Biomass Technology
BIO ENERGY
Association for Sustainable Development
مؤسسة الطاقة الحيوية للتنمية المستدامة

Bioenergy for Sustainable Development Association

A. Masr El Kadima, Cairo, Egypt

TEL.FAX. +(202) 274 08 363

Web. https://bio-egypt.org/

2022

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About Us

Chairman of the Board

H.E. Dr. Yasmine Fouad

Dr. Yasmine Fouad was appointed Minister of Environment of the Arab Republic of Egypt on 18 June 2018. She was previously Assistant Minister of Environment since 2014.

As Minister of Environment, she leads a transformational change in environment sector in Egypt by creating more business oriented enabling environment, through 1) leading the processes of developing the Waste Management Law (202/2020), 2) leading the development and implementation of National Solid Waste Strategy. 3) developing waste to energy as new economic instrument; 4) participating in progressing the first governmental green bonds in Egypt and Middle East; 5) co-leading mainstreaming environmental sustainability aspects into national investment plans, as well as 6) improving Greater Cairo air quality and supporting construction of waste management infrastructure.

Executive Director

Wael Radwan

Wael Radwan was appointed Director of BSDA on April 2022, he was the Executive Director of ENCID.

Wael Radwan has 30years of experience in business development and manufacturing processes. Sustainable development expert, talented at operations and restructuring for improved performance, Marketing strategy and corporate management areas.

Wael has a proven track record of knowing how to identify deficiencies and implement improvements to reduce costs and increase productivity and turn over. Wael has put a new roadmap and strategy for BSDA to fulfil its vision and mission.

Who We Are

- Bioenergy technologies Lead entity in Egypt
- Business Development service Center
- Entrepreneurship Accelerator
- Financing Packages

Bio Energy Association

For 11 years, BSDA has raised awareness, supported and promoted the biomass technology application in Egypt. Technically and financially supported by the Egyptian Ministry of Environment. BSRDA supports the clients, donors, and entrepreneurs in order to create an appropriate environment for the implementation of the activities of biomass technologies.

11

years of excellence

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Association Philosophy

Vision statement

To become a national center of excellence for Biomass technologies and its applications

Mission statement

Spreading awareness. transfer, apply and development of bioenergy technologies to fit with the Egyptian market by overcoming technical, institutional, informational and financial barriers to establish sustainable projects respect to the social, environmental and economic aspects to support the national economy

