NAME OF COMMITTEE: Governmental Services & Administration Committee

DATE: October 17, 2011

TIME: 5:30 PM

PLACE: **Ulster County Resource Recovery Agency**
999 Flatbush Road
Kingston, New York

LEGISLATORS PRESENT: Chairman Kevin A. Roberts, Legislators Carl Belfiglio, Dean Fabiano, Kenneth Ronk, Hector Rodriguez, Michael Madsen and Robert Parete

LEGISLATORS ABSENT: None

OTHERS PRESENT: Tim Rose, Executive Director, Ulster County Resource Recovery Agency
Leon Smith, Chairman, Board Ulster County Resource Recovery Agency
Dennis Helm, Board Member, Ulster County Resource Recovery Agency
John Parete, Board Member, Ulster County Resource Recovery Agency
Al Teetsel, Board Member, Ulster County Resource Recovery Agency
Charlie Whitaker, Ulster County Resource Recovery Agency
Catherine Beinkaufner, former Board Member, UCRRA, LWV
James W. Taylor., Jr., CEO Taylor Biomass Energy
Jim Rollins, Taylor Biomass Energy
Bill Kemble, Reporter, Daily Freeman
Mike Randall, Reporter, Times-Herald Record
Victor J. Melville, LWV-Observer Corp
Emilie Hauser, LWV, Mid-Hudson Region Member
Pete Robins, Citizen
Karen L. Binder, Clerk of the Legislature, Recording

At 5:30 PM James W. Taylor, Jr., Chairman and CEO of Taylor Biomass Energy gave a Power Point Presentation by Taylor Biomass Energy-Montgomery. The Ulster County Resource Recovery Agency Board Members, the Executive Director, joined committee and others as noted above.

TBE is a privately-held, limited liability company, incorporated in the State of New York in February 2005. The most recent in a line of family-owned businesses that extends three generations, TBE has it roots in a tree-removal company started in 1956 by Mr. James Taylor Sr. In 1976, Mr. James Taylor Jr. purchased "Taylor Tree" from his father and grew the company into one of the nation's leading recyclers of construction and demolition debris. Now known as Taylor Recycling Facility, LLC (TRF) and located approximately 70 miles north of New York City, the state-of-the-art plant is home to one of the most unique construction and demolition recycling operations in the world. At TRF, 97% of received waste is converted into valuable end products, and kept out of landfills as waste. Taylor has been widely recognized as a pioneer in developing innovative recycling solutions and for maintaining very high operating standards for safety and environmental integrity. Fourteen years ago, Taylor Recycling Facility, LLC became one of NY State's first DEC- approved C&D recycling facility. Over the last two decades, TRF has developed

and refined its proprietary "Taylor Sorting and Separating Process" technology, taking recycling to its best and highest use. Developing new technology to convert biomass into energy for commercial use is the next step in a long tradition of environmental stewardship and innovation. Taylor Biomass Energy was established to accomplish this goal. Mr. James Taylor Jr. is currently affiliated with the three separate companies: Taylor Biomass Energy, Taylor Recycling Facility and Taylor Recycling Solutions. James W. Taylor Jr. is President and CEO of Taylor Biomass Energy. The Taylor family business has been located on Neelytown Road in Montgomery for almost 20 years.Developing new technology to convert biomass into energy for commercial use is the next step in a long tradition of environmental stewardship and innovation.

PowerPoint Presentation:

What is it?

An environmentally clean method to separate biomass and recyclables fraction from wastes such as: Construction and Demolition (C&D), Municipal Solid Waste (MSW), Commercial waste (CW) residual and efficiently produce renewable, sustainable electricity (biopower)

An indirectly heated biomass gasification process

- No air or oxygen in the gasification reactor – greatly reduces environmental impact
- Uses compact circulating fluidized bed reactors (similar to entrained reactors)

Includes in-situ (within the main process) tar conversion into additional useful syngas

- Simplified and more effective gas cleanup
- Improved heat recovery
- Organics reduced in waste water (and waste water recycled for process use)
- Enhanced syngas composition eliminating the need for further modification

Provides high hydrogen concentrations without additional downstream processes

- Potential for hydrogen recovery in the future
- Gas suitable for synthesis applications (production of transportation fuels or chemicals)

How does it work?

