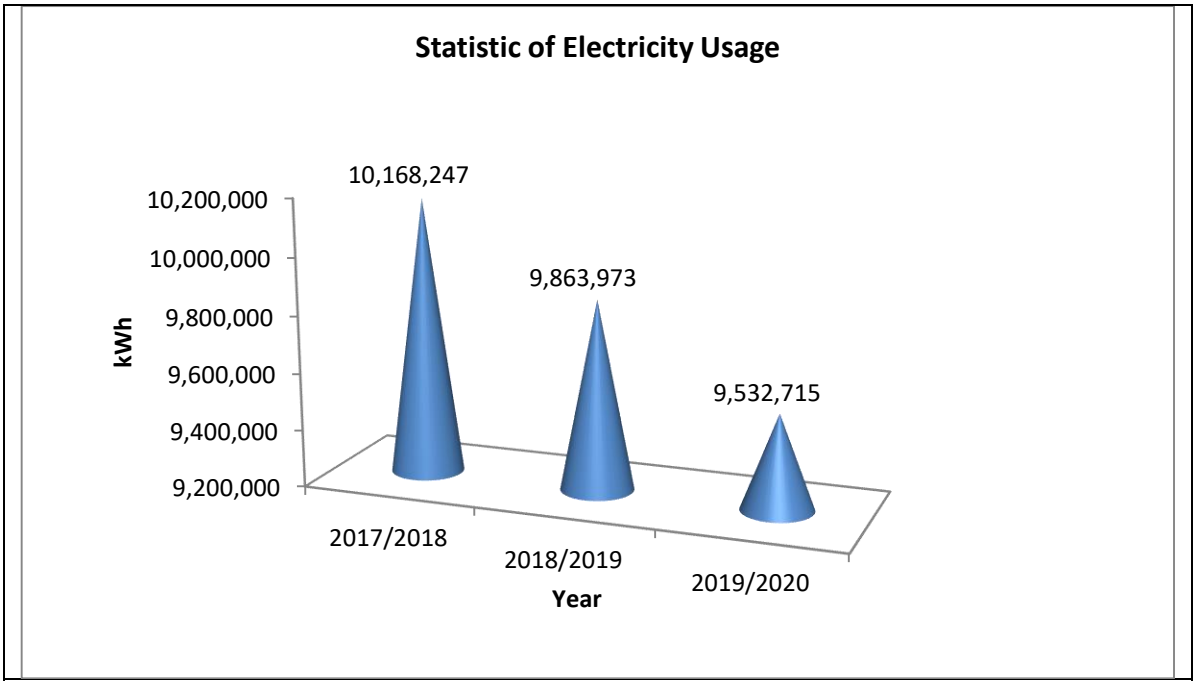
   Coal-traded companies and establishments and port authorities are subjected to the provisions of environmental monitoring and the environmental record stipulated (**in Articles No. 22 and 24 of the Environmental Law promulgated by Law No. 4 of 1994)**.
   https://wipolex-res.wipo.int/edocs/lexdocs/laws/ar/eg/eg033ar.pdf

Affordable and clean energy (SDG 7)

7.3. Energy use density

7.3.1. Total energy used

1. Reduction of Electricity Usage in Beni-Suef University in the period from JUL-19 to JUN-20 compared to periods from JUL-17 to JUN-18 and from JUL-18 to JUN-19 is described in the drawn figure;



Reduction of Electricity Usage in Beni-Suef University in the period from JUL-19 to JUN-20 compared to periods from JUL-17 to JUN-18 and from JUL-18 to JUN-19.

2. The total electricity usage of Beni-Suef University for a year in the period from JUL-20 to JUN-21 is 9,374,582 kWh (33,748.495 GI). Electricity is used for lighting, cooling, heating, laboratory appliances and other purposes. Implementation of several green means is thought to have a clear role in the electricity reduction year after year.

3. University floor space : 386,990 m^2

4. Electricity consumption per square meter in 2021 = 33,748.495 /386,990 = 0.08 GJ/m^2

Affordable and clean energy (SDG 7)

7.4. Energy and the community

7.4.1. Local community outreach for energy efficiency

Provide programmes for local community to learn about importance of energy efficiency and clean energy

BSU implements relative activities to increase awareness of the importance of energy efficiency and clean energy in the local community, for example;

1. The lighting of Beni-Suef University in green celebrating with the World Earth Day from seven to nine in the evening and for three days (20 to 22 April, each year). It aims to spread awareness and concern for the environment. A number of instructional videos and documentaries have been published on the university's official page to raise the awareness of the local community and the students of the environment, the dangers of pollution, and how to save energy and preserve the climate.
   https://www.bsu.edu.eg/News.aspx?NID=154228&cat_id=1

   https://fb.watch/foNGXWzu4I/

2. Launching the “Save and Preserve Your Country” initiative. It aims to instill the concepts of conservation of electricity and water energy, spread awareness of energy consumption, and how to rationalize by changing the patterns and habits of daily consumption, and to provide practical solutions for rationalization. Also, it aims to instill in the consumer the conviction of the necessity of rationalization in the interest of the public interest and the security of the national economy. The initiative included many events and activities that serve the environment and society, whether inside or outside the university, including seminars to raise awareness of the conservation of electricity and water.
   https://www.shorouknews.com/news/view.aspx?cdate=22032017&id=84155a0e-35d8-4024-8584-7bf85ee547e0