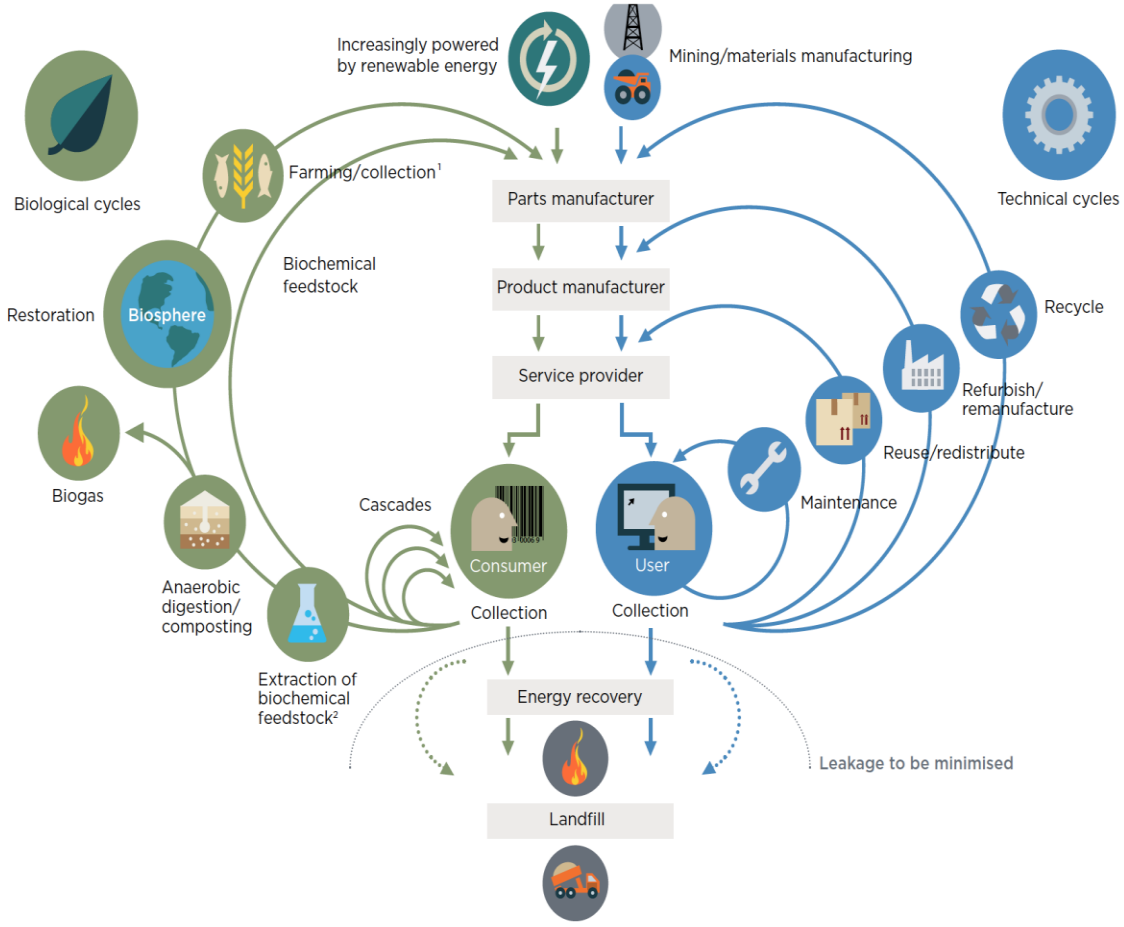
Our Strategy

BSDA supports Egypt's ambitious sustainable development strategy: Egypt vision 2030, and Egypt national climate change strategy 2050 through supporting the main three dimensions (Economy – Social – Environment) to ensure the resilience of Egyptian community, then to the level of sustainable development strategy for Africa 2063, then to the global impact.

BSDA supports and promotes the circular bioeconomy as waste is generated at all steps in the life-cycle of materials and products in the biological cycle.

As BDS center for fully integrated biomass technologies, we provide a customized and feasible solutions, and delivering large-scale turnkey projects that capitalize on our activities and broad expertise.

By leveraging BSDA expertise, we aim to create a strong market for biomass technologies and alternative fuels in Egypt. through our strategic partners, BSDA has significant experience in arranging financing, planning, designing, building, operating and maintaining significant Green Projects for government and commercial clients.