In the process, a circulating, catalytically active, heat carrying material (sand) is used to rapidly heat the incoming biomass, convert it to syngas, and convey unconverted biomass (char) from the gasification reactor into an associated combustor.

In the gasification reactor, biomass from the sorting and separating system is surrounded by the sand and steam. No air or oxygen is added so there are no combustion reactions taking place, providing minimal environmental impact. The biomass is rapidly converted into medium calorific value synthesis gas at a temperature of approximately 1500F.

Unconverted biomass (char), and the cooled sand, pass through the gasification reactor and then are separated from the synthesis gas.

The synthesis gas continues on to the gas conditioning reactor while the sand is conveyed into the associated combustion reactor.

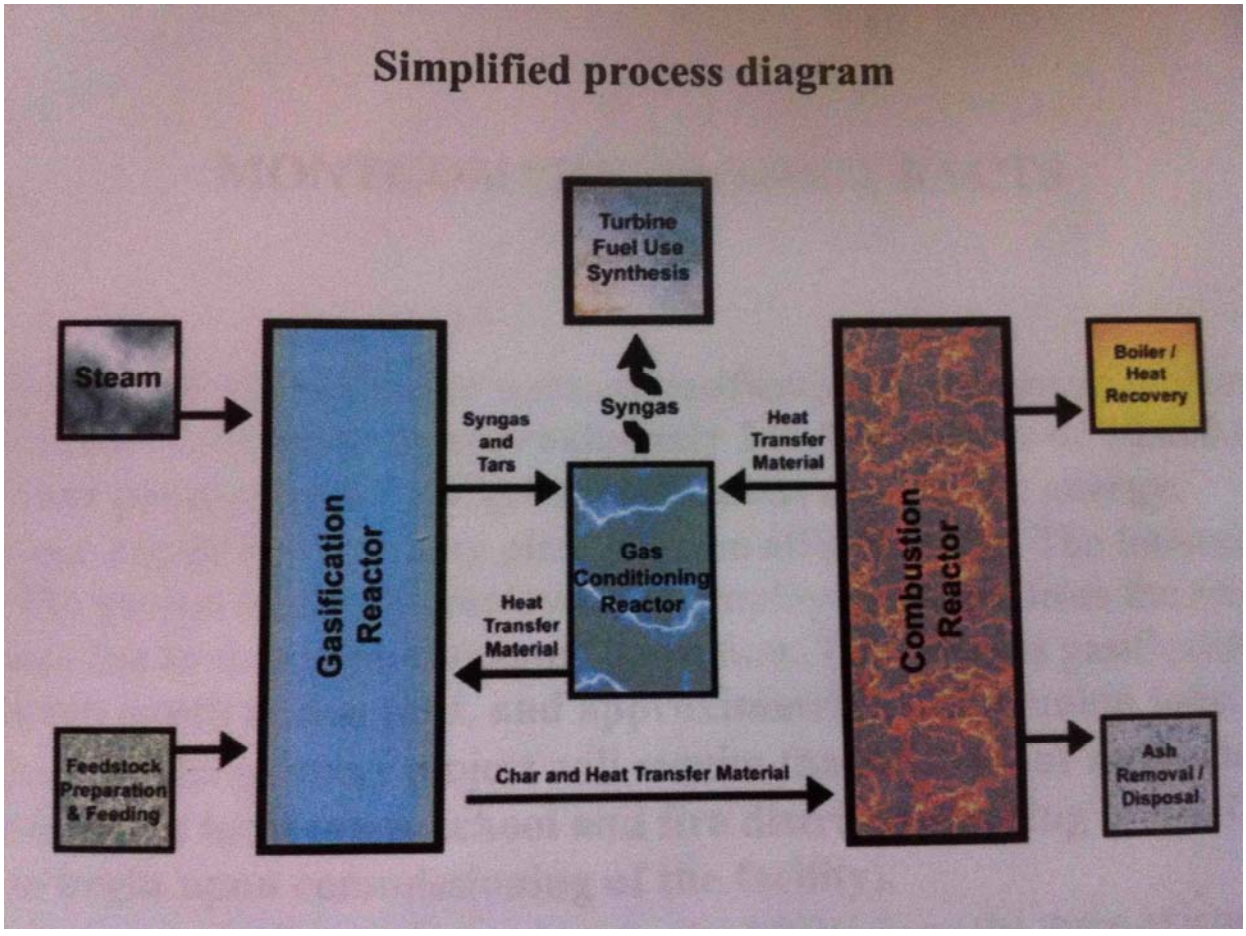
In the gas conditioning reactor, steam in the product gas reacts with condensable materials in the gas (tars) to produce carbon monoxide, hydrogen, and low molecular weight hydrocarbons **such as** methane and benzene, all used for power generation or the production of chemical products. In addition, some carbon monoxide is converted into hydrogen by reaction with steam.

