



TAXIS RESOURCE SYSTEMS

*Sustainable Business Solutions for Environment, S&H,
Energy & Development*

TRS is a wholly owned business unit of Taxis Group, LLC

***Bridging environmental, energy & process efficiency needs
with the right technology solutions & support services***

OVERVIEW



Taxis Group, LLC and its technology partner Carew Energy & Water are committed to helping industrial, governmental, NGO and commercial organizations manage their environmental, safety & health risks and energy management needs with sustainable business solutions; specifically matching the best technology solutions to each client's unique business and environmental challenges.

We currently offer simple yet effective waste water, bio-solids (residuals) management, and newly developed energy technologies for municipal, agricultural, industrial, and marine applications. Our innovative, yet proven technologies are custom designed to meet the specific needs of each project.

CLIENT FOCUS

Municipal Wastewater: Residuals / BioSolids

Thousands of municipal wastewater plants located in large metropolitan cities and small rural communities spend financial resources and derive little or no benefit from their management of residuals produced from upstream wastewater treatment. Typical residuals budgets for pump and haul management range from \$0.50MM to \$50MM.

Biosolids

Biosolids are essentially treated sewage sludge. Sewage sludge is the solids component that is collected from the wastewater treatment process but which have not undergone further treatment. *Sludge normally contains up to around from 2-3 % solids.*

Biosolids are a product of the sewage sludge once it has undergone further treatment to reduce disease causing pathogens and volatile organic matter significantly, producing a stabilized product suitable for beneficial use. Biosolids, normally contain between 15 % to 90 % solids. Biosolids are carefully treated and monitored and they must be used in accordance with regulatory requirements.



Biosolids can be applied as a fertilizer to improve and maintain productive soils and stimulate plant growth. They are also used to fertilize gardens and parks and reclaim mining sites. In many of the developed countries biosolids can be used for:

- Waste to Energy
- Land application in agriculture as soil amendment
- Land application in forestry operation
- Landscaping and topsoil
- Composting
- Feedstock for biofuel production

Technology Development/Transfer – Filtration – Flash Pyrolysis – BioEnergy Products

Naples & Bonita Springs, Florida – Rochester, Michigan

www.taxis-ehsr.com

For more information call Dave Hanson 239-948-6668 direct; 239-777-1510 mobile

Our Technology Approach

Carew Energy and Water brings innovative yet proven environmental technologies, and “re-deployed” technologies from other industrial processes directly to the owner of an environmental liability or organizations desiring to minimize their environmental footprint while improving their financial position – including asset owners, PRPs, liability underwriters, or process facilities confronting significant performance, regulatory and/or economic challenges.

- *Waste Water Processing w/o Residuals Liabilities*
- *Residuals Management and Sale of By-Product*
- *Waste Water Liability to Drinking Water Resource*
- *Gasification of Waste Water Solids and Energy Production*
- *Hydrocarbon Fuel Opportunities*
- *Solid Waste to Fuel Options*

Carew Filtration & Energy



Carew Energy & Water, LLC is currently offering its filtration technologies to process wastewater sludge to 30-50% solids which greatly reduces residuals management costs. We are poised to introduce our patent pending gasification/biofuel refining/fuel cell technologies which, when used alone or in concert with select complementary technologies, have the capability in the field to process municipal, agricultural, marine waste water, and most solid waste streams.

CFS technology clarifies waste water streams, removing solids, oil and grease and biological contaminants to sub-micron range, with or without chemical pre-treatment and can extract 30-50%

solids in one pass. It concentrates carbon-containing components for energy generation and/or hydrocarbon condensation and biofuels production.

Dissolved solids and nutrients can also be removed using proprietary polymers and oxygenation diffusion techniques.

(See next page – Carew Energy Solutions for additional information about this exciting developing technology offering.)

The resultant effluent may be further purified for human or animal consumption, or applied to the environment with no adverse impact to the receiving medium.



Recovered bio-solids can then be processed to provide soil amendments, fuel for waste to energy processes, or as feedstock for biofuel production and fuel cell applications.

Our management systems approach enables tight integration of global, federal, state and community standards and expectations with a well-managed environmental “footprint” -- ensuring an long-term regulatory compliance and attainable financial savings.