3. The launching of the "Green Environment" initiative, by Faculty of Postgraduate Studies for Advanced Science in cooperation with the Drinking Water and Sanitation Company, and a number of charitable institutions. The initiative includes educating the outside community from villages, centers and cities affiliated with the governorate and schoolchildren through lectures and seminars in a simple and easy way on how to rationalize water and energy, about environmental toxins surrounding students and how to prevent them, and Hepatitis C
https://www.bsu.edu.eg/News.aspx?NID=60336&cat_id=1

4. The Fourth International Conference "The Risks of Environmental Pollution in Developing Countries", held its first session at the University of Beni-Suef involved scientific sessions on various initiatives, including prepare for green, our bag is paper and our package is glass, with field visits to the Angel Eight factory in the industrial zone. Several international and regional universities, participated and the goals of the conference revolve around environmental pollution, environmental risk management, modern technologies for environmental monitoring, protection of water resources, wastewater management, water quality, the impact of environmental pollution on food security, renewable energy, sustainable development, waste management, green chemistry, climate change and environmental risks.
https://www.bsu.edu.eg//News.aspx?NID=104875&cat_id=5

5. Holding of Climate Change Conference that is organized by Beni-Suef and Nile Universities. The most prominent recommendations of the conference are to continue supporting the implementation of presidential initiatives for various projects aimed at reducing the effects of climate change such as lining canals, a decent life project, desalination of sea water, the transition to drip irrigation, renewable energy projects such as the Benban project in Aswan, and materials recycling projects and the use of nano-fertilizers to reduce resource and energy consumption compared to conventional fertilizers that increase carbon emissions and pollute soil and water,
https://www.bsu.edu.eg/NewsDetails_New.aspx?NID=155915&cat_id=1

6. Inaugurating the Egyptian Public Universities Activities and Events Forum to Confront Climate Changes. The forum has goals at the regional level, most notably the importance of regional integration between public universities in preserving the environment and achieving sustainable development, as well as national goals represented in supporting and developing scientific research in applied projects related to climate change, managing new and renewable energy, and developing research in the field of water purification and water treatment. Drainage and beach protection.
https://www.albawabhnews.com/4656766

7. The “We Are All One” and “Get ready for the green” initiatives aim to raise awareness not to throw waste, and to dispose of used masks in a safe manner, by making awareness posters and distributing them to all railway stations with the participation of the Ministry of Transport, in addition to recycling agricultural waste for use with the participation of the Egyptian Agricultural Bank and the Directorate of Veterinary Medicine.
https://edu.see.news/new/2020/09/22/%D8%AC%D8%A7%D9%85%D8%B9%D8%A9-%D8%A8%D9%86%D9%8A-%D8%B3%D9%88%D9%8A%D9%81-%D9%85%D8%B4%D8%A7%D8%B1%D9%83%D8%A9-%D9%85%D8%B1%D9%83%D8%B2-%D8%A7%D9%84%D9%85%D8%AD%D8%A7%D9%81%D8%B8%D8%A9/
https://www.elwatannews.com/news/details/4316926
https://www.elbalad.news/4414088

8. Holding a seminar on energy conservation and its types in the surrounding community by Faculty of Developmental Social Work. It aimed to raise awareness of the students of the primary E-Montazaha School with the different means of energy saving in both home and school.
https://www.bsu.edu.eg/Backend/Uploads/PDF/SDG/SDG/University%20Report%202019_compressed.pdf

Affordable and clean energy (SDG 7)

7.4. Energy and the community

7.4.2. 100% renewable energy pledge

Promote a pledge toward 100% renewable energy

The university seeks to fulfill the pledge to provide 100% renewable energy through collaboration projects, research projects, and related activities. The related procedures are as follows:

1. Cooperation:
   1.1. A joint cooperation protocol between the Beni-Suef University and the Ministry of Environment. It aims to; a) participate in achieving sustainable development, b)/ directing scientific research and linking it to environmental issues, and C) contributing with the ministry to the success of all projects and solving environmental problems such as waste recycling and power generation.
   https://www.bsu.edu.eg/Content.aspx?side_id=60&cat_id=1

   1.2. Cooperation protocol between the University and the Arab Organization for Industrialization. It allows cooperation in various research areas of common interest between the two sides, such as; a) seawater desalination, b) industrial and sewage treatment, c) new and renewable energy, d) artificial intelligence, computing, and automated control, as well as e) training students of the Faculty of Engineering at the Organization's Academy and its units and training centers and cooperation in the implementation of student graduation projects.
   https://www.masrawy.com/news/news_regions/details/2022/3/31/2200457/%D8%A8%D8%B1%D9%88%D8%AA%D9%88%D9%83%D9%88%D9%84-%D8%AA%D8%B9%D8%A7%D9%88%D9%86-%D8%A8%D9%8A%D9%86-%D8%AC%D8%A7%D9%85%D8%B9%D8%A9-%D8%A8%D9%86%D9%8A-%D8%B3%D9%88%D9%8A%D9%81-%D9%88%D8%A7%D9%84%D9%87%D9%8A%D8%A6%D8%A9-%D8%A7%D9%84%D8%B9%D8%B1%D8%A8%D9%8A%D8%A9-%D9%84%D9%84%D8%AA%D8%B5%D9%86%D9%8A%D8%B9
   1.3. Scientific cooperation programs between Egypt and Italy under the auspices of the Science, Technology and Innovation Funding Authority in fields of renewable energy, materials science and engineering and environmental sciences.
   https://www.bsu.edu.eg/News.aspx?NID=156044&cat_id=361

