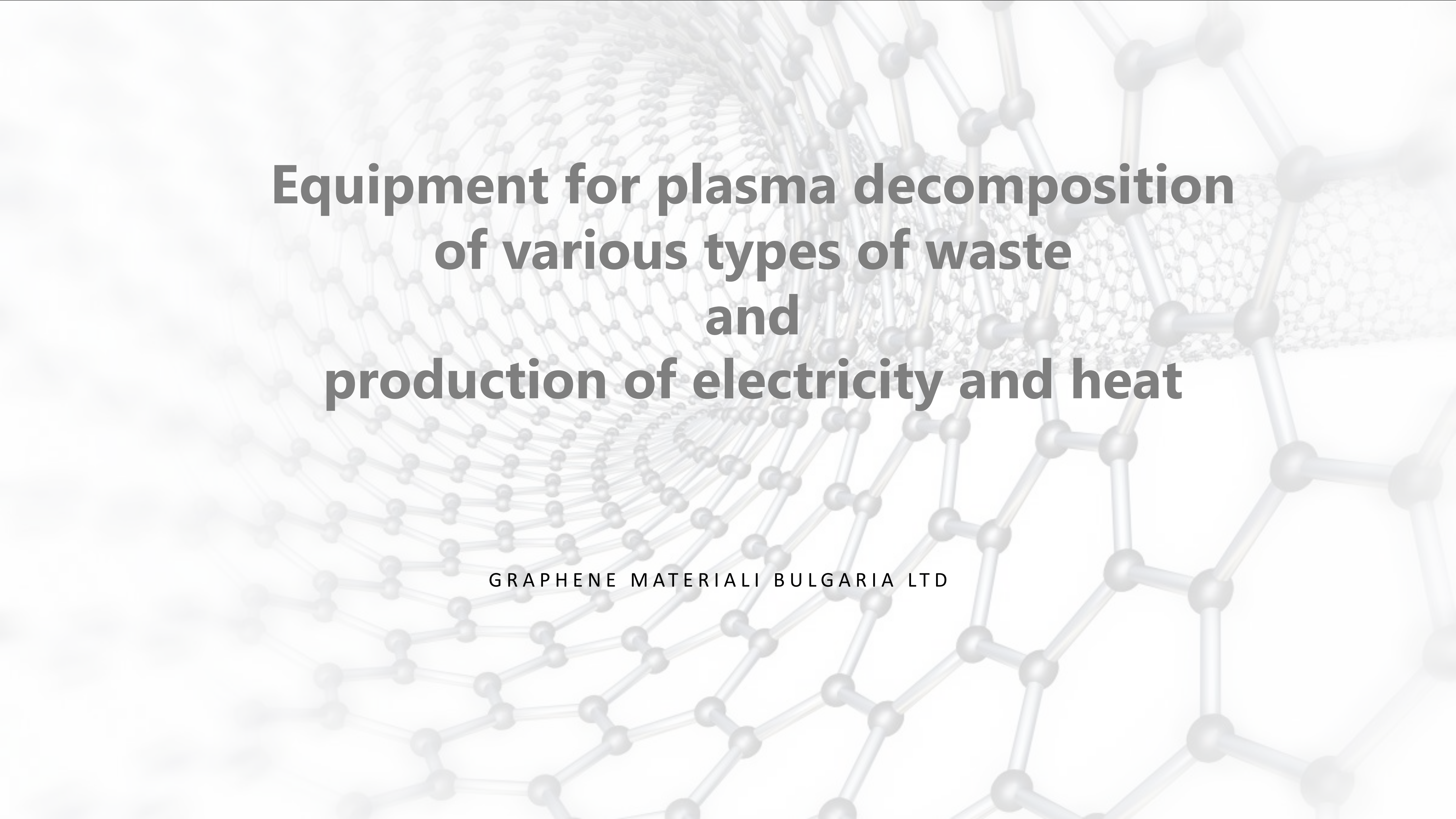


The background of the image is a detailed, three-dimensional representation of a graphene lattice. It consists of a hexagonal network of carbon atoms, depicted as small grey spheres, connected by bonds shown as thin grey rods. The structure is shown in a perspective view, creating a sense of depth and curvature. The overall color scheme is light grey and white, giving it a clean, scientific appearance.