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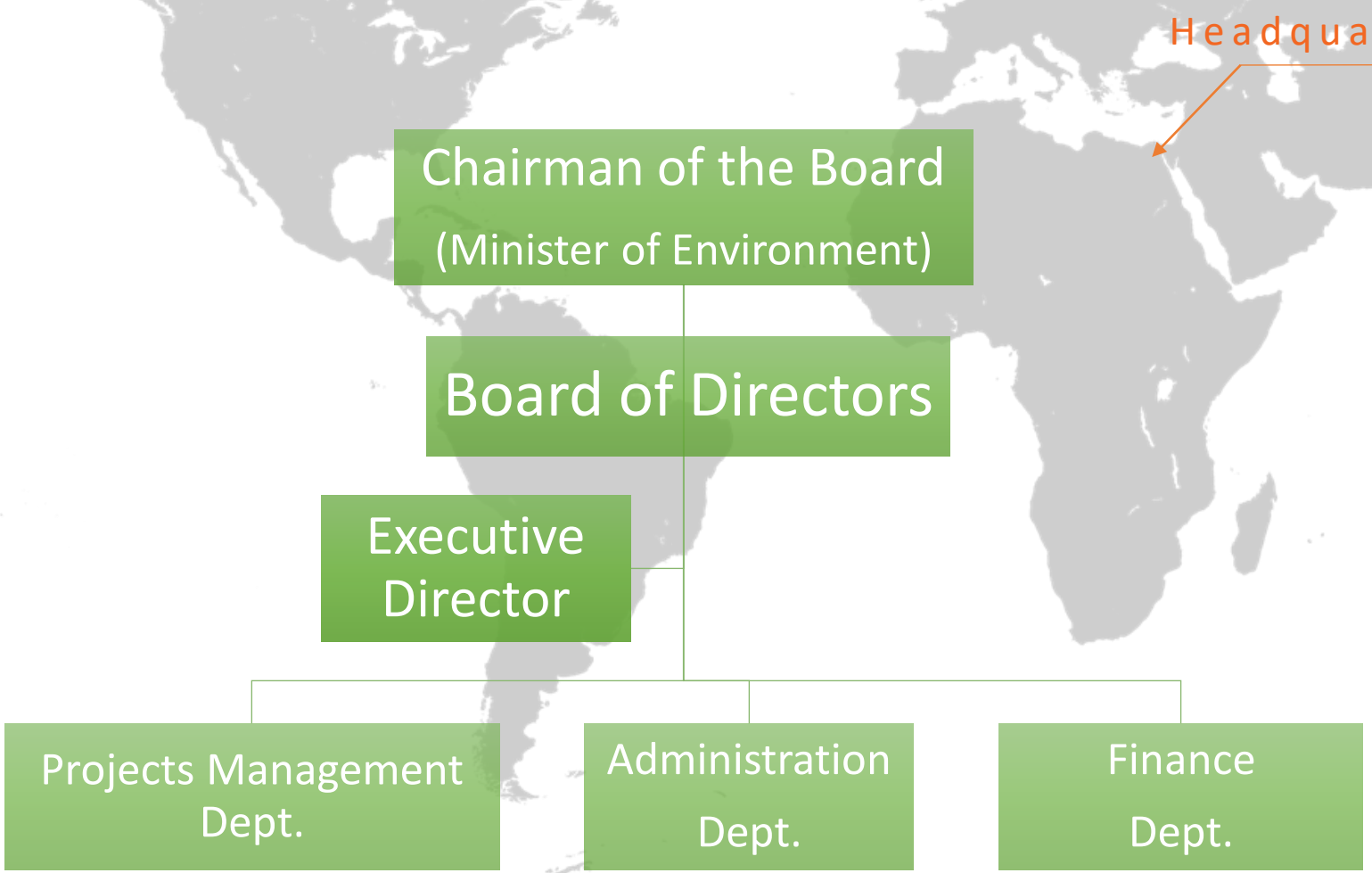
Association Structure



BSDA presence in Egypt

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Activity

Core Activity

- Biofuels
- Waste to Energy
- Others

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Biofuels

Biogas:

Biomass such as wood, straw, chaff or other organic residues are available in large quantities. Using biomass as a fuel is significantly cheaper than natural gas and diesel.

Biogas produce from anaerobic digestion of organic wastes. Anaerobic Digestion is mature technology to treat the organic waste include; sludge, animal manure, Agriculture waste and organic solid waste in an economical and health-safe way to protect the environment from pollution.

Producing biogas as sustainable green source of energy that greatly contributes rationalizing the consumption of conventional energy such as fossil fuels.

Biogas is a safe, non-toxic, colorless gas with a clean blue flame. It is used for cooking, heating, electricity generation, or vehicle fuel.

Waste to Energy

Waste to Energy

Effective waste management is among big challenges in most Arab countries, including Egypt, due to high population growth rate and rapid urbanization. Egypt on may 2020 opened the call for submission of the investment interest in the “WtE” projects based on the MSW management strategy and the roadmap of investment in “WtE”.

Waste to Energy “WtE” technologies consist of any waste treatment process that creates energy in the form of electricity, heat or vehicle fuels from a waste source.

Many countries see WtE as a sustainable alternative to landfills. The Egyptian market is expected to expand at an exponential rate for the next decades, Ministry of Environment efforts to replace existing landfills with WtE facilities. Moreover, BSDA is actively developing large-scale WtE projects from different sectors.

The FiT decree has been issued by the prime minister decree #41-2019 stating the rate for purchasing the government of Egypt the electrical energy generated through the thermal treatment of the municipal solid waste (MSW), biogas of the sanitary landfilling, and the sludge of the waste water treatment plants.

Waste to Energy is an investment opportunity in Egypt in accordance to the waste management strategic plan targeting reduction in final disposed off waste to the sanitary landfilling. The technologies are planned to be assigned to the public private partnership “PPP” having the concept of win-win relationship to enable the sustainability and efficient performance.