1.4. A protocol of cooperation with the universities of Toliara in Madagascar and Dakar in Senegal in the scientific fields, and the expansion of the establishment of new programs in various projects and activities. It aims to;

a) Engineering consultancy services in the fields of renewable energy and water.
b) Enhance cooperation in fields of education and scientific research, academic programs and degrees
c) Exchanging faculty members and students
d) Scholarships and mutual visits
e) Organizing joint conferences, seminars and workshops,
f) Integrating laboratories between the two universities
g) Engineering consultancy services in the fields of renewable energy and water.

https://www.elwatannews.com/news/details/5258570

1.5. The participation of Faculty of Postgraduate Studies for Advanced Sciences in the Renewable Energy Alliance project, which was approved for funding by the Academy of Scientific Research, with a value exceeding $ 280,000. The project aims to manufacture and install a solar cell system and Egyptian industrial solar inverters, pointing out that the alliance has fifteen partners, headed by Cairo University, Helwan, Beni-Suef, the Metals Research Center, Orascom, the New and Renewable Energy Authority, and the Center for Research in Metals. Industry modernization.

https://www.bsu.edu.eg/News.aspx?NID=64075&cat_id=1

1.6. Getting an Egyptian-French research project entitled “Nanometric Compounds of Pure and Grafted perovskite and Their Use in Energy Applications.” The project falls under the Imhotep protocol between the Academy of Scientific Research and Campus France, and the project includes the preparation of some nanometric materials and their use in fuel cells to produce energy. The project includes visits exchanged between the research team of the project from the Egyptian side and the principal researcher, Dr. Pierre Mellet, professor at the University of Paris-South in France.

https://www.bsu.edu.eg/News.aspx?NID=104169&cat_id=1&fbclid=IwAR2vpXEWP6UjiiwyeCE3-w1vxoYlbk4kFTUJ20vALQzdHMs-KEzDVzPfknc

1.7. International cooperation and exchange agreements of Beni-Suef University with French, Spanish and Japanese Universities. Where, some students traveled to the Spanish University of Vigo and University of Jaen to study solar energy.
https://www.psas.bsu.edu.eg/News.aspx?NID=146774&cat_id=18

كلية الدراسات العليا للعلوم المتقدمة
جامعة بني سويف

جامعة بني سويف - كلية الدراسات العليا
مكتب العميد
صادر/وارد
التاريخ ٢٠ /١٠ /٢٠٢٠

إعلان

في ظل اهتمام كلية الدراسات العليا للعلوم المتقدمة جامعة بني سويف بطلابها والحرص والعمل الدئوب على توفير افضل الوسائل والامكانيات البحثية وتوفير فرص للتعاون الدولي وتبادل الطلاب والاساتذة مع الجامعات الاجنبية يسر قسم علوم المواد وتكنولوجيا النانو بكلية الدراسات العليا للعلوم المتقدمة جامعة بني سويف ان يعلن عن توافر فرصة لسفر احد طلاب درجة الدكتوراة الى جامعة فيجو باسبانيا لمدة 5 شهور لإجراء بعض الأبحاث. كما يسر القسم ان يعلن عن توافر فرصة لسفر عضو هيئة تدريس لمدة اسبوع بجامعة فيجو باسبانيا. وذلك في اطار مشروع ايراسموس بلاس بين كلية الدراسات العليا للعلوم المتقدمة وجامعة فيجو.

المتطلبات الأساسية لطالب الدكتوراة:

1. ان يكون المتقدم حاصل على درجة الماجستير في علوم المواد وتكنولوجيا النانو
2. ان يكون مسجل لدرجة الدكتوراة بجامعة بني سويف.
3. ان يكون لدية خبرة في اجراء التجارب الكهروكيميائية.

المتطلبات الأساسية لعضو هيئة التدريس:

1. ان يكون من اعضاء هيئة التدريس بجامعة بني سويف
2. ان يكون مجال تخصصة علوم المواد وتكنولوجيا النانو

- تقدم الطلبات الى رئيس قسم علوم المواد وتكنولوجيا النانو بالكلية خلال اسبوع من تاريخ الاعلان.

للعرض على معالي
أ.د/ رئيس الجامعة

يعتمد ،
عميد الكلية
ا.د/أحمد فرغلي

رئيس القسم
ا.م.د/وليد الروبي

Announcing of opportunities for international cooperation and the exchange of students and professors with foreign universities

1.8. Professor Olive was received at Faculty of Science, Beni-Suef University, to discuss ways of cooperation between Beni-Suef University and German University of Rostock in the field of Theoretical Chemistry and renewable and clean energy. In addition, Professor Olive gave a lecture on how to use sunlight and the use of modern theories to simulate sunlight in solar cells aiming to generate renewable energy.

