SECURING THE SUPPLY OF ENERGY

WWW.RAMBOLL.COM/ENERGY
PLANNING & URBAN DESIGN
Ramboll's holistic approach to urban development encompasses strategy, planning and world-class technical design services and is based on an integrated multidisciplinary skills base. We have an extensive track record working with a number of the world's largest cities to create livable, sustainable, and healthy urban areas.

Read more at: www.ramboll.com/planning-and-urban-design

WATER
Water is essential to life and one of our most precious resources. Working with municipalities, utilities, and industrial clients, Ramboll draws on proven multidisciplinary expertise to manage the most challenging water resources, wastewater, and storm water issues. We integrate treatment process selection and engineering, operational services, and regulatory management and planning to deliver innovative solutions that benefit both industries and society.

Read more at: www.ramboll.com/water

ENVIRONMENT & HEALTH
As a globally recognized environmental and health consultancy, we have earned a reputation for technical and scientific excellence, innovation and client service. Advances in science and technology and evolving regulatory, legal and social pressures create increasingly complex challenges for our clients. We evolve to keep pace with these changes - by adding new services, contributing to scientific advances or expanding geographically.

Read more at: www.ramboll.com/environment

TRANSPORT
Mobility fuels economic and social development and with 50% of the world’s population now living in urban areas, efficient and reliable transport systems are essential.

To meet this need, Ramboll has been working on some of the world’s largest, most innovative infrastructure projects and is the leading consultancy in the Nordic region. We create value for transport authorities, contractors and local authorities by providing multidisciplinary technical excellence and minimising resource usage.

Read more at: www.ramboll.com/transport

ENERGY
Security of supplies, climate change, energy efficiency and resource scarcity are top priorities on the global agenda. The key challenge is to plan and implement a sustainable and affordable energy system that is capable of meeting the growing demand for energy.

As a consultancy, Ramboll is at the forefront of addressing these issues with world-leading competencies in offshore wind, waste-to-energy, thermal power and district energy. Read more at: www.ramboll.com/energy

BUILDINGS
Buildings form a fundamental part of our lives by shaping our communities and daily activities.

For these reasons, Ramboll’s design philosophy is to always make room for the human experience. As one of Europe’s top 3 buildings designers with decades of experience in the global market, we create visionary, sustainable and award-winning buildings that improve life for users and enhance the surrounding landscape.

Read more at: www.ramboll.com/buildings

OIL & GAS
To make it in today’s fast-paced and competitive oil and gas market, companies depend on advanced technical solutions that combine economic efficiency with stringent health, safety and environmental (HSE) safeguards during the production and distribution processes.

These elements form an integral part of Ramboll’s independent and multidisciplinary consultancy service, which covers the entire project cycle. We excel in onshore consultancy and have designed offshore structures for industry giants such as Maersk Oil, DONG Energy and Statoil since the 1970s.

Read more at: www.ramboll.com/oil-gas

COUNTRIES WITH PERMANENT OFFICES
NORDIC REGION: Denmark - Copenhagen, company head office, Finland, Greenland, Norway, Sweden
EUROPE: Belgium, Cyprus, France, Germany, Italy, Netherlands, Poland, Romania, Russia, Spain, Switzerland, United Kingdom
MIDDLE EAST: Kingdom of Saudi Arabia, Qatar, United Arab Emirates
AFRICA: South Africa
ASIA-PACIFIC: Australia, China, India, Indonesia, Malaysia, Philippines, New Zealand, Singapore, Thailand, Indonesia
THE AMERICAS: Brazil, Canada, Mexico, USA
AFRICA: South Africa
Ramboll has more than 45 years of experience in the planning, design and implementation of energy solutions.

Our energy team provides expertise on the full spectrum of technologies and all parts of the value chain from production over transmission to distribution.

Our special competences lie within offshore wind, waste-to-energy, district energy and thermal power. Within these four areas, we provide a one-stop shop of services based on unique know-how and experience gained from a large number of projects, unmatched by other consultancies.

- More than 65% of the world’s offshore wind turbines rise from foundations engineered by Ramboll
- We have worked on waste-to-energy projects in 40 countries, providing consulting services for 130 new units and retrofits
- We have designed and constructed more than 90 major power plants, including some of the most energy-efficient plants in the world, and been instrumental in the ongoing conversion from fossil fuels to biomass
- We have provided consultancy services to more than 200 district energy systems worldwide, ranging from small village schemes to city-wide transmission networks.

ABU DHABI WASTE-TO-ENERGY FACILITY
Architectural vision of waste-to-energy facility in Abu Dhabi, United Arab Emirates. The facility will annually process 1 million tonnes of waste and will play a key role in achieving the country’s 80% landfill diversion target.

ANHOLT SUBSTATION, DENMARK
The substation of an offshore wind farm is one of the core elements for transforming energy from wind turbines to the electrical grid. Ramboll provided the complete design of the Anholt substation.
OUR APPROACH

WE TRANSFORM COMPLEX CHALLENGES INTO SOLUTIONS THAT ARE FUTURE PROOF, ENERGY EFFICIENT, COST EFFECTIVE AND PRACTICAL

Securing the supply of energy
The projects that we carry out for our clients typically provide the overall society benefit of securing the supply of energy, reducing climate impact, improving energy efficiency and countering resource scarcity.

Reducing the cost of energy
We place a strong focus on improving performance and reducing costs in all phases of our projects, from capital to operation and maintenance costs.

