

SOLUTIONS FOR THE ENERGY TRANSITION

**CONTRIBUTIONS TO
A SUSTAINABLE WORLD**

FIRST EDITION / 2021

From Innovation to Solutions

The energy transition is one of the world's top priorities and is profoundly reshaping how cities, buildings and societies function. Governments, corporations and individuals are all due to play a role in making it happen. Due to the technical skills and expertise of its 45,500 employees, SPIE is set to play a significant role.

Contributing to the energy transition is a core part of SPIE's DNA. SPIE is the independent European leader in multi-technical services in the areas of energy and communications. For over a decade it has been providing services and solutions that enable its customers to limit their impact on the environment. When it comes to mitigating climate change, SPIE is clearly on the side of the solution.

SPIE's contribution revolves around three pillars of the energy transition: improving energy efficiency, supporting the shift of the energy mix towards renewable sources, and promoting sustainable mobility. In each of these three areas, SPIE's expertise is vital to its customers.

SPIE offers tailored services and has an in-depth understanding of the limitations faced by its customers, be they energy providers, manufacturers, service providers or public authorities. As an integrator of solutions, SPIE implements the most innovative technology and products from a broad partner ecosystem, particularly in the digital sector, which is the cornerstone of its solutions. SPIE, therefore, enables its customers to reduce their own carbon footprint and support them in meeting their carbon-neutral objectives.

In this first edition of SPIE's 'Solutions for the Energy Transition', concrete examples showcase SPIE's long-lasting commitment to making the energy transition a reality.

We hope that you enjoy reading it.

SPIE GROUP – MARKETING DEPARTMENT

Jérôme Vanhove

Group Strategy, Development and M&A Director





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Interview

Provide key points about SPIE's solutions & services

THE PRIMARY PURPOSE OF THIS PUBLICATION IS TO SHOW HOW SPIE CONTRIBUTES TO THE ENERGY TRANSITION, DELIVERED BY ZAHRA ESSI, MARKETING DIRECTOR AND ISABELLE LAMBERT, CSR DIRECTOR.

WHAT WAS THE IDEA BEHIND THIS BOOK?

Zahra Essi: Working on energy efficiency is at the heart of what SPIE has been doing for a long time. Whether it be buildings, cities or industries, we are helping customers deliver a large number of projects in this area. Our solutions and services catalogue is very extensive. We collectively came up with the idea that it was time to create a publication giving people a set of key points, a tool that would give shape to and help to understand the value we can add to projects in this area. This was the idea behind the 'Solutions for the Energy Transition' book.

WHAT WILL WE FIND IN THIS BOOK?

Zahra Essi: In terms of meeting the climate challenge, this book aims to present very real and pragmatic illustrations of what SPIE can offer its customers. In this publication, we have tried to keep it accessible and informative, tackling the question of our solutions and providing an inexhaustive list of our referenced projects. The idea was also to explain our innovative initiatives. Working alongside our customers, we use our ecosystems to work tirelessly to find new solutions.

WHAT ARE THE BIG SUBJECT AREAS IN WHICH SPIE IS HELPING IN THE FIGHT AGAINST GLOBAL WARMING?

Isabelle Lambert: Our work is focused around three main pillars; energy performance, mobility and the energy mix. We design and implement solutions that save energy in buildings, offices, industrial facilities and so on.

We make journeys more efficient and less damaging to the urban environment. Finally, in the energy sector, we help businesses and public organisations benefit from new renewable energy production capacity (for example wind, solar and hydroelectric). Our capabilities are very extensive, supporting buildings, transport, electricity and heat generation.

HOW DO YOU RATE SPIE'S CONTRIBUTION TO THE ENERGY TRANSITION?

Isabelle Lambert: All our customers are affected by the challenges inherent to the energy transition, as it requires a significant reduction in our dependence on fossil fuels. Through the solutions we provide them, we are also contributing to reducing their carbon footprint and facilitating the energy transition. As per EU taxonomy for sustainable activities, 41% of SPIE's 2020 revenue and activities contributed to the fight against climate change. Implementing SPIE's strategic plan shall bring our green share of revenue to 50% of total revenue in 2025. It is also within this framework that the offers, projects and other solutions presented in this edition of 'Solutions for the Energy Transition' are positioned.



Zahra Essi
Marketing Director



Isabelle Lambert
CSR Director





ENERGY PERFORMANCE

Optimisation as Leverage for Cost Savings

Designing a new and more efficient energy model is now the common denominator for all projects. In urban environments, industrial buildings and the tertiary sector, technology acts as an accelerator and facilitator. To what extent can it help reconcile financial constraints with environmental concerns? How can it help meet expectations in terms of service quality whilst aiming for smarter energy use?

City

Consuming less and saving more

TECHNOLOGICAL ADVANCES AND MODERNISED INFRASTRUCTURES ALLOW CITIES TO BE MORE CONNECTED AND ENERGY-EFFICIENT.

Cities around the globe consume an enormous sum of energy and therefore produce significant amounts of carbon dioxide into the atmosphere because of this. Implementing more sustainable solutions to a city's public lighting and traffic flow can lessen the impact on the environment. This is crucial if Europe is going to achieve the 2030 key targets set out by the EU (40% cuts in greenhouse gas emissions, 32% share for renewable energy and 32.5% improvement in energy efficiency).

CONSUMING ENERGY, SUSTAINABLY

Traditional diesel or petrol-powered vehicles, public lighting and traffic

congestion all contribute towards a carbon-heavy eco-system. SPIE utilises SMART technology to lessen the impact of these factors on a city. SPIE's installation of charging stations could encourage the adoption of e-vehicles, the upgrade to LED lighting as well as SPIE's management of traffic flow could result in fewer CO₂ emissions and costs.

LIGHTING THE WAY TO A GREENER CITY

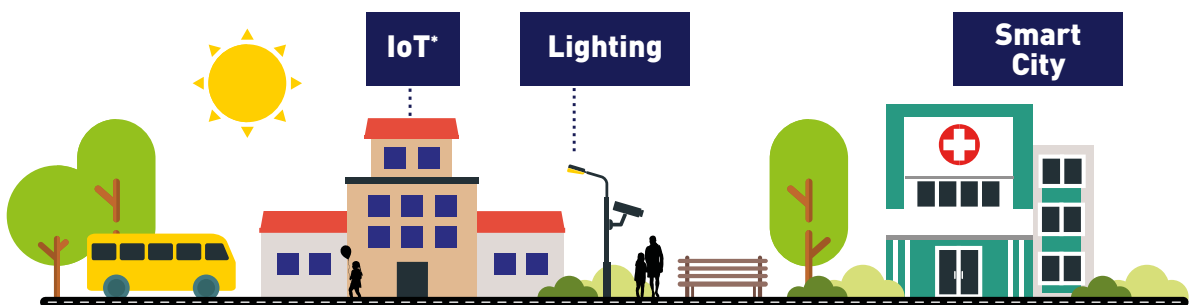
A smart lighting system allows for controlled consumption, better safety in public spaces and a reduction in light pollution. SPIE reduces the energy bills of public decision-makers by providing planning, construction, maintenance and innovative LED lighting solutions. These services cover all urban infrastructures such as roads, tunnels, sports facilities and architectural heritage.

Through the use of sensors and SMART management, the lighting systems allow for greater comfort, safety and energy efficiency, all of which contribute to a more sustainable urban eco-system.



Around the world, cities alone consume more than 2/3 of primary energy supplies and generate 70% of CO₂ emissions.

Source: Le Monde de l'Énergie



*Internet of Things

SPIE'S OFFER FOR CITY

Smart City

CUSTOMER CHALLENGES

This offer is ideal for customers who are seeking to contribute to the energy transition whilst maintaining a good level of performance. SPIE offers an array of varied services that help make a city smarter. These include everything from protection against potential cyberattacks, rational uses of natural

resources as well as improved water and waste management systems.

SPIE'S ANSWER

SPIE can deliver smart, creative and high-performing city solutions. These innovative solutions are sustainable and optimised, leading to a better urban lifestyle.

CUSTOMER BENEFITS

Customers will be able to benefit from having a more attractive city to both work in and visit. This offer will also allow for improved well-being of local citizens.

FOCUS ON GREEN BENEFITS

The use of SMART technology will result in a reduced CO₂ footprint for customers. As SPIE will be providing low carbon solutions, the air quality will gradually improve over time.



© CUSTOMER TARGET Public sector

♥ SUBSIDIARY SPIE Group

⚡ #ENERGY PERFORMANCE, #CITY

SPIE'S OFFER FOR CITY

City LED Lighting

CUSTOMER CHALLENGES

This offer is aimed at customers seeking to improve security as well as reduce lighting, energy and maintenance costs. This is crucial for customers seeking to use their energy budget elsewhere.

SPIE'S ANSWER

SPIE offers various services including a lighting study, the replacement of bulbs with long-life LED solutions and an energy performance software that adapts lighting to a more natural hue. SPIE also includes a scheduling software solution that is used to aid in lighting plans.

CUSTOMER BENEFITS

The customer will gain a higher quality of light and therefore increased comfort for all users, fewer maintenance costs and the possibility to add sensors directly with the new lights.



FOCUS ON GREEN BENEFITS

The customer will receive **more than 60% in energy savings** due to LED bulbs consuming less power. This results in a reduced amount of harmful emissions being released into the atmosphere.

© CUSTOMER TARGET Public sector

♥ SUBSIDIARY SPIE Group

⚡ #ENERGY PERFORMANCE, #CITY

CUSTOMER'S REFERENCE FOR CITY

City of Tain l'Hermitage



- 📍 SUBSIDIARY SPIE France
- 📅 YEAR 2018
- 🏷️ #ENERGY PERFORMANCE, #CITY

CUSTOMER CHALLENGES

The customer aimed to replace obsolete equipment to guarantee safety for users, make energy savings by using LED technology and ultimately, provide the commune's inhabitants with quality lighting to highlight their environment.

SPIE'S ANSWER

SPIE leased the LED equipment, with a future option to buy. This was a brand-new and innovative funding channel for this type of contract.

CUSTOMER BENEFITS

The customer benefited from a **160 kWh decrease**

in the commune's energy bill from 2017 to 2018 followed up by achieving its 2019 contractual fixed target.

FOCUS ON GREEN BENEFITS

The customer experienced energy savings of **72%** (the equivalent of almost **580 kWh**) due to LED lighting being more efficient than conventional bulbs.

KEY FIGURES

This contract saw SPIE assemble and install **1226 lighting poles** across the city of Tain l'Hermitage.

CUSTOMER'S REFERENCE FOR CITY

Ver-ledden N9 / Rijks Waterstaat (RWS)

CUSTOMER CHALLENGES

The Dutch government and owner of the highways wanted to be climate neutral by the year 2050. To achieve this, the city's lighting system needed to be adapted and refurbished.

SPIE'S ANSWER

SPIE installed LED lighting across the public areas of Verledden. SPIE also provided maintenance works for LED public lighting, ensuring the panels and globes were correctly cleaned and functioned efficiently.

CUSTOMER BENEFITS

Due to this project, the customer has progressed significantly with their 2050 target of becoming

climate neutral. LED lighting is also a cost-effective and energy-efficient solution.

FOCUS ON GREEN BENEFITS

The new LED public lighting saves power, consumes less energy and reduces carbon output significantly. This, in turn, results in less harmful emissions being released into the atmosphere.

KEY FIGURES

SPIE installed approximately **617 LED luminaires** across Verledden, lighting the way for all the inhabitants and contributing towards the Dutch government's 2050 climate goals.



- 🔧 SERVICES Mechanical & Electrical
- 📍 SUBSIDIARY SPIE Nederland
- 📅 YEAR 2018
- 🏷️ #ENERGY PERFORMANCE, #CITY

Charing Cross Underpass



CUSTOMER CHALLENGES

The customer aimed to improve lighting and replace old inefficient luminaires in the Charing Cross underpass. Driving efficiencies and meeting environmental targets was also desired.

SPIE'S ANSWER

SPIE supplied and installed adaptive SMART LED lighting to the Charing Cross underpass. This technology is remote and has management

capabilities as well as being environmentally friendly, cost-effective and energy-efficient.

CUSTOMER BENEFITS

The improved and enhanced LED lighting consumes less electricity and therefore saves money on energy costs.

FOCUS ON GREEN BENEFITS

The new and improved LED lighting, specifically designed for

underpasses, reduced energy consumption and carbon output drastically when compared to regular luminescent bulbs.

- SERVICES Mechanical & Electrical
- SUBSIDIARY SPIE UK
- YEAR 2020
- #ENERGY PERFORMANCE, #CITY

CUSTOMER'S REFERENCE FOR CITY

LED Tunnel Luminaire

**CUSTOMER CHALLENGES**

The customer aimed to improve the performance and energy output of lighting within a tunnel and replace old inefficient luminaires. The customer also desired to drive SMART efficiencies and meet environmental targets.

SPIE'S ANSWER

SPIE supplied and installed adaptive SMART LED lighting technology inside the tunnel. The new lighting performs far better and is equipped with remote management capabilities.

CUSTOMER BENEFITS

The project resulted in an improved and enhanced lighting system, costing far less than the previous one. Due to LED technology, the tunnel's lighting is more energy-efficient and will need far less maintenance works carried out in the future.

FOCUS ON GREEN BENEFITS

The new LED lighting reduces energy consumption drastically, resulting in fewer carbon emissions being released into the atmosphere

as well as contributing towards reducing the customer's carbon footprint.

- ✦ **SERVICES** Mechanical & Electrical
- 📍 **SUBSIDIARY** SPIE UK
- 📅 **YEAR** 2020
- 🏷️ **#ENERGY PERFORMANCE, #CITY**

CUSTOMER'S REFERENCE FOR CITY

Municipality of Sosnowiec



- **SERVICES** Mechanical & Electrical
- 📍 **SUBSIDIARY** SPIE DZE (Poland)
- 📅 **YEAR** 2018
- 🏆 **#ENERGY PERFORMANCE, #CITY**

CUSTOMER CHALLENGES

The customer needed to obtain guidelines referring to yearly wattage savings as well as yearly CO₂ emission savings.

SPIE'S ANSWER

SPIE prepared technical documentation for the customer, replaced luminaires, assembled a lighting management system, installed lighting controllers in luminaires, configured the control system management centre and provided photometric measurements of luminance and illuminance.

CUSTOMER BENEFITS

The customer saw a reduction in the costs of maintenance, CO₂ emissions, energy consumption

and energy costs as well as several improvements in the safety of road users.

FOCUS ON GREEN BENEFITS

LED lighting is 80% more energy-efficient than conventional bulbs and wastes far less energy than other forms of lighting. This results in an overall reduction of CO₂ emissions.

KEY FIGURES

SPIE replaced **7694 luminaires** with lighting controllers and assembled **204 pieces** of lighting management system elements in control cabinets. This resulted in an annual wattage saving of **3802.44 MWh** and a CO₂ emission reduction of **3087.58 Mg** per year.

CUSTOMER'S REFERENCE FOR CITY

Bordeaux Métropole

CUSTOMER CHALLENGES

The customer aimed to measure the impact of deploying connected infrastructures to improve the effectiveness of its services. This ambitious goal specifically includes public lighting and reducing operating costs.

SPIE'S ANSWER

By feeding the data back to a single platform via a dedicated network and maintaining a dialogue with public facilities, SPIE optimised energy consumption and prevented malfunctions.