2. Research plan:
   2.1. Faculty of Postgraduate studies for Advanced Sciences is characterized by the presence of a strong infrastructure of integrated devices and laboratories and it has different innovative programs and plans concerning renewable energy as shown:
      a) The faculty includes a Department of Renewable Energy Science and Engineering, which is the first of its kind to integrate energy sciences, is concerned with manufacturing materials used in energy storage and conversion with engineering manufacturing of energy tools from solar energy, batteries and fuel cells, to contribute to alternative solutions for electricity and fuel.
      b) It has a central lab for thin film protection used in solar cell applications. The current generated can be used to power various appliances or it can be stored in batteries to be used when required.
      https://www.facebook.com/advancedsciences/videos/437018341678633/
      https://www.psas.bsu.edu.eg/ContentSide.aspx?section_id=11742&cat_id=18
      https://www.psas.bsu.edu.eg/Content.aspx?section_id=5780&cat_id=18
      c) Environmental and Energy Department is concerned with giving many master's and doctorate degrees as well as diplomas in more than 10 programs specialized in fields of energy, environment , climate change, cement chemistry and technology and quality control. From 2014 to 2022. a large number degrees was registered and awarded as displayed by the attached figure:
      https://www.psas.bsu.edu.eg/ContentSide.aspx?section_id=696&cat_id=18&fbclid=IwAR3jEC1bRlotLIid4ib9grBZl9iYVCtiqCylNUfFDQ0gN3hnJW1HnP92uj8

Number of registered and awarded degrees (M.Sc., Ph.D. and diplomas)

year	M.Sc.R	M.Sc. A	Ph.D.R	Ph.D.A	Diplome R	DiplomeA
2014	2	0	6	0	65	51
2015	38	0	17	0	88	67
2016	39	1	7	1	130	80
2017	27	7	9	2	181	120
2018	44	9	9	2	360	262
2019	28	16	10	5	466	364
2020	36	10	8	2	853	637
2021	49	19	10	4	119	286
2022	32	22	8	5	221	210
total	**295**	**84**	**84**	**21**	**2483**	**2077**

d) Many research projects are interested in the field of renewable energy such as;

1. Using chemical routes to nanostructured materials for solar cell applications).
2. The design and implementation of transformers with new properties to work within solar cell systems.
3. Creating superior batteries for storage using lithium electrodes superimposed in metal-organic structures. Creating an energy storage technology can provide sufficient power while driving and support the power needed for speed while driving, in addition to the efficient use of renewable energy.
4. Using innovative technologies for piezoelectric power generation
5. Fabrication and characterization of low cost and highly efficient nanocomposite membranes for fuel cell applications.
6. Synthesis and characterization of new compounds of two- and three-layer double hydroxide/carbon xerogel (CX/LDH) nanoparticles modified for glassy carbon electrodes as a catalyst in methanol fuel cells.
7. Assessment of pollution risks resulting from the cement industry in Beni Suef Governorate.
8. A number of research projects aimed at manufacturing and characterizing nanomaterials by simple and suitable industrial methods and their application in many fields, including the field of energy (solar cells - fuel cells - photovoltaic hydrogen production - converting CO_2 to methane).
   https://portal.arid.my/14272/ApplicationUsers/GetProfile/0004-9561
   https://portal.arid.my/14272/Posts/Details/dab41d3f-eb6c-4e91-b73d-60882d350e25?t=%D9%85%D8%AC%D9%85%D9%88%D8%B9%D8%A9-%D8%B9%D9%85%D9%84-%D8%A7%D9%84%D9%86%D8%A7%D9%86%D9%88%D9%81%D9%88%D8%AA%D9%88%D9%86%D9%83-%D9%88%D8%AA%D8%B7%D8%A8%D9%8A%D9%82%D8%A7%D8%AA%D9%87%D8%A7-%E2%80%93-%D9%83%D9%84%D9%8A%D8%A9-%D8%A7%D9%84%D8%B9%D9%84%D9%88%D9%85-%E2%80%93-%D8%AC%D8%A7%D9%85%D8%B9%D8%A9-%D8%A8%D9%86%D9%89-%D8%B3%D9%88%D9%8A%D9%81-%D8%AC%D9%85%D9%87%D9%88%D8%B1%D9%8A%D8%A9-%D9%85%D8%B5%D8%B1-%D8%A7%D9%84%D8%B9%D8%B1%D8%A8%D9%8A%D8%A9
   https://www.bsu.edu.eg/News.aspx?NID=11133&cat_id=
   https://www.bsu.edu.eg/News.aspx?NID=122465&cat_id=52
   https://www.bsu.edu.eg/Content.aspx?section_id=12096&cat_id=361

e) Many theses are interested in the field of renewable energy such as;

1. Improving the performance of quantum dot-fueled solar cells using different nanometric materials.
2. Study and design of a hybrid renewable energy system (sun cells, wind energy, bioenergy).
3. Maximizing the share of renewable energy in the Egyptian energy model in 2040
4. Design and implementation of a high-performance control system for a renewable energy system consisting of solar cells and batteries
5. Exploitation and use of cement dust in solar cell applications.

6. Design of a hybrid renewable energy system for a typical building in a village far from Egypt.
7. Saving electricity using the solar tube.
8. Optimizing control and design of a powerful hybrid electrical system of solar cells and fuel cells.
9. Preparation of some nanometric materials by different chemical methods and study of their applications in solar cells.
10. Modeling and simulation of inorganic perovskite materials for solar energy harvesting, and many others.
11. Preparation of some nanometric materials by different chemical methods and study of their applications in solar cells.
12. Scientific and computer studies on renewable energy systems that contain plastic wastes Selection of some hybrid nanomaterials for fuel cell applications,
13. Effects of vacancies on the physical and catalytic properties of iron nanocomposites for energy applications.
14. Modeling and optimization of advanced energy systems using artificial intelligence approaches
15. Preparation and characterization of nanocomposites based on organometallic structures for fuel purification: experimental and computational studies
16. Metal organic nanostructures complexes as electrocatalysts in energy applications
17. Oils extracted from wastewater algae communities as a source for biofuel production
18. Converting oil to biofuel using nanometric materials
19. Dual applications of duckweed in wastewater treatment and biofuel production
20. Nanoelectroeconomic catalysts and their uses in direct methanol fuel cells
21. Nickel based nanoelectrocatalysts and their applications in fuel cells
22. Compact design of energy-efficient nanomaterials for energy applications
23. Applications of nanocomposites of palladium and carbonate for fuel cells
24. Using data-driven computer learning to improve advanced power equipment.
25. Preparation and investigation of carbon nanocomposites doped with transition element dichalcogensides for fuel cell applications
26. Nanoscale materials based on molybdenum and tungsten for direct methanol fuel cells
27. The use of nanometric hybrid metal sulfides in energy storage systems
28. Study of some hybrid nanomaterials in direct methanol fuel cell application
29. And last but not least, Laboratory and computational design of nanoscale composites of metal-organic structures.

