PHILIPS

Lighting

Solar’s time to shine

Why **Solar**?

More than
75%
of the EU's greenhouse gas emissions come from energy production and use

"Europe's man on the moon moment"

The European Green Deal is the world's most comprehensive climate action initiative.

It aims to reconcile the economy and the way we consume resources with the planet, making sure that nobody is left behind.

The **Green Deal** calls for a number of measures, including linking renewables to the grid, promoting connected technologies and boosting the energy efficiency of electrical products and devices.

The Green Deal aims to achieve a carbon-neutral continent by
2050

"Green Deal"- they say,
"Green Switch" - we respond.

Infrastructure projects such as connected street lighting retrofits create

20 local jobs for every **€1 million** spent

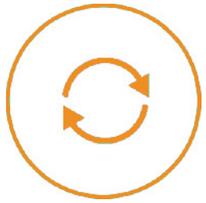
benefitting the environment and the economy and building the digital platforms needed to ensure a green future.

Lighting is the quickest path to a **greener, smarter and more prosperous Europe.**

Read more about it here.

Solar energy is free and available everywhere on the planet. It reduces no only the conumption of energy, but also the transportation of it, leading to savings of

50 to 100%.



Solar lighting is a

reliable partner

not only for new installations, but also for

rennovation of current installations.

Thanks to technology, the Solar energy can be used

instead of, or complementary to grid electricity

every-night of the year.

Solar can decrease energy consumption by up to
100%
compared to a conventional solution.

Solar lighting can decrease carbon emissions by
100
million tons per year.

Why **Signify**?

Number one

In conventional lighting, LED and connected lighting.

6.5 billion

Euro sales in 2020

2.5 million

Connected streetlight points in

58 countries

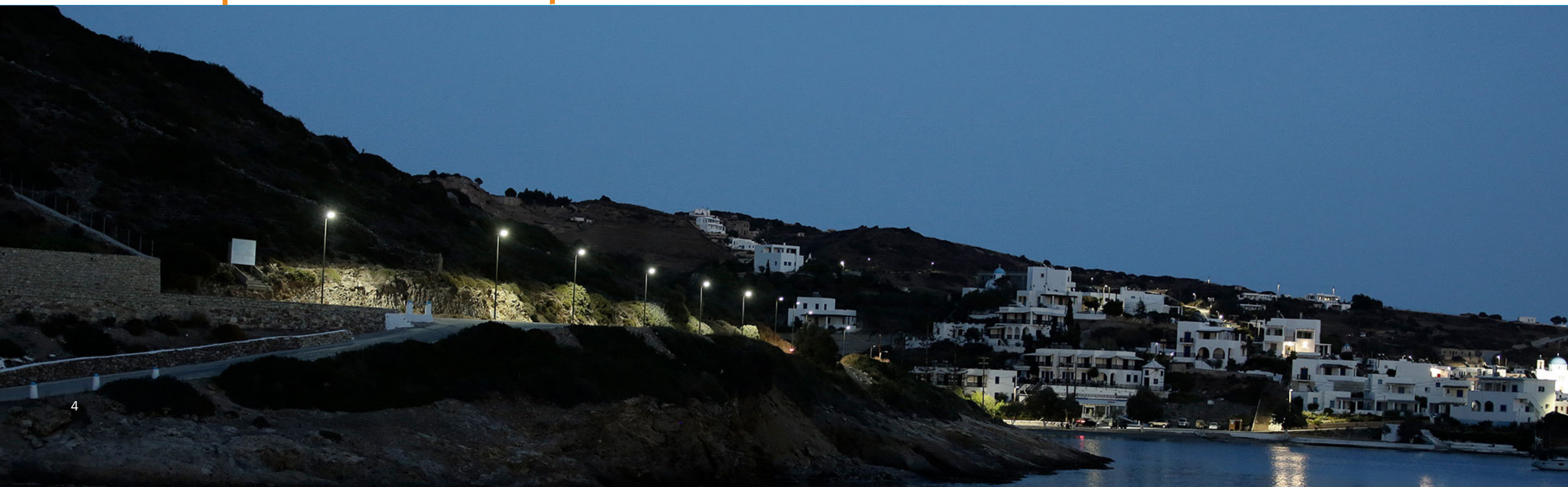
and more than

2 250 projects

100% carbon neutral

Global operations

Read more about it here.



Why **Solar with Signify**?

Signify advocates the wide adoption of solar and hybrid solar powered street lighting as it paves the way to

lower carbon emissions

and **reduces the need**

for extra power stations, while accelerating the scale of renewables.

There is a possibility for built-in Passive Infrared (PIR) motion sensor. When no motion is detected the light level

decreases to 30%,

reducing energy consumption and increasing battery backup.

Solar lighting offers high-quality and reliable lighting with a design that **fits into any environment** with **minimal requirements in terms of investment and maintenance,**

even when it concerns a single luminaire. We offer expert follow up on every project.

Read more about it here.

Myth

There is not enough solar light in my country for 365 nights.

Fact

Hybrid-solar technology uses **clean solar-powered electricity** when there is sunlight, and **the mains grid** when there is not. Whereas in off-grid systems it can be achieved thanks to **right sizing** and **dimming** of the solar system.

Myth

Solar LED lighting is not reliable, nor durable.

Fact

Thanks to advanced technology, it's possible for:
Up to **100,000 hours** lifetime for LED lights;
Up to **25 years** lifetime for PV panel;
Minimum of **10 years** lifetime for Li-ion and Fer-Pho batteries.

Myth

Solar lighting system is not suitable for every area all year long.
I'm afraid of a blackout.

Fact

Efficient photo voltaics, energy storage, LED lighting and IoT technology allow solar applications **anywhere, anytime.** You shouldn't be afraid of a blackout thanks to battery technology improvements and charge controllers.