CUSTOMER BENEFITS

The charging points, access control and public lighting are all optimised.

This resulted in a reflection of current uses as measured by the sensors.

FOCUS ON GREEN BENEFITS

The measuring container fill rates aid in rationalising waste collection rounds, therefore reducing pollution and traffic. The public lighting is adapted to the level of brightness and doesn't switch on when it is not needed, meaning energy is saved more frequently.

KEY FIGURES

SPIE installed **500 SMART sensors on more than 200 lamps**. SPIE also connected an electric charging station, an access control bollard, sorting containers and litter bins.



- **SERVICES** Installation & maintenance
- 📍 **SUBSIDIARY** SPIE France
- 📅 **YEAR** 2018
- 🏆 **#ENERGY PERFORMANCE, #CITY**

Building

Designing buildings to be more energy-efficient

SMART SOLUTIONS ARE CRUCIAL TO THE BUILT ENVIRONMENT AS THEY ALLOW FOR A DYNAMIC AND BESPOKE APPROACH TO THE OPERATIONS AND FUNCTIONALITY OF A BUILDING.

SPIE works within all sectors for all types of buildings, whether that be private offices, data centres or educational sites. SPIE provides optimised and sustainable solutions that offer greater opportunities to improving a building's performance as well as occupant wellbeing and comfort. Whether it be a LED project, an energy savings package or a Building Management System (BMS) upgrade, SPIE provides the innovation needed for the buildings of tomorrow.

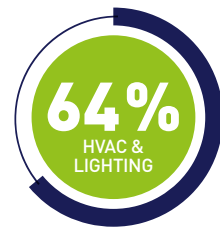
AN INTEGRATED APPROACH

SPIE addresses performance challenges such as information systems, communication networks and technical facility management through solutions that cover all of a building's needs, throughout its lifecycle. By way of advice, support and an integrated approach, SPIE helps its customers make the most out of the digital transformation.

SMART CONSUMPTION MANAGEMENT

Smart consumption is the use of products and services that cause minimal harm to the environment. SPIE offers companies and organisations the opportunity to use the potential of this cutting-edge technology to increase the energy

efficiency of their building systems. Using sensors, the monitoring system measures the energy consumed by lighting, heating, ventilation or air conditioning systems in real-time.



Heating Ventilation and Air Conditioning (HVAC) and lighting are responsible for 64% of total building energy consumption.

Source: Australian Government, Department of Agriculture, Water and the Environment



SPIE'S OFFER FOR BUILDING

LED Lighting for New Buildings

CUSTOMER CHALLENGES

This offer is targeted at customers aiming to improve lighting efficiency and reduce maintenance costs within new buildings. Further reductions to energy consumption and bills would also be desired.

SPIE'S ANSWER

SPIE offers various services including a lighting study, the installation of bulbs and lamps with long-life LED solutions and energy performance software that adapts lighting to a more natural hue. SPIE also includes a scheduling software solution that is used to aid in lighting plans.

CUSTOMER BENEFITS

Through this offer, the customer can gain a higher quality of light



and therefore comfort for all users, fewer maintenance costs and the possibility to add sensors directly to new lights.

FOCUS ON GREEN BENEFITS

The customer will receive more than **60% of energy savings**. This is because LED bulbs consume less power per unit (lumen) of light

emitted, reducing greenhouse gas emissions being released into the atmosphere.

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- 📍 **CUSTOMER TARGET** Offices, Commercial buildings
 - 🔧 **SERVICES** Mechanical & Electrical
 - 🏢 **SUBSIDIARY** SPIE Group
 - 🌱 **#ENERGY PERFORMANCE, #BUILDING**
-

SPIE'S OFFER FOR BUILDING

LED Relamping for Existing Buildings



CUSTOMER CHALLENGES

This offer is for customers requiring a more energy-efficient lighting system. Some buildings **use 25% to 50% of the electrical consumption** through lighting alone.

SPIE'S ANSWER

SPIE can design and initiate relamping projects by converting existing bulb fixtures to LED luminaires. This makes the building more energy-efficient and cost-effective.

CUSTOMER BENEFITS

The customer benefits from a reduced lighting cost as well as a significant CO₂ footprint reduction.

FOCUS ON GREEN BENEFITS

After the LED lighting conversion, the customer can enjoy **direct savings of up to 60%**.

KEY FIGURES

The average payback period for the customer after the LED lights have been fitted is estimated to be **around 3 years**.

-
- 🔧 **SERVICES** Mechanical & Electrical
 - 🏢 **SUBSIDIARY** SPIE Nederland
 - 🌱 **#ENERGY PERFORMANCE, #BUILDING**
-

SPIE'S OFFER FOR BUILDING

Energy performance

CUSTOMER CHALLENGES

This offer is ideal for customers wanting to reduce their energy consumption with a complete solution that is easy to install, open, is user friendly and in compliance with regulations. Services to ensure the performance of the solution and a short ROI would also be desired.



SPIE'S ANSWER

SPIE has a comprehensive and tailor-made offer including smart metering solutions with IoT, cloud-based energy management solutions, Energy Performance Contracts (EPC) and regulatory compliance.

FOCUS ON GREEN BENEFITS

This offer significantly improves energy performance (30-60%) and commits to clear and fast energy reductions. The carbon footprint of the customer could also dramatically reduce.

CUSTOMER BENEFITS

Improved energy performance of its buildings with CO₂ emission reduction.

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- 🎯 **CUSTOMER TARGET** Real estate/Offices
 - ⚙️ **SERVICES** Technical Facility Management
 - 📦 **OUR OFFERS** Energy management pack & Energy Performance Contract (SPIE France) Energy manager offer (SPIE DZE)
 - 📢 **#ENERGY PERFORMANCE, #BUILDING**
-

SPIE'S OFFER FOR BUILDING

Data Centre



CUSTOMER CHALLENGES

SPIE offers a complete build of an efficient data centre used for data storage and computing. The data centre is fully capable of following the customer's development.

SPIE'S ANSWER

SPIE will cover an array of action points from meeting deadlines of critical environments to the provision and safeguarding of resilient power supplies. SPIE provide customer-centric and turnkey solutions for all phases of a data centre build.

CUSTOMER BENEFITS

SPIE's customer-centric approach allows the customer to benefit greatly. The data centre's innovative

and expert design allows for complete space optimisation and outstanding value for both on and off-site builds.

FOCUS ON GREEN BENEFITS

The data centre has multi-technical and IT optimised solutions, resulting in a reduced carbon footprint for the customer.

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- 🎯 **CUSTOMER TARGET** IT & Telecom
 - ⚙️ **SERVICES** Mechanical & Electrical, Technical Facility Management, Information and Communication Services
 - 🏢 **SUBSIDIARY** SPIE Group
 - 📢 **#ENERGY PERFORMANCE, #BUILDING**
-

Smart Workspaces

CUSTOMER CHALLENGES

This offer is targeted at customers looking to optimise used spaces within their buildings as well as improve the overall well-being and comfort for all their occupants.

SPIE'S ANSWER

SPIE provides a complete offering that includes smart booking systems, indoor navigation, space utilisation, integrated energy efficiency, intelligently designed and performance-based maintenance.

CUSTOMER BENEFITS

The customer can benefit from having an attractive and welcoming building for all occupants, whilst maintaining compliance with regulations.

FOCUS ON GREEN BENEFITS

The amount of energy consumed is dramatically decreased through the optimisation of lighting and HVAC when people are working. This dramatically reduces the customer's carbon footprint.

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- 📍 **CUSTOMER TARGET** Offices
 - 🔧 **SERVICES** Technical Facility Management
 - 📍 **SUBSIDIARY** SPIE Group
 - 🏆 **#ENERGY PERFORMANCE, #BUILDING**
-



SPIE'S OFFER FOR BUILDING

Smart FM 360°

CUSTOMER CHALLENGES

This offer is aimed at customer's needing an easy-to-use tool that has real-time information on what is happening in their building. The ability for occupants to report even the slightest malfunction relating to general services and requesting support in just a few clicks would also be desired.

SPIE'S ANSWER

SPIE offers a platform in which customers can manage their assets. They will also be able to transparently manage their service contracts and have access to data in real-time.

CUSTOMER BENEFITS

The customer will be able to manage a multitude of different components

in real-time, gaining instant escalation of all the information received. These components include intelligent predictive maintenance which has a 360° view of activity and interconnectable assets which maximise the value of data received from ecosystems.

FOCUS ON GREEN BENEFITS

The travel for itinerant technicians will be reduced, resulting in less CO₂ emissions being released into the atmosphere. The customer will also have better use of data to optimise the energy consumption of the entire building, resulting in further energy reduction. This offer allows customers to have a complete view of activity in their building, leaving them to

manage contracts and perform services in real-time. This offer also allows for easy management with a comprehensive view of contracts, instant escalation of support requests and immediate visibility of key indicators.



- 🎯 **CUSTOMER TARGET** Real estate, Offices
- 🔧 **SERVICES** Technical Facility Management
- 📍 **SUBSIDIARY** SPIE Group
- 🏷️ **#ENERGY PERFORMANCE, #BUILDING**

CUSTOMER'S REFERENCE FOR BUILDING

Crédit Agricole / Occitanie Toulouse



CUSTOMER CHALLENGES

The customer was challenged with making a new smart building to house approximately **500 employees in 10,000 square metres** of offices. This building showcased its activities in Toulouse.

SPIE'S ANSWER

SPIE managed all the high and low current installations of the building with a fully pre-wired terminal distribution system for greater flexibility in interior design. The team also installed **2.2 km of LED's** on the facade as dynamic lighting.

CUSTOMER BENEFITS

The smart building provides more comfort and performance. The autonomous lighting system

also makes it possible to regulate and control the intensity of the light according to the outside luminosity and the presence of people in each office.

FOCUS ON GREEN BENEFITS

The technical solutions result in reduced consumption of energy. The building information modeling also decreases works and maintenance, further reducing the customer's carbon footprint. The reduced amount of energy expenditure is more cost-effective for the customer as well as occupant satisfaction increasing significantly.

- 🔧 **SERVICES** Mechanical & Electrical
- 📍 **SUBSIDIARY** SPIE France
- 📅 **YEAR** 2020
- 🏷️ **#ENERGY PERFORMANCE, #CITY**

CUSTOMER'S REFERENCE FOR BUILDING

Gecina



© CUSTOMER TARGET

Real estate and office buildings

⊕ SERVICES Information & Communication Services

◆ SUBSIDIARY SPIE France

📅 YEAR 2019

🏗️ #ENERGY PERFORMANCE, #BUILDING

CUSTOMER CHALLENGES

The customer embarked on a digital transformation strategy. This involved specific changes to the workstation as well as identifying that the IT infrastructure was reaching the end of its life. The IT department turned to hyper-converged solutions.

SPIE'S ANSWER

SPIE introduced a hyper-convergence solution to reduce the number of servers within the data centre. By replacing the old servers, the data centre now consumes far less energy.

CUSTOMER BENEFITS

The customer rationalised its costs and infrastructures, made progress in terms of CSR as well as increased the general performance of the data centre.

FOCUS ON GREEN BENEFITS

Due to the **50% reduction** of servers within the data centre, the customer's environmental footprint has been halved.

KEY FIGURES

The recovery time objective went **from 24 hours to 1 hour** and the performance of databases rose drastically.

CUSTOMER'S REFERENCE FOR BUILDING

Thésée Data Centre

CUSTOMER CHALLENGES

The customer's project was to shape a new generation of data centres at the cutting edge of energy efficiency. An autonomous solution was needed to allow the customer to save money and be more energy-efficient.

SPIE'S ANSWER

In addition to the free-cooling solution, SPIE also introduced artificial intelligence technology to manage and regulate the temperature in the control room and data halls. The room is now managed and regulated by sensors and the data they provide is analysed by algorithms in real-time.

CUSTOMER BENEFITS

90% of the time, the IT rooms are cooled without consuming

any electricity due to the artificial intelligence SPIE provided.

This results in the data centre becoming more autonomous and cost-effective.

FOCUS ON GREEN BENEFITS

The data centre consumes **25% less electricity** and a further **25% of the customer's carbon footprint** is reduced.

KEY FIGURES

The total surface of the campus is **6,400 m²** with **6 buildings**, 2 of which are **534m²**. The reduction in energy consumption represents **35%**, due to indirect free cooling. The Power Usage Effectiveness (PUE) is **less than 1.2**.



⊕ SERVICES Information & Communication Services, Mechanical & Electrical

◆ SUBSIDIARY SPIE France

📅 YEAR 2020

🏗️ #ENERGY PERFORMANCE, #BUILDING

CUSTOMER'S REFERENCE FOR BUILDING

Muldentalkliniken

CUSTOMER CHALLENGES

The customer required a solution to aid them in their energy reduction plan. The desired goal was to have less energy consumption and reduced CO₂ emissions whilst being cost-effective.

SPIE'S ANSWER

As part of a ten-year energy efficiency partnership, SPIE installed **2 CHP plants** and **2 absorption chillers**. SPIE also optimised the distribution and consumption of electricity, heat and air conditioning within two hospitals in 2018 to save energy.

CUSTOMER BENEFITS

The customer benefited from a reduced energy cost within the

hospitals due to SPIE offering everything from a single, streamlined source.

FOCUS ON GREEN BENEFITS

The installation of the CPH plants and absorption chillers resulted in a saving of **2800 megawatt-hours of electrical energy**. CO₂ emissions were also reduced drastically (approximately **720 tonnes** annually).

KEY FIGURES

Approximately **75% of the hospital's electricity consumption** and a further **70% of its heat consumption** is now covered by the new CHP plants.



- ⊕ SERVICES Technical Facility Management
- 📍 SUBSIDIARY SPIE DZE (Germany)
- 📅 YEAR 2019
- 🏷️ #ENERGY PERFORMANCE, #BUILDING

CUSTOMER'S REFERENCE FOR BUILDING

SI-Centrum



- ⊕ SERVICES Technical Facility Management
- 📍 SUBSIDIARY SPIE DZE (Germany)
- 📅 YEAR 2020
- 🏷️ #ENERGY PERFORMANCE, #BUILDING

CUSTOMER CHALLENGES

The customer required new and improved technical equipment and an easy-to-use facility management system that could run without needing a lot of man-hours.

SPIE'S ANSWER

SPIE refurbished the technical equipment such as the chiller and ventilation units as well as installed CHP technology and an energy supply of power, heating and cooling.

CUSTOMER BENEFITS

The customer was relieved of energy delivery and billing risks due to SPIE providing a suitable facility management system. SPIE also took charge of operations,

leaving the customer to focus on their core business.

FOCUS ON GREEN BENEFITS

Due to the improved energy performance that SPIE delivered, less harmful emissions were released into the atmosphere (approximately **4500 tons of CO₂** per annum).

KEY FIGURES

The new CHP plant covers approximately **35% of electrical consumption** and **60% of heat consumption** of the customer's building. The new chiller is also estimated to be **45% more efficient**.

CUSTOMER'S REFERENCE FOR BUILDING

Nouvelle-Aquitaine



- **SERVICES** Technical Facility Management
- **SUBSIDIARY** SPIE France
- **YEAR** 2020
- **#ENERGY PERFORMANCE, #BUILDING**

CUSTOMER CHALLENGES

Since 2011, SPIE has been managing the operation of the energy installations of around **20 high schools** for the customer. Due to the positive results over the past decade, 30 more schools needed their energy facilities managed on top of this. The customer also needed to optimise energy consumption and decarbonise their activities.

