

energy understoodSM

- Strategic consulting
- Regulatory
- Natural resources
- Engineering
- Alternative delivery
- Construction management

Development of energy projects requires a diverse approach to meet project objectives in today's uncertain landscape. We understand the inherent issues our clients face and the need to make sound decisions. HDR's wide array of expertise and "national expertise delivered locally" approach result in flexible, customized solutions unique to your community for even the most complex energy projects.

Sound decisions made through understanding the business, your risk, and technology.

Substation experience includes rural, urban and industrial sites through 500 kV. Specialty services—such as protective relay applications and substation integration and automation design and programming—are our hallmarks.

National leaders in **wind** siting, permitting, engineering and foundation design, resulting in 20,000 MW of project experience throughout North America

We work to develop an understanding of risks and a strategy to site, permit, construct and operate **offshore energy** projects—even in the most complex arctic environments. Our expertise includes:

- Offshore wind
- Submarine transmission cable
- Wave/tidal/deep current
- Ocean energy conversion
- Ports, harbors and LNG facilities

A **hydropower** industry leader with specialized technical expertise to include regulatory, environmental and engineering disciplines. Our participation in over 110 project licensings over the last 10 years alone has represented more than 11,000 MW installed hydro capacity.

Renewable fuels experts offer innovative planning and cutting edge technologies that convert waste solids and gases into renewable energy.

Technical experts—many with decades of hands on **pumped storage** experience—work to identify needs, develop work plans and implement best-value, best-engineered solutions.

Energy supply and management solutions for **industrial and institutional** applications. Projects range from innovative solar and fuel cell installations to waste-heat applications, including industrial use of steam, hot and chilled water, and district heating systems. Our **LEED® Consulting** professionals work to achieve successful LEED green building certification.

Premier firm specializing in **fisheries and aquatic resources**. We offer aquatic ecosystem restoration, fisheries assessment, fish facility, fish passage and barrier solutions.

HDR provides economic, financial and risk analysis using its **decision economics** tools such as Risk Analysis Process (RAP) and Sustainable Return on Investment (SROI) methodology to assist clients in developing comprehensive decision support models.

Public outreach teams with a proven track record of tailoring stakeholder outreach to project, client and community needs.

Expertise in the management of **water resources, treatment and water quality**. Water rights, supply, and Clean Water Act professionals understand the complex regulations surrounding power generation, offering sustainable solutions and technologies.

An industry leader in **electrical transmission** resulting in thousands of miles of transmission lines over a wide range of terrain and structure types. We frequently represent our clients in the coordination of joint-system planning studies performed by other utilities and agencies. Reputation as a successful project integrator for environmental, permitting, right-of-way and engineering disciplines.

We offer unique and comprehensive expertise that is required to incorporate proprietary **solar energy** technology into a functioning power plant. Of added value is our understanding of other **energy storage** and **generation technologies** to support variable and intermittent solar energy.

Owner's engineers and program managers work to ensure that all factors critical to project success have been addressed as part of a clear strategy for project delivery. Identifying all elements of the project scope and eliminating the owner's risk regarding schedule, price and performance are essential.

Power plant engineers offer expert solutions for issues from traditional power plant operation to new construction and facility redesign. From owner's engineer to fuel transportation, from pollution control to plant modifications, HDR has a 90-year legacy in helping clients design, build and operate efficient and economical power plants.