



# **Smith Baez Consulting, Inc.** **Engineering & Industrial Services**

**“Advancing Science Through Innovative Technology”**



**Sugar Cane Technology**

**Alternative Energy:  
Biofuels Ethanol and Biodiesel**

**Environmental Consulting**

**Water Purification Technology**

**Project Management**

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## *Services Offered by Smith Baez Consulting, Inc.*



Smith Baez Consulting, Inc. offers a wide variety of services, including process engineering, sugar production, research & development, scientific investigations, project management, as well as environmental consulting.

From the production of today's alternative energy of ethanol and biodiesel to tomorrow's technology in the production of hydrogen, Smith Baez Consulting, Inc. provides technical and scientific innovations. Our clients can always be assured of the highest integrity and strictest confidentiality.

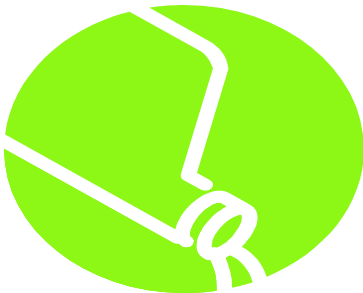
## *Sugar Cane Technology*



Smith Baez Consulting, Inc. has the experience and knowledge to develop new and improved production techniques to optimize sugar production, including advanced technology for the production of new co-products. **Among services offered are the following:**

- ❖ Sugar Cane Juice Composition and Extraction Calculations
- ❖ Sugar Process Modeling, Material and Energy Balance
- ❖ Preparation of Fabrication Modeling Using Sugars™ for Windows™ and other Computer Programs
- ❖ Evaporation & Crystallization Calculations, Including Double Magma Boiling Systems
- ❖ Molasses Desugarization Studies
- ❖ Columns for Juice Decalcification, Juice Micro and Ultra filtration
- ❖ Juice Chromatographic Separation Studies
- ❖ Juice Decolorization Studies
- ❖ Fabrication Pilot Plants Studies and Design
- ❖ Research & Development Plans
- ❖ Feasibility Studies
- ❖ Technical Reports
- ❖ Sugar Cane Co-product Recovery
- ❖ Electric Cogeneration
- ❖ Steam Balances & Optimization

## Alternative Energy Technology

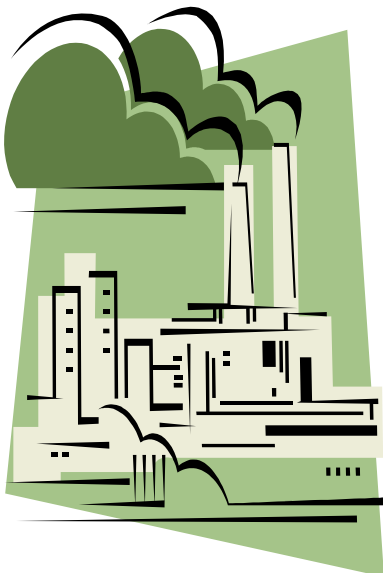


Biorefineries are being used to produce ethanol, gasoline, diesel fuel, and feedstock for the chemical industry directly from carbohydrates such as sugar, starch, cellulose, and other agricultural wastes from renewable plants. Smith Baez Consulting, Inc. is abreast of the latest technological advancement to deliver our clients the most cost efficient alternative energy processes.

### Among Services offered are:

- ❖ Calculations for the Biomass to Energy conversion
- ❖ Biocombustible Production Studies
- ❖ Advanced Technologies for Ethanol and Biodiesel
- ❖ Technical Studies for the production of Ethanol and Biodiesel
- ❖ Enzyme and Yeast Evaluation Studies
- ❖ Ethanol and Biodiesel Plants Design
- ❖ Biomass Co-products Recovery Studies
- ❖ Bioenergy Process Optimization
- ❖ Feasibility Studies
- ❖ Financial Studies on Biocombustibles
- ❖ Planning and Implementation of Bioenergy Policies
- ❖ Evaluations of Effects of Biocombustible on the Environment, Including Emission Inventory and Permits

## Environmental Consulting

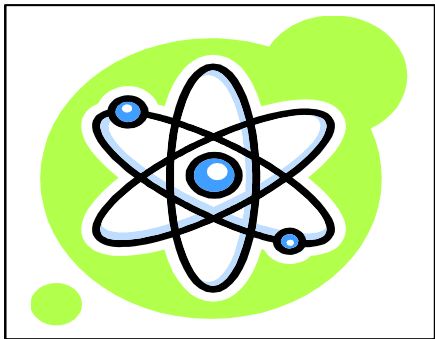


Smith Baez Consulting, Inc. brings problem solving skills to any environmental contamination and remediation problem or issue, whether it is compliance with environmental regulations or design of pollution abatement equipment.

### Services Offered:

- ❖ Environmental Chemistry
- ❖ Air, Water and Soil pollution Assessments
- ❖ Emission Inventory
- ❖ Environmental Audits and Permits
- ❖ Preparation of Contingency Plans
- ❖ Wastewater Treatment
- ❖ Pollution Abatement Equipment Design
- ❖ Storage Tanks Environmental Assessment

# Water Purification Technology



Smith Baez Consulting, Inc. offers a variety of water purification services, covering residential, commercial and industrial applications. Smith Baez consulting, Inc. provides these services through the application of basic principles of science and engineering to solve water purification needs. **Services include the following:**

- ❖ State of Florida professional engineer services, including:
  - Assessing,
  - Validating
  - Signing and Sealing
  - Certification of

Drawings and documents for water purification systems

- ❖ Technical Studies on the selections of water purification technologies
- ❖ Design and assessment of all water purification systems, including the following:
  - Water Softening
  - Advanced Activated Carbon Filtration
  - Reverse Osmosis Systems
  - Chlorination and Ozonation
  - Color and Odor Removal Studies
  - Sulfur Removal Studies
  - Water Desalinization
  - Water Reclamation Systems
  - Economic Evaluation of water's Purification Processes

## Process Design



Smith Baez Consulting, Inc. has the innovation and technical capability to design any type of process equipment, and provides science-based solutions. Whether it is validation of existing processes or the implementation of evolutionary technology to a brand new process, Smith Baez Consulting, Inc. provides problem-solving solutions.

**Services include the following:**

- ❖ Copywriting and Patenting New Ideas and Processes
- ❖ Research & Product Development
- ❖ Industrial Design

## *Project Management*



Smith Baez Consulting, Inc. has expertise in project management and credentials certified by the prestigious Project Management Institute (PMI). **Services include the following:**

- ❖ The preparation of project plans and leadership in the initiation, implementation, execution and closing of projects
- ❖ The preparation of project charters
- ❖ The determination project schedules
- ❖ Evaluation of project costs and budgets
- ❖ The determination of methods to assess the project quality standards
- ❖ The determination of the project human resources requirements and the preparation of plans to improve communication among project team members
- ❖ The determination of project risks
- ❖ The determination of documentation needed to finalize and close projects
- ❖ The preparation of project management templates

*Please contact Smith Baez Consulting, Inc., for information regarding technical solutions, or to obtain a quotation for our services:*

- ❖ Phone: (561) 762-5653
- ❖ Fax: (772) 402- 4539
- ❖ Email: [cbaezsmith@smithbaez.com](mailto:cbaezsmith@smithbaez.com)

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## Engineering & Industrial Services



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