

# EUREKA PROJECT

## 4227 ELTGEL



## GEL-BASED TECH SPARKS JOBS AND INNOVATION IN THE EUROPEAN ENERGY SECTOR

**A team of experts from four European countries spent two and a half years developing ELTGEL, a revolutionary electronics technology. It has already created hundreds of jobs and will improve the durability and effectiveness of electrical systems involving renewables.**

Thanks to the innovation and hard work of six partner organisations, led by Germany's GT Elektrotechnische Produkte, a new form of polyurethane

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gel called ELTGEL will soon form part of any electrical network in Europe. The technology could have a huge impact on the capacity of players in the renewable energy sector to drive prices down.

Created by researchers from France, Romania, Germany and the Slovak Republic, using €1,990,000 in funding from the Eurostars Programme, ELTGEL can be used as an insulating material in cable connectors in the medium voltage region. Medium voltage networks are becoming increasingly important, as

they can create power grids that can stabilise the fluctuations in outputs of local power production and renewable energy sources. ELTGEL is ideal for this, as it allows for electrical accessories such as cables to be opened and closed again, which is a great advantage when extending a network or dealing with a significant outage or disturbance.

### Hiring in renewables

While the technology is still in a pilot phase, it has already generated more than a million euros in turnover and ELTGEL's developers aim for its use to be standard practice in the near future. For citizens concerned about the environment, the technology improves the capability of small locally based and renewably sourced electrical generation and distribution.

Professor Albert Claudi of the University of Kassel, Germany was a key researcher in developing ELTGEL: “The idea behind it was to develop a substitute for conventional materials, which is more effective, eco-friendly and easier to handle.”

ELTGEL offers a cleaner, cheaper and greener way of insulating products that use and transmit electrical energy. Another researcher on the project, Professor Michael Herzog from the Technical University of Wildau, Germany explains how ELTGEL will not only assist European countries in lowering their

carbon emissions, but also, crucially in the current economic climate, create jobs both in Europe and possibly for export:

“There is an increasing European network of locally produced electrical energy from renewable resources. Individually, the supply can be variable, and the sources need to be connected by medium voltage networks,” Herzog explains. “A dispersed and variable production of electrical energy forces a close-meshed grid. Using cable grids can avoid this, delivering many goals in environmental and landscape protection, in security of energy supply and redundancy as well in participation of many producers in the electrical power market.”

The division of a market largely based on monopolies in turn drives a huge rise in employment: “jobs are created and the interests of the majority of citizens are supported by technological progress,” concludes Herzog. Other companies and institutes involved in the project have seen job growth as a result, including BT & C Produits Electrotechniques of France and Europur SRO in the Slovak Republic. In total, over 500 hundred jobs have been created through the project to date, and researchers like Herzog believe there is the opportunity to create many more.

The insulating gel could also play a role in the development of other cutting-edge markets in the future, as it could be used in computers and for flexible electronic devices.

### COUNTRIES INVOLVED

France, Germany, Romania, Slovak Republic

### DURATION

32 months

### BUDGET

€ 1.99M

### CONTACT

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