



POWER EXPERIENCE



QUICK FACTS

- Founded in 1917
- 10,000 employee-owners
 - Approximately 1,000 in the Power Program
- More than 200 locations worldwide
- Ranked No. 8 among Engineering News-Record's 2017 "Top 500 Design Firms"
- Projects in all 50 states and in 60 countries



POWER PROGRAM

Power
Generation

Hydropower

Power
Delivery

Renewables

Consulting

Strategic
Services

Water-
Energy



A Comprehensive Suite of Services for Every Phase of Your Project

We work closely with you, guiding you through the known and unfamiliar to develop infrastructure needed to power the world.

And we do it all with a keen focus on societal, economic and environmental impacts.



01 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.

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

03 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.

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

05 **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.

06 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.

07 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.

08 An industry leader in **electrical transmission** resulting in thousands of miles of transmission lines through 500 kV resulting in a wide range of terrain and structure types.

09 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.

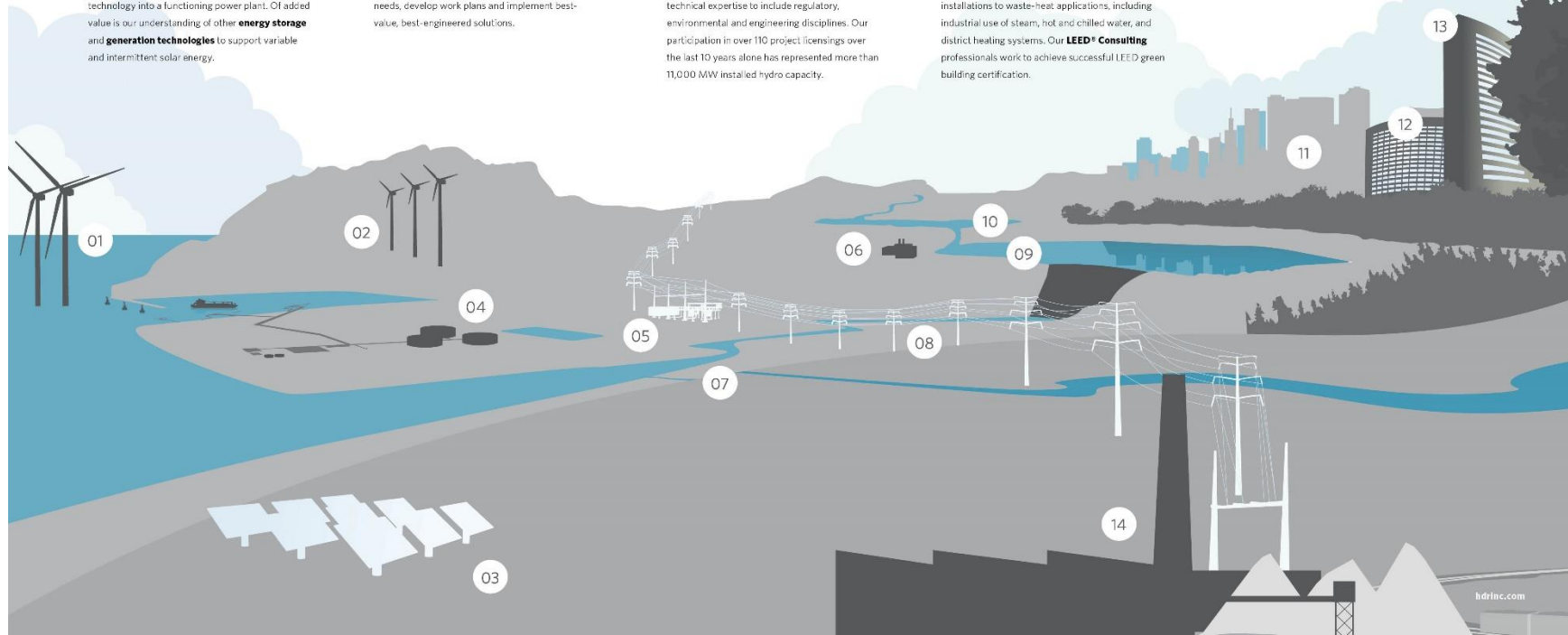
10 Premier firm specializing in **fisheries and aquatic resources**. We offer aquatic ecosystem restoration, fisheries assessment, fish facility, fish passage and barrier solutions.

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

12 **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.

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

14 **Power plant engineers** offer expert solutions for issues from traditional power plant operation to new construction and facility redesign. HDR has a 90-year legacy in helping clients design, build and operate efficient and economical power plants.



TOP POWER CLIENTS

- Duke Energy
- Bonneville Power Administration (BPA)
- Brookfield Renewable Energy Group
- Alliant Energy
- Detroit Edison
- NorthWestern Energy
- Pacific Gas & Electric (PG&E)
- Sunflower Electric Power Corp.
- Tennessee Valley Authority (TVA)
- Xcel Energy





HOLLAND BPW - HOLLAND NATURAL GAS PLANT

Michigan



WE ENERGIES– OAK CREEK & ELM ROAD POWER STATIONS

Wisconsin



XCEL ENERGY— POWER PLANT MODIFICATIONS

Minnesota & Colorado



PG&E – STRATEGIC ALLIANCE HYDROPOWER CONTRACT

California



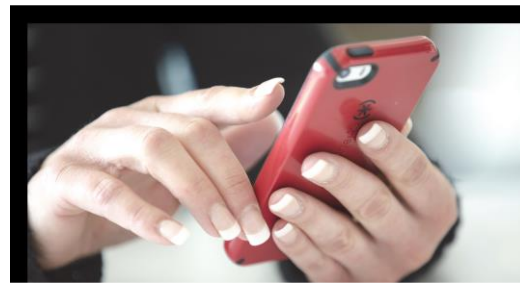
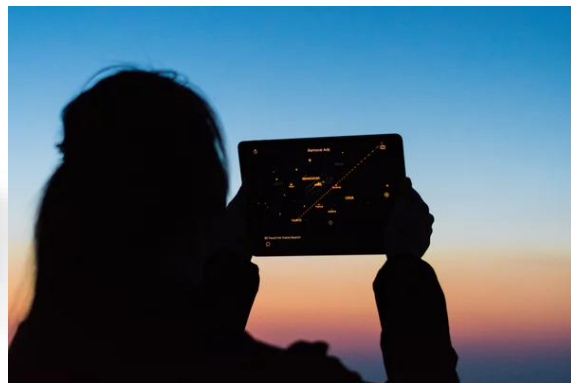
DUKE ENERGY— BRIDGEWATER HYDROPOWER STATION

North Carolina



BPA – TRANSMISSION SYSTEM OWNER'S ENGINEER

Washington, Oregon, Idaho



Strategic Communications

To help your project achieve public, political, and agency acceptance by leading with proactive communications and creative engagement.







We're Building A New Type of Interchange

— TEST DRIVE IT AT —

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THE LIFE
PIONEER
CROSSING
415 26 REDWOOD AVE

