

# Power Generation and Distribution Planning



## Safe and sound

The decisions you make during the planning phase of a project will have an enormous impact on its ultimate success. We can work with you at every stage to support your strategy and implementation, ensuring that safety and a successful outcome go hand in hand.

## The Future of Energy – supporting you in transitioning to renewable energy sources

As the global power generation industry continues to move away from the use of fossil fuels and in view of the shift of nuclear power generation to non-OECD-countries, our extensive range of services can help you transition to a sustainable long-term business model based on renewable power generation, including adaption of transmission and distribution infrastructure.

### Environmental Advisory and Services

Our environmental consultants and auditors look not just at compliance, but also at how your company can increase efficiency. If your sector requires environmental appraisals, assessments or permits, our experts are there to help.

### Environmental Technical Advisory and Inspection

Providing recommendations with a view to achieving conformity and/or efficiency recovery, DEKRA's experts offer you a wide range of technical support, advice, training and quality assurance services related to environmental pollution caused by your industrial assets and buildings (storage equipment and pipelines in industrial plants and buildings, etc.).

### Expediting, Shop and Vendor Equipment Inspections (Electrical, Pressure Vessels, Machinery)

Acquiring new equipment and machinery can be time-consuming costly and risky. We carry out inspection and expediting services at your supplier's premises, verifying the quality of manufactured products or equipment and time of delivery.

### Green Energy Power Measurement and Technical Advisory

DEKRA experts can provide you with geological profiles and power measurement data (solar and/or wind) to choose the best possible location for the renewable energy parks already during the feasibility and design stages. This equipment is later used to confirm the reliability of the data versus real production.

## Health, Safety and Environment (HSE) Management System

We help to ensure your ability to protect the health and safety of your employees as well as the environment. ISO 50001 improves energy efficiency with an energy management system, while ISO 14001 certifies your environmental management system to demonstrate your sustainable operation.

## Health, Safety and Environmental (HSE) Strategy and Management

Our HSE strategy and management services help you design a system, select the appropriate strategies and implement policies and procedures that keep your workforce healthy. Our experts bring a wealth of experience, innovative tools and a passion for HSE to every project.

## Health, Safety and Environmental (HSE) Management Training and Examination

Participants learn how to set up an energy and environment as well as health and safety management systems. Our accredited personnel certification services span a wide range of requirements generally recognized on the international stage. Training and certification, both accredited and non-accredited, are available for ISO 14001 and ISO 50001 and can be customized for your requirements.

## International Sustainability and Carbon Certification (ISCC)

ISCC certification is applicable to the production of biofuels and bioenergy at every level of the supply chain; starting with farmers and agricultural traders, followed by oil and sugar factories, biodiesel, ethanol plants and traders of biofuels.

## NDT Advisory

DEKRA is a leading global provider of non-destructive testing (NDT) across many industries. NDT is helpful to avoid stoppage and accidents by assessing the status and risk linked to the material. Standard and advanced NDT as well as mechanized inspection solutions are used to locate surface and subsurface flaws and defects and determine their size.

## Supply Chain and Second-Party Audits for Health, Safety and Environment (HSE)

Our comprehensive audits give you the opportunity to evaluate and ensure environmental as well as process integrity and security throughout the entire supply chain. Our services include initial supplier audits and continuous monitoring, as well as helping you understand the complex international, national and local regulatory requirements. We provide recognized services to help you identify reliable



sources when developing new products or finding alternative suppliers for parts currently in use. We assist you in reducing costs, investigating quality issues, controlling corrective actions and performing supplier maintenance audits.

## Sustainability Advisory and Services

Focusing on sustainable practices, we evaluate policies and processes. Our experts show you how to maximize sustainability with solutions that answer your company's needs. Whether compliance, education or corporate sustainability management, we are equipped to provide innovative, tailored solutions that help you reach your sustainability goals.

## Technical Advisory linked to Green Energy

As renewable energy technology continues to advance and grow in popularity, wind farms as well as solar power plants are becoming increasingly common. DEKRA provides technical advisory for both these kinds of energy production facilities.