SPIE'S ANSWER

For the next 8 years, SPIE is responsible for operating and running the collective heating, hot water for sanitary use, ventilation and general electricity supply equipment for **30 different establishments**. SPIE will maintain

a strong commitment to energy performance when continuing to carry out these services.

CUSTOMER BENEFITS

SPIE's expertise in operating the client's energy facilities enables a reduction in the carbon footprint and energy costs of the buildings which are essential for the client.

FOCUS ON GREEN BENEFITS

Among the various projects carried out for the customer, SPIE installed a 960 kW wood-fired biomass boiler room that provides a short primary energy supply circuit and covers **nearly 70% of the school's heating needs**. In another school, a 440 kW heat pump is used to **decarbonise 95% of the heating requirements**.

SPIE'S INNOVATION FOR BUILDING

German Reinsurer

CUSTOMER CHALLENGES

This innovation allows for the reduction of energy consumption within office buildings, resulting in fewer electricity costs and a decreased carbon footprint.

SPIE'S ANSWER

SPIE can implement smart solutions that use weather forecasts to predict climatic conditions and anticipate heating and air conditioning settings in buildings. This creates a naturally comfortable indoor environment.

CUSTOMER BENEFITS

The customer will be able to efficiently control the heating and cooling of the office building depending on the weather forecasts.



FOCUS ON GREEN BENEFITS

The building would naturally be more energy efficient as less wasted heat and non-essential electricity would be consumed.

- **SUBSIDIARY** SPIE DZE (Germany)
- **YEAR** 2019
- **#ENERGY PERFORMANCE, #BUILDING**

Industry

Maintaining performance whilst saving energy

THROUGH A SMART AND TECHNOLOGICAL-DRIVEN APPROACH, THE INDUSTRY MARKET IS CAPABLE OF BEING MORE ENERGY-EFFICIENT AS WELL AS IMPROVING EQUIPMENT PERFORMANCE.

Reducing the carbon footprint while remaining productive across industrial sites can be a difficult hurdle to overcome. These challenges can be faced, however, with innovative technology that allows production processes to consume less energy and create a safe environment for users.

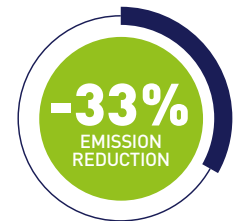
ENERGY EFFICIENCY ON SITE

Welcoming industry into the energy transition with open arms, SPIE provides organisations with innovative and sustainable solutions. SPIE offers optimised energy management services such as audits, efficient equipment alternatives, monitoring systems and sustainable lighting in production facility areas. These solutions such as Artificial Energy Intelligence software, LED lighting and E.M.P.E.R.E all improve energy

efficiency across sites, whilst being cost-effective. This reduces downtime, leaving customers to focus on their core business.

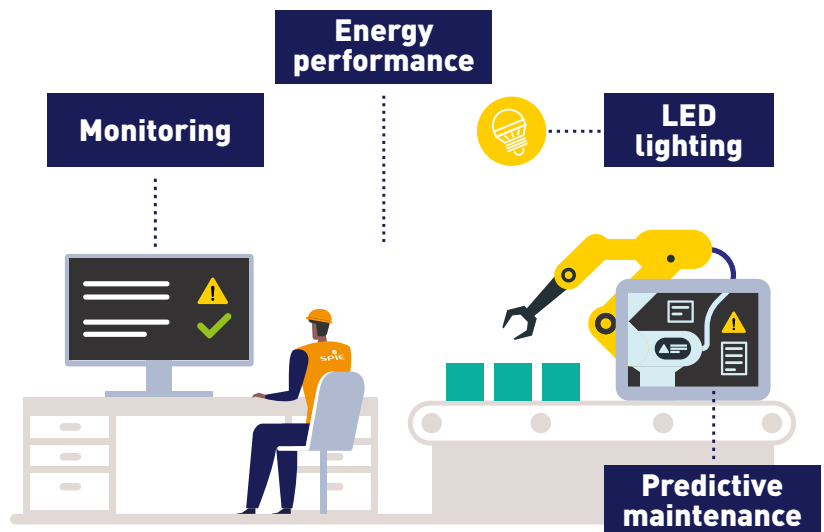
PREDICTIVE MAINTENANCE

Guaranteeing equipment performance is a daily challenge to maintain business activity and optimise production. Using SMART technology, SPIE can provide predictive maintenance that monitors the performance and condition of equipment during normal operation, reducing the likelihood of failures. The regular upkeep and maintenance of equipment ensures more productivity and improved energy performance.



Industry emissions need to reduce by 33% by 2050 to be on a path to achieve EU decarbonisation targets (compared to 2020)

Source: AFRY



SPIE'S OFFER FOR INDUSTRY

E.M.P.E.R.E

CUSTOMER CHALLENGES

The electrodes regulation system for electric arc ovens is an offer aimed at customers who are looking to increase productivity, reduce energy consumption and decrease curative maintenance.

SPIE'S ANSWER

SPIE can fully design and install an electrode regulator system for electric arc furnaces. This reduces the on-time power from **1 to 3 minutes** and increases productivity significantly.

CUSTOMER BENEFITS

This offer will result in a reduction of energy consumption of approximately **15 kW.h/tons of**

liquid steel for a 100t furnace. This offer will also increase active power, reduce electrode consumption and enable control of the arc radiation.

FOCUS ON GREEN BENEFITS

The electrodes regulation system will result in huge energy savings regarding steel production plants. The energy-efficient system is cost-effective and reduces CO₂ emissions. This, in turn, leads to a quick ROI. The electrodes regulation system is capable of saving more than **1800 tons of CO₂** on only one oven during a calendar year.



© **CUSTOMER TARGET** Steel production plants
♦ **SUBSIDIARY** SPIE France
#ENERGY PERFORMANCE, #INDUSTRY

SPIE'S OFFER FOR INDUSTRY

Electrical Hybridisation



CUSTOMER CHALLENGES

This offer is targeted at customers who are looking to provide a SMART, innovative and efficient energy mix solution for their isolated industrial sites.

SPIE'S ANSWER

SPIE will provide the study, design, installation, management and maintenance of hybrid electricity production systems. These systems are powered by fossil fuels such as generators as well as solar energy sources such as photovoltaic.

CUSTOMER BENEFITS

The customer will be able to integrate a predictive model to maximize the efficiency of production facilities.

The customer will also benefit from reduced operating costs as fewer batteries are required.

FOCUS ON GREEN BENEFITS

This energy-efficient hybrid offer uses green sources and therefore lessens the harmful CO₂ emissions being released into the atmosphere. This, in turn, reduces the customer's harmful effects on the environment.

© **CUSTOMER TARGET** Industry
+ **SERVICES** Mechanical & Electrical
♦ **SUBSIDIARY** SPIE France
#ENERGY PERFORMANCE, #INDUSTRY

SPIE'S OFFER FOR INDUSTRY

EnerGQ artificial energy intelligence software technology

CUSTOMER CHALLENGES

This artificial intelligence offer is aimed at customers looking to reduce their energy consumption and prevent regular system failures through early detection of faults.

SPIE'S ANSWER

SPIE offers an integrated solution that involves the use of Aei software with existing data infrastructure systems. SPIE also provides an installation of energy sub-metering hardware.

CUSTOMER BENEFITS

The customer will have reduced energy and maintenance costs and

less waste due to the efficiency of the software. The customer will also have reduced total cost ownership and improved operational excellence.

FOCUS ON GREEN BENEFITS

The software allows the customer's systems to become more energy-efficient, meaning less harmful emissions are released into the atmosphere. This further reduces the customer's carbon footprint.



- © **CUSTOMER TARGET** Industries/Buildings
- 📍 **SUBSIDIARY** SPIE Nederland
- 🔗 **#ENERGY PERFORMANCE, #INDUSTRY**

SPIE'S OFFER FOR INDUSTRY

Industry LED Lighting

CUSTOMER CHALLENGES

This offer is aimed at customers looking to improve general lighting efficiency and reduce maintenance costs within their production areas. The offer also targets customer's who are looking to decrease their energy bills.

SPIE'S ANSWER

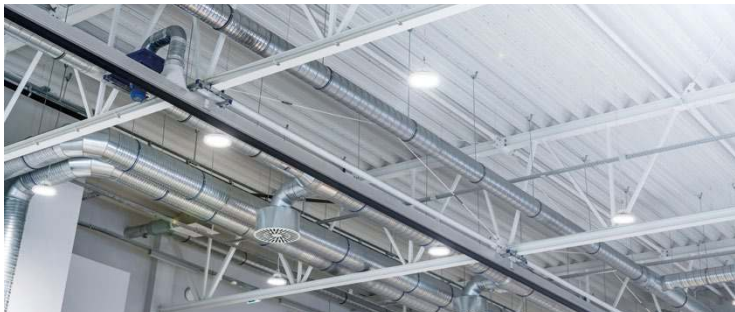
SPIE can provide a complete offering that includes lighting studies, LED replacements, scheduling software solutions and energy performance software that adapts to natural light.

CUSTOMER BENEFITS

The customer will benefit from a better quality of light due to superior LED technology and fewer maintenance works, resulting in a more cost-effective way of running an industrial building.

FOCUS ON GREEN BENEFITS

LED technology is far more energy-efficient than fluorescent bulbs and the customer is estimated to reduce more than **30% on energy consumption**.



- © **CUSTOMER TARGET** Industries
- ⚙️ **SERVICES** Mechanical & Electrical
- 📍 **SUBSIDIARY** SPIE Group
- 🔗 **#ENERGY PERFORMANCE, #INDUSTRY**

CUSTOMER'S REFERENCE FOR INDUSTRY

Ministry of Infrastructure, Water Pumping station IJmuiden

CUSTOMER CHALLENGES

Due to a breakdown, the customer experienced a large amount of damage to the pump stations. This reduced pumping capacity drastically. The customer, in turn, required a sustainable predictive maintenance system.

SPIE'S ANSWER

SPIE implemented EnerGQ's Aei software technology, hardware for sub-metering and a plan for a fast track implementation. Motor failure was detected and a cooling fan was fixed.

CUSTOMER BENEFITS

The customer now has prevented pump failures meaning that the 'mean time to restore' (which can be more than a week in some cases) is avoided. The customer also benefitted from reduced energy consumption.

FOCUS ON GREEN BENEFITS

Using SPIE's expertise in combination with EnerGQ's Aei, the repairs have resulted in the pumps being more energy-efficient. The new pump SPIE provided allowed for increased energy reduction as well as general maintenance improvement.



📍 **SUBSIDIARY** SPIE Nederland
📅 **YEAR** 2019
🏆 **#ENERGY PERFORMANCE, #INDUSTRY**

CUSTOMER'S REFERENCE FOR INDUSTRY

Relighting AMG / Arcelor Mittal

CUSTOMER CHALLENGES

The customer required improved efficiency of their general lighting and reduced maintenance costs within their production areas. Decreasing energy bills was also desired.

SPIE'S ANSWER

SPIE installed new industrial lighting, replacing the old bulbs with cost-effective and energy-efficient LED luminaires in the production facilities.

CUSTOMER BENEFITS

The customer benefitted from a superior LED system producing a higher quality of light. The lighting is now much cheaper, meaning electricity bills have decreased significantly.

FOCUS ON GREEN BENEFITS

The customer has benefitted from an estimated **30% reduction in energy consumption**.



🔧 **SERVICES** Mechanical & Electrical
📍 **SUBSIDIARY** SPIE Belgium
📅 **YEAR** 2019
🏆 **#ENERGY PERFORMANCE, #INDUSTRY**

CUSTOMER'S REFERENCE FOR INDUSTRY

Continental Surface Solutions



CUSTOMER CHALLENGES

The customer aimed to reduce the consumption of energy and create a more cost-effective and on-going solution for their plant.

SPIE'S ANSWER

SPIE implemented a quarterly energy table with the customer to discuss further energy-saving projects for the plant. SPIE identified new energy-efficient projects, planning them and installing them on behalf of the customer. SPIE implemented cost-effective and energy-efficient steam boilers and megawatt chillers. SPIE also introduced regenerative thermic oxidation plants.

CUSTOMER BENEFITS

The customer had their energy supply (steam, cooling water, and compressed air) including the transfer of employees completely outsourced by SPIE. This allowed the customer to concentrate on their core business whilst having a guaranteed availability for outsourcing.

FOCUS ON GREEN BENEFITS

Due to SPIE's solutions, approximately **3800 tons of CO₂** are saved from being released into the atmosphere per year. This dramatically reduces the customer's carbon footprint.

- **SERVICES** Technical Facility Management
- **SUBSIDIARY** SPIE DZE (Germany)
- **YEAR** Since 2004
- **#ENERGY PERFORMANCE, #INDUSTRY**

CUSTOMER'S REFERENCE FOR INDUSTRY

Umicore Olen

CUSTOMER CHALLENGES

The customer aimed to work in a more energy-efficient way. An upgrade of the electrical installation in the cooling system was also required.

SPIE'S ANSWER

SPIE replaced the motors, pumps and fans with new, more efficient alternatives. SPIE also replaced the control system so that the pumps and motors are now controlled proportionally and on-demand.

CUSTOMER BENEFITS

The customer benefitted from a reduced amount of energy being consumed through the day-to-day

running of the industrial building. The cooling capacity was also adjusted to the production process.

FOCUS ON GREEN BENEFITS

The new cooling system reduces carbon emissions and electric consumption. The pump motor, VLT automation drive and fan motor are significantly more energy-efficient.

- **SERVICES** Mechanical & Electrical
- **SUBSIDIARY** SPIE Belgium
- **YEAR** 2020
- **#ENERGY PERFORMANCE, #INDUSTRY**



SPIE'S INNOVATION FOR INDUSTRY

ZYTEC Contactfree Magnetic coupling



CUSTOMER CHALLENGES

Contact-free magnetic coupling is an innovation aimed at customers looking to improve equipment reliability and reduce energy consumption.

SPIE'S ANSWER

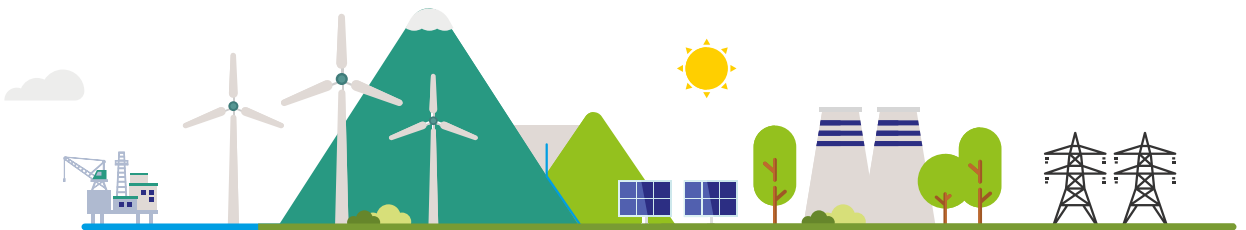
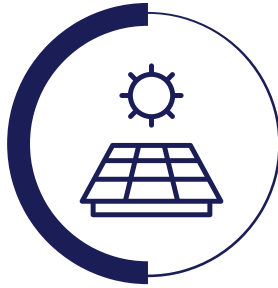
SPIE is capable of providing a retrofit of existing pump sets and fan sets with the ZYTEC contact-free magnetic coupling. SPIE can also install an application of the contact-free magnetic coupling in new equipment.

