

**NATURE-INCLUSIVE
LIGHTING BY PLANT-E**
A SPARK OF NATURE

Introduction

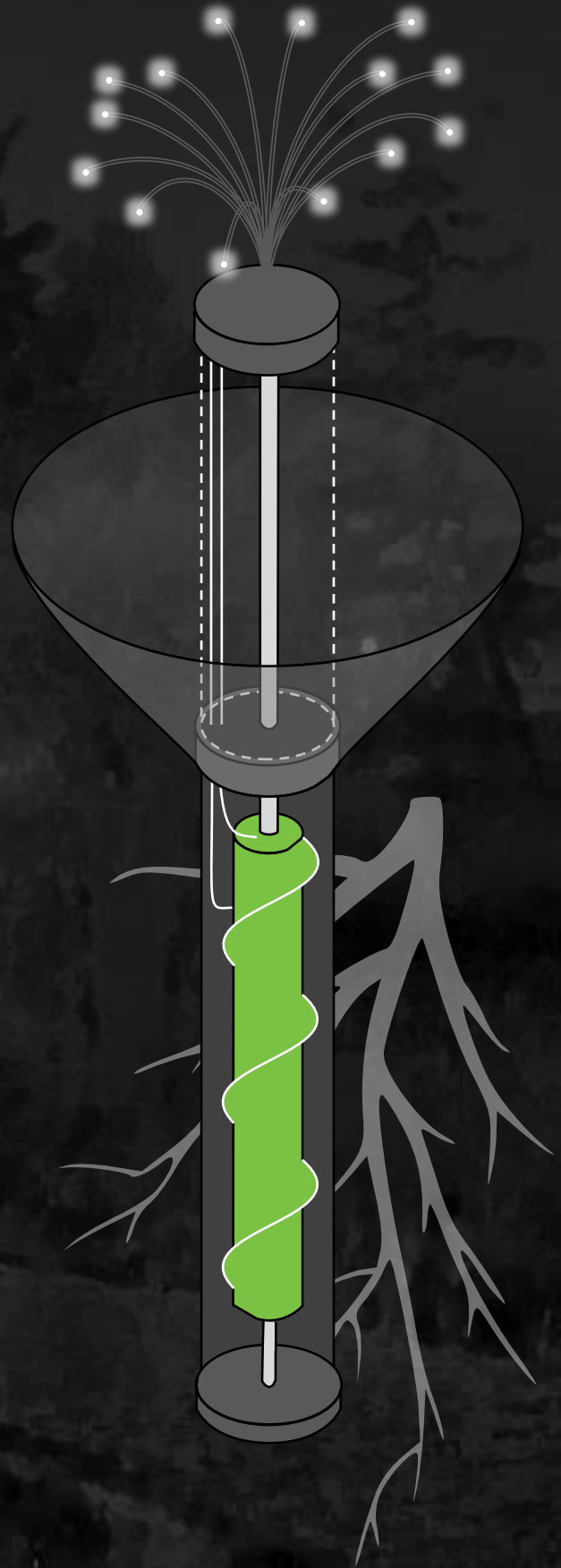
Nature-inclusive lighting by Plant-e is a low-lumen lighting system that creates social safety without interfering with nature. Even better; the power needed for the lights is created by nature itself!

