Geosyntec consultants

BIOENERGY & SUSTAINABLE FUELS

LEVERAGING INNOVATION AND EXPERIENCE

With a reputation for **managing risk and adding value with innovation,** we help clients develop their sustainable fuels projects.

Clients turn to us to create opportunity and value while transitioning to low carbon fuels and energy. We support innovative fuel ventures and solve complex problems involving sourcing, permitting, and integration of new solutions.

Low-carbon and clean fuel incentives are accelerating the production and use of bioenergy in the global market.

Ethanol, biodiesel, renewable diesel, and sustainable aviation fuel (SAF) have all found competitive niches to meet rising demand. Biomethane and renewable natural gas (RNG) are valued as low-carbon transportation fuels, as well as a low-carbon substitutes for natural gas.

We are experts in many fields, including the following:

- Waste management processes
- Hydrogen, ammonia, syngas, and low-carbon fuel production facilities
- Technology development and research
- Gas and renewable distribution infrastructure

Geosyntec's diverse experience allows us to help developers meet the fast-paced, highly dynamic development needs of the market.

ENERGY SOURCE STRATEGY & DEVELOPMENT

- Technology R&D evaluation and demonstration support
- Feasibility and technoeconomic analysis (TEA)
- Site selection services
- Phase I ESAs
- Environmental due diligence surveys
- Site development permitting, NEPA
- Carbon analysis, life cycle assessment, and low-carbon fuel standard guidance
- Funding and grant support

BIOENERGY FACILITY DEVELOPMENT

- Stakeholder engagement and regulatory liaison
- Permitting for land, air, and water
- Community benefits plans
- ESIA, Equator Principles
- Civil and geotechnical engineering
- Water supply evaluations
- Wastewater, water treatment design

PROCESSING, STORAGE, & DISTRIBUTION

- Permits to construct and operate
- Contingency and response planning
- Terminal and pipeline development services
- Sustainability plans
- Environmental and social monitoring and reporting
- Offsite Consequence and Risk Management Plans

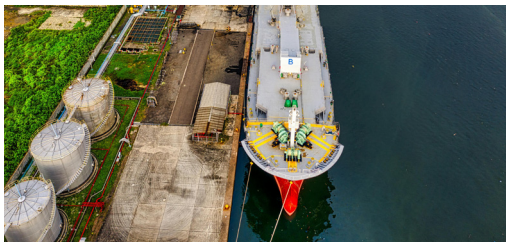
BIOENERGY & SUSTAINABLE FUELS
APPLICATIONS

Agriculture & Forest Resources

Crops and biomass waste can be used to produce energy from agricultural feedstocks for power supply, alternative fuels feedstocks, and manufacturing activities. Geosyntec's work in agricultural applications includes carbon management and low-carbon fuel standard (LCFS) support for a grain and soybean processor and transactional support and environmental permitting for a wood pellet manufacturer.

Energy Developers & Producers

Energy developers and producers are critical to the global energy transition. Geosyntec helps locate and develop energy projects, secure funding and incentives, develop permitting and regulatory strategy, engage with stakeholders, reduce carbon footprints, support reporting and compliance, evaluate water supply and other natural resources, and decrease energy and water use. Geosyntec's work in energy development includes program management for biomass to SAF production facility and infrastructure development.

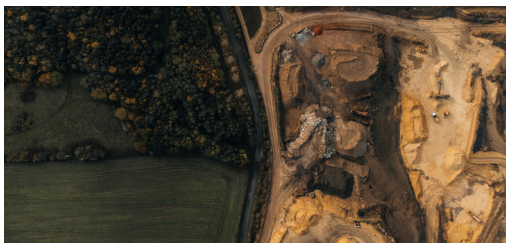


Industrial & Transportation Users

Low-carbon and sustainable fuels can provide a strong foundation for reducing greenhouse gas (GHG) emissions associated with transportation and industrial operations. Geosyntec recently helped redevelop a site as a new "Carbon Zero One" biofuels facility to produce renewable diesel and sustainable aviation fuel.

Food & Beverage Facilities

Anaerobic digestion (AD) has been used for years as a source of renewable energy from biosolids and industrial wastewaters. More recent trends show the use of AD for co-digestion of fats, oils, grease, food wastes, and other organics. Geosyntec evaluates and designs engineering solutions associated with wastewater treatment at food and beverage facilities.



Waste Management, Landfills & Municipal Governments

Geosyntec also delivers award-winning brownfield site redevelopment strategies to transform impacted properties to end uses that meet our clients' needs. With a long history in landfill engineering, Geosyntec helps clients develop landfill gas-to-energy projects with AD technology. We work with owners and operators to optimize the construction of landfill gas collection and control systems.

For More Information

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