



Shakti Consultants, Inc.
Solving Your Energy Challenges

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1400 21st Way South

205.243.7725

Birmingham, AL 35205

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Shakti Consultants, Inc.
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With the objective of delivering cost-effective energy solutions, Shakti Consultants, Inc. provides customized, sustainable energy efficiency solutions to enhance the performance of facilities and processes. At SCI we are experienced in providing service to commercial, institutional, industrial, federal and various other sectors.

Employing the best practices and leveraging the experience of the talented professionals that make up SCI, our team will support you with exceptional engineering, technical and management expertise. At Shakti Consultants, Inc. we are ready to assist you in advancing your specific energy initiatives, developing cost-effective solutions for your situation, and moving you forward towards your definitive energy goals.

- Shakti Consultants, Inc. -

Services to

- ✧ Facility Owners &/or Operators
- ✧ Utilities & their Customers
- ✧ ESCOs in ESPC Development
- ✧ Prime Contractors

Assist you with

- ✧ Assessing the feasibility of facility energy efficiency and renewable opportunities
- ✧ Developing the appropriate projects to leverage a specific technology or strategy
- ✧ Developing cost effective measures
- ✧ Maximizing operational performance of facilities
- ✧ Optimizing energy and related financial performance

We will

- ✧ Accurately identify energy efficiency &/or facility issues
- ✧ Understand business and technical risks
- ✧ Define insightful alternative solutions
- ✧ Refine alternatives into viable and sustainable solutions



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Energy Auditing & Analysis

- ASHRAE Level 1 &/or Level 2 Audits
- Investment Grade Audits
- Building Simulations (eQuest, Trace, Etc.)

Energy Project Development

- Feasibility Studies & Detailed Design
- Central Plant Studies &/or Evaluations
- Life Cycle Cost Analysis
- Grants and Energy Financing Support

Energy & Utility Data Management & Analysis

- Energy Star Portfolio management
- Utility Bill REviews & Rate Evaluations
- Benchmarking
- Energy Analytics & Trend Data Analysis
- Risk Analysis & Management

Commissioning: Measurement & Verification (M & V)

- Re or Retro-Commissioning
- New Construction Commissioning
- Data Logging and Field Measurements
- Functional Performance & Systems Testing
- M&V Plan Development: Initial & Ongoing M&V

LEED Facilitation

- Retrofit Projects
- New Construction

Technology Research & Testing



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Alabama Power Company

- Engineering support in development of UESC projects & retro-Commissioning
- Energy Audits for various customers of Alabama Power's Industrial, Institutional & Commercial sectors

ABM

- Provided HVAC design services under ESPC projects for school systems in AL, GA & SC

Birmingham-Jefferson Convention Complex (BJCC)

- Comprehensive evaluation of mechanical and utility systems; Developed a \$25 million energy project.
- Developing detailed design for energy project with construction value of \$25 million (as a part of Alabama Power Company's energy contract with BJCC)

Other recent clients:

Georgia Power Company
Siemens

Trane & City of Birmingham

- Assisted in development of a large ESPC project; Provided HVAC and controls design; Performing retro-commissioning & T&B

Southern Company

- HVAC technology research support
- New technology testing & demonstration
- Test setup, data collection & analysis

VA (VISN 7) Medical Centers

- Developed energy projects worth close to \$100 million for ten (10) different VA medical centers in VISN 7

Lighting Upgrades

- Developed and implement LED upgrades for churches, schools and industrial facilities in Birmingham, AL. Performed numerous lighting audits as a part of energy project development.

Gulf Power Company,
Johnson Controls



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Raja Chirumamilla, PE, CEM, CMVP, MSME, MBA

Raja has over twenty-five years of experience in energy management as an energy engineer and energy project manager. This includes extensive experience in the development of comprehensive energy studies for large and complex facilities &/or groups of facilities including computerized building energy simulations for large hospitals, schools, commercial industrial and governmental facilities. He is also experienced in the Measurement & Verification process for ESPC projects and has performed several M&V audits for large ESPC projects.

Areas of Expertise

- Energy auditing & analysis
- Building simulations
- Central plant studies
- Energy Project Development
- Project Management
- M&V

Career Highlights

- **Adjunct Faculty** - Department of Mechanical Engineering, UAB
- **Energy Manager** - City of Birmingham
- **Vice President of Engineering** - Private consulting firm, Managed 20-80 engineers
- **AEE's CMVP Committee & EVO's IPMVP Committee** - Served on both committees

Joseph Raynaud, CEM, BSME

Joseph's experience includes energy audits for more than 300 buildings and project development in the federal sector for Veterans Administration, U.S. Navy, Army and Air National Guard. Joseph has performed detailed advanced metering studies for DOE and U.S. Army facilities. He has also performed numerous field measurements involving various energy systems, data logging and data analysis in support of M&V and HVAC research.

Areas of Expertise

- Energy auditing & analysis
- Building simulations
- Advanced metering
- M&V
- Energy project development
- Field data logging & data analysis

Career Highlights

- **HVAC technologies research support** - Southern Company
- **Energy audit lead** - Numerous Federal Sector Facilities



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