## Testing and Certification for Equipment

At DEKRA, we assess and certify power generation, transmission and distribution equipment, including a wide variety of products such as generators, turbines, inverters, reactors, switching installations, cables, plugs and insulator sets, and many more. We are also experts in testing and certifying solar panels, wind turbines and hydrogen and energy storage plants.

## Asset Inspections and Maintenance – working with you to minimize downtime and maximize productivity

Benefit from our experience in process optimization to achieve leaner, more productive operations. By developing strategies to minimize downtime, we can help give your business the agility and robustness needed to ensure lasting success.

### Design Verification of Assets and Equipment

All equipment manufacturers (lifting, hoisting, machinery, electrical, pressure, etc.) must ensure that their products fulfil essential safety requirements set out in the relevant directives before signing the declaration of conformity and placing the product on the European market. We help manufacturers fulfill the requirements of the mandatory assessment.

### Electrical Technical Advisory and Inspection

Our experts' extensive knowledge and experience with electrical installation and lightning protection processes makes us a professional and trusted advisor in this field. Our specialists are ready to provide you with comprehensive technical support on all phases of electrical installation and lightning protection.

### Environmental Technical Advisory and Inspection

Providing recommendations with a view to achieve conformity and/or efficiency recovery, DEKRA's experts offer you a wide range of technical support, advice, training and quality assurance services related to environmental pollution, storage equipment and pipelines in industrial plants and buildings.

### Fire Protection Management and Advisory

Our fire protection experts can help you understand and address the fire risk in your organization through assessments, consulting services, fire prevention officers and more.

### Health, Safety and Environmental (HSE) Strategy and Management

Maintaining strong HSE management is the most efficient way to ensure the well-being of your staff and thus your business. Our HSE strategy consultants help companies design a roadmap for a comprehensive HSE policy that leads to improved outcomes for safety and beyond through reduced hazard exposures, accident-free work, a healthy workspace and protections for personnel. In addition to addressing compliance issues, our experts assist you in reducing environmental impact, creating a supportive culture and promoting performance improvements.

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## Process Safety Consulting

Whether you are carrying out a safety review, implementing safety audits or ensuring compliance with standards or regulations, we can help. We provide impartial advice and recommendations for risk identification, analysis, prevention and management of fires, explosions and accidental chemical releases whenever you need it.

## Process Safety Competence Development

The DEKRA Process Safety Academy provides competence development programs in all areas of process safety. We incorporate various learning methodologies, including courses and events open to the general public, tailored in-house courses, e-learning and computer-based training and skills development programs.

## Remote and/or Online Monitoring and Digital Optimization Service

We offer services for remote and online monitoring to complement basic services for inspection. Your main advantage will be the ability to get information about trends and foresee the potential issues, helping you prevent downtimes, increase

efficiency and save costs. In addition, DEKRA uses state-of-the-art data management and analysis solutions to optimize workflows and processes.

## Work Safety Advisory

Our workplace safety consultants help you formulate effective health and safety management plans and adopt measures that yield positive results. Our experts provide support in specific high-hazard contexts, such as work environments, facilities, jobs and fields that involve unusual or special risks to guide you in understanding your organization's priorities regarding health and safety, implementing the right policies and practices and investing wisely in the well-being of your employees.

## Work Safety Risk Assessments

Knowing your risks is the first step to protecting your workforce and other individuals from unhealthy exposure as to harmful substances and influences well as accidents. Our occupational safety experts ensure that your risk assessment complies with the relevant regulations, putting you on a secure legal footing in your interactions with authorities, professional associations and insurers.

## Digital Processes – from testing to cyber security, DEKRA is at your side in developing robust Industry 4.0 operations

The only way to effectively meet the challenges of digitalization is to stay ahead of them. DEKRA enables you to implement digital solutions into your processes in order to work more efficiently, with a higher profitability and more safety and security. From IT consulting and data protection to cyber security and innovative digitized solutions for operational processes, DEKRA can support you in becoming fit for the future.

## Cyber Security and Data Protection

With the continual rise in cybercrime and data security breaches, IT security has become a key challenge for all technology users today. From network security to penetration testing and risk assessment, our 360° services are based on a comprehensive analysis of your IT processes. Working from that basis, we can help design and implement security systems, provide an information security officer, or use behavioral technology to optimize your organization's cyber security, including Internet-of-things (IoT) and Machine-to-Machine (M2M) networks.