Equipment for plasma decomposition of various types of waste and production of electricity and heat

GRAPHENE MATERIALI BULGARIA LTD

WHAT WE DO

GRAPHENE MATERIALI BULGARIA Ltd. aims to effectively develop installation for plasma decomposition of various types of waste and production of synthesized gas ($\text{CO} + \text{H}_2$), electricity and heat by closing the production cycle and growing the market for this type of products.

WHERE WE ARE NOW

We are a start-up company entering the green energy market.

MARKETING & PROMO

Advertising campaign in the media and specialized publications, trade fairs, as well as direct promotion to potential customers.

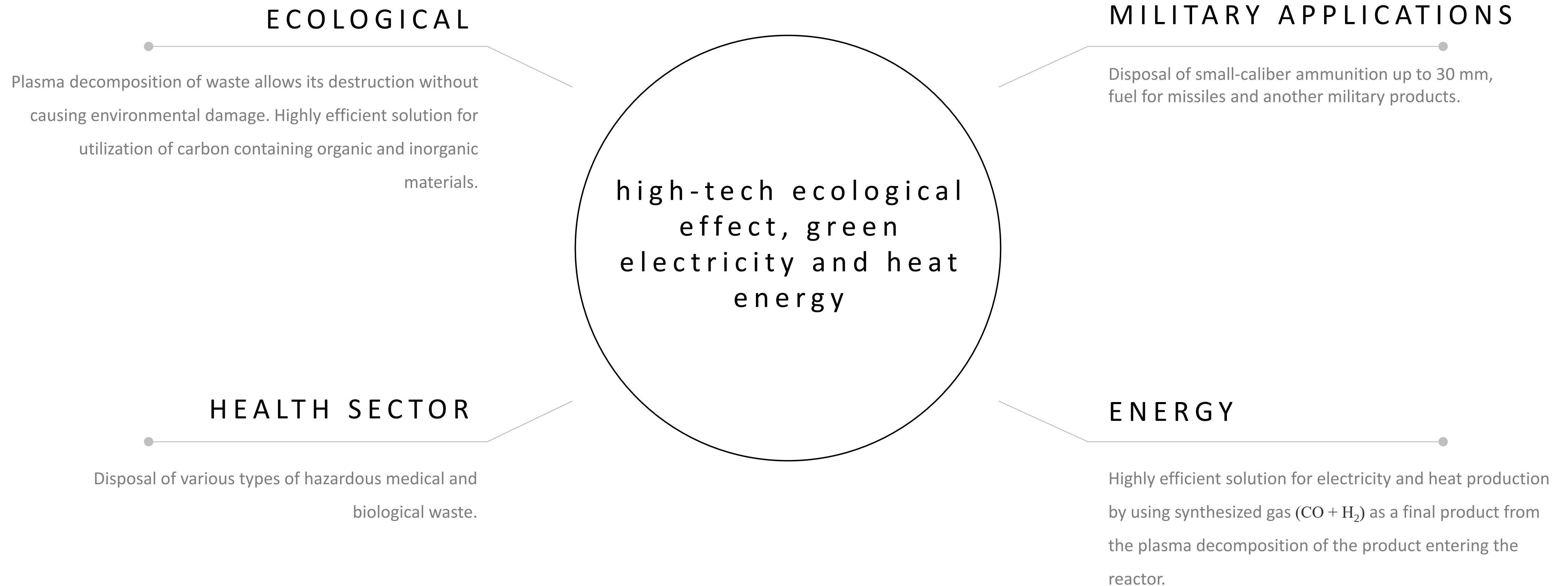
OUR TARGET

Establishing our products on the civil and military markets.

COMPLEX IDEAS

Closing the production cycle of synthesized gas, electricity and heat.

APPLICATION OF PLASMA DECOMPOSITION



USE OF TECHNOLOGY FOR PLASMA DECOMPOSITION OF MATERIALS

The main points in high temperature plasma technology are temperature and concentration regimes. This process ensures highly efficient treatment of hazardous waste without emissions into the environment / dioxins, resins, phenols, aerosols, etc./ - included in the composition of plastic materials.

The plasma gasification process is insensitive to the moisture of the processed waste and its composition.