In the combustion reactor, air is introduced which consumes the char and, in the process, reheats the sand to approximately 1800F. In the combustion reactor all remaining carbon is consumed, resulting in a carbon-free ash.

The reheated sand is separated from the flue gas (exhaust) and returned to the gasifier.

Ash is removed from the exhaust, resulting in a high temperature (1800F) clean flue gas stream, available for heat recovery.

The process operates at essentially atmospheric pressure, simplifying the feeding and handling of the incoming biomass.



What are the Advantages of This System?

Eliminates greenhouse gas emissions by removing degradable material from landfills

Produces clean sustainable energy products on a continuous basis (24/7)

Significant reductions of residuals that must be disposed of in a landfill

Efficiently recycles non-biomass materials (metals, glass, gypsum, etc.)

A medium BTU (medium calorific value) synthesis gas having a high heating value

A synthesis gas having a consistent heating value and a high hydrogen content without further processing

A carbon-free ash

Over 90% of the energy in the incoming biomass recovered as synthesis gas and high value hot gas streams) with no other energy inputs required

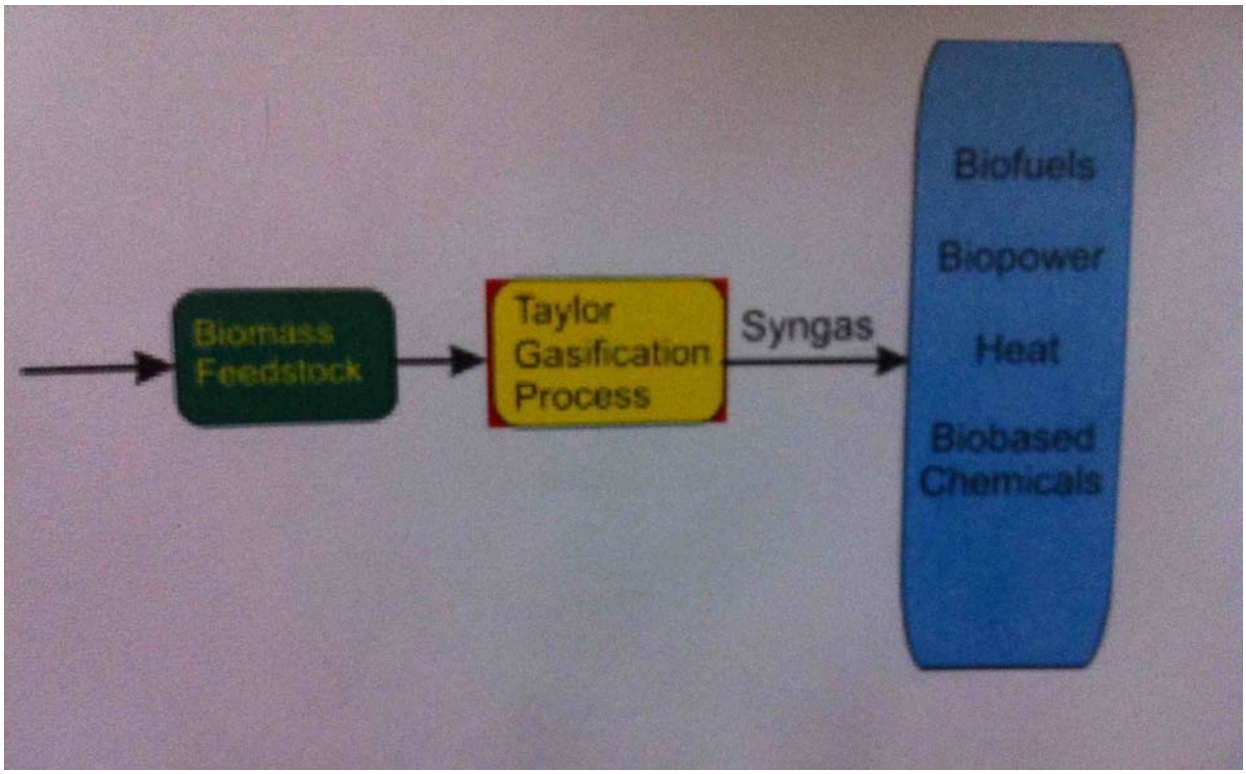
Low emissions profile

No, well below regulatory standards

Sulfur oxides and particulate emissions near zero

Over 100 lower times lower greenhouse gas emissions when compared to land filling residual materials

