



CAREER PROFILE

Distributed Energy Resources Engineer

JOB OUTLOOK⁴

Employment of mechanical engineers across industries is projected to grow in the next ten years. Mechanical engineers who are well trained in the latest technology and tools will be most competitive for a wide range of job prospects. Distributed energy resource management is a field that is bound to continue to grow as well, as energy sources are rapidly diversified. As the world's population continues to grow and communities become more engaged in ensuring their energy sources are safe, reliable, and clean, mechanical engineers will be needed to navigate the integration of DERs into utility grids.

SALARY RANGE⁵

\$71,900–\$114,400

WHO ARE THEY?^{1,2,3}

A **distributed energy resources (DER) engineer** is a mechanical engineer interested in transforming the way that utility companies supply power to communities and generate power from those communities in turn. Mechanical engineers work across industries, including applying engineering skills to the generation and distribution of energy. DER engineers see a cleaner, brighter future for all of us and want to be part of making that happen. DERs are decentralized, community-generated energy sources that create a two-way flow of power, completely changing the way power grids function. Examples of the types of DERs that an engineer might work with include rooftop solar photovoltaic units, natural gas turbines, wind turbines, biomass generators, fuel cells, and electric vehicles and electric vehicle chargers. It is the engineer's job to safely and effectively integrate these energy sources into a utility company's grid. If you are creative, enjoy putting your mind to solving problems, and are interested in transforming the way energy is created and utilized, you might make a great distributed energy resources engineer.

WHAT DO THEY DO?²

Distributed energy resources engineers work to integrate community-based forms of energy reliably into a company's utility grid. This includes planning, investigating, and surveying the energy sources and using modeling to determine how they will fit into the existing distribution grid. They may create technical documentation that explains the integration and help craft procedures to be used moving forward. They may also be involved in the maintenance of the DER integration, including ongoing testing and diagnostics. Besides the highly specialized mechanical engineering principles this work requires, DER engineers work very closely with a range of stakeholders, both within their company and in the broader community, so interpersonal skills are a must. They may also support or drive the process of collecting bids from DERs and might perform roles such as budgeting, forecasting, and accounting, so some interest in business operations may be helpful. This is a great career path for someone with the technical-know-how to become a mechanical engineer and who would enjoy working within communities to help them get the most out of their energy.



CAREER PROFILE

Distributed Energy Resources Engineer

EDUCATION/ TRAINING^{2,4}

- Bachelor's degree in mechanical engineering or a related engineering discipline
- Intern or professional experience with distributed energy resources preferred
- On-the-job training

HOW DO I BECOME ONE?⁴

Distributed energy resources engineers will likely have a bachelor's degree in mechanical engineering or a closely related engineering field. To obtain this degree, they will follow a path with courses in mathematics, life and physical sciences, engineering, and design. Many mechanical engineering degrees require internships and co-ops, which would be a great opportunity for students to see if specialization in distributed energy resources would be a good fit. Those who want to be competitive for more advanced job opportunities could consider pursuing a master's degree. High school students can prepare for this career by concentrating on science, technology, engineering, and math (STEM) courses, building mathematics, problem-solving, and mechanical skills that will be highly applicable.

¹ "What are distributed energy resources and how do they work?" ARENAWIRE. <https://arena.gov.au/blog/what-are-distributed-energy-resources>.

² "Distributed Energy Resources Engineer." Clean Energy Resource Teams. <https://www.cleanenergyresourceteams.org/distributed-energy-resources-engineer>.

³ "What Does a Mechanical Engineer Do?" Iowa State University. <https://www.me.iastate.edu/what-does-a-mechanical-engineer-do>.

⁴ "Occupational Outlook Handbook." U.S. Bureau of Labor Statistics. <https://www.bls.gov/ooh/architecture-and-engineering/mechanical-engineers.htm>.

⁵ "Occupational Employment and Wage Statistics." U.S. Bureau of Labor Statistics. <https://www.bls.gov/oes/current/oes172141.htm>.