CUSTOMER BENEFITS

Any customer looking to implement this innovation will have reduced maintenance and energy costs as well as improved equipment availability and fewer spills.

- © **CUSTOMER TARGET** Industrial asset owners with rotating equipment
- **SERVICES** Technical Facility Management
- **SUBSIDIARY** SPIE Nederland
- **YEAR** 2019
- **#ENERGY PERFORMANCE, #INDUSTRY**





ENERGY MIX

Sustainable Development at Source

Reducing greenhouse gas emissions and becoming carbon neutral between now and 2050 will require much more reliance on sources of renewable energy. Can solar, wind, hydroelectric, biomass and geothermal sources contribute to achieving this objective? What will the contribution of innovative technologies such as smart grids be in arriving at the optimum energy mix?

Solar Energy

Harnessing the infinite power of the sun

SOLAR POWER REPRESENTS A CLEAN, GREEN SOURCE THAT IS CRUCIAL IN EUROPE'S TRANSITION TO RENEWABLE ENERGY.

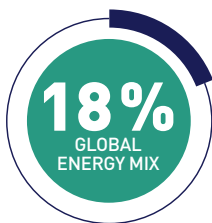
Solar power is a renewable energy source due to the lack of environmental side effects associated with its use. Generating energy from solar panels is a zero-emissions process that doesn't release harmful gases into the air.

TAKING ADVANTAGE OF AN INFINITE POWER SOURCE

Like many other renewable sources, solar power is a growing segment in Europe's energy mix and will be key if the EU's 2030 environmental targets are to be met. SPIE utilises this infinite energy source, supplying customers with solar power farms, rooftop panels and intelligent energy management systems. SPIE also makes the most of innovative technology to implement solar power into the electricity grid, distributing it across the energy network.

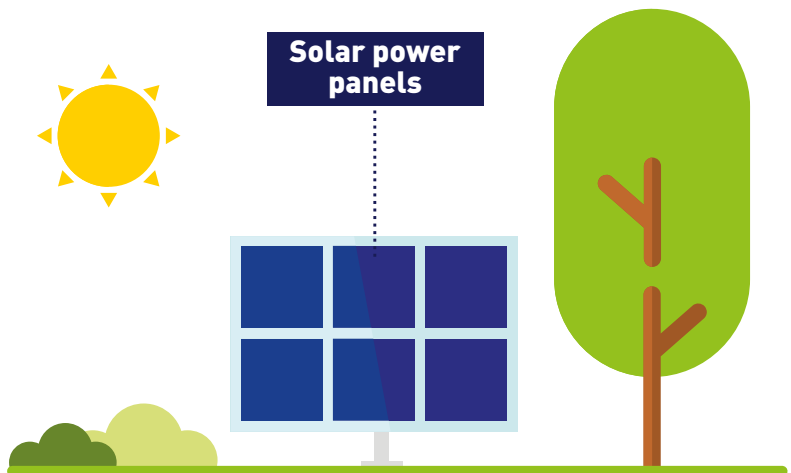
MAKING THE MOST OUT OF THE SHADE

SPIE uses solar power and innovative technology to dramatically reduce the costs of running a building. Installing solar photovoltaic panels onto building rooftops not only gathers energy from the sun but allows the building to utilise energy to power its other assets such as its lighting systems.



In Europe in 10 years' time, solar energy could reach 9-12% of electricity demand* and 18% of the global energy mix.

Sources: International Energy Agency (IEA) and World Energy Council



SPIE'S OFFER FOR SOLAR ENERGY

Solar power plants

CUSTOMER CHALLENGES

This offer is targeted at customers who are looking to have a single point of contact to be supported throughout the life of their solar power plant.

SPIE'S ANSWER

SPIE can install photovoltaic systems, from the planning stage to grid connection. These systems include planning, designing

the entire facility, tackling interface issues with the responsible energy provider, installing, commissioning as well as maintenance and troubleshooting services.

CUSTOMER BENEFITS

The customer will receive a secure start-up time and a guarantee of the sustainability of a photovoltaic power plant.



-
- © CUSTOMER TARGET Energies & Utilities
 - 🔧 SERVICES Mechanical & Electrical
 - 🏢 SUBSIDIARY SPIE Group
 - 🌞 #ENERGY MIX, #SOLAR
-

CUSTOMER'S REFERENCE FOR SOLAR ENERGY

Compagnie Nationale du Rhône

CUSTOMER CHALLENGES

The customer required maintenance works to be carried out for the world's first floating solar power plant. The plant has been producing electricity on Madone Lake since 2019.

SPIE'S ANSWER

SPIE operated at a site specialised in photovoltaic maintenance, with experts and representatives across the whole of France. All of

SPIE's engineers who have worked on this project have undergone training in aquatic rescue and high-voltage activity (HVA). This helps the engineers when accessing the plant's high voltage cell.

CUSTOMER BENEFITS

The underwater cables are protected in submerged sheaths that do not impact the aquatic fauna in any way. The platform is also made from recyclable plastic, further reducing the customer's carbon footprint.

FOCUS ON GREEN BENEFITS

This floating solar power plant produces **250 MWh per year**, which corresponds to the electricity consumption of **57 households**.

KEY FIGURES

The floating solar platform measures **2500m²**, which represents **4% of the total surface area** of the agricultural irrigation basin upon which it is situated. **630 floating photovoltaic panels** are installed as well as **7 anchors and underwater cables**, **3 photovoltaic inverters** and **1 HVA cell**.



-
- 🔧 SERVICES Mechanical & Electrical
 - 🏢 SUBSIDIARY SPIE France
 - 📅 YEAR 2019
 - 🌞 #ENERGY MIX, #SOLAR
-

CUSTOMER'S REFERENCE FOR SOLAR ENERGY

Mouscron Hospital Centre

CUSTOMER CHALLENGES

The customer desired to work in a more energy-efficient manner and upgrade the electrical installation of a car park in a hospital by utilising solar power.

SPIE'S ANSWER

SPIE installed solar panels on the car park rooftop and implemented a superior electrical connection with the hospital.

CUSTOMER BENEFITS

The underground parking of the hospital had energy-efficient LED lighting which was powered by the recently installed solar panels.

FOCUS ON GREEN BENEFITS

Not only was the implementation of solar power an incredibly green energy solution but it powered LED lighting which is far greener than fluorescent bulbs.



- 🔗 SERVICES Mechanical & Electrical
- 📍 SUBSIDIARY SPIE Belgium
- 📅 YEAR 2018
- 🏷️ #ENERGY MIX, #SOLAR

CUSTOMER'S REFERENCE FOR SOLAR ENERGY

Générale du solaire / Corsica



CUSTOMER CHALLENGES

The customer was highly dependent on fossil fuels and therefore, required the construction of a solar power station. Contributing to the objectives of their energy policy (which aims to increase the share of renewable sources in the energy mix) was also desired.

SPIE'S ANSWER

SPIE's solution was based on an energy management system. This software dispatched solar-produced energy in storage or within the grid, depending on several economic parameters.

KEY FIGURES

SPIE installed a total of **4 solar power plants** for the customer. This saved approximately **220 tonnes of CO₂** per year.

- 🔗 SERVICES Mechanical & Electrical
- 📍 SUBSIDIARY SPIE France
- 📅 YEAR 2018-2023
- 🏷️ #ENERGY MIX, #SOLAR

Largest solar plant in Hungary



CUSTOMER CHALLENGES

The customer required the construction of a large solar power plant located in Hungary. The plant needed to generate large sums of energy as it needed to be the main source of power for many households.

- **SERVICES** Transmission & Distribution
- **SUBSIDIARY** SPIE DZE (Hungary)
- **YEAR** 2019
- **#ENERGY MIX, #SOLAR**

SPIE'S ANSWER

SPIE (along with its subcontractor) designed and built the largest power plant in Hungary within just 5 months.

CUSTOMER BENEFITS

This operating solar power plant produces enough energy to supply approximately **6500 households** with renewable electricity.

FOCUS ON GREEN BENEFITS

The plant now produces renewable solar energy. This decreases harmful CO₂ emissions being released into the atmosphere, therefore reducing the customer's carbon footprint.

KEY FIGURES

The new photovoltaic power plant consists of **64,000 polycrystalline solar modules with a nominal output of 355 watts each.**

SPIE'S INNOVATION FOR SOLAR ENERGY

Supply of an intelligent Energy Management System (EMS)



CUSTOMER CHALLENGES

SPIE's turnkey hybrid solutions are ideal for customers looking to implement rural electrification and installations to unconnected microgrids, commercial or industrial sites and connected networks.

SPIE'S ANSWER

SPIE provides engineering, conception, design and furniture of an energy management system (EMS) that operates a light hybrid photovoltaic-battery mobile plant. The EMS can connect with

4 expert weather forecasters and uses advanced modelling of Li-Ion batteries.

CUSTOMER BENEFITS

This solution allows customers to reduce energy bills while limiting CO₂ emissions and dependence on fluctuations in diesel prices for controlled maintenance costs. Fuel consumption is minimised due to optimisation algorithms. The robust product operates in any condition.

FOCUS ON GREEN BENEFITS

This hybrid solution reduces the dependency on carbon-based energies as solar power is utilised more often. The carbon footprint of the customer is also reduced.

- © CUSTOMER TARGET Industry and off-grid facilities
- ✦ SERVICES Mechanical & Electrical
- ✦ SUBSIDIARY SPIE France
- YEAR 2020
- ✦ #ENERGY MIX, #SOLAR

Solar park coupling



CUSTOMER CHALLENGES

This innovation dramatically reduces the costs of electro-mobility connections. These SMART connections are installed on rooftops or via photovoltaic shades.

SPIE'S ANSWER

SPIE installs busbars to the step-up transformer as it is not necessary to look for possibilities on a substation level. The solar park is located near a gas-fired powerplant and feeds **150/380kV worth of power** into the grid.

CUSTOMER BENEFITS

The solar park has the potential to be extended in the future. Lead times for the connection are much shorter and costs are lower in comparison to a substation connection or extension.

FOCUS ON GREEN BENEFITS

Additional benefits of a hybrid solution are a significant reduction in connection costs as well as fewer CO₂ emissions being released into the atmosphere. The park allows for maintenance savings of the rotating assets due to a reduced load.

KEY FIGURES

SPIE can connect a **30-megawatt solar park to a 448 MVA gas-fired power plant**.

- ✚ SERVICES Transmission & Distribution
- 📍 SUBSIDIARY SPIE Nederland
- 📅 YEAR 2019
- 🔗 #ENERGY MIX, #SOLAR

Wind Energy

Producing clean energy in a sustainable manner

THE INEXHAUSTIBLE POWER OF WIND IS ONE OF THE MOST EFFICIENT SOURCES OF RENEWABLE ENERGY.

Wind power consists of converting the kinetic energy produced by the movement of turbine blades, driven by the wind into electrical energy. It is a green energy source that not only reduces the use of harmful fossil fuels, but also advances sustainable development.

TAKING ADVANTAGE OF WIND IN EUROPE

With a myriad of wide-open plains, coastlines and mountainous regions, Europe, in particular, is a hotspot for breezy environments, making it ideal for wind energy development.

SPIE utilises its technical expertise and efficient solutions to provide customers with machine tests that validate the performance of a turbine, wind farms and substations. SPIE also connects renewable wind energy to the electricity grid.

CONNECTING WIND ENERGY TO THE ELECTRICITY GRID

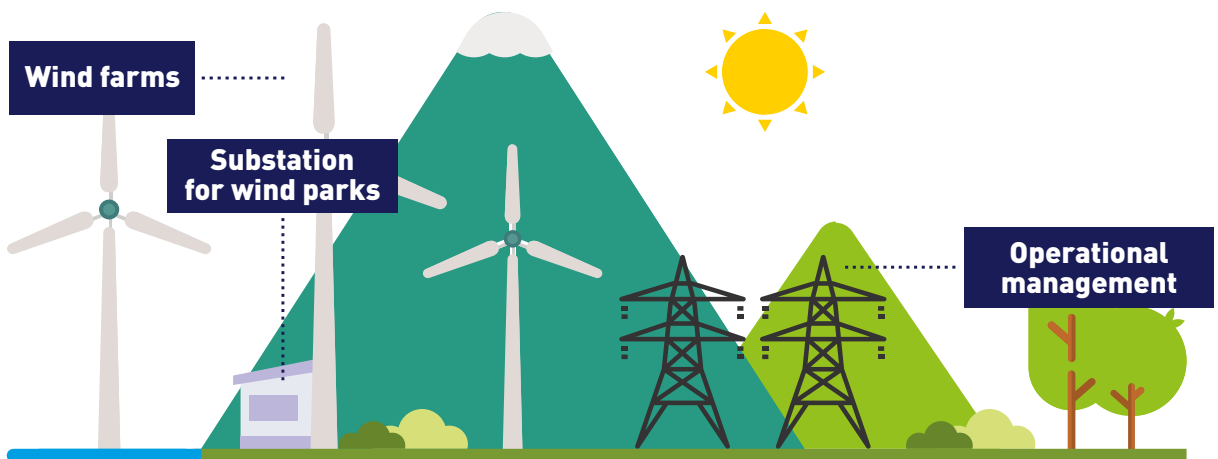
To make the most of wind energy and accelerate its development, designing productive wind farms and connecting them to the electricity grid in a cost-effective manner is crucial. SPIE provides its electrical engineering expertise to local

decision-makers and has designed and constructed substations for connecting wind farms to the electricity grid.



Today, wind covers 15% of energy demand in Europe. More than 500 new turbines were brought online in 2019.

Sources: Wind Europe and University of Sussex



SPIE'S OFFER FOR WIND ENERGY

Substations for wind parks

CUSTOMER CHALLENGES

This offer is aimed at customers looking to find a partner with the technical expertise and proven experience for substations, independent of any manufacturer.

SPIE'S ANSWER

SPIE offers a complete coverage of all services. These include planning, installation, commissioning and operational management.

CUSTOMER BENEFITS

SPIE's expertise and 20-year experience in building substations for wind farms can be of great benefit to customers. This turnkey offer allows SPIE to provide a full-service package, independent of any manufacturer.



FOCUS ON GREEN BENEFITS

The offer allows for green power to be connected to the grid via the operator which then transports the generated energy straight to the consumer.

KEY FIGURES

SPIE has built more than **75 High Voltage (HV) substations** across Germany in the last 20 years.

-
- © **CUSTOMER TARGET** Energies & Utilities
 - ⚡ **SERVICES** Transmission & Distribution
 - 📍 **SUBSIDIARY** SPIE DZE (Germany)
 - ⚡ **#ENERGY MIX, #WIND**
-

SPIE'S OFFER FOR WIND ENERGY

Operational management of wind farm transformer stations

CUSTOMER CHALLENGES

This offer is aimed at customers looking for an independent supplier who can offer operational management and a host of services for grid connection whilst maintaining short reaction times.

SPIE'S ANSWER

SPIE offers to secure a permanent online connection to the substation,



back up systems, apply daily data backups, make fault detection redundant and apply rapid elimination of possible malfunctions and scheduled maintenance works.