FLEXIBLE POSSIBILITIES FOR COMPLETING THE INSTALLATION DEPENDING ON THE INPUT MATERIALS USED AND THE DESIRED RESULT

I. Depending on the input raw material.

- 1) Use as a raw material of RDF;
- 2) Use as a raw material of separated waste;
- 3) Other types of waste or hazardous waste.

II. Depending on the desired end result.

- 1) Destruction of hazardous waste;
- 2) Waste disposal and production of electricity and heat.

COMPLETE CONFIGURATION

THE COMPLETE SET OFFERED INCLUDES:

- 1. PLASTIC AND SEPARATED WASTE SHREDDING LINE;**
- 2. PLASMA DECOMPOSITION PLANT WITH FILTER SYSTEM AND EQUIPMENT
FOR STORAGE AND COMPRESSION OF SYNTHESIZED GAS;**
- 3. MULTIFUNCTIONAL MOBILE GAS TURBINE THERMALPOWER PLANT FOR
INDUSTRIAL USE.**

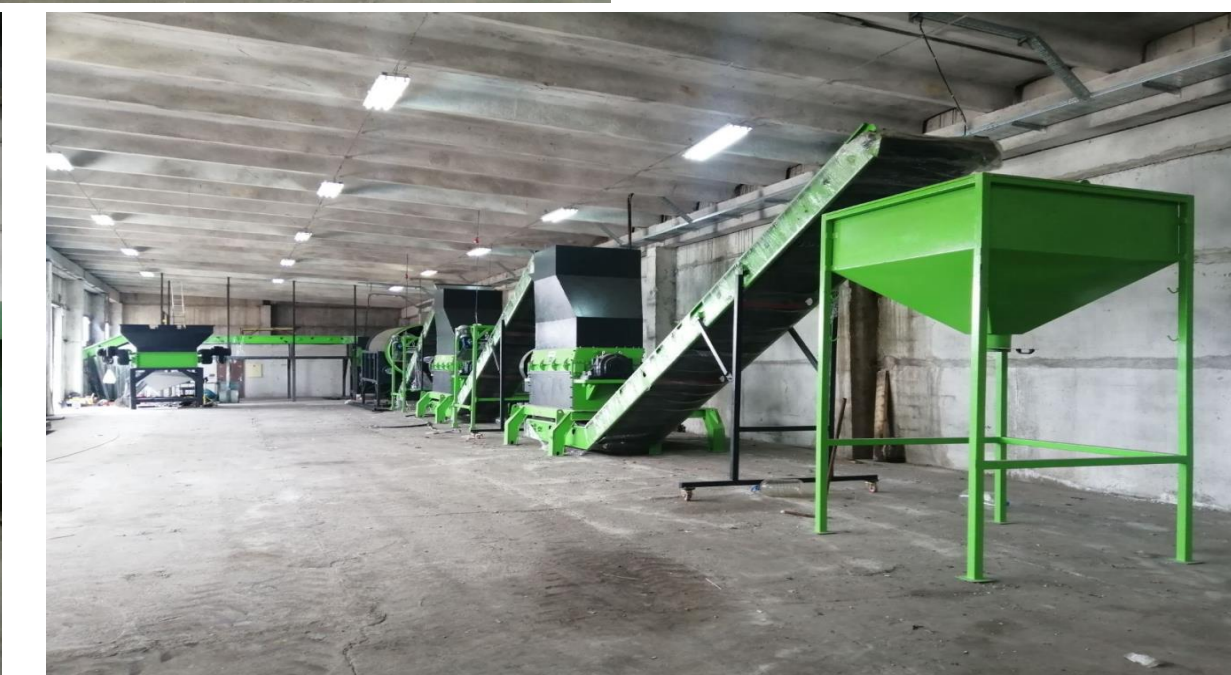
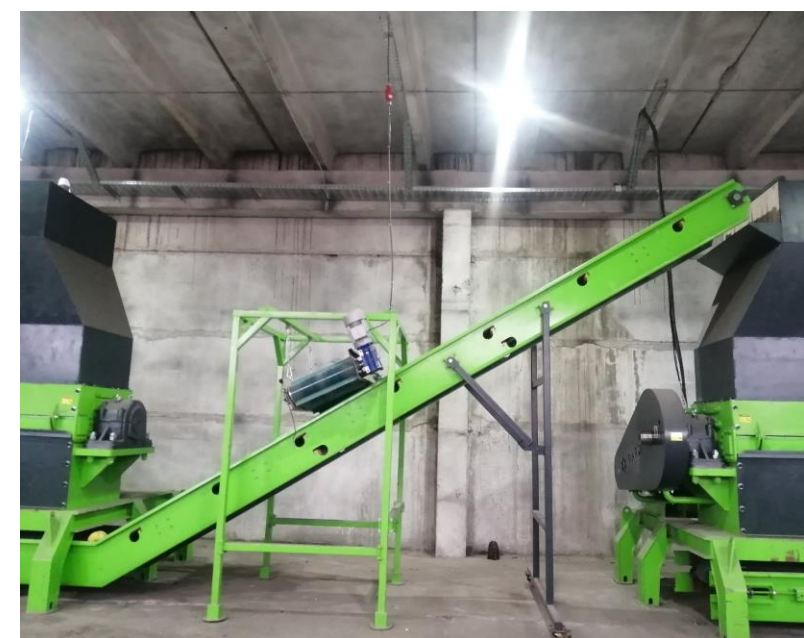
PLASTIC AND SEPARATED WASTE SHREDDING LINE