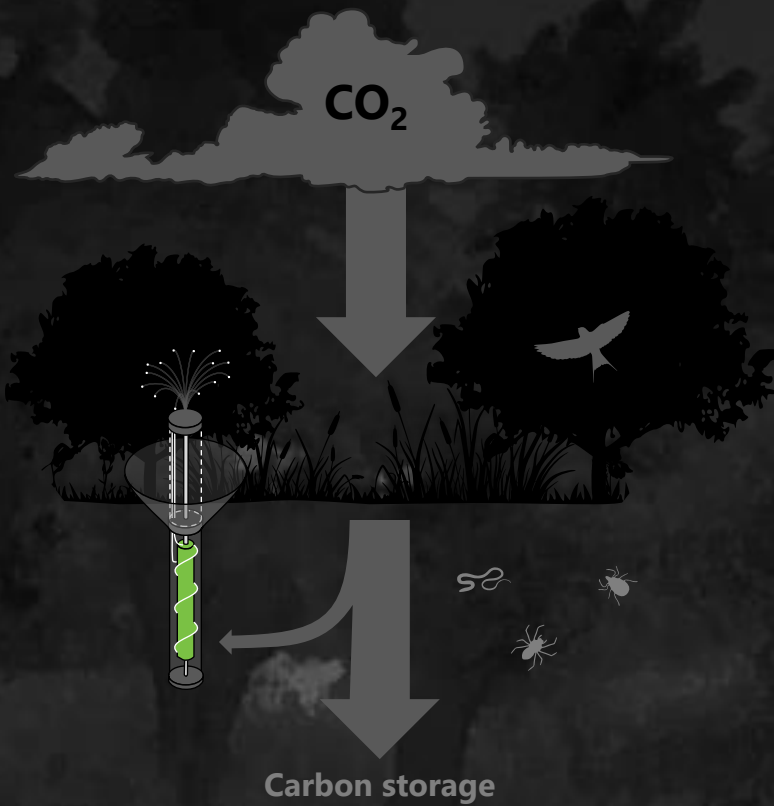
Plant-e's Spark of Nature is a low-power and year-round source of electricity. It harvests natural energy from living plants.

The Spark of Nature includes an innovative power source that harvests energy from plants.

Based on unique patented technology, the Spark of Nature relies on microorganisms naturally present in all soils to generate electricity.

After quick and easy installation in the ground, the Spark of Nature starts providing light for social safety and a nice atmosphere.





Nature-inclusive lighting stimulates the greening of urban spaces and strengthens the bond between people and nature.

Spark of Nature by Plant-e thrives on healthy wetland ecosystems. This lighting solution supports the development of integrated green spaces in urban communities, making nature's pace part of their landscaping projects.

Plant-lighting projects enables a stronger biodiversity, climate cooling, human-nature bonding, and carbon capture, all the while producing an immersive landscaping experience.

Design

The Spark of Nature is designed with three key elements in mind: sustainability, practicality, and durability.

The “all-in one” stick design allows for quick and easy installation of the Spark of Nature in all types of soil