CUSTOMER BENEFITS

The benefits include the implementation and operation of the grid connection for an uninterrupted power supply. The customer can also be certified an **ISO 27001 modern control centre** and full area cover service due to the extensive territorial coverage of the service personnel.

FOCUS ON GREEN BENEFITS

This offer allows for the connection of green power into the grid which is then generated for the consumer. The more green energy is used, the less harmful carbon emissions are released into the atmosphere.

KEY FIGURES

SPIE has already installed **40 transformer stations**.

-
- © **CUSTOMER TARGET** Energies & Utilities
 - ⚡ **SERVICES** Transmission & Distribution
 - 📍 **SUBSIDIARY** SPIE DZE (Germany)
 - ⚡ **#ENERGY MIX, #WIND**
-

CUSTOMER'S REFERENCE FOR WIND ENERGY

Construction of 3 new wind farms

CUSTOMER CHALLENGES

The customer was looking to implement a diversity of green energy sources aimed at reducing CO₂ emissions. Strengthening their position as the leader of the renewable energy market in Poland was also desired.

SPIE ANSWER

SPIE was responsible for detailed designs and the construction of wind turbine foundations, medium-voltage and fibre-optic cables as well as substations.

CUSTOMER BENEFITS

In 2020, wind farms became commercially operational. These wind farms can power over **80,000 homes with green electricity.**

FOCUS ON GREEN BENEFITS

The implementation of green wind energy decreases the number of carbon emissions that are released into the atmosphere. This further reduces the customer's carbon footprint.

KEY FIGURES

SPIE installed **3 new wind parks** with a total capacity of **88 megawatt, 43 wind turbine foundations and 2 transformer stations.**

- **SERVICES** Transmission & Distribution
- 📍 **SUBSIDIARY** SPIE DZE (Poland)
- 📅 **YEAR** 2018-2020
- 🏷️ **#ENERGY MIX, #WIND**



CUSTOMER'S REFERENCE FOR WIND ENERGY

Wind turbines

CUSTOMER CHALLENGES

The customer required an installation of an electric connection between their electrical grid and their electrolyzers.

SPIE ANSWER

SPIE implemented a connection from an onshore wind turbine to the national electricity grid. The turbine provides renewable wind energy to the electricity grid.

FOCUS ON GREEN BENEFITS

Wind power decreases the number of carbon emissions that are released into the atmosphere.

KEY FIGURES

SPIE installed **5 new parks** between 2020 and 2021 and connected a total of **23 turbines** to the electricity grid.

- **SERVICES** Transmission & Distribution
- 📍 **SUBSIDIARY** SPIE Belgium
- 📅 **YEAR** 2020
- 🏷️ **#ENERGY MIX, #WIND**



CUSTOMER'S REFERENCE FOR WIND ENERGY

Wilton Engineering Services / Hornsea

CUSTOMER CHALLENGES

The customer required a wind focused delivery programme.

SPIE ANSWER

SPIE used local resources to implement a wind delivery programme. This allowed the teams to be reactive to programme flux.

CUSTOMER BENEFITS

The customer received a local and reactive delivery programme.

FOCUS ON GREEN BENEFITS

Wind power is a green energy source that reduces harmful CO₂ emissions being released into the atmosphere.



KEY FIGURES

SPIE was responsible for the electrical fit out of 20 turbines. This project is one of the world's largest offshore wind projects.

- ➕ SERVICES Transmission & Distribution, Mechanical & Electrical
- 📍 SUBSIDIARY SPIE UK
- 📅 YEAR 2019
- 🌐 #ENERGY MIX, #WIND

SPIE'S INNOVATION FOR WIND ENERGY

Wind turbine test bench

CUSTOMER CHALLENGES

This innovation is for customers wanting to increase the nominal power of their energy production tools, particularly offshore wind turbines.

SPIE ANSWER

SPIE can carry out a test bench to validate the performance of the wind turbine. The teams can accomplish this by using pre-magnetisation technology to synchronise the wind turbine with the power grid. SPIE provides stability for the electricity grid whilst adhering to standards and testing wind turbines.

CUSTOMER BENEFITS

The customer can receive expert advice on power grids and renewable energy. SPIE's tailored and reliable tool allows the innovation to be deployed.

FOCUS ON GREEN BENEFITS

This innovation provides renewable energy from an offshore wind turbine. The customer's carbon footprint is greatly reduced as fewer harmful emissions are now being released into the atmosphere.



- 🎯 CUSTOMER TARGET Wind turbine producers
- 📍 SUBSIDIARY SPIE France
- 📅 YEAR 2020
- 🌐 #ENERGY MIX, #WIND

Hydroelectricity

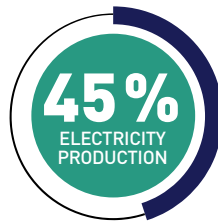
Benefiting greatly from our blue planet

HYDROELECTRIC ENERGY ALLOWS FOR POWER TO BE GENERATED FROM WATER, AN ENDLESS ENERGY SOURCE.

Hydroelectric power is generated using flowing water to spin a turbine that turns a shaft which is connected to an electric generator. More often than not, hydroelectric dams are used to direct the water downward through the turbine in a way that can be controlled to maximise energy production. Within Europe, alpine regions such as Switzerland, France and Central Europe are perfect for hydroelectric development.

PROVIDING HYDROELECTRIC TURNKEY SOLUTIONS

SPIE provides electricity producers with turnkey engineering solutions such as equipment design, renovation, commissioning, maintenance and monitoring of infrastructure throughout the project's lifecycle. These can cover all of an operator's requirements for hydroelectric power stations, alongside operation.

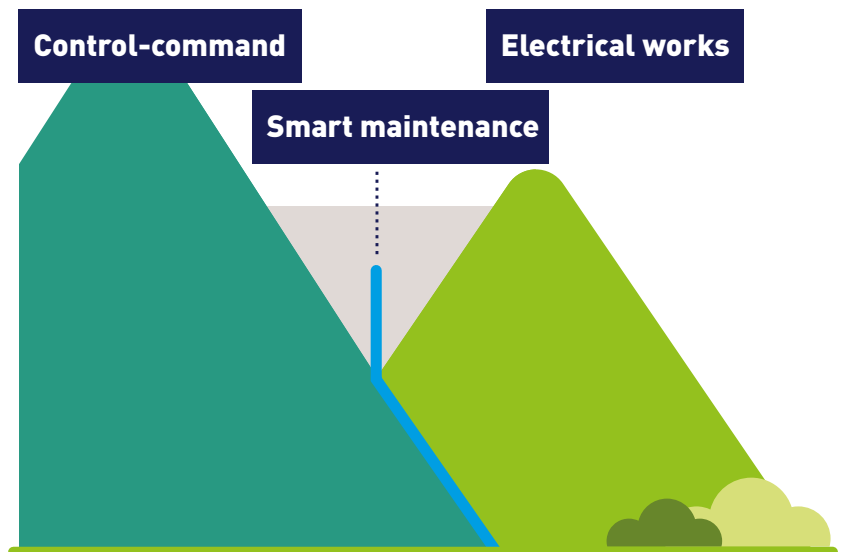


In Europe, hydroelectric energy represents 45% of electricity production from renewable sources. It is the third most productive renewable energy source in the world.

Sources: Hydropower & Dams, World Atlas 2018 and MaTerre.fr

OPTIMISING PRODUCTION THROUGH TECHNOLOGY

SPIE has been using the latest technology to develop the environmentally friendly technique of exploiting the force of water to produce energy. Collaborating closely with hydroelectric energy producers, SPIE has designed monitoring software that can be accessed from a web server or smartphone. It allows power stations to be controlled remotely and provides instant visibility of operating data such as production reports, machine temperatures and power ratings. This asset can optimise the production of the hydroelectric energy of tomorrow.



SPIE's expertise in hydroelectricity



CUSTOMER CHALLENGES

This offer is aimed at customers who are looking to install and maintain the site facilities as well as optimise energy production. The customer should be able to consult data of operations and remotely manage production.

SPIE ANSWER

SPIE offers turnkey solutions in electrical engineering, control command, supervision, regulation

and electrical maintenance.

This includes hydroelectric power plant projects, high voltage energy evacuation stations and turbines. SPIE provides a global approach for optimising energy production and consulting operating data to manage production remotely.

CUSTOMER BENEFITS

The customer benefits from significantly less on-site interventions (thanks to the remote

control), energy optimisation and a benchmark between several installations.

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♥ **SUBSIDIARY** SPIE France
📍 **#ENERGY MIX, #HYDROELECTRICITY**

CUSTOMER'S REFERENCE FOR HYDROELECTRICITY

Hydroelectric power plant of Teyssode

CUSTOMER CHALLENGES

The customer is an autonomous private producer and needed a renovation project to be completed at their hydropower plant site with **2 machines of 800kVA** and permanent magnets installed.

SPIE'S ANSWER

SPIE completely renovated the plant, installing the control command as well as implementing the remote access via virtual network computing. SPIE also equipped the customer with an energy evacuation station, introduced machine coupling through a voltage switchboard/distribution panels and installed automatic reactive power compensation.



CUSTOMER BENEFITS

The customer received a fully operational hydropower plant with all of the requirements of the project completed.

FOCUS ON GREEN BENEFITS

Hydropower is a climate-friendly energy source, generating power without producing air pollution or

toxic by-products. Utilising hydropower avoids the use of fossil fuels, meaning less harmful emissions are released into the atmosphere.

◆ **SUBSIDIARY** SPIE France
 ⌚ **YEAR** 2021
 # **#ENERGY MIX, #HYDROELECTRICITY**

CUSTOMER'S REFERENCE FOR HYDROELECTRICITY

Modernisation of Hydroelectric Power Plants



◆ **SUBSIDIARY** SPIE France
 ⌚ **YEAR** 2015
 # **#ENERGY MIX, #HYDROELECTRICITY**

CUSTOMER CHALLENGES

The customer wanted to reduce operating costs and launch a vast standardisation program. This program needed to have the capability to cover a part of the customer's hydroelectric power stations across France.

SPIE'S ANSWER

SPIE was responsible for the modernisation and standardisation of hydraulics. The teams intervened to replace the corrugated auxiliaries, the control-command as well as carrying out instrumentation works to the plant. SPIE also provided the customer with general services and PLC programming.

CUSTOMER BENEFITS

The modernisation and standardisation of the installations of the customer's hydroelectric power stations reduces energy consumption and therefore will lower costs, as it has done for the past 5 years.

FOCUS ON GREEN BENEFITS

The customer's plants allow for environmentally-friendly hydropower to be generated. This green energy source generates power without producing air pollution or using fossil fuels.

Hydroelectric power plant of Gavet



CUSTOMER CHALLENGES

The customer needed to build and implement a new hydroelectric scheme that is more efficient, safer and more environmentally friendly. The project is almost entirely underground and replaces five dams and six power stations.

SPIE ANSWER

SPIE installed **400V, 125Vcc** and corrugated control unit auxiliaries, implemented production and security groups as well as carrying out general services which included status logging, alarm management, dewatering pumps and installing compressors. On top of these renovations, SPIE has been involved in the dam, screen and small plant services since this contract began.

CUSTOMER BENEFITS

Since the start of the project, which lasted 10 years, the customer has benefited from thousands of hours worth of SPIE's hydroelectricity services. The implementation of the instrumentation and control system, general services and auxiliaries of the power plant allowed the customer to benefit from high-performance facilities while making the production tools more reliable.

FOCUS ON GREEN BENEFITS

Hydropower is an environmentally friendly energy source that generates power and electricity without releasing harmful carbon emissions into the atmosphere.

KEY FIGURES

The new **97-megawatt** facility will increase hydroelectricity production by **40% on the same stretch of river**. It produces the equivalent of the annual electricity consumption of around **230,000 inhabitants** from a low-carbon and renewable energy source.

-
- ◆ SUBSIDIARY SPIE France
 - ◆ YEAR 2020
 - ◆ #ENERGY MIX, #HYDROELECTRICITY
-

Bioenergy

Heating homes, buildings and industrial sites the sustainable way

ORGANIC MATTER SUCH AS BIOMASS, GEOTHERMAL AND COGENERATION IS USED TO GENERATE CLEAN ENERGY AND CARBON-NEUTRAL GAS.

Bioenergy refers to electricity and gas that is generated from organic matter and waste, known as biomass. This can be anything from plants, timber, agricultural, food and even sewage waste. The waste is burnt and, in turn, boils water, creating steam, which drives a turbine to generate electricity.

AIDING PUBLIC ORGANISATIONS

With its strong engineering expertise in the field of renewable energy, SPIE aids local public organisations, industries and businesses with geothermal power stations and biomass-powered production facilities. SPIE also provides technical expertise for projects involving the reconversion of coal-fired power stations into biomass-powered production facilities, which is a major challenge across Europe.



621 biogas production facilities are present in the main European producing countries, of which 80% are connected to the national gas distribution networks.

Source: Sia Partners and France Biométhane

NOT ALL WASTE HAS TO BE WASTED

SPIE excels in delivering and installing combined heat and power (CHP) plants to its customers. SPIE provides extensive piping systems, associated measurements, innovative control technology as well as including special equipment used for heating centres. The CHP plants allow for renewable bioenergy to heat homes and organisations across Europe, eliminating the use of fossil fuel sources and reducing the customer's carbon footprint.

CUSTOMER'S REFERENCE FOR BIOENERGY

Heating System of Chartres Métropole

CUSTOMER CHALLENGES

The customer aimed to modernise and extend the conurbation's district heating system to new users within the biomass construction plant.

SPIE'S ANSWER

During the project, SPIE has contributed to large-scale operations on the biomass handling, boiler system and steam circuit utilities phases.

CUSTOMER BENEFITS

The client reduced their carbon footprint and contributed to the circular economy and energy transition.

FOCUS ON GREEN BENEFITS

SPIE produced new and sustainable energy from biomass, specifically, wood sourced from the recycling industries.



KEY FIGURES

At maximum capacity, the plant is expected to produce **70 million kilowatt-hours (kWh)** of heat per year, equivalent to the needs of **6000 homes**, and the volume to provide **17,000 homes** with electricity.

- 📍 **SUBSIDIARY** SPIE France
- 📅 **YEAR** 2020
- 🔗 **#ENERGY MIX, #BIOENERGY**

CUSTOMER'S REFERENCE FOR BIOENERGY

MGT Biomass Powerplant

CUSTOMER CHALLENGES

The customer required a large electrical and instrumentation build as there were previous challenges around securing a local contractor with the ability and capability to deliver a project of this size.

SPIE'S ANSWER

SPIE utilised a local delivery office a few miles from the site to great effect. The highly qualified local resource pool allowed SPIE to deliver a project of this scope quickly and efficiently.

CUSTOMER BENEFITS

The customer experienced complete and comprehensive engineering of

this local delivery project and an installation solution. The works were also delivered very quickly.

FOCUS ON GREEN BENEFITS

It is expected to save **1.2 million tonnes of carbon dioxide** per year, accounting for **5.5% of the UK's renewables target**.

KEY FIGURES

The construction of this power station would generate **299 megawatts of electricity**, enough to power **600,000 homes**. The plant is one of the largest biomass-fueled power stations in the world.