The line is equipped with high-performance components with strong and reliable construction, easy maintenance and easy repair.

1. Bale Opener – capacity 5 т/h;
2. Loading and Throughput Belt Conveyors - capacity 10,000-12000 kg / h;
3. Manual separation platform;
4. Double Shaft Shredder - - capacity 5 т/h;
5. Trommel screen - -capacity 5 т/h;
6. Two Magnetic separators - total electric power: 4,1 KW/h;
7. Single_Shaft Shredder - capacity 2.5-4 т/h of **30 mm**;
8. Single_Shaft Shredder - capacity 2.5-4 т/h of **4 mm**;
9. Silo for Big-Bags



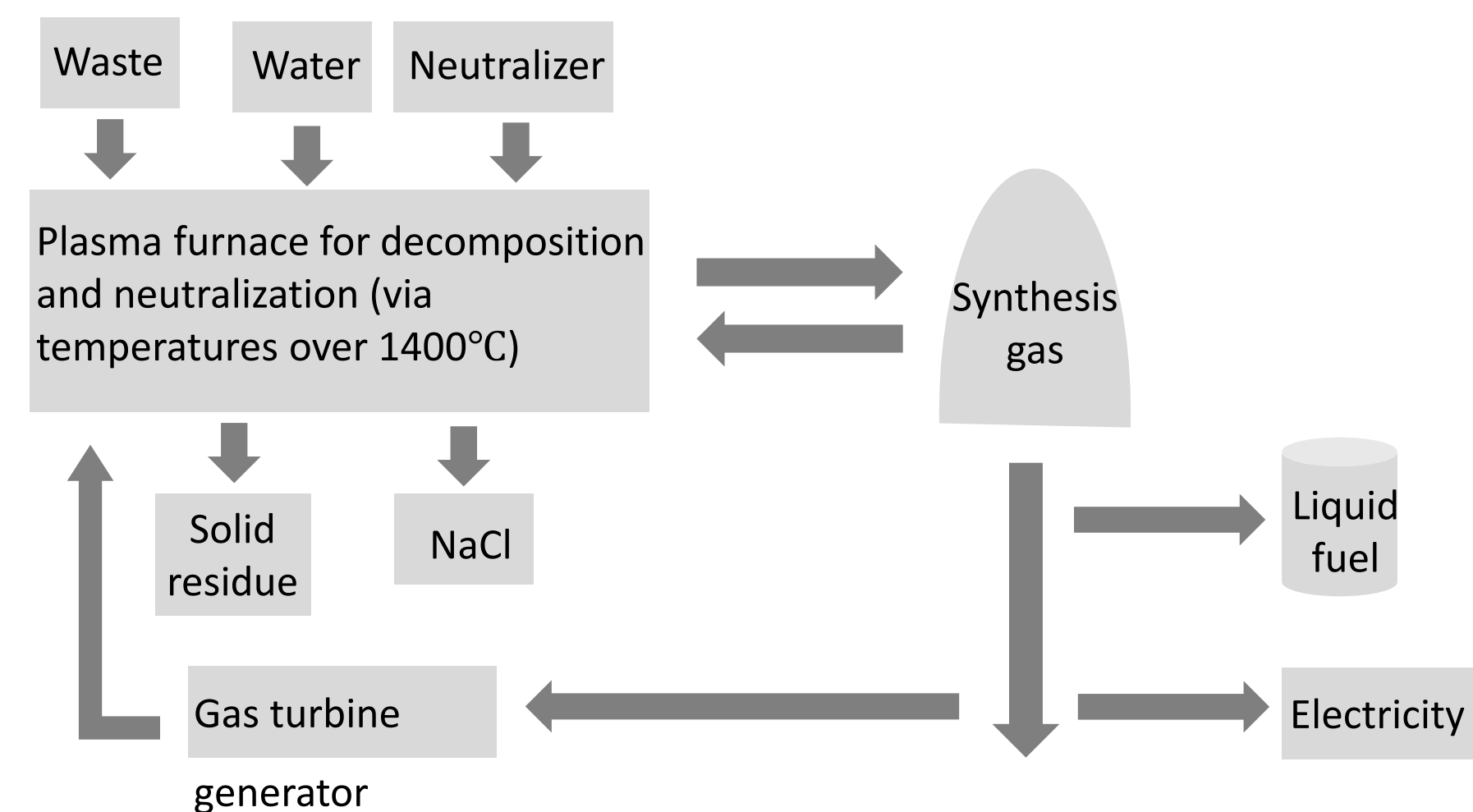
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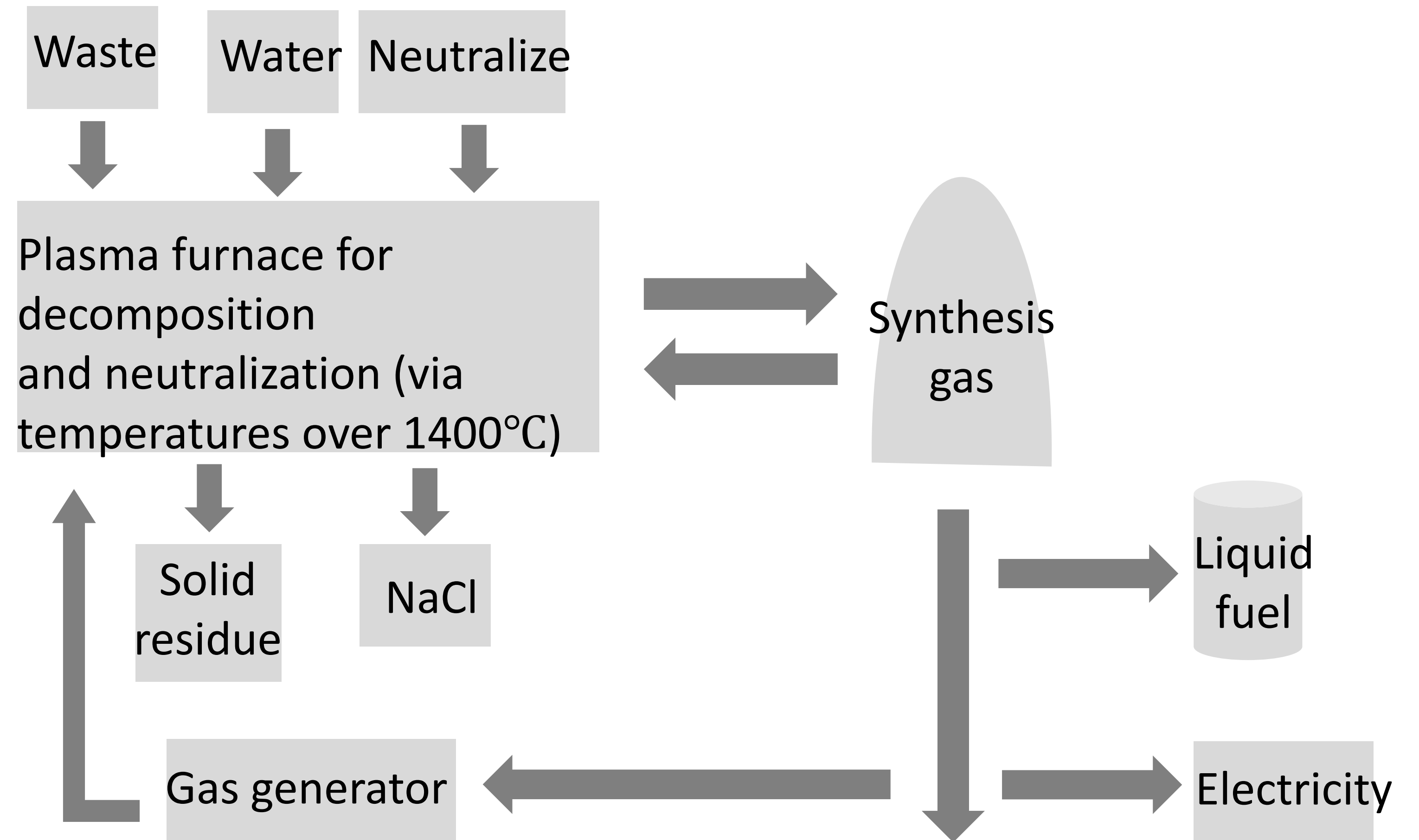