https://www.psas.bsu.edu.eg/News.aspx?NID=40742&cat_id=18
https://www.youm7.com/story/2022/8/17/%D9%81%D9%82%D8%B7-%D9%81%D9%89-%D8%AC%D8%A7%D9%85%D8%B9%D8%A9-%D8%A8%D9%86%D9%89-%D8%B3%D9%88%D9%8A%D9%81-%D8%A3%D9%88%D9%84-%D9%83%D9%84%D9%8A%D8%A9-%D9%84%D9%84%D8%AF%D8%B1%D8%A7%D8%B3%D8%A7%D8%AA-%D8%A7%D9%84%D8%B9%D9%84%D9%8A%D8%A7-%D9%84%D9%84%D8%B9%D9%84%D9%88%D9%85/5873564

3. Relative Activities such as;

3.1. In light of man's constant search for new sources of energy to meet his growing needs, waste-to-energy is a vital part in the chain of sustainable waste management, complementary to the process of recycling and recovery of valuable resources, and not just a way to dispose of garbage. Hence, BSU encourages wastes recycling to save energy through certain procedures and measures and research projects. Where, all colleges and departments place recycling bins for paper and plastic within offices, halls and laboratories to implement recycling. Paper recycling reduces water and energy consumption. Recycling paper reduces greenhouse gases, as it reduces the production of gas methane and carbon dioxide in the atmosphere, in addition, burning plastic waste negatively affects the surrounding environment and public health, and there are different research projects use these wastes in the production of different economic products such as economic fuel cells limiting the harmful impact of waste and maximizes its use. (some examples are described in our approach 7.2.3)
https://www.youm7.com/story/2019/9/30/%D8%AA%D9%85%D9%88%D9%8A%D9%84-%D9%85%D8%B4%D8%B1%D9%88%D8%B9-%D8%A8%D8%AD%D8%AB%D9%89-%D9%81%D9%89-%D8%A5%D9%86%D8%AA%D8%A7%D8%AC-%D8%AE%D9%84%D8%A7%D9%8A%D8%A7-%D8%A7%D9%84%D9%88%D9%82%D9%88%D8%AF-%D8%A8%D8%A7%D8%B3%D8%AA%D8%AE%D8%AF%D8%A7%D9%85-%D8%A7%D9%84%D9%85%D8%AE%D9%84%D9%81%D8%A7%D8%AA-%D8%A8%D8%AC%D8%A7%D9%85%D8%B9%D8%A9/4438264
https://www.youm7.com/story/2019/5/25/%D8%A5%D9%86%D8%B4%D8%A7%D8%A1-%D9%85%D8%B1%D9%83%D8%B2-%D9%84%D8%AA%D8%AF%D9%88%D9%8A%D8%B1-%D9%88%D9%81%D8%B5%D9%84-%D8%A7%D9%84%D9%85%D8%AE%D9%84%D9%81%D8%A7%D8%AA-%D8%A8%D8%AC%D8%A7%D9%85%D8%B9%D8%A9-%D8%A8%D9%86%D9%8A-%D8%B3%D9%88%D9%8A%D9%81/4257463
https://www.bsu.edu.eg/Content.aspx?section_id=12096&cat_id=361
https://www.bsu.edu.eg/Content.aspx?section_id=13062&cat_id=361

3.2. The Electrical Engineering Department at Faculty of Engineering has an energy factory as one of the modern laboratory in the college. This lab is a miniature form for generating electricity from new and renewable energy. The lab includes small sets for generating electricity from wind and solar energy to be a fixed energy.
https://www.facebook.com/BSUUniv/videos/1126930127840255/

https://bsu.edu.eg/SingleNews.aspx?NID=151344&cat_id=1&fbclid=IwAR0gppdW4KW0ZWq0pb9ZcDbPO8ady2__oBsBND_Ch7H3QUOndPoI6AlLhmA

Example of generating electricity from solar and wind energies (Beni-Suef University – Electrical Engineering Department, Faculty of Engineering, Beni-Suef)

3.3. Believing in the big role of the renewable energy next periods;

3.3.1. Solar energy project is circulated within different parts of Beni-Suef University. As exemplified by using light poles working with solar energy and starting to operate different buildings with solar energy.