- ⚙️ **SERVICES** Mechanical & Electrical
- 📍 **SUBSIDIARY** SPIE UK
- 📅 **YEAR** 2019
- 🔗 **#ENERGY MIX, #BIOENERGY**

CUSTOMER'S REFERENCE FOR BIOENERGY

Landkommanderij Alden Biesen

CUSTOMER CHALLENGES

The central boiler needed to be renovated through the use of modern techniques such as condensing gas boilers, cogeneration, heat networks and an energy monitoring system. Consuming less energy and emitting less CO₂ was also desired.

SPIE'S ANSWER

SPIE installed a combined heat and power (CHP) unit to the central boiler room. The CHP engine now burns gas and converts it into heat and electricity. The boiler room feeds a heat network, which is linked to the heating installations of the castle, hotel, party halls, seminar centre and sanitary hot water preparation.



FOCUS ON GREEN BENEFITS

The central boiler now consumes less energy, resulting in a significant reduction in CO₂ emissions.

- 📍 SUBSIDIARY SPIE Belgium
- 📅 YEAR 2019
- 🏷️ #ENERGY MIX, #BIOENERGY

CUSTOMER'S REFERENCE FOR BIOENERGY

Klinikum am Bruderwald



- 🛠️ SERVICES Technical Facility Management
- 🏆 LABEL/CERTIFICATION CHP Plant of the Year 2018
- 📍 SUBSIDIARY SPIE DZE (Germany)
- 📅 YEAR 2019
- 🏷️ #ENERGY MIX, #BIOENERGY

SPIE'S ANSWER

As part of SPIE's 11-year energy-efficiency partnership, it optimised the generation of electricity, heat, air conditioning and processed outdoor air for the Bamberg Social Foundation from 2006 to 2007 to save energy. However, not content with the savings SPIE made, it continuously searched for further optimisation possibilities.

CUSTOMER BENEFITS

The conventional combined heat and power (CHP) plant was replaced with a more powerful one in 2016. In 2018, approximately **50% of the**

hospital's electricity and 54% of its heat consumption were covered by this new CHP plant.

FOCUS ON GREEN BENEFITS

The primary energy requirement was reduced by 26% compared to the separate production of electricity and heat.

Furthermore, CO₂ emissions can be reduced by **7000 tonnes a year** with this modernised system.

VITO (Vlaamse Instelling voor Technologisch Onderzoek)



CUSTOMER CHALLENGES

Research on the use of geothermal heat for commercial applications needed to be carried out.

SPIE'S ANSWER

SPIE installed a heat network which is now controlled from the technical room that generates the electricity for it. **9MW dry coolers** were used as a backup, in case of interrupted heat-consumption.

FOCUS ON GREEN BENEFITS

The network now generates heat and electricity whilst being CO₂ neutral.

KEY FIGURES

Drilling up to a depth of **3.6km** helped pump water at **128°C** from the earth's deep layers. There were also **9 adiabatic coolers** at the plant which can now generate a **total power of 9 MW**.

- ◆ SUBSIDIARY SPIE Belgium
- ◆ YEAR 2018
- ◆ #ENERGY MIX, #BIOENERGY

CUSTOMER'S REFERENCE FOR BIOENERGY

Bottrop Power Plant



CUSTOMER CHALLENGES

Dewatered sewage sludge needed to be dried in an eco-friendly way, using solar and waste heat energy for one of Germany's largest and most modern wastewater treatment plants that purifies water for an area of over a million inhabitants.

SPIE'S ANSWER

SPIE delivered and installed 4 combined heat and power plants (CHP), with a total capacity of **11 megawatts** as well as an extensive piping system. SPIE also provided equipment for the new heating centre, the measurement and control technology. The plants now serve to supply energy to

the wastewater treatment and the new thermo-solar sewage sludge drying system.

CUSTOMER BENEFITS

The CHP unit allowed the customer to utilise thermo-solar drying in **32 halls**. SPIE is still responsible for the smooth operation of the cogeneration units and the complete periphery under this maintenance contract.

FOCUS ON GREEN BENEFITS

Due to the thermo-solar drying system, the use of approximately **20,000 tons of coal** per year will be eliminated.

KEY FIGURES

SPIE reduced the annual CO₂ emissions of the wastewater treatment plant by circa **70,000 tons**.

- ✦ **SERVICES** Mechanical & Electrical
- ✦ **SUBSIDIARY** SPIE DZE (Germany)
- ✦ **YEAR** 2020
- ✦ **#ENERGY MIX, #BIOENERGY**

CUSTOMER'S REFERENCE FOR BIOENERGY

Stadtwerke Georgsmarienhütte



CUSTOMER CHALLENGES

The customer needed to reduce the amount of heat and waste that was discharged into the environment as it was releasing a significant amount of fossil fuel emissions.

SPIE'S ANSWER

SPIE contributed to the expansion of climate-neutral energy by enabling the customer to use existing heat to avoid the use of fossil fuels.

CUSTOMER BENEFITS

The industrial heat now feeds through a pipeline from the steelworks in a buffer storage tank. The heat was reused in the district heating network resulting in less wasted energy.

FOCUS ON GREEN BENEFITS

The recycled heat which was utilised allows for less wasted heat to be released into the atmosphere. This reduced SPIE's and the customer's carbon footprint.

KEY FIGURES

The customer reduced their annual CO₂ emissions by circa **900 tons**.

- ✦ **SERVICES** Mechanical & Electrical
- ✦ **SUBSIDIARY** SPIE DZE (Germany)
- ✦ **YEAR** 2019
- ✦ **#ENERGY MIX, #BIOENERGY**

CUSTOMER'S REFERENCE FOR BIOENERGY

Shell Tour London

CUSTOMER CHALLENGES

The customer required a new engineering arrangement for the use of high volumes of river water and filtration arrangements whilst protecting aquatic life in the River Thames.

SPIE'S ANSWER

SPIE devised a new mechanism to provide the river filtration land-side within the customer's below ground areas. This involved developing a unique filtration and pumping system with high-quality engineering standards made to SPIE's specifications and designs. SPIE was responsible for the removal and replacement of the cooling and heating infrastructure, including the river water heat rejection system and associated

electrical power installation, as well as the commissioning of the complete package. All the works were carried out in a live building environment.

CUSTOMER BENEFITS

SPIE's solution significantly lowered client costs, reduced the buildings carbon footprint, safeguarded the programme and secured a major eco-friendly solution for the customer's corporate operations.

FOCUS ON GREEN BENEFITS

SPIE's solution helped to lower the building's carbon footprint, whilst looking after protected river species. The new asset programme also enhanced "free cooling" at certain times of the year to reduce the total energy consumption of the overall system.



- ✦ **SERVICES** Mechanical & Electrical
- ✦ **SUBSIDIARY** SPIE UK
- ✦ **YEAR** 2018
- ✦ **#ENERGY MIX, #BIOENERGY**

Hydrogen

Combining renewable energy to power the transport of tomorrow

HYDROGEN HAS THE POTENTIAL TO LEGITIMATELY REPLACE FOSSIL FUELS.

Green hydrogen is a clean and renewable energy source that can be produced from renewable energies such as biomass, solar and wind. These qualities make it an attractive fuel option as it can be used to power vehicles, houses, portable machines and many more applications.

DECARBONISING MAJOR SECTORS OF THE ECONOMY

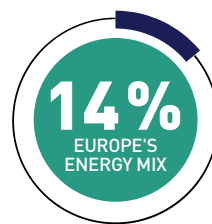
Hydrogen technologies and fuel cells offer an alternative and improved solution for a decarbonised future. SPIE utilises innovative technology to enable large-scale hydrogen

integration and power generation, distributing renewable energy to a multitude of sectors and regions. The use of hydrogen can aid in decarbonising transportation, heating and power for buildings, industry heat as well as serving as a renewable power source.

CHARGING E-VEHICLES WITH HYDROGEN

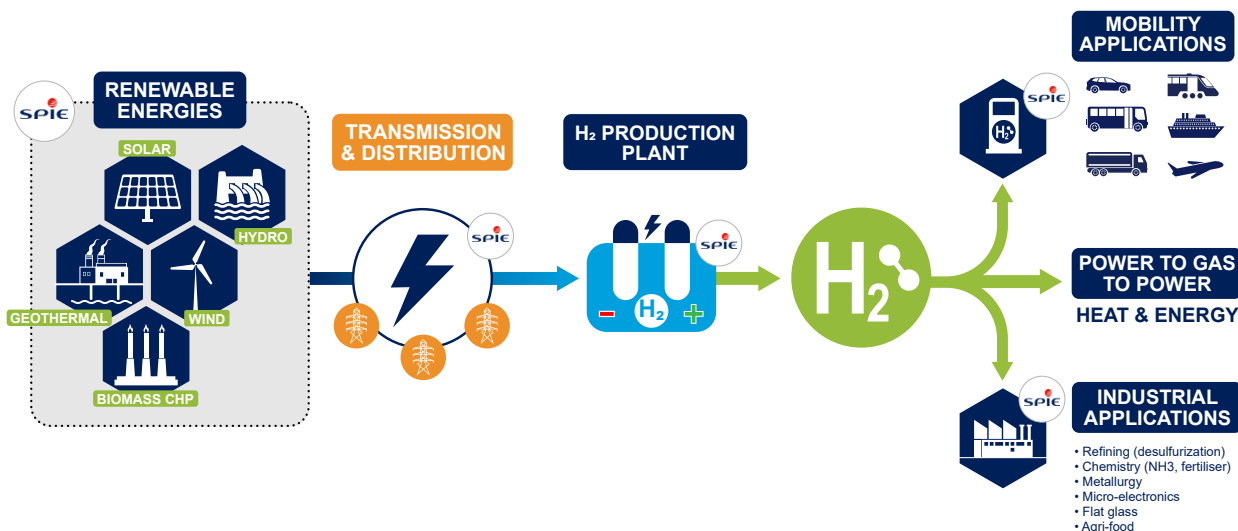
SPIE has positioned itself within the hydrogen mobility sector, using renewable energies such as solar and wind as well as excess electricity from the grid, along with water to generate hydrogen gas via an electrolyser. This gas is then stored and used to refuel electric vehicles. Hydrogen-powered vehicles emit

far less harmful emissions into the air than their petrol and diesel counterparts.



The aim of the European hydrogen plan should be to bring hydrogen to between 12% and 14% of Europe's energy mix by 2050.

Source: EC Europa EU



CUSTOMER'S REFERENCE FOR HYDROGEN

H2 refueling station of the port of Cherbourg



- SERVICES Mechanical & Electrical
- SUBSIDIARY SPIE France
- YEAR 2020
- #ENERGY MIX, #HYDROGEN

CUSTOMER CHALLENGES

The customer required a turnkey project of a hydrogen refuelling station with a potential connection to an electrolyser.

SPIE ANSWER

SPIE provided the customer with studies and a detailed design to prepare the building permit and regulatory statement. SPIE also carried out works in electricity, instrumentation, piping, insulation, commissioning and exploitation.

CUSTOMER BENEFITS

The customer received end-to-end support by SPIE throughout the project and now has a hydrogen refuelling station, which supplies renewable energy to their customers.

FOCUS ON GREEN BENEFITS

Hydrogen-powered vehicles emit far less CO₂ into the air when compared with petrol or diesel vehicles.

CUSTOMER'S REFERENCE FOR HYDROGEN

Hydrogen park of Gladstone

CUSTOMER CHALLENGES

The customer needed to build a production facility that produced renewable energy to support industrial organisations across the city of Gladstone in Queensland, Australia.

SPIE ANSWER

SPIE carried out the installation and commissioning works across the production facility, aiding the customer greatly in their build of the hydrogen production facility.

CUSTOMER BENEFITS

The Gladstone plant is Australia's first renewable hydrogen production facility, able to deliver **10% blended hydrogen natural gas** across Gladstone. The city is already home to Queensland and Australia's east coast liquefied natural gas production, processing and export industry.



FOCUS ON GREEN BENEFITS

The Gladstone plant is Australia's first renewable hydrogen production facility, able to deliver 10% (**10MW electrolyser**) of blended hydrogen natural gas across the city's total **770 customer** base (residential, small commercial and industrial).

- SERVICES Mechanical & Electrical
- SUBSIDIARY SPIE OGS
- YEAR 2021
- #ENERGY MIX, #HYDROGEN

Energy Transmission & Distribution

Using renewable energy sources to power Europe

OPTIMISING ENERGY FROM THE PRODUCTION SITE TO THE CONSUMER.

Transmission and distribution (T&D) refers to the different stages of carrying electricity over poles and wires from generators to homes or businesses. These lines can be found overhead or sometimes in the ground, and, combined, T&D lines make up what is commonly called "the grid". The grid provides and distributes electricity, some of which is sourced from renewable energy, across Europe.

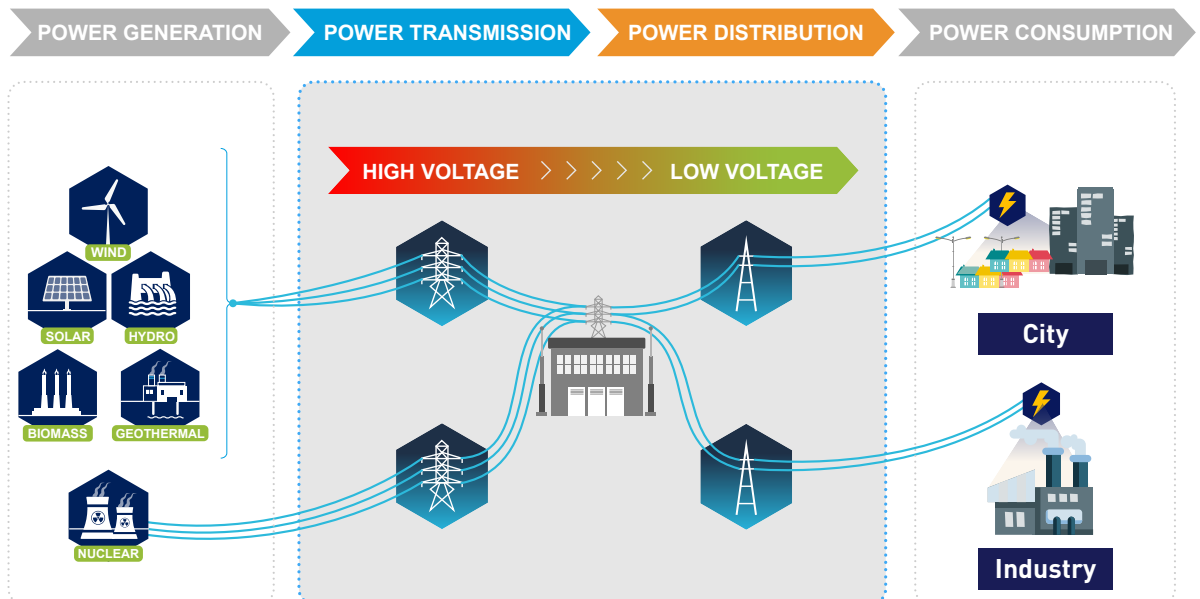
MAKING GRIDS SMARTER

With new, innovative digital technology integrated into them, smart grids can provide flexible, real-time control of the distribution network, potentially cutting electricity production costs by 5%. With strong technical expertise in electrical engineering and communications technology, SPIE installs, maintains and manages the IT of next-generation electricity systems for operators.



The large-scale deployment of smart grids may generate up to €65 billion of savings per year or 5% of the cost of electricity production.

