

SILICONES & ENERGY

Did you know?



You may know silicones as the sealant of your windows or bathroom. But did you know silicones play a key role in energy performance and renewable energy technologies?

A relatively modest quantity of silicones can be sufficient to obtain a large increase in the efficiency of processes, energy consumption, transmission and use of materials.

A SELECTION OF APPLICATIONS



Wind turbines



Solar panels



LEDs



Green tires



Computers



1.7 MILLION PEOPLE ACROSS EUROPE ARE EMPLOYED IN SECTORS THAT ARE RELATED TO SILICONE PRODUCTS.

Silicones are part of a bigger value chain that create jobs and enable a better quality of life for us.

A SNAPSHOT OF HOW SILICONES HELP IMPROVE OUR LIVES



SOLAR PV

WIND TURBINES

TRANSMISSION AND DISTRIBUTION

SILICONE USE IMPROVES EFFICIENCY AND REDUCES COSTS

Used in 90% of solar panels
Has reduced manufacturing costs



Durability, strength and low weight has facilitated larger turbines
Reduced friction = efficiency



Underground cable life up 20 years
Better durability in transformers



You will find more information on the socio-economic contribution of silicones in our report available at silicones.eu





THEY ENABLE CLEAN ENERGY SUPPLY.

••• Silicones have facilitated larger **wind turbines** with greater energy potential.

Silicones enable the construction of turbines with bigger blades which increases power output. On average, units built in 2010 generated 40 times as much power as those made twenty years earlier.

••• Silicone sealants and mouldings are resilient and durable which help protect wind turbines from harsh weather conditions.

••• Silicone lubricants and coatings damp vibrations inside turbines allowing them to spin smoothly.

••• Silicones are used to connect and frame **solar panel** cells so that they can generate and deliver electricity over a number of years with minimal maintenance.

••• Silicones are electrical insulators which are used to fix electrical components in place. Optically transparent silicones are used to make the outer panelling as they are moisture and UV resistant.

THEY CUT ENERGY DEMAND.

••• Silicone insulation reduces energy transmission and wastage in everything from electronic devices to buildings.

••• Silicone-based products save nine times the quantity of greenhouse gases used in their production and disposal by enabling energy saving technologies and a more efficient use of energy and materials.

By using products made with silicones, you generate on average
9 TIMES LESS GREENHOUSE GASES *than were emitted during manufacturing and disposal of that product.*



PUT SIMPLY, SILICONES MAKE THINGS WORK BETTER!

WANT TO KNOW MORE?

This is just a snapshot of some of the applications in which silicones are used. For more information on silicones in other energy applications, the following website will help you find what you need:

WWW.SILICONES.EU

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This factsheet is one of a series developed by silicone producers in Europe to highlight some interesting and surprising facts about the use of these innovative materials and how they contribute to Europe's goals of smart, sustainable and inclusive growth.