Myth

Because of the batteries and solar panels used, solar energy is not that green.

Fact

Our batteries are **super easy to recycle.** Newer battery technologies are more **environmentally friendly** when compared with older ones. However it is recommended to follow safe disposal norms.

How **Solar lighting works**

The **combo charge controller** switches on and off the lights and charging. Thanks to the controller, we avoid both overcharging and undercharging.

The **solar panel** also known as a solar photovoltaic cell absorbs the sunlight during the day and transforms it into electrical energy that gets stored in the battery.

The **pole** offers security and stability, making the system safe for the surrounding area. As it meets the EN40 norm, it can be installed in every geographical location.

The **rechargeable battery** is a type of electrical battery or accumulator. It stores the energy received from the sun during the day for when it gets dark. It can vary in size depending on the climate conditions of the current city.

Off-grid and hybrid systems

The **LED luminaire** offers hassle-free installation and maintenance, high lighting output compared to conventional luminaires, long shelf life, rovision of portability and a two year warranty. Last but not least, it's pollution-free.

When it gets **dark**, the lights turn on automatically consuming the energy gathered during the day and keep the city bright and safe all night long. Reusing energy allows achieveing energy savings of up to 100%.

Hybrid charging unit +SPD box

The **hybrid option** offers the possibility of connecting the solar lights to the mains grid system. As a result, in case it runs out of battery, it can be powered by the grid. This option helps countries with less sunshine use solar as well.

The **off-grid option** uses only the rechargeable battery which makes it fully sustainable and highly efficient in terms of energy costs. This option also gives opportunity for off-the-grid communities to live in a safer and better environment with 24/7 access to light.

From the beginning to the end of the project,

we're here for you!

Become our customer.

Step 1

Contact our team

here.

Step 2

Discuss together

the project details

the expectations, requrements, possibilities.

Step 3

Design the project

This is a cruical part of the process to make sure that our customer is taking the most of our products, systems, services and tools with the help of Signify experts and always aligned with the European Regulations and Standards.

Step 4

Execute the project.

We're always on the spot to make sure installation is being done properly.

Solar technology can help more people access cheap, portable, and clean power to

alleviate poverty and increase quality of life.

But it can also enable developed countries – and those who are the largest consumers of fossil fuels – to

transition to sustainable alternatives.

Solar streetlighting is fully **futureproof** and is no longer being attributed only to places where existing infrastructure lacks. Instead it is being seen as an

important part of the global energy mix.

The alternative is becoming

the new norm.

Application and **use**

Highways

Parking

Sea/river fronts

Industrial areas

Parks

Cycle tracks

Camping

Philips range of **Solar lighting solutions**

<5k lumens

· Pathways
· Rural areas
· Parks

5k-8k lumens

· Parks
· Plazas
· Cycle tracks

8k-15k lumens

· Office campuses
· Suburban roads
· Inner city roads

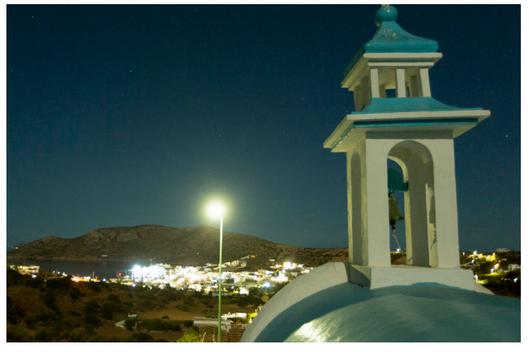
Solar boosting **energy efficiency and safety** on Greek island

“

We are very satisfied about the installed solar luminaires by Signify. As we have many hours of sunshine throughout the year this is a very effective and functional solution for those areas on our island that are not connected to the power grid. Additionally, the lights have such an aesthetic design that they seamlessly blend in with our island’s natural landscape.”

Fotis Mangos
Mayor of the Municipality of Leipsoi

Read more about it here.



Seville steps up citizen's safety **with Signify's solar streetlights**

“

Seville is a city committed to the fight against climate change and a model of a sustainable city that meets the objectives of the strategic plan Sevilla 2030 and the UN Sustainable Development Goals. All the municipal electricity supply is converted into 100% renewable energy. That is why it is so important that one of the green areas in the city is where we will develop an innovative business project to find solutions that improve citizens public spaces usage and, at the same time, contribute to the reduction of emissions and sustainability.“

Juan Espadas,
Mayor of the City of Seville

Read more about it here.

Philips **outdoor luminaires**

SunStay
All-In-One solar street light
2000-6000 lumen

UrbanSpark
Integrated post top luminaire
2500/ 6000 lumen

UniStreet gen2 Solar
solar street lighting
2000-15000 lumen

Luma gen2 Solar
solar street lighting
2000-15000 lumen

Click on each image to find yourselves in our E-catalogue.

Solar sub systems

PV panel sub systems

- for 12V and 24V systems
- 30Wp-325Wp flat panel
- 100-190Wp vertical panel

Battery sub systems

In-ground gel batteries
- 12V and 24V
- 65-250Ah
- 800 cycles at 70% DOD
- IP68 rated

In-ground $LiFePO_4$ batteries
- 12.8V and 25.6V
- 50-180Ah
- 2000 cycles at 90% DOD
- IP68 rated

Combo CC Gen4.0

- 200Wp, 400Wp and 600Wp versions
- Support Gel and $LiFePO_4$ batteries
- Offgrid and hybrid solar

Cables and connectors

- Waterproof IP67 connectors
- Plug and play, easy installation
- Error-proof to avoid the mistake of onsite installation
- Different length of cables are available for various application

Click on each image to find yourselves in our E-catalogue.

© 2021 Koninklijke Philips N.V. All rights reserved.

www.philips.com