Source: International Energy Agency (IEA)



Overhead high-voltage & compact line

CUSTOMER CHALLENGES

This offer is aimed at customers looking to construct an overhead transmission line with reduced ambiance. The line would be powered at **380kV**.

SPIE'S ANSWER

SPIE provides suspension of conductor bundles using highly tensioned steel ropes which reduce the sag of the line. The reduced sag leads to smaller tower construction as well as creating a decreased right of way as wind won't swing the bundles.

CUSTOMER BENEFITS

Overhead transmission lines will be upgraded from **220kV** to **380kV**. The compact line allows for a smaller right of way to be introduced. The new **380kV** line is capable of being constructed in the existing **220kV** corridor.

FOCUS ON GREEN BENEFITS

This offer allows for the use of energy to be transported using the existing transmission line routes. This increases the energy capacity by utilising a more compact design.



-
- © **CUSTOMER TARGET** Energies & Utilities
 - ⊕ **SERVICES** Transmission & Distribution
 - ◆ **SUBSIDIARY** SPIE DZE (Germany)
 - ⊕ **#ENERGY MIX, #ENERGY DISTRIBUTION**
-

SPIE'S OFFER FOR ENERGY TRANSMISSION & DISTRIBUTION

Smart Grids

CUSTOMER CHALLENGES

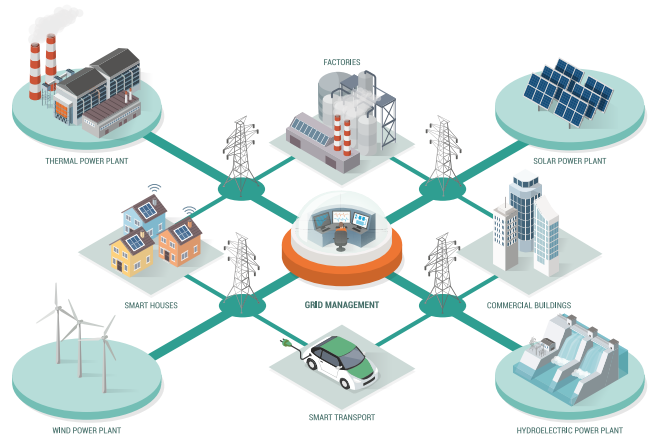
This offer is ideal for customers looking to adjust their energy production and reduce consumption to their needs.

SPIE'S ANSWER

Through this offer, SPIE will extend conventional networks and smart grids as well as develop a suite of tools. These include assessing the current state of the network, inspecting protection systems and conducting a comprehensive network planning study which includes a target network and expansion planning.

FOCUS ON GREEN BENEFITS

Smart grids provide and distribute electricity sourced through renewable energy in real-time. This lessens the reliance on fossil fuels.



- 📍 **CUSTOMER TARGET** Energies & Utilities
- 🔧 **SERVICES** Transmission & Distribution
- 📍 **SUBSIDIARY** SPIE Group
- 🏷️ **#ENERGY MIX, #ENERGY DISTRIBUTION**

CUSTOMER'S REFERENCE FOR ENERGY TRANSMISSION & DISTRIBUTION

DEWA (Dubai Electrical & Water Authority)

CUSTOMER CHALLENGES

The customer strongly participates in 2030's main objective of reducing water & electrical demand by 30% and thus, required sufficient solutions to support this.

SPIE'S ANSWER

SPIE carried out works for the implementation of cutting edge automated intelligent meters. These meters run on the 11kV network.

FOCUS ON GREEN BENEFITS

Both the first and second phases of this project saved 10-15% in electrical consumption.



- 📍 **SUBSIDIARY** SPIE OGS
- 📅 **YEAR** 2020
- 🏷️ **#ENERGY MIX, #ENERGY DISTRIBUTION**

Medium voltage installations for Vattenfall, H4A, Trio Invest



CUSTOMER CHALLENGES

The customer's distribution grid had limited capacity due to a significant increase in renewable energy. This resulted in increased costs for grid connection and a greater lead-time.

SPIE'S ANSWER

SPIE was in charge of the installation of the batteries and was responsible for the interface between the renewable energy producer and the medium voltage grid. Without this interface, it was not possible to transport and distribute renewable energy.

CUSTOMER BENEFITS

Due to SPIE managing the interface, the customer no longer deals with high costs for the grid connection. The customer can now be confident that the demands from the distribution network operator are translated in a clear and understandable way.

FOCUS ON GREEN BENEFITS

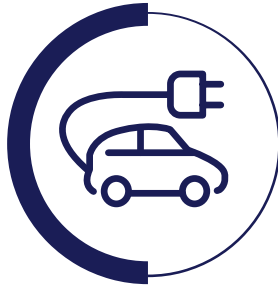
Without a good understanding between the distribution network operator and the developer or a reasonable grid connection, the renewable energy project wouldn't have been realised. The grid connection is likely the most important link in the chain.

KEY FIGURES

SPIE connected **200MW of wind energy and 100MW of solar energy** to the grid.

-
- 📍 SERVICES Transmission & Distribution
 - 📍 SUBSIDIARY SPIE Nederland
 - 📍 #ENERGY MIX, #ENERGY DISTRIBUTION
-





MOBILITY

A Social and Environmental Challenge

In the context of the energy transition, transport is central, whether that be individual, collective or shared. In sustainable urban areas, decision-makers must now find the best solutions for developing functional, yet efficient mobility systems. What opportunities do new technologies offer? How do new practices such as remote working affect urban transport?

Eco-mobility

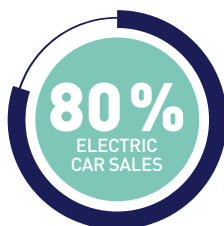
Expanding the use of e-vehicles in urban areas

CITIES AND TOWNS ACROSS EUROPE ARE TURNING TO ELECTRICITY FOR THEIR PUBLIC TRANSPORT NETWORK.

Vehicular pollution is one of the biggest barriers to a zero-carbon city. There are solutions available, however, as research has shown that electric vehicles are better for the environment, improving air quality as they emit fewer greenhouse gases and air pollutants than their petrol or diesel counterparts. If urban areas are to contribute to the energy transition, then they must support and encourage the use of electric cars, vans and buses.

LAYING OUT THE GROUNDWORK FOR A SUSTAINABLE FUTURE

The eco-mobility transition is only possible if the necessary infrastructure is provided and supported. SPIE offers end-to-end support for infrastructure projects to



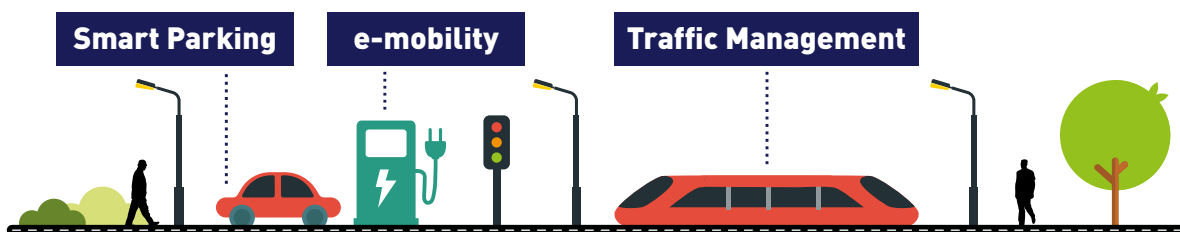
Unlike the market in traditional vehicles which is losing steam, sales of electric cars grew by 80% in Europe in 2019. In 2020, there are 600,000 charging points across Europe.

Sources: Berg Insight and European Electric Car Report, CAAM and European Automobile Manufacturers Association

CHARGING THE TRANSPORT OF TOMORROW

Charging stations are crucial in the transition to electric vehicles. The easier charging stations are to use and the more of them there are, the more likely e-vehicles will be adopted by decision-makers and city-goers. SPIE simplifies access to charging stations through a specific set of services that improve the experience of electric vehicle users. These services include the geolocation of charging stations via a smartphone app, remote reservation and contactless payment options.

charging station operators, providing auditing and consultancy, cloud-based administration platforms, expert maintenance and operation works as well as technical and commercial assistance.



E-mobility



CUSTOMER CHALLENGES

This offer is aimed at customers looking to find a single point of contact through Europe to deliver the best service for users. This offer is ideal for customers who have a clear vision of their charging points and wish to inform users when their vehicle is charged.

SPIE'S ANSWER

SPIE provides consulting and planning services, process management and charging systems. SPIE also offers realisation solutions such as project management, installation, civil engineering services,

load and energy management as well as maintenance and operational works.

CUSTOMER BENEFITS

Through this offers, the customer will receive a complete e-mobility provider with European coverage. SPIE offers a full scope of services and use a large range of electric vehicle chargers.

FOCUS ON GREEN BENEFITS

Electric vehicles are a far greener alternative to petrol cars as they emit less CO₂ into the atmosphere. This offer contributes to the population adopting e-vehicles, thereby contributing to the energy transition.

KEY FIGURES

As of 2020, **more than 20,000 charging points** have already been installed by SPIE throughout Europe.

© **CUSTOMER TARGET** Logistics, retail, cities, authorities, car/buses manufacturer, fleet management, public transport, companies, utilities, grid operators, property managers, and e-mobility providers.

⚙️ **SERVICES** Mechanical & Electrical

📍 **SUBSIDIARY** SPIE Group

MOBILITY, #ECO MOBILITY

CUSTOMER'S REFERENCE FOR ECO-MOBILITY

Bruxelles Mobilité STIB



- **SERVICES** Mechanical & Electrical
- **LABEL/CERTIFICATION** Panduit Gold
- **SUBSIDIARY** SPIE Belgium
- **YEAR** 2018
- **#MOBILITY, #ECO MOBILITY**

CUSTOMER CHALLENGES

By 2030, the customer intends to reduce direct and indirect greenhouse gas emissions from journeys made on its network by **40% per place-kilometre**.

SPIE'S ANSWER

SPIE improved the service and security for all passengers by delivering information technology and security services. The team also aided in recovering wastewater using energy-efficient technology.

FOCUS ON GREEN BENEFITS

The new and improved transport system reduces carbon output for the metro, tram, bus, and train systems.

KEY FIGURES

SPIE installed **3000 cameras**, **100km of optic fibre**, **250 door access controls** and **100 radio antennas**. The team also upgraded **40 public address systems** such as racks, loudspeakers and cables. SPIE implemented **15 wastewater pumping stations** and installed **400 lasers** to detect pedestrians, animals and vehicles.

CUSTOMER'S REFERENCE FOR ECO-MOBILITY

Bus Rapid Transit (BRT) lines / PACA Region

CUSTOMER CHALLENGES

The customer aimed to improve passenger comfort and increase the demand for public transport. The customer was keen to promote a better managed and more eco-friendly approach to the region's transport system.

SPIE'S ANSWER

SPIE was involved in installing and integrating passenger information systems, public address systems, fibre optics, IP networks, intercom systems and video surveillance systems into the existing street furniture.

CUSTOMER BENEFITS

The customer was able to promote the use of public transport by providing more frequent, faster and more flexible services. The passenger experience was improved greatly as a high-level of comfort and real-time user traffic information was provided on top of guaranteed access.

FOCUS ON GREEN BENEFITS

This project allowed for sustainable mobility and energy-efficient driving to be implemented through high-capacity transport. The use of e-vehicles also contributed to the energy transition.

KEY FIGURES

The new **100% electric** Aixpress bus line runs from north to south, travelling through a city centre in the PACA region on a **7.2km route** (comprising 19 stops). **80% of the route** consists of exclusive bus lanes.

- SERVICES Mechanical & Electrical
- SUBSIDIARY SPIE France
- YEAR 2020
- #MOBILITY, #ECO MOBILITY



CUSTOMER'S REFERENCE FOR ECO-MOBILITY

Eneco e-mobility



CUSTOMER CHALLENGES

The customer required an array of electric chargers and equipment installed. Becoming the best charge point operator in Benelux was also desired.

SPIE'S ANSWER

SPIE installed electric charging equipment, and provided maintenance works to the existing charging equipment.

CUSTOMER BENEFITS

SPIE contributed to the customer's ambitious goal of becoming the best charge point operator in Benelux.

FOCUS ON GREEN BENEFITS

The new electric vehicle stations aid in the energy transition as they are much greener than petrol alternatives, emitting less harmful carbon emissions into the atmosphere.

KEY FIGURES

2300 electric vehicle charging stations were installed for the customer by SPIE.

- ✚ SERVICES Mechanical & Electrical
- 📍 SUBSIDIARY SPIE Belgium
- 📅 YEAR 2017
- 🏷️ #MOBILITY, #ECO MOBILITY

CUSTOMER'S REFERENCE FOR ECO-MOBILITY

Ionity / EV High Power Charging Stations

CUSTOMER CHALLENGES

The customer required the industrial deployment of electric vehicle charging stations within several European countries.

SPIE'S ANSWER

SPIE provided a complete management plan. This included multiple site surveys, design works and installations. SPIE also commissioned the customer's high-power charging stations.

CUSTOMER BENEFITS

The customer received an operational network for electric vehicles deployed on time. The customer also benefited from having uniformed e-vehicles chargers within several countries.

FOCUS ON GREEN BENEFITS

This project supports e-mobility development and the energy transition in general. The installation of new charging points dramatically reduces the levels of CO₂ being released into the atmosphere as well as reducing vehicle noise.

KEY FIGURES

SPIE has installed over **170 charging stations** for the customer through just this project alone.

- ✚ SERVICES Mechanical & Electrical
- 📍 SUBSIDIARY SPIE Group
- 📅 YEAR 2019
- 🏷️ #MOBILITY, #ECO MOBILITY



Volvo Car Nederland BV



CUSTOMER CHALLENGES

The customer (located in Beesd) needed electrical installation works carried out to be able to extend the charging stations.

SPIE'S ANSWER

SPIE installed **24 electrical charging stations** across Beesd. This aided the customer in contributing to the energy transition.

CUSTOMER BENEFITS

The new charging stations were crucial in the customer's ability to deliver electric vehicles to Beesd. This is because any e-vehicles sold need a viable place to be charged.

FOCUS ON GREEN BENEFITS

This project was a key factor in the customer's producing and selling strategy. This further encouraged the population of the Netherlands to join in the energy transition and convert to electrical vehicles.

KEY FIGURES

SPIE installed **24 charging stations** across Beesd within the Netherlands.

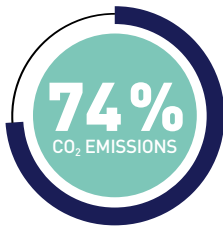
- 🔧 **SERVICES** Mechanical & Electrical
- 📍 **SUBSIDIARY** SPIE Nederland
- 📅 **YEAR** 2020
- 🚗 **#MOBILITY, #ECO MOBILITY**

Traffic Management

Optimising journeys and reducing air pollution

USING INNOVATIVE TECHNOLOGY TO ALLOW FOR TRAFFIC SYSTEMS TO FLOW SMOOTHER.

Managing a city's traffic system is essential to reduce unnecessary emissions being released into the atmosphere and improve occupant comfort in urban areas. Operators and regional governments must find the means to optimise traffic



Road journeys (cars, lorries, buses) represent around 74% of CO₂ emissions produced by the transport sector.

Source: International Energy Agency (IEA)

management and therefore limit the environmental impact of millions of vehicle journeys. Innovative and advancing technology can help limit and control traffic flow, which has immediate environmental benefits.