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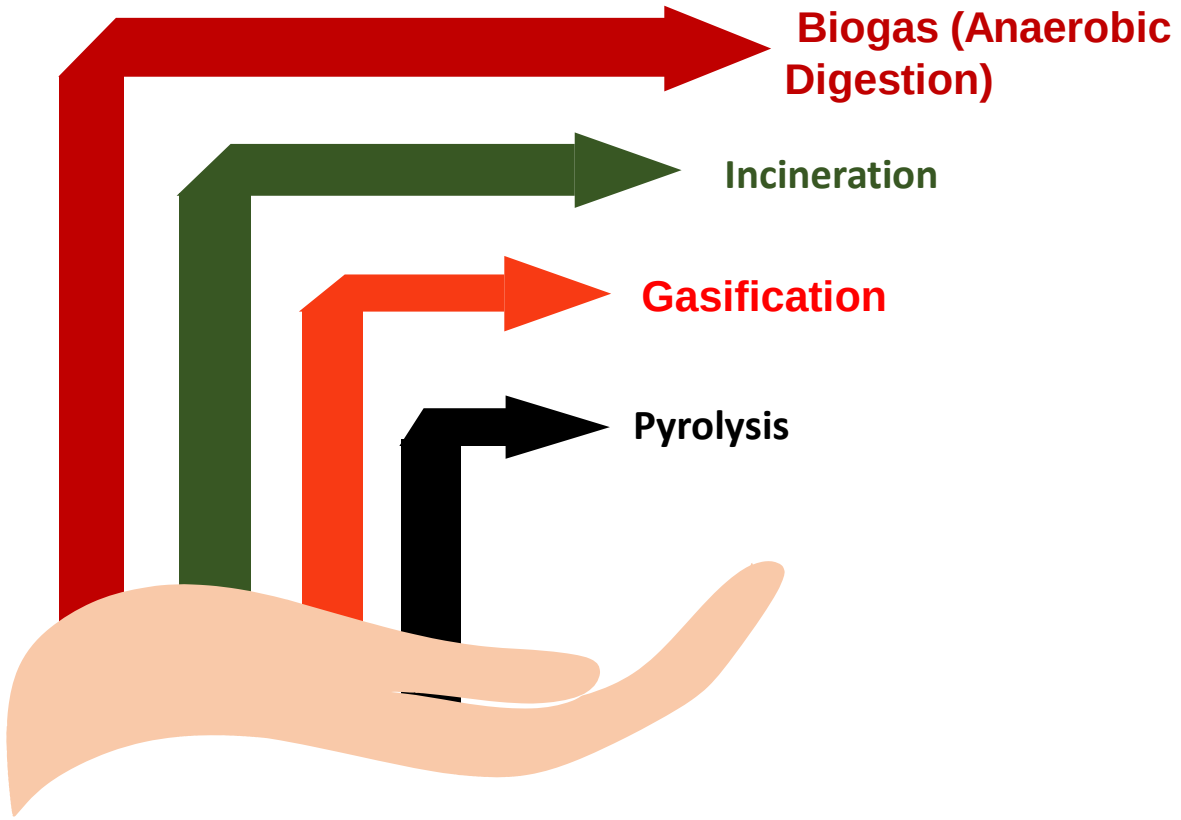
Waste to Energy “WtE” technologies consist of any waste treatment process that creates energy in the form of electricity, heat or vehicle fuels from a waste feedstock.



Health, safety and Environment

Setting the standard

We are building every project and deliver every product by putting safety first. As all our startups are subject to strict to risk management procedures. These establish our high health, safety, and environment standards, which cover everything from personal protective equipment and safety device to sanitary and healthcare facilities for workers.

When it comes to health, safety and environment we are committed to zero incident. We do all we can to remove the risk of incidents from our operations. All of our contracts is assessed for health and safety risk, from design and delivery to the final use. Senior engineers regularly visit sites to monitor health and safety procedures.

We believe that thriving communities boost economic prosperity and contribute positively to society. We are at the heart of many of the local communities where we live and work. We are committed to improving the quality of life and provide a decent life.