Lights

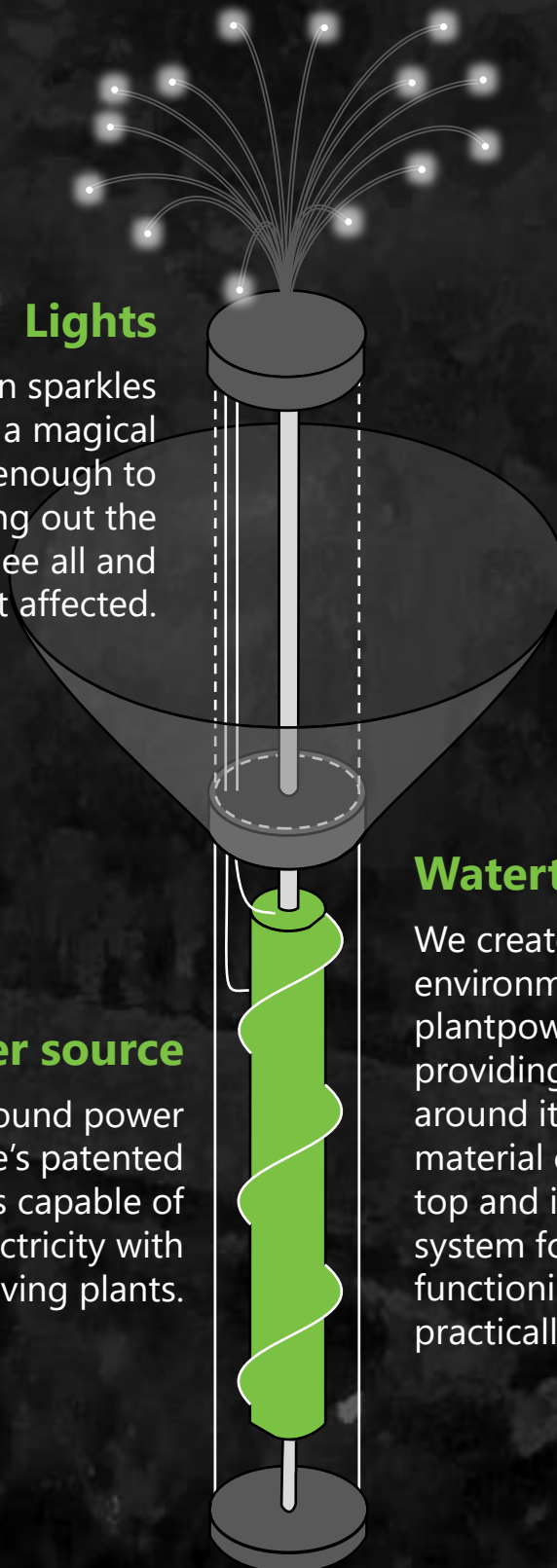
This glassfiber light-design sparkles on and off and creates a magical atmosphere. It lights up enough to guide you, without blocking out the surroundings. You can see all and nature is not affected.

Power source

The underground power source is Plant-e’s patented technology. It is capable of generating electricity with living plants.

Watertight casing

We create the perfect environment for the plantpower source by providing a watertight casing around it. Water and plant-material can enter from the top and is contained in the system for optimal functioning. This way it’s practically maintenance free.



PlantPower source

Sparks of Nature include their own power source, generating electricity with living plants.

#1 Organic matter

Plants release organic matter in the soil through their roots and above-ground parts.