https://www.youm7.com/story/2019/6/24/%D8%AC%D8%A7%D9%85%D8%B9%D8%A9-%D8%A8%D9%86%D9%89-%D8%B3%D9%88%D9%8A%D9%81-%D8%A7%D8%B3%D8%AA%D8%AE%D8%AF%D8%A7%D9%85-%D8%A7%D9%84%D8%B7%D8%A7%D9%82%D8%A9-%D8%A7%D9%84%D8%B4%D9%85%D8%B3%D9%8A%D8%A9-%D9%81%D9%89-%D8%AA%D8%B4%D8%BA%D9%8A%D9%84-%D9%85%D8%B1%D9%83%D8%B2-%D8%A7%D9%84%D9%85%D8%A4%D8%AA%D9%85%D8%B1%D8%A7%D8%AA/4302148

https://www.bsu.edu.eg//News.aspx?NID=56808&cat_id=1
https://www.bsu.edu.eg//News.aspx?NID=74737&cat_id=1
https://www.youm7.com/story/2018/8/6/%D8%AC%D8%A7%D9%85%D8%B9%D8%A9-%D8%A8%D9%86%D9%89-%D8%B3%D9%88%D9%8A%D9%81-%D8%AA%D8%B9%D9%85%D9%8A%D9%85-%D9%85%D8%B4%D8%B1%D9%88%D8%B9-%D8%A7%D9%84%D8%B7%D8%A7%D9%82%D8%A9-%D8%A7%D9%84%D8%B4%D9%85%D8%B3%D9%8A%D8%A9-%D9%88%D9%88%D8%B6%D8%B9-%D8%A7%D9%84%D8%AA%D8%AC%D8%B1%D8%A8%D8%A9-%D8%A8%D9%85%D9%86%D8%A7%D9%87%D8%AC/3900593

3.3.2. BSU is planning to install new roof-mounted photovoltaic panels on the various buildings in 2023-2024.

Affordable and clean energy (SDG 7)

7.4. Energy and the community

7.4.3. Energy efficiency services for industry

Provide direct services to local industry aimed at improving energy efficiency and clean energy (energy efficiency assessments, workshops, research renewable energy options)

•Free

•Paid

The university actively promotes energy efficiency and clean energy through energy efficiency assessment, workshops, seminars, relative conferences and research renewable energy options. The relevant actions are as follow:

1. Energy Efficiency Evaluation: such as;
    A. Unit of Consultation and Engineering & Technical Support (UCETS) at BSU includes a group of faculty members who have distinguished experiences in various engineering disciplines. It keeps pace with scientific development and contributes to serving society and the technology industry.
    https://www.bsu.edu.eg/Content.aspx?section_id=2150&cat_id=16
    https://www.bsu.edu.eg/Content.aspx?section_id=2150&cat_id=16
    B. Center for the Development of Means of Preserving the Environment at BSU aims to identify environmental problems in the province and work to solve them in a scientific manner to reduce them. It also establishes close cooperation with advisory offices, governmental and industrial bodies, and community and scientific institutions, to solve environmental problems and provide specialized technical advice. In addition, it actively contributes to the development and implementation of policies, whether at the governorate or national level.
    https://www.elwatannews.com/news/details/4316926
    https://www.elbalad.news/4414088
    https://www.elwatannews.com/news/details/4316926?t=mpush
    C. A joint cooperation protocol between the Beni-Suef University and the Ministry of Environment. It aims to; a) participate in achieving sustainable development, b)/ directing scientific research and linking it to environmental issues, and C) contributing with the ministry to the success of all projects and solving environmental problems such as waste recycling and power generation.
    https://www.bsu.edu.eg/Content.aspx?side_id=60&cat_id=1

2. Different conferences, initiatives, workshops and seminars are always launched to raise the awareness of energy saving and to encourage youth to find innovative solutions for energy problems.
https://www.bsu.edu.eg/News.aspx?NID=104734&cat_id=1

For example;

A. Organizing a workshop within the project of the clean energy storage.
https://www.bsu.edu.eg/News.aspx?NID=146358&cat_id=1

B. International Conference of "Waste to Energy" at Faculty of Postgraduate Studies for Advanced Sciences.
https://www.bsu.edu.eg/News.aspx?NID=53078&cat_id=1
https://www.psas.bsu.edu.eg/Gallery.aspx?ID=614&cat_id=18

C. Conference of the Faculty of Postgraduate Studies for Advanced Sciences entitled "The Fifth International Conference on Advanced Sciences (ICASS). 9-12 November 2019 Hurgada, Egypt" in cooperation with Misr International University and Prais Sud University in France, in the presence of a group of scholars and researchers from various Egyptian universities. European and Arabic. The activities of the International Conference on Advanced Sciences discussed the use of nanometric applications in water purification and desalination, energy storage, and in the treatment of cancer diseases.
https://www.miuegypt.edu.eg/%D9%85%D8%B4%D8%A7%D8%B1%D9%83%D8%A9-%D8%AC%D8%A7%D9%85%D8%B9%D8%A9-%D9%85%D8%B5%D8%B1-%D8%A7%D9%84%D8%AF%D9%88%D9%84%D9%8A%D8%A9-%D9%85%D8%B9-%D8%AC%D8%A7%D9%85%D8%B9%D8%A9-%D8%A8%D9%86%D9%8A-%D8%B3/

D. Organizing annual workshops in the renewable energy field at Faculty of Postgraduate Studies for Advanced Sciences such as the workshop entitled ″Recent advances in Renewable Energy technologies IV″
https://www.facebook.com/advancedsciences/posts/1912098568902141

3. 1429 scientific papers were published during the year 2020/2021, according to the global SCOPUS website, achieving the sustainable development goals that involve the clean energy goal. The percentage of international cooperation in published research reached 63%,
https://www.elfagr.org/4367785