For additional information contact

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TRS/Carew Energy Solutions

Technology developer, Carew Energy and Water possesses patent rights, and in this application, has field validated its technology by processing agricultural-concentrated feed lot waste waters using its exclusive self cleaning combination centrifugal / wave-coil mechanical filter in which the filtration apertures (pore sizes or filtration free spaces) can be electronically or pneumatically adjusted from a coarse range to micron and sub-micron sizes.

In the present "waste to energy", and fresh water representative application, the original variable self cleaning filter is modified to both filter and dewater liquid municipal/ agricultural/industrial liquid waste water and sludge such that the extracted solids have a high fuel value.

For economic reasons the high Btu solids will subsequently be blended with curbside solids or other bio-waste and fed directly into a gasification apparatus for electric power generation.

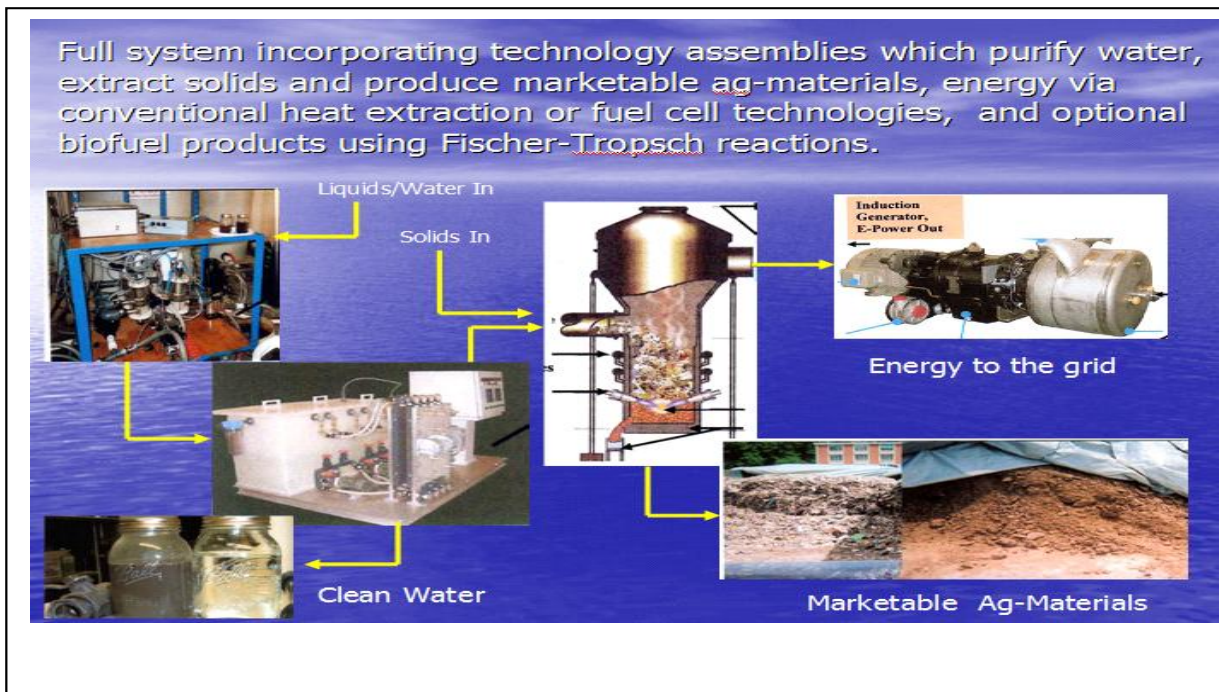
Using the patented Wave-Coil Centrifugal filter/filter press technology, dried waste solids are fed into a gasifier which converts carbon based solids into hot gases which drive an electric generator.

As a result, waste carbon is "recaptured" upon drying. The system facilitates the conservation of energy contained in the carbonaceous waste streams converted into electric power, further purifies the processed waste water for reuse.

Of greater long term importance is the new unpublished work on hydrocarbon synthesis with modified versions of the Carew filtration and energy system technologies to provide the production of synthetic hydrocarbon fuels for the transport industry.

(Newly developed Carew Biofuel/Fuel Cell technology information available on request)

Below: Example of system components incorporating CEW Filtration System and compatible technologies for water purification, and third party gasified/dried solids, waste to energy, biosolids for agriculture and landscaping and



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