A biomass energy system capable of competitively producing virtually any energy product desired (direct natural gas replacement, biopower, biofuels, biochemicals, or hydrogen)



Montgomery Project Facts

The proposed 300 DTPD Taylor Biomass Gasification Montgomery Project will reduce our fossil fuel dependency by approximately 240,000 barrels or 10,000,000 gallons of oil per year producing 24 MW gross, renewable, alternative energy.

The current Taylor-Montgomery plant is union affiliated with The International Laborers Union. The project currently employs 35 employees, down from the normal 50-60 employees due to the recent economic down turn. The biomass gasification expansion will add 400 construction jobs, and approximately 70 new union jobs.

The expanded Montgomery Project will require the payment of approximately $1.1 in new taxes tot the local town, school and fire district according to the Town Assessor's office (to begin upon commissioning of the facility.)

The Montgomery Project proposes to take the NSW from the three existing Orange County operated transfer stations, deliver the waste to the Montgomery project, reducing long haul trucking, where it will be sorted, separated, recycled as feasible and prepare the organic biomass fraction into silos for storage and then into the biomass gasification process.

This will produce renewable, alternative energy, generated locally and distributed into the local, grid congested, grid system reducing the need for new electric transmission power lines and corridors thru the area. We (Taylor) are proposing to sell the REC's back to Orange County ensuring our County becoming one of the first counties becoming truly "sustainable" in both waste and energy categories.

The Montgomery Project has completed the permitting process with all permits being approved by the appropriate agencies.

The Project will utilize a project labor agreement for construction through its Engineer, procure, construct (EPC) contractor.

We must stop wasting our waste; it is a valuable resource.

We can no longer continue to create those large mountains of waste that are never, ever going to go away.

We now have a much more environmentally friendly method of processing our waste.

Think of it like this – we are most probably one of the first County's to have a private company take in a waste stream within its normal service area (30 mile radius) such as construction & demolition debris, and recycle 97% of it into remanufactured products and have those 97% remanufactured products reused within the same 30 mile service radius. This is what you call "SUSTAINABILITY."

This is what Taylor proposes for our municipal and commercial waste streams as well. Help us continue to make Orange County first in the World; first in SUSTAINABILITY.

The Montgomery Project uses the proprietary "Taylor Energy Solution" as the foundational technology for a three-part, integrated system design that converts the organic biomass portion of mixed solid waste (MSW) to electric power, through gasification.

The Montgomery Project will:

- Expand the Taylor Sorting and Separating Process to accept mixed solid waste ("MSW"), in addition to wood waste, and waste from construction and demolition debris ("C&D") as inputs.
- Produce a stable, cost-effective, biomass-processed fuel supply from suitable feedstock, reducing landfill waste in the process.
- Use the biomass-processed fuel to feed its proprietary gasification process, producing a medium calorific value synthesis gas (syngas), capable of serving as a direct substitute for natural gas.
- Connect to the power grid as a first-generation MSW product, providing clean, renewable energy.
- Maximize financial investment by conducting the Montgomery Project with a view to cost efficiency, widespread commercial replication; flexible facility design that can meet local needs, and diverse potential for future development of product slate.

The project will generate a net 20 MW clean, renewable energy and produce enough electricity to power approximately 27,000 homes based 500 kwh/month usage per residence, with an estimated cost over 20 years of around 5 cents per KW.

The Montgomery Project will be located on 95 acres of interchange development property, at 350 Neelytown Road, Montgomery, in Orange County, New York. The site is the current location of Taylor Recycling Facility (TRF) and is "shovel ready" due to local site control and the extensive permitting work completed to date.