4. Winning and funding of different research projects from different sources within the framework of implementing the national strategy Egypt 2030 to achieve sustainable development., for example;
   a) Using nanotechnology and plastic waste to produce renewable energy with the participation of a Solar Energy Technology and Fuel Production Company. The burning of plastic waste negatively affects the surrounding environment and public health, and the exploitation of these wastes in the production of economic fuel cells limits the harmful impact of waste and maximizes the use of it.
   https://pages.facebook.com/BSUUniv/photos/a.506431046034292/2791886260822081/?type=3&source=48

   b) Production of nanometric materials in the size of carbon quantum dots using the electromechanical method and its applications in super capacitors to solve energy problems. The project aims to produce nanometric materials for energy applications, and link between the use of nanometric materials and solving energy problems.
   https://www.albawabhnews.com/3499523

   c) The Renewable Energy Alliance project, which aims to manufacture and install an Egyptian solar cell system and industrial solar inverters.
   http://www.innfrad.com/News/19/1409310/%D8%AC%D8%A7%D9%85%D8%B9%D8%A9-%D8%A8%D9%86%D9%89-%D8%B3%D9%88%D9%8A%D9%81-%D8%AA%D8%B4%D8%A7%D8%B1%D9%83-%D9%81%D9%89-%D9%85%D8%B4%D8%B1%D9%88%D8%B9-%D8%A8%D8%AD%D8%AB%D9%89-%D9%84%D9%84%D8%B7%D8%A7%D9%82%D8%A9-%D8%A7%D9%84%D8%B4%D9%85%D8%B3%D9%8A%D8%A9-%D8%A8%D8%AA%D9%85%D9%88%D9%8A%D9%84

d) Advanced removal of selected pharmaceutical residues from wastewater using nano-metal/organic frameworks and the use of bacterial algae resulting from it in the extraction of fuel and organic fertilizers
https://ahlmasrnews.com/500919/%D8%AC%D8%A7%D9%85%D8%B9%D8%A9-%D8%A8%D9%86%D9%8A-%D8%B3%D9%88%D9%8A%D9%81-%D8%AA%D8%A8%D8%AA%D9%83%D8%B1-%D8%B7%D8%B1%D9%8A%D9%82%D8%A9-%D9%84%D9%85%D8%B9%D8%A7%D9%84%D8%AC%D8%A9-%D9%85%D9%8A%D8%A7%D9%87-%D8%A7%D9%84%D8%B5%D8%B1%D9%81-%D8%B5%D9%88%D8%B1

e) Winning of a number of research projects in the projects of young researchers - the fourth stage, as follow;
- Design of new nanocomposites based on organometallic frameworks for fuel purification: experimental and computational studies.
- Improving the efficiency of iron oxide films in producing hydrogen under sunlight
- Preparation of nanometer-thin films from earth-abundant metal oxides for solar energy harvesting applications.
- Design and implementation of a three-phase split source inverter for renewable energy applications.

https://www.bsu.edu.eg/Content.aspx?section_id=13062&cat_id=361

5. The Excellence Center for the economic production of approved nanometric materials aims to establish a small certified factory to produce specific and approved nanometric materials needed by society and by industry, to be an example of linking research with industry. Clean energy storage, safe and highly efficient energy devices can be designed using mixed nanometric materials. The center project is funded from the Science and Technology Development Fund at the Academy of Scientific Research. The Science and Technology Development Fund participates in setting some items in it to ensure the achievement of the project objectives,
https://www.shorouknews.com/news/view.aspx?cdate=25022019&id=03d06323-2a6e-48fe-816b-c28d0c4325e7

Affordable and clean energy (SDG 7)

7.4. Energy and the community

7.4.4. Policy development for clean energy tech

Inform and support governments in clean energy and energy-efficient technology policy development

1. The participation of Beni-Suef University in the National Committee for Sustainable Development and Governance that is financially and technically funded by Academy of Scientific Research and Technology. The most important objectives and outputs of the committee, are the establishment of a center for sustainable development and governance in all Egyptian universities to ensure the sustainability of the committee's work, as well as cooperation with industrial bodies and strengthening community participation through the committee.
https://www.elbalad.news/4810693


Beni-Suef University
President of BSU
جامعة بني سويف
رئيس الجامعة
خطاب مشاركة
باللجنة القومية للتنمية المستدامة والحوكمة
التوقيعات
الجهة المشاركة : جامعة بني سويف
المقر الثاني : جامعة بني سويف
ممثلها الثاني : رئيس الجامعة
محور الشبكة : أ.د. سماء إسلام الدق
يعتمد
رئيس الجامعة
أ.د. منصور حسن أحمد
ختم الاعتماد

The participation of Beni-Suef University in the National Committee for Sustainable Development and Governance

2. Center for the Development of Means of Preserving the Environment at BSU aims to identify environmental problems in the province and work to solve them in a scientific manner to reduce them. It also establishes close cooperation with advisory offices, governmental and industrial bodies, and community and scientific institutions, to solve environmental problems and provide specialized technical advice. In addition, it actively contributes to the development and implementation of policies, whether at the governorate or national level. For example; the participation of the center in the "Get ready for the green" campaign, with the participation of the Egyptian Group for the Recycling of Agricultural and International Waste for Environmental Services, under the supervision of the Ministry of Environment ("Get ready for the green initiative"), raising awareness on how to dispose of used masks and waste, and making posters to distribute them to the Traffic Department and various government agencies to be placed on cars and bodies government, after the approval of the Ministry of Environment.