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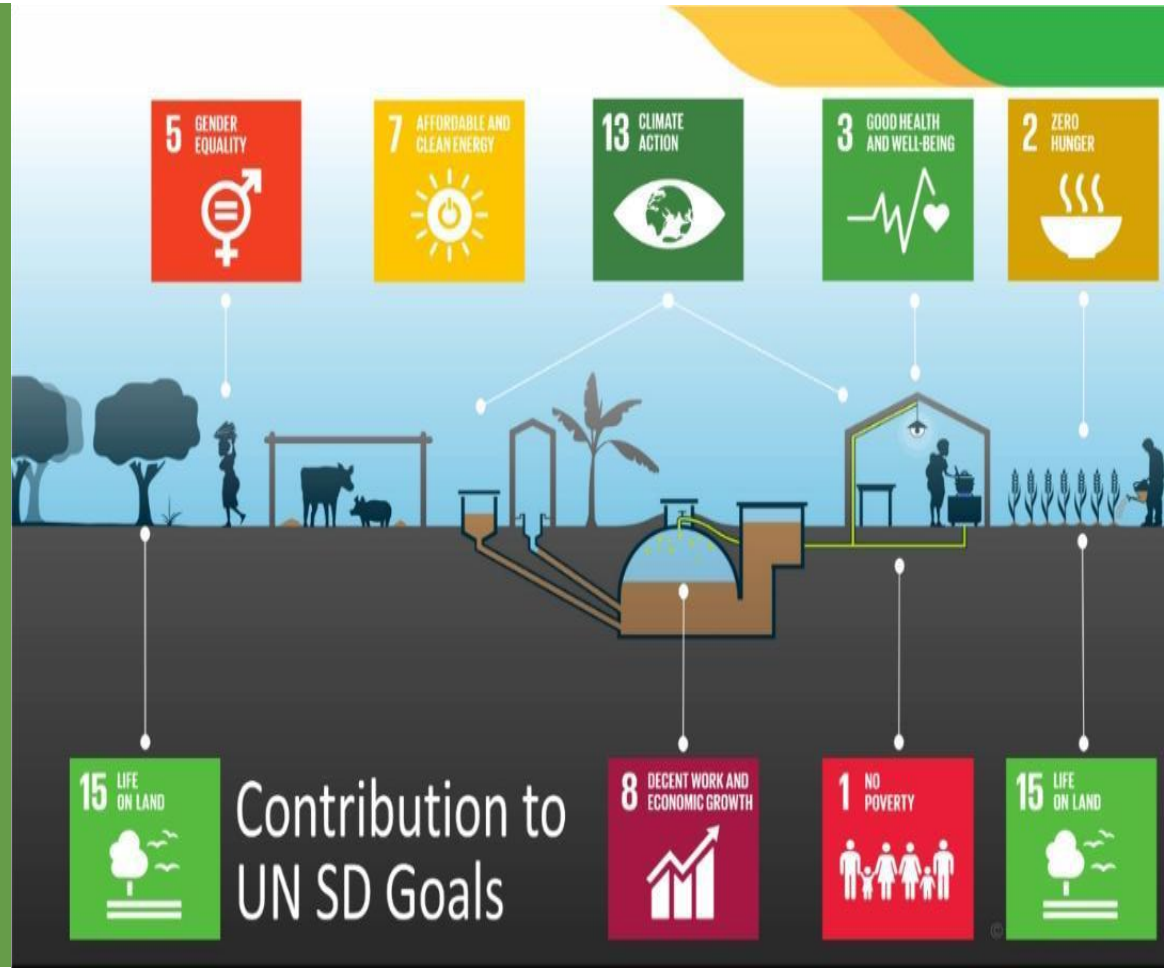
Key References

Biogas

Biogas:



Waste to Energy

First Gasification Plant in Egypt

Gasification converts carbon based materials to gas by creating a chemical reaction. This reaction, which does not produce any flame, combines carbon based materials with very low levels of oxygen, breaking them down to molecules, primarily a mixture of carbon monoxide and hydrogen, removing impurities and pollutants, leaving clean syngas. Syngas is used in the production of biofuels. Gasification has been successfully used since the late 1800's. Over 9 million automobiles were powered by syngas in 1945.