Optimum solutions
For our clients, working with Ramboll means that they will benefit from our long-term experience and know-how, and together we can transform their challenges into excellent solutions.

Scandinavian roots
When working outside Scandinavia, we often use Nordic best practice solutions as inspiration, while naturally considering the local factors applying to the project in question. Ramboll has offices in 21 countries around the world - thereby combining global knowledge with a local presence.

SYDVÄSTLÄNKEN, SWEDEN AND NORWAY

The purpose of the Sydvästlänken overhead transmission line is to increase the capacity, robustness and flexibility of the transmission system in Southern Sweden and between Sweden and Norway. Ramboll is the project manager of a 400 kV substation in Barkeryd, connecting the northern and southern parts of the transmission line (Image: Svenska Kraftnät, Thomas Wiklund).
ENERGY MASTERPLAN FOR THE GREATER MANCHESTER AREA, UK

To support carbon and energy policy commitments both locally and nationally, the Greater Manchester Heat Network Programme is being developed to facilitate the efficient, cost-effective delivery of heat networks across the ten authorities of Greater Manchester. Ramboll was commissioned to develop a district heating energy masterplan and provide a basis for decisions about specific projects to be initiated.

OUR SERVICES

WIND ENERGY
WASTE-TO-ENERGY
THERMAL POWER
DISTRICT ENERGY
POWER TRANSMISSION
ASSET MANAGEMENT
RENEWABLE ENERGY
ENERGY STRATEGY
How We Work

Project Management Excellence, Deep Technical Insight and Independence of Suppliers

Sarepta Onshore Wind Project, Norway
With up to 250 wind turbines to be located along the coast of Mid-Norway, the country is one step closer to reaching its renewable energy targets for 2020. Ramboll is the Owner’s Engineer for the procurement of wind turbines and Balance of Plant (Image: Sarepta).

BioGas Tønder, Denmark
So far the largest biogas plant in the Nordics has been the Maabjerg BioEnergy facility in Denmark. Now this record is about to be broken by a new plant to be located in Tønder in the south of Denmark, and also this time Ramboll provides engineering support. The plant will have the capacity to receive 930,000 tonnes of biomass and will produce 68.5 million m³ of biogas a year (Visualisation: Tegnestuen Mayenst, Kolding).

From idea to operation
We assist our clients on all aspects of a project, ranging from planning to engineering design, to long-term operation and maintenance.

Strategic advice and hands-on experience
We typically act as the Owner’s/developer’s Engineer or lead advisor on multi-million EUR energy investment projects, assisting our clients with project management, technical expertise and engineering.
Unlike most other consultancies, we work both as strategic advisors and are deeply involved in the implementation phase of our projects, drawing on our hands-on experience from the operation and maintenance of energy facilities.

Trusted advisor
We seek long-term relationships with our clients and have worked for some of them for more than 30 years.
WORLD CLASS PROJECTS

BORKUM RIFFGRUND 1 OFFSHORE WIND FARM, GERMANY
The monopile has been the preferred foundation concept in most offshore wind projects, but moving wind farms to deeper water with larger turbines requires alternative bottom-mounted foundation concepts. Now, the first full-scale prototype jacket with suction buckets has been installed as a proof-of-concept. Ramboll has performed the innovative structural design of both the jacket foundation and suction buckets, a technology previously used for offshore oil and gas platform foundations, which has several economic and environmental advantages.

COPENHILL, DENMARK
Copenhill will be one of the most efficient waste-to-energy facilities in the world. As the Owner’s Engineer, Ramboll has assisted in the planning and implementation of the EUR 469 million facility, which will produce 20% more energy per tonne of waste, compared to the existing plant. The 560,000 tpa facility will be fully integrated into the urban setting, surrounded by high-end flats, and will feature recreational facilities on the roof (Illustration: Amager Ressourcencenter).
WORLD CLASS PROJECTS

DISTRICT COOLING IN MECCA, SAUDI ARABIA
The King Abdul Aziz Road Project includes two roads, a metro line, a grand mosque and over 200 plots for houses along a new pedestrian pathway running from the city outskirts to the Grand Holy Mosque. The district cooling system that will ensure a comfortable journey through Mecca for the millions of pilgrims during Hajj will be one of the largest in the world. Ramboll is carrying out preliminary studies, conceptual design and procurement of the system.

COPENHAGEN DISTRICT HEATING SYSTEM, DENMARK
Copenhagen’s district heating system is one of the largest in the world, and the associated networks supply low-carbon heat to a city of one million residents. For more than 30 years, Ramboll has been the Metropolitan Copenhagen Heating Transmission Company’s main consultant, providing consultancy assistance during all stages of the project from planning and design to operation and maintenance of the city-wide system.

AVEDØRE POWER PLANT, DENMARK
Ramboll is assisting DONG Energy as the Owner’s Engineer in converting power units from coal to biomass. Ever since the conception of the first unit in the 1980s, Ramboll has participated in the development of the plant’s continuous and flexible adaptations to new fuel types. Today, the plant is a state-of-the-art, multi-fuel producer of low-carbon power and heat, and one of the most energy-efficient plants in the world.
Ramboll is a leading engineering, design and consultancy company employing 13,000 experts. Our presence is global with a strong representation in the Nordics, UK, North America, Middle East and Asia-Pacific. We constantly strive to achieve inspiring and exacting solutions that make a genuine difference to our customers, end-users and society as a whole. www.ramboll.com