https://www.elbalad.news/4414088
https://gate.ahram.org.eg/News/2942904.aspx
https://www.elwatannews.com/news/details/4316926?t=mpush
https://www.youm7.com/story/2020/7/19/%D8%AC%D8%A7%D9%85%D8%B9%D8%A9-%D8%A8%D9%86%D9%8A-%D8%B3%D9%88%D9%8A%D9%81-%D8%A7%D8%B7%D9%84%D8%A7%D9%82-%D9%85%D8%A8%D8%A7%D8%AF%D8%B1%D8%A9-%D8%B2%D8%B1%D8%A7%D8%B9%D8%A9-%D8%A7%D9%84%D8%A3%D8%B3%D8%B7%D8%AD-%D8%A8%D9%8A%D9%86-%D8%B7%D9%84%D8%A7%D8%A8-%D8%A7%D9%84%D8%AC%D8%A7%D9%85%D8%B9%D8%A9/4886687
https://edu.see.news/new/2020/09/22/%D8%AC%D8%A7%D9%85%D8%B9%D8%A9-%D8%A8%D9%86%D9%8A-%D8%B3%D9%88%D9%8A%D9%81-%D9%85%D8%B4%D8%A7%D8%B1%D9%83%D8%A9-%D9%85%D8%B1%D9%83%D8%B2-%D8%A7%D9%84%D9%85%D8%AD%D8%A7%D9%81%D8%B8%D8%A9/

3. The university has many distinguished researchers in achieving the goals of sustainability development globally and regionally. As exemplified by;

A. Dr. Laila Abdel-Fattah, the researcher in the field of solar energy at Beni-Suef University is classified as one of the best researchers in Africa.
https://www.elbalad.news/5312198
https://www.bsu.edu.eg/NewsDetails_New.aspx?NID=154812&cat_id=1

B. Dr. Al-Rubi is one of the 2% of the world's most distinguished and influential scientists in the field of materials and energy sciences, according to the Stanford University classification.
https://www.elbalad.news/5015243

C. European honor for the Egyptian scientist Muhammad Hussain Al-Bakai who presented promising solutions in the production of clean energy. The International Journal of Hydrogen Energy published one of his most important researches showing the huge potential of nanostructures in clean energy applications.

https://nabd.com/s/106557092-801872/%D8%AA%D9%83%D8%B1%D9%8A%D9%85-%D8%A7%D9%88%D8%B1%D9%88%D8%A8%D9%89-%D9%84%D8%B9%D8%A7%D9%84%D9%85-%D9%85%D8%B5%D8%B1%D9%8A-%D9%82%D8%AF%D9%85-%D8%AD%D9%84%D9%88%D9%84%D8%A7-%D9%88%D8%A7%D8%B9%D8%AF%D8%A9-%D9%81%D9%8A-%D8%A5%D9%86%D8%AA%D8%A7%D8%AC-%D8%A7%D9%84%D8%B7%D8%A7%D9%82%D8%A9-%D8%A7%D9%84%D9%86%D8%B8%D9%8A%D9%81%D8%A9

4.

Affordable and clean energy (SDG 7)

7.4. Energy and the community

7.4.5. Assistance to low-carbon innovation

Provide assistance for start-ups that foster and support a low-carbon economy or technology

BSU continuously prepares and facilitates the work of its centers, offices and units in a way that ensures the success of their roles to support low-carbon economy or technology startups. The relevant industry-academia cooperation is explained as follow:

A. The Excellence Center for the economic production of approved nanometric materials establishes a small certified factory to produce specific and approved nanometric materials needed by society and by industry to be an example of linking research with industry. Clean energy storage, safe and highly efficient energy devices can be designed using mixed nanometric materials.

https://www.elbalad.news/3716813

https://www.bsu.edu.eg/ContentSide.aspx?section_id=633&cat_id=16

B. The Center for the Development of Means of Preserving the Environment establishes close cooperation with advisory offices, governmental and industrial bodies, and community and scientific institutions, to solve environmental problems and provide specialized technical advice, The center supervises a scientific academy for the environment at the university in cooperation with the scientific authorities and the various university faculties for the approved training courses in various environmental fields. (described in our approach 7.4.4)

C. The Office of Consultation and Linking Research to Industry opens unconventional permanent channels of communication between the university, industry and society. It is concerned with marketing the results of applied scientific research projects for industry and the private sector, whether local or international, in coordination with the beneficiary authorities and heads of research projects.

https://www.youtube.com/watch?v=LDz59R7pPoM

https://www.bsu.edu.eg/Content.aspx?section_id=14560&cat_id=414

D. The Unit of Consultation and Engineering & Technical Support (UCETS) includes a group of faculty members who have distinguished experiences in various engineering disciplines. It keeps pace with scientific development and contributes to serving society and the technology industry.

https://www.bsu.edu.eg/ContentSide.aspx?section_id=633&cat_id=16

https://www.elwatannews.com/news/details/5813953

E. The Technology Transfer and Innovation Marketing Office at BSU comes within the framework of the university's orientation to support and stimulate innovation, transfer and commercialization of technology, support the research and technological needs of small and medium enterprises, support the permanent and effective link of scientific research to the needs of the Egyptian society. In addition, the office aims to exploring new ideas, taking care of their owners and providing the appropriate environment for them, and designing and creating databases about all technologies, knowledge, innovations and patents available at the university based on the survey conducted for this purpose.
https://www.facebook.com/BSU.TICO/
https://www.elwatannews.com/news/details/2064472