#2 Microorganisms

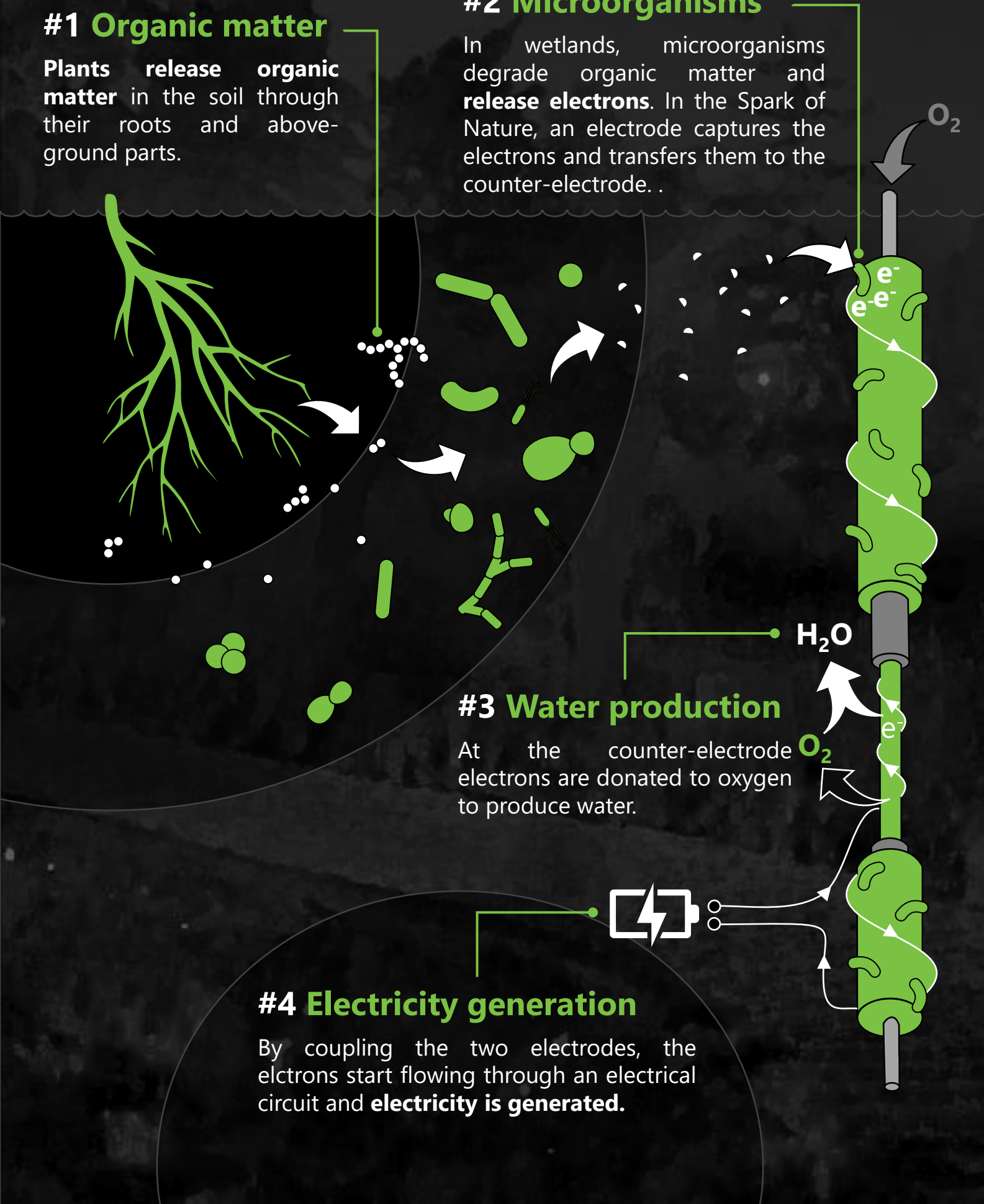
In wetlands, microorganisms degrade organic matter and release electrons. In the Spark of Nature, an electrode captures the electrons and transfers them to the counter-electrode.

#3 Water production

At the counter-electrode electrons are donated to oxygen to produce water.

#4 Electricity generation

By coupling the two electrodes, the electrons start flowing through an electrical circuit and electricity is generated.



Installation

The Spark of Nature's "all-in one stick" design allows for quick and easy installation in any type of soil using an auger.

#1 Location assessment

We can help assessing your site to see where the Sparks of Nature would have the best effect.



#3 Installation

Drill a hole at the chosen location and insert the Spark of Nature with the top about 30 cm above ground.



#2 Transport

The Spark of Nature is a lightweight handheld stick that is easy to ship and carry.

#4 Operation and maintenance

The most important pre-condition of the Spark of Nature is that there's water in the system at all times. With regular rainfall there's no need for additional watering, but during extremely hot and dry times a bit of watering alongside with the plants will be needed. Other than that, no maintenance is needed.

Showcase

Spark of Nature powers a range of application, from recreational and landscaping projects to signalling purposes.

Fairy tale lights



path signalling



Water body signalling



Interactive information boards



PARK OF TOMORROW

A lighting installation, holding a total of 292 Sparks of Nature and 438 glass fibre poles, powers a set of lighting modules and stepping sensors, along a wooden deck.

First of its kind in the world, the Park of Tomorrow needs time to grow and boot-up. Nature cannot be rushed; if the bacterial growth is dormant due to harsh weather, the lights may stay off.

This project was put together at the municipality of Rotterdam, in a co-creation between Plant-e and Novalnova.

In the Reyeroord neighbourhood of Rotterdam, a 35-meter boardwalk leads pedestrians through electricity-producing plants, where small lights twinkle as they walk by.



Get in touch

sales@plant-e.com

office@plant-e.com

