

ENERGY FOR AI

ENERGY SERVICES

-  **Owner's Engineer and Agent**
-  **Renewables**
-  **Battery Energy Storage Systems**
-  **District Energy and Microgrids**
-  **Nuclear and Fuel Cells**
-  **Geothermal/Ground Source Heating and Cooling**
-  **Carbon/Greenhouse Gas Strategies**
-  **Grid Expansions**
-  **Transmission Routing Studies**

Artificial Intelligence (AI) is fueling rapid growth in data centers, driving the global emergence of gigawatt-scale clusters. As these facilities become larger and more power-intensive, electricity availability and grid infrastructure are now central to site selection and industry momentum, making energy strategy and policy coordination more critical than ever.

Geosyntec partners with clients to de-risk complex projects and mitigate challenges while identifying opportunities to streamline site development, achieve compliance, and maximize sustainability outcomes. We focus on the efficient delivery of resilient infrastructure and sustainable resource solutions across energy and digital sectors—accelerating performance, reducing risk, and maximizing return on investment.

Through smart planning, design, and engineering, we use our experience in energy development projects to help clients develop solutions that meet the demands of rapidly expanding digital infrastructure.

TIME TO POWER

Schedule efficiencies with integrated project delivery approach

- Identify risks and mitigation strategies
- Deploy permitting, site studies, and development approvals concurrently
- Advise and develop strategies to optimize existing authorizations and partnerships

BRING YOUR OWN POWER

Site-specific solutions

- Use our experience in power generation, energy transition, renewables, and energy storage for data center siting considerations
- Get greenfields and brownfields expertise across North America and globally
- Work within large teams to fill gaps and meet schedules

ENERGY FOR AI PROJECTS



SITE DEVELOPMENT FOR BATTERY STORAGE | EASTERN United States

In support of adding grid capacity for data center development, Geosyntec is preparing engineering, procurement, and construction (EPC) bid packages for the development of multiple battery energy storage system (BESS) sites in the eastern United States. Our services include environmental due diligence and Phase I Environmental Site Assessments (ESAs), conceptual civil and electrical design, noise baseline assessments and modeling, Energy Assistance Fund (EAF)/State Environmental Quality Review (SEQR) applications, and local permitting support. In addition to grid expansion, Geosyntec is assisting the client with evaluating behind-the-meter colocation opportunities with data centers. To date, Geosyntec has supported the development of nine BESS facilities for this client.



PERMITTING & PLANNING FOR DATA CENTER & AUXILIARY INFRASTRUCTURE | TX

To facilitate the development of a data center and infrastructure on a 140-acre parcel, Geosyntec was engaged to provide comprehensive environmental consulting, permitting, and stormwater pollution prevention plan services. Our services include thorough environmental and cultural resource assessments, alternatives analyses, and mitigation planning for compliance with intricate federal, state, and local regulations such as Clean Water Act Sections 404 and 401 and National Environmental Policy Act (NEPA), to reduce the risk of permitting obstacles. Our proactive engagement with regulatory agencies enabled our client to navigate complex environmental permitting processes efficiently, establishing clear permitting pathways, minimizing potential delays, and ultimately supporting the successful advancement of this project.



RENEWABLE INTEGRATION PROJECTS | Nationwide, United States + Global

Geosyntec works with businesses and organizations as they make critical changes to create opportunity and value in transition toward low carbon fuels and energy. We are currently supporting developers, owners, and EPC firms with project requirements such as carbon footprint reduction, technology evaluations, design, risk mitigation, permitting, consumption and energy evaluations, economic assessments, natural resource evaluations, water treatment and supply, and geotechnical engineering. Our approach focuses on de-risking project development, navigating geopolitical challenges, and meeting schedule and budget commitments.



DATA CENTER FEASIBILITY: UNDERGROUND MINE POOLS FOR SUSTAINABLE COOLING | WV

Geosyntec conducted a feasibility study for developing a data center and related facilities on inactive coal mines in West Virginia. The study focused on evaluating the potential use of underground mine pools as a sustainable cooling source for data centers through ground source heat pump (GSHP) technology. In partnership with McKinstry, the team assessed hydrogeologic conditions, utility service availability, and mine-pool water flow rates to determine the viability of an open-loop GSHP system. Services included hydrogeologic and thermal modeling, water use permitting, utility requirements analysis, and flow meter installation to collect critical data. The findings provided essential insights into technical, regulatory, and logistical considerations, positioning our client to make informed decisions about future development and project planning.



ELECTRICAL SUBSTATION DESIGN & PERMITTING PROJECTS | Nationwide, United States

Geosyntec offers a wide range of services for electrical substations across the United States, including site-civil engineering, design, permitting support, decommissioning, and environmental assessment. Our expertise covers site evaluation, feasibility studies, cost estimating, erosion control, drainage design, traffic control, structural engineering, geotechnical evaluation, and construction support. We handle local, state, and federal permits, including NEPA, Federal Aviation Administration, and United States Army Corps of Engineers compliance. Additionally, we manage substation decommissioning projects, environmental site investigations, site remediation, spill response, and brownfields redevelopment.

About Geosyntec

Geosyntec is a consulting and engineering firm that works with private and public sector clients to address new ventures and complex problems involving our environment, natural resources, and civil infrastructure.

With a combined staff exceeding 2,800 engineers, scientists, and related technical and project support personnel, we serve our clients from more than 130 offices in the United States, Canada, the United Kingdom, Ireland, Sweden, Finland, Spain, Saudi Arabia, the United Arab Emirates, and Australia.

Geosyntec
consultants