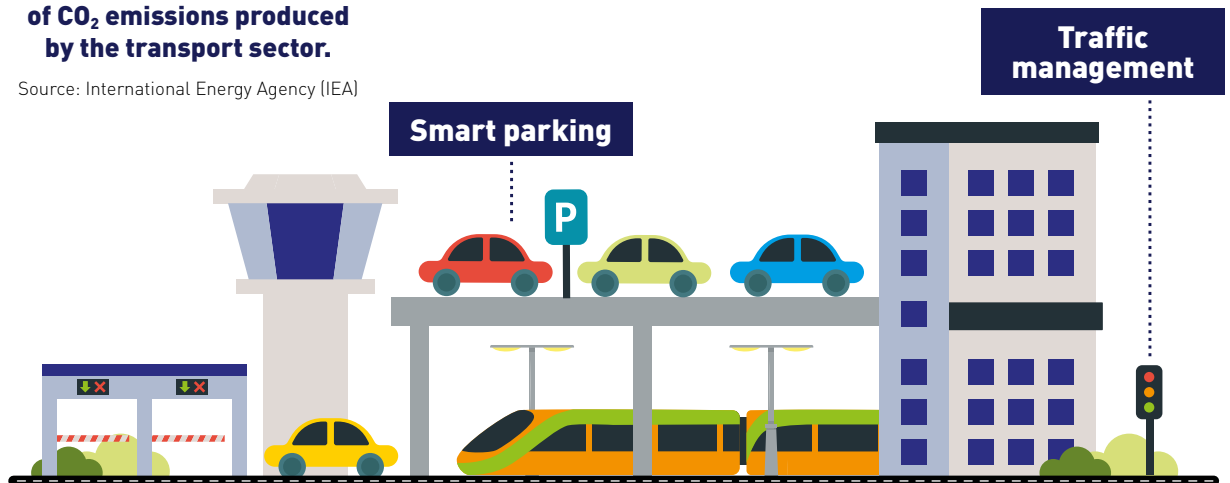
NEGATING CONGESTION IN URBAN AREAS

Ensuring that traffic jams and congestion are kept to a minimum is crucial to decrease the air pollution of an urban area and therefore, to reduce its carbon footprint. SPIE implements effective services and solutions that allow traffic systems to run smoother for cars, buses and tramways. Vehicle detection systems, smart parking, traffic prediction technology and carpool management are all SPIE solutions that not only decrease the carbon footprint of a city but improve

comfort for occupants, allowing for traffic to be more fluid and efficient.

REAL-TIME DATA IS TOO LATE

Traffic management systems that are based on real-time data do reduce congestion and unnecessary carbon emissions being released into the atmosphere, but they have their limits. SPIE utilises sensors and SMART technology such as decision-support algorithms to create a system that anticipates traffic between 15-20 minutes ahead of real-time data. This solution allows for operators to get a head start on how best to optimise journeys for occupants as well as prevent unnecessary traffic jams or congestion.



SPIE'S OFFER FOR TRAFFIC MANAGEMENT

AI SY



- © CUSTOMER TARGET Urban Transport
- ⚙️ SERVICES Mechanical & Electrical
- 📍 SUBSIDIARY SPIE Belgium
- 🚗 #MOBILITY, #TRAFFIC MANAGEMENT

CUSTOMER CHALLENGES

This offer is aimed at customers wanting to provide automatic recognition of buses and tramways. This offer provides bus and tramway loops, meaning the commercial speed is heightened.

SPIE'S ANSWER

SPIE can provide a selective vehicle detection system aimed at buses and tramways. This solution includes crosslight priority for public transport vehicles and railroad switch control for tramways.

CUSTOMER BENEFITS

Through this offer, the customer could gain better fluidisation of the public transport companies. This

is achieved through the creation of green waves for buses and tramways.

FOCUS ON GREEN BENEFITS

Due to buses no longer having to stop and start at traffic lights, fewer carbon emissions are released into the atmosphere. This results in a reduced carbon footprint for customers.

KEY FIGURES

More than **6500 loops** were installed in Belgium, France and the Netherlands. More than **5300 vehicles** have been equipped from 1990 through to 2020.

SPIE'S OFFER FOR TRAFFIC MANAGEMENT

Smart Parking Solutions



CUSTOMER CHALLENGES

Smart Parking Solutions (SPS) is aimed at customers looking to improve the user's experience for car parks. SPS focuses on reducing the time taken to find parking spots, easing the overall user experience.

SPIE'S ANSWER

SPIE can offer a complete solution that includes the installation of sensors, software and digital signage.

CUSTOMER BENEFITS

The customer can enjoy a quick and light installation, avoiding unnecessary business downtime.

FOCUS ON GREEN BENEFITS

Time spent in vehicles is reduced and therefore less time is wasted in searching for a parking spot. Because of this, SPS reduces both the customer and user's carbon footprint.

KEY FIGURES

Smart Parking Solutions allows for an estimated **30% reduction of the traffic** in the city that is generated by drivers looking for a parking space.

- © CUSTOMER TARGET Closed and overhead car park managers and operators
- ⚙️ SERVICES Mechanical & Electrical
- 📍 SUBSIDIARY SPIE Group
- 🚗 #MOBILITY, #TRAFFIC MANAGEMENT

CUSTOMER'S REFERENCE FOR TRAFFIC MANAGEMENT

SPIE's references in Belgium for AISY offer

CUSTOMER CHALLENGES

The customer needed to provide a system for automatic bus and tramway recognition. Heightening the commercial speed was also desired.

SPIE'S ANSWER

SPIE provided a selective vehicle detection system aimed at buses and tramways. This solution included crosslight priority for public transport vehicles and railroad switch control for tramways.

CUSTOMER BENEFITS

The customer gained better fluidisation of the public transport companies. This was achieved through the creation of green waves for buses and tramways.

FOCUS ON GREEN BENEFITS

Due to buses no longer having to stop and start at traffic lights, fewer carbon emissions are now released into the atmosphere. This resulted in a reduced carbon footprint for the customer.

KEY FIGURES

SPIE installed **452 needle orders, 6577 ground loops, 5349 mobile devices and 1327 priority passage orders** at traffic lights.



- 📍 **CUSTOMER TARGET** Urban transport
- ⚙️ **SERVICES** Mechanical & Electrical
- 📍 **SUBSIDIARY** SPIE Belgium
- 📅 **YEAR** 1990-2020
- 🏷️ **#MOBILITY, #TRAFFIC MANAGEMENT**

CUSTOMER'S REFERENCE FOR TRAFFIC MANAGEMENT

Val de Marne

CUSTOMER CHALLENGES

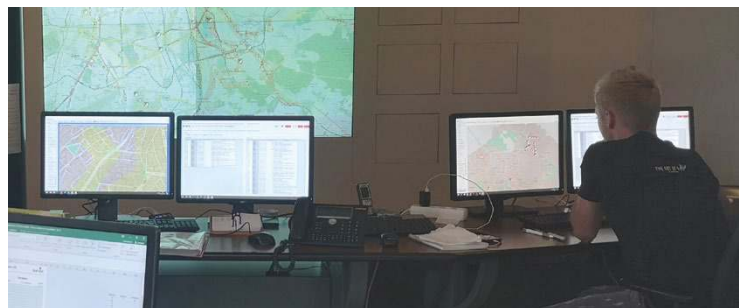
The customer observed the limits of a traffic management system based on real-time analysis. Despite the use of many sensors, the system wasn't able to anticipate decisions that were necessary to limit road saturation and thus, increased traffic pollution.

SPIE'S ANSWER

SPIE integrated traffic prediction into the decision-support algorithms. The team relied on a traffic regulation based on anticipated traffic (15-20 minutes in advance), rather than real-time to complete the works.

CUSTOMER BENEFITS

The economic model used for the solution attracted attention



from multiple regions as it made it possible to use already available information. There was no need to increase the number of sensors. Given the sensor maintenance costs, this was a considerable economic advantage.

- 📍 **SUBSIDIARY** SPIE France
- 📅 **YEAR** 2020
- 🏷️ **#MOBILITY, #TRAFFIC MANAGEMENT**

CUSTOMER'S REFERENCE FOR TRAFFIC MANAGEMENT

Mons, Liège, Mechelen, Braine l'Alleud, Bree



CUSTOMER CHALLENGES

The customer aimed to reduce cars that drive in towns to search for free parking places. Reducing traffic jams and giving **30 minutes of free parking** in shopping destinations was also desirable.

SPIE'S ANSWER

SPIE installed parking sensors and intelligent cameras on nearby streets.

CUSTOMER BENEFITS

An overview of the occupied and free parking places in the town was available to the customer. This resulted in new possibilities for car park enforcement.

FOCUS ON GREEN BENEFITS

Vehicles emit fewer carbon emissions due to the quicker parking of cars.

KEY FIGURES

More than **300 sensors** and over **20 different cameras** were installed.

- 📍 **SERVICES** Information & Communication Services
- 📍 **SUBSIDIARY** SPIE Belgium
- 📅 **YEAR** 2017-2020
- 📌 **#MOBILITY, #TRAFFIC MANAGEMENT**

SPIE'S INNOVATION FOR TRAFFIC MANAGEMENT

Carpool lane management

CUSTOMER CHALLENGES

This innovation would benefit customers looking to address the phenomenon of motorists being alone in their vehicles. Customers would want to offer a high-performance mobility solution capable of encouraging changes in behaviour.

SPIE'S ANSWER

SPIE provides a decision-support tool, based on both real-time data and traffic forecasts via artificial intelligence engines. The forecasts enable the customer to project future traffic **over a 6, 15 and 30mn** horizon and also proposes early openings of the carpool lane, delaying its closure.

CUSTOMER BENEFITS

The analysis of the data collected and the recommendations made will enable the metropolitan area to fine-tune its carpooling lane operation policy. The customer would also contribute to a more efficient sharing of infrastructure between the various users.

FOCUS ON GREEN BENEFITS

Carpool lane management improves air quality, reduces noise pollution, emissions and energy consumption. This innovation exceeds particularly through the implementation of a decision support tool aimed at optimising the use of carpooling lanes through a dynamic operation.



KEY FIGURES

Carpool lane management forecasts traffic at **6, 15 and 30mn**.

- 📍 **CUSTOMER TARGET** City and motorway authorities
- 📍 **SERVICES** Information & Communication Services
- 📍 **SUBSIDIARY** SPIE France
- 📅 **YEAR** 2020
- 📌 **#MOBILITY, #TRAFFIC MANAGEMENT**

Remote Working

Benefiting employers, workers and the environment

REMOTE WORKING HAS SHOWCASED HOW EFFECTIVE AND BENEFICIAL IT CAN BE EVER SINCE THE COVID-19 PANDEMIC CHANGED HOW WE WORKED.

Remote working is an arrangement in which employees do not commute or travel to a central place of work, such as an office building, warehouse, or plant. This cuts out daily journeys made for work, dramatically reducing the carbon footprint of both the employee and the organisation they are employed at. During the COVID-19 pandemic, a large number of workers shifted to working remotely. This contributed to decreasing global CO2 emissions significantly during the first few months of lockdown in 2020.

CREATING EFFICIENT AND COMFORTABLE CONDITIONS

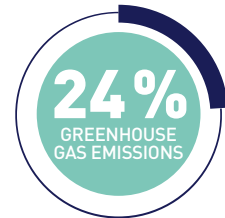
For remote working to have beneficial results, organisations need to provide their workforce with the means, equipment and necessary technology, if they are to expect efficient and comfortable

working. SPIE provides unified networking, communications expertise and remote solutions such as collaborative workspaces, video conferencing, instant messaging, corporate social networks and merged landline/mobile telephone systems. These solutions meet operational challenges head-on, facilitating remote working anywhere, anytime and from any device.

OFFICES ARE STILL RELEVANT

Whilst working from home is an enticing benefit to employees, management and organisations, flexible working offices provide the opportunity to attend the office on a part-time basis if the employee wishes to do so. SPIE provides hot

desks, workspace management and booking systems via mobile interfaces that allow for work flexibility, giving employees more choice, allowing them to have a healthier work-life balance as a result.



Transport is still responsible for 24% of the entire planet's greenhouse gas emissions.

Source: International Energy Agency (IEA)



Remote working



CUSTOMER CHALLENGES

This offer is aimed at customers looking to decrease their carbon impact by reducing the individual transport of their employees and encouraging remote working where possible.

SPIE'S ANSWER

SPIE supports customers by extending the use of their work environment and offering solutions for workstation devices. SPIE can also offer solutions for Unified

Communication and Collaboration (UCC), networks, infrastructures management, helpdesks as well as cybersecurity.

CUSTOMER BENEFITS

The customer can offer employees flexible, remote solutions that contribute to a smooth workflow and eliminate travel costs.

FOCUS ON GREEN BENEFITS

SPIE's remote working offer reduces home-to-work travel time, meaning

fewer carbon emissions are released into the atmosphere as transport (such as buses and cars) are not being utilised.

📍 **CUSTOMER TARGET** Customers with remote workers

🛠️ **SERVICES** Information & Communication Services

📍 **SUBSIDIARY** SPIE Group

🌐 **#MOBILITY, #REMOTE WORKING**

SPIE'S OFFER FOR REMOTE WORKING

Virtual meetings



CUSTOMER CHALLENGES

SPIE's virtual meetings offer is aimed at customers who are looking to decrease their CO₂ impact through transport. This offer benefits customers looking to reduce meeting focused journeys that include public transport, car and even air travel.

SPIE'S ANSWER

SPIE helps customers to set up remote working solutions to accommodate virtual meetings.

CUSTOMER BENEFITS

The customer would save time and money by not travelling from one meeting to another. The customer would also be able to offer employees a more time-effective and flexible approach to attending meetings.

FOCUS ON GREEN BENEFITS

The fewer journeys made for meetings would decrease the number of carbon emissions that

are released into the atmosphere. This further reduces the customer's carbon footprint.

-
- ✦ **SERVICES** Information & Communication Services
 - ◆ **SUBSIDIARY** SPIE Group
 - 📍 **#MOBILITY, #REMOTE WORKING**
-

Workspace management



CUSTOMER CHALLENGES

This solution aims to provide customers who are looking to reduce their carbon footprint through workspace management with energy-efficient solutions. This solution optimises work and business trips and offers workplace alternatives other than employee homes.

SPIE ANSWER

The solution allows employees the option to reserve a working position in a space appropriate to their needs, via a mobile interface.

SPIE utilises vacant office spaces to create an optimised and open working environment for all employees.

CUSTOMER BENEFITS

The customer's employees can work remotely within the nearest office branch. This results in better working conditions for employees, reduced travel times and flexible meetings.

FOCUS ON GREEN BENEFITS

This solution reduces travel times and distances by offering an

alternative between the office and the home. The project allows for SPIE to be a visible player in the face of current climate emergency issues.

- ✦ SERVICES Information & Communication Services, Technical Facility Management
- ✦ SUBSIDIARY SPIE France
- ✦ YEAR 2020
- ✦ #MOBILITY, #REMOTE WORKING



OFFER

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About SPIE

SPIE is the independent European leader in multi-technical services in the areas of energy and communications. Our 45,500 employees are committed to achieving the energy transition and digital transformation alongside our customers.

SPIE achieved in 2020 consolidated revenues of €6.6 billion and consolidated EBITA of €339 million.



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