## Cyber Security Certification

Third-party cyber security certification provides the recognized and independent proof you need to prove that your products and processes comply with globally recognized security requirements and standards.

## Digital Health, Safety and Environmental (HSE) Solutions

How we seek and use information about safety is critical to our ability to achieve results in safety. DEKRA delivers innovative IT-solutions and platforms which enable organizations to manage, control and understand their data and uncover relevant trends and gain insights in order to identify areas of improvement and risk minimization. Our data collection and analytics solutions pair the experience and knowledge of our research professionals with proven tools and methodologies.

## Functional Safety Consulting

Most industrial processes today rely on a framework of Safety Instrumented Systems (SIS) to prevent hazardous scenarios for people, the environment and facilities. With our functional safety consulting services, we carry out Functional Safety Assessments (FSA) to ensure that your SIS includes the required Safety Instrumented Functions (SIFs) and that these are effective and reliable and maintain the required Safety Integrity Levels (SILs) through all the Safety Lifecycle.



### Information Security Awareness Training

This face-to-face information security awareness training is intended to sensitize your employees and enable them to precisely identify and prevent cyber and social engineering attacks. The aim of this course is to inform employees of current threats, show them how you are equipped to protect your assets, and teach staff how to react in actual risk situations.

### Information Security Training and Examination

To inspire trust in existing customers and attract new potential customers, ensuring information security – including the IT systems, components and processes involved – is essential. Information security auditor training courses equip you with the knowledge and skills to assess your organization's information security management systems in accordance with ISO 27001. DEKRA offers its expertise as an objective and independent certification body for a wide range of personnel certification programs customized to the client's needs.

### Information Security Management System (ISMS)

Helping you protect sensitive data and secure your IT systems, components and processes to meet today's cyber security challenges with certification in accordance with ISO 27001, ISO 27701, ISO 20000-1.

### Internet of Things (IoT) and Machine-to-Machine (M2M) Security Testing

We work across multiple security evaluation markets for IoT and M2M devices to guarantee that your products meet all the necessary requirements. From testing of wireless protocols, integrated wireless modules and firmware analysis, to mobile applications, web services and final products. DEKRA specializes in certifying products and confirming their compliance in the full ecosystem of IoT and M2M.

### Product Penetration Testing

Product Penetration Testing shows the risks associated with an attack for connected devices. It is more complex than the traditional penetration testing, as hardware, software and communication protocols are involved. DEKRA evaluates a large attack surface and a wide array of attack vectors during the assessment to identify risks, vulnerabilities and security flaws in connected devices.

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### Security Evaluations

DEKRA's cyber security engineers have extensive knowledge accredited by most recognized ethical hacking certifications related to penetration testing OSCP (Offensive Security Certified Professional and/or CEH). Our lab is accredited to carry out the most demanding private certification programs demanded by our clients.

### Second-Party Audits for IT and Cyber Security

Our comprehensive audits let you evaluate and secure your IT and cybersecurity processes. Our services include initial audits and continuous monitoring, as well as helping you understand the complex international, national and local regulatory requirements.

## Added Value – innovative services to enhance operational performance

With our business continuity, business resilience and safety management services, we bring added value to your operational business to increase the long-term development opportunities of your business.

### Occupational Health and Safety Management

To minimize operational risks for employees, ISO 45001 stipulates a number of requirements for comprehensive, modern occupational health and safety. Our experts certify your occupational health and safety management system according to ISO 45001 and consider all aspects of occupational safety.

### Business Continuity Management System

Business Continuity Management (BCM) according to ISO 22301 enables you to quickly resume your business activities after critical events. The international standard provides the appropriate framework and bundles the requirements for robust, effective business continuity management.

### Business Resilience Impact Assessment (BRIA)

We provide a multilevel impact assessment to evaluate and strengthen business resilience. Effective business resilience requires a strong corporate "immune system" capable of withstanding disruptive global events such as economic fluctuations, political unrest, natural disasters or infectious diseases. Our experts help you implement and maintain reliable strategies to overcome any challenge.

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On the safe side.