Joint Protocol between the EEAA and the central administration of zoos

Client: Central Administration of Zoos
Doner: Egyptian Environmental Affairs Agency
Location: Giza Governorate
Project Duration: 2021-2022

Scope of Work:

Design, Build, Install, Installation testing, supervision, maintenance of; GLS Biogas pilot plant inside the Giza Zoo

Project Facts:

- Giza Zoo now is treating its organic waste in Eco-friendly method, and generating a Green Energy.
- Installing the **First** GLS Biogas Digester in **E G Y P T**

Nahr El-khair Biogas Plant (8x 50 Cubic meters Biogas units)

Client: Nar El-Khair for Development and Investment
Doner: Bioenergy for Sustainable Development Association
Location: Minya Governorate
Capacity: 8 units with 50 cubic meters capacity (400 m3/d)
Project Duration: 2019-2022

Scope of Work:

Installation testing, supervision, of; 8 Biogas pilot units inside Nahr Elkhair Farm in Minya Governorate

Project Facts:

- Nahr Elkhair Farm has new Green Energy stream

Cooperation with the Small Grants Program

Client: Small Grants Program
Doner: Small Grants Program
Location: Fayoum – Minya – Luxor Governorates
Capacity: 96 units with 3 cubic meters capacity (288 m3/d)
Project Duration: 2021-2022

Scope of Work:

Installation testing, supervision, of; 96 Household Biogas Units with capacity 3 cubic meters in (Fayoum – Minya – Luxor) Governorates.

Project Facts:

- Nahr Elkhair Farm has new Green Energy stream

Cooperation with Rawabet Project (ILO)

Client: International Labour Organization
Doner: International Labour Organization
Location: Gharbia Governorate
Capacity: 50 units with 3 cubic meters capacity (150 m3/d)
Project Duration: 2021-2022

Scope of Work:

Installation testing, supervision, of; 50 Household Biogas Units with capacity 3 cubic meters in Zifta Town, Gharbia Governorates.

Project Facts:

- Nahr Elkhair Farm has new Green Energy stream

MoU with NBK to install 61 Household biogas units in Sohag Governorate

Client: National Bank of Huwait-Egypt
Doner: National Bank of Huwait-Egypt
Location: Sohag Governorate
Capacity: 186 m3/d
Project Duration: 2021-2022

Scope of Work:

Design, Build, Install, Installation testing,
supervision, maintenance of; 60 Household Biogas
Units with capacity 3 cubic meters and one with capacity
6 cubic meters of biogas in west gao, Temaa, Sohag Governorate

Project Facts:

- West gao, Temaa village has the most number of Households Biogas units installed in Sohag Governorate with **67%** of total installed units in Sohag Governorate.
- Train **6** of recent graduates engineers, and **6** of masons on the mechanism of units building and installation.
- Establish new **3** startups to join the market

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Cooperation Experience

Partnership	Experience
MSME مشاريع مصر PROJECTS DEVELOPMENT AGENCY	
SCIENCE & TECHNOLOGY CENTER OF EXCELLENCE مركز التميز العلمي والتكنولوجي مركز تطوير المشروعات وتكنولوجيا الابحاث العلمية Projects Development & Scientific Research Technology Center R&D TECH مدينة زويل للعلوم والتكنولوجيا Zewail City of Science and Technology ZEWAIL CITY	
Chemonics Egypt Consultants	

BSDA Projects in Egypt

Total Contracts Value

11 Millions EGP

Installed Capacity

1.4 Millions cubic meters of Biogas

Job Opportunity

> 1,000 Manhours

BSDA Contribution to Egyptian growth

BSDA provide Energy to

> 8,000 People

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Partners

WMRA
جهاز تنظيم إدارة المخلفات

جمهورية مصر العربية - وزارة البيئة
Arab Republic of Egypt-Ministry of Environment

جمهورية مصر العربية
وزارة التضامن الاجتماعي
Ministry of Social Solidarity

gef

UNDP

مركز تطوير المشروعات وتكنولوجيا الابحاث العلمية
Projects Development & Scientific Research Technology Center

مدينة زويل للعلوم والتكنولوجيا
Zewail City of Science and Technology

الوطني NBK

سوهاج SOHAG

جامعة سوهاج

SCIENCE & TECHNOLOGY CENTER
مركز التميز العلمي والتكنولوجي

MSME مشاريع مصر
PROJECTS DEVELOPMENT AGENCY

GLS TANKS
glass lined steel manufacturer

GIZA Zoo

Chemonics Egypt
Consultants

ILO

مستقبل مصر
لحلول الطاقة المتجددة

A.H.B

BioMasr

شركة خدمات المشروعات ش.م.م
Project Services Company (S.A.E)

MAJAZ
Biogas solutions and organic waste management

SGP The GEF Small Grants Programme Egypt