

Power Generation Energy



gai consultants



Transforming
Ideas for the
Energy We Use

gaiconsultants.com/energy

Power Generation

Focused on Your Goals

The electric power generation industry continues to evolve as environmental regulations and the economics of supply and demand drive more efficient operation of existing facilities and conversion of power generation facilities or development of renewable energy generation. GAI's managers understand these changes and can help our clients navigate the path forward.

GAI works closely with clients in coal, natural gas, nuclear, and renewable energy generation and distribution. We design structurally stable and environmentally secure landfills, impoundments, and pond-to-landfill conversions for major electric power companies. We take pride in developing innovative and cost-effective solutions for coal combustion residuals disposal, and have saved clients millions of dollars by negotiating variances to regulations with state agencies.

GAI is committed to keeping our clients' power generation facilities running efficiently. Your goals are important. And if it's important to you, it's important to us.





We believe our clients have important goals and we make those goals our own.

What Distinguishes GAI

- Solutions that save clients millions of dollars by avoiding capital investments, reducing operating expenses, and maintaining compliance at facilities
- Managers who understand and closely follow changing regulations governing power generation, and are prepared to assist clients with required compliance
- Power clients that have trusted GAI since our founding through long-lasting relationships, which speaks to GAI's reliability and commitment to our clients' goals
- Guidance—whether managing decommissioning activities or managing conversions to alternate power sources for an ever-changing industry
- Teaming partnerships that yield creative solutions to meet dates in-service
- A firm truly invested in improving clients' competitiveness

Power Generation Services

Coal Combustion Product Management

- CCR management planning
- Siting, design, and permits for new landfills and impoundments
- CCR landfill and impoundment closures
- Technical responses to proposed rules
- Innovative compliance solutions
- Geotechnical, hydraulic, and hydrologic analyses of dams
- Conversion of wet to dry disposal
- Seismic/liquefaction analyses
- Groundwater monitoring and assessments

Environmental Compliance and Permitting

- Wetland and stream delineation
- Agency consultations
- Rare, threatened, and endangered species consultations
- Water encroachment and floodplain permitting
- Erosion and sediment control plans
- Site features inventory
- Grading plans
- GIS, CADD, and Microstation (maps, drawings)
- Post-construction stormwater management plans
- Cultural resources management
- Air permitting and noise monitoring

Plant Facility Siting and Design

- Site evaluations
- Site design and permits
- Property acquisition
- Environmental due diligence support

Plant Decommissioning

- Demolition
- Cold storage (mothballing)
- Repowering or repurposing
- Health and Safety Plan compliance
- Inspection of demolition, deconstruction, and site restoration activities
- Lock out/tag out
- Salvageable equipment removal management

Geologic and Geotechnical Investigations

- Groundwater assessments
- Geologic studies and reconnaissance
- Subsurface explorations
- Subsidence studies and remediation
- Slope stability analysis and design
- Soil and groundwater remedial support

Water Quality Compliance

- Compliance with new effluent limitations guidelines
- National Pollutant Discharge Elimination System permitting

Wastewater Evaluation and Treatment Plants

- Water disposal strategies
- Reuse/recycle water treatment system design
- Pretreatment system recommendations
- Treatment plant design and permitting
- Existing facility expansion or enhancement design

Construction Management

- Contractor oversight
- Project scheduling and budgets
- Review of contractors' proposals, submittals, policies, and procedures
- QA/QC compliance

Plant Operations Support

- Outage support, planning, and scheduling
- Vendor surveys
- Maintenance management support



“GAI responds nimbly when we call for design changes. They are responsive!”

– Confidential 25-year Client

60 YRS

of service to the power industry.



Connect with Our Experts

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About GAI Consultants, Inc.

Transforming ideas into reality[®], since 1958, GAI is an employee-owned engineering, planning, and environmental consulting firm providing local expertise to worldwide clients in the energy, transportation, development, government, and industrial markets.



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