G R A P H E N E M A T E R I A L I B U L G A R I A L T D

EQUIPMENT FOR PLASMA DECOMPOSITION

Equipment for plasma decomposition of various types of waste and production of synthesized gas is designed as basic equipment.





MULTIFUNCTIONAL MOBILE GAS TURBINE THERMALPOWER PLANT FOR INDUSTRIAL USE

PURPOSE AND SCOPE

Turbine power plants are designed to be used as the main or backup source of electrical and thermal energy. The versatility of the approach will make it possible to organize the operation of the power plant on almost any type of fuel, the combination of which can produce temperature of at least 800 °C. Turbine power plants can operate in parallel with other plants, and in parallel to the grid. Power plants can operate with the simultaneous generation of electricity and heat.

WE OFFER GENERATORS WITH:

1. Nominal electrical power of 680 kW and a nominal heat output of 3000 kW
2. Nominal electrical power of 2,5 MW and a nominal heat output of 6,1 MW

The control of the
gas turbine and
the generator is
carried out
automatically,
including remote
monitoring.



INSTALLATION DIAGRAM ON PLASMA
UTILIZATION RDF

installation for
preparation of RDF



granules

Plasma decomposition
installation



synthesized
gas

Turbo power plant



Exhaust gases to
the heating system

power supply for own needs

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ADVANTAGES OF PLASMA DECOMPOSITION

ENVIRONMENTALLY-FRIENDLY

Plasma waste decomposition technology
does not pollute the environment.

HIGH PERFORMANCE

Plasma waste decomposition technology ensures complete
destruction of waste and RDF. The resulting synthesized gas
reduces production costs and allows to produce additional
electricity and heat.

LONG SERVICE LIFE

All components of the installation are
designed for long service life, easy and safe
operation and quick repair in case of need.

FLEXIBLE

The design of the installation allows for
different types of assembly on a modular
basis depending on the needs of the client.

STAFF REQUIREMENTS

Simplicity and safety during installation and
operation, lack of contact of personal with
hazardous waste. Simplification and
automation of the management of the
installation and the waste disposal process.

LOW COST

The received subsidies for the utilization of
waste and the revenues from the
production of electricity and heat give high
financial efficiency of the production.

WHY US?

TRAINED STAFF

Graphene Materials Bulgaria Ltd. has trained staff for the entire production process, which significantly reduces costs and allows almost immediate start of production. Also, contracts with two scientific institutes ensure the further research support of technology development.

RAW MATERIALS

The supply of raw materials is provided by landfills for waste separation and RDF raw material from different suppliers.

GRAPHENE MATERIALI
BULGARIA LTD

EQUIPMENT

The non-standard equipment will be produced in Bulgaria, whereas some of the elements will be imported from Ukraine.

INFRASTRUCTURE

The infrastructure for the construction of the production facilities is simplified, does not require large investments and depends entirely on the customer's desire for assembly in accordance with his requirements.

GRAPHENE MATERIALI BULGARIA LTD

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