The Montgomery Project will expand from its current capacity of 307 TPD of C&D waste and 100 TPD of wood waste, to accommodate a new inflow of 450 TPD of C&D waste, 100 TPD of wood waste, and 500 TPD of municipal solid waste. Proposed site modifications include improvements to the existing C&D Processing Structure, and construction of a new Post Collection Separation Facility Structure, two Biomass Storage Silos, the Gasification Unit and a Power Generation Pad. The Taylor Post Collection Separation Structure will prepare a portion of the biomass feedstock for the gasifier. Additional wood and biomass for the project may be supplied as needed from the existing Construction and Demolition ("C&D") Processing Structure. Biomass will be stored in two storage silos with a combined storage capacity of five days. Ladig and Weaver, vendors with extensive experience in storage and handling of materials, will supply the storage silos. The current silo design is based on performance specifications; the actual design of the equipment will be by the supplier. The current PBF feed design is subject to review and modification by Tom Miles of TR Miles Technical Consultants, a leader in the design of handling and feeding of biomass, including RDF materials.

The design of the Taylor Gasification Process uses three, fluidized-bed reactors: a gasification reactor, a gas conditioning reactor, and a combustion reactor. The gasification and combustion reactors are circulating fluidized beds, while the gas conditioning reactor is of the bubbling fluidized bed type. TBE expects to use a Solar Titan gas turbine as the prime power generation component. A steam turbine based bottoming cycle will complete the power generation system. Grading, concrete work and installation of utilities necessary for the gasification and power generation islands will be completed as part of the project scope. In the final step, all piping

associated with the gasification and power generation structure will be completed. Central Hudson Gas and Electric Corporation will complete interconnection to the power grid. The Taylor site has a Central Hudson 13.2/69kv electric transmission line through the center of the 95 acres and a 69kv substation referred to as the Central Hudson Gas and Electric Maybrook substation on its property border. This will simplify the interconnection activities and allow for rapid completion of this task. All unit operations, including all heat recovery and gas compression steps, will be included as a part of the facility. All unit operations for these steps are expected to be fully commercial operations and not require development effort at the Montgomery site.

Site improvements will include revised site access, new emergency access, and multiple vehicle weigh stations to optimize and safely convey the flow of traffic. Building construction will include a new, 7,342 square foot, 2-story Scale House/Office Building, a 15,042 square foot Equipment Maintenance Structure, a 20,000 square foot Recyclables Handling and Recovery Structure, a 30,000 square foot, three-story Corporate Office and a 119,520 square foot post collection separation building. The existing 4,104 square foot Scale House/Office Building will be remodeled and serve as additional office space. In addition the existing C&D processing building will receive a 14,375 square foot addition. This addition will facilitate drive thru tipping with no more backing up to tip your load. Throughout the United States there have been significant deaths attributed to customers backing up to tip their loads. Taylor's new facilities will not allow for any backing up to tip loads of material on their site.

There was a question and answer period after the PowerPoint Presentation. Information packets were distributed to all Committee members present and the Ulster County Resource Recovery Agency Board Members.

There was discussion regarding competitive pricing, current contracts, when Taylor would be ready to operate, Town procedural errors, funding and operational issues. Mr. Taylor indicated that his vision is for Ulster County to become the second site to build a plant.

The presentation and discussion with Taylor Biomass Energy ended at 6:45 PM. The Committee agreed to take a 10-minute recess.

Regular Committee Meeting

1. Chairman Roberts called the meeting to order at 7:03 PM.

2. Legislator Robert Parete motioned, seconded by Legislator Ronk to approve the minutes from the September 19, 2011 meeting. All in favor.

3. Departments/Agencies

Ulster County Resource Recovery Agency

- Copies of UCRRA 2012 Approved Operating Budget – attached to agenda

4. Late Resolutions

Resolution: Requesting The County Executive To Commence The Procedure Necessary To Implement The Policy Of The Ulster County Legislature To Renovate And Modify The Golden Hill Health Care Center As Adopted In The Ulster County Capital Program For 2011 – 2016

Legislator Robert Parete motioned, seconded by Legislator Belfiglio to approve the resolution. Legislator Rodriguez recused himself due to employment. Approved: 4 – 2 (1 Abstention: Legislator Rodriguez) (NOES: Legislators Roberts and Ronk)

Resolution: Urging Multi-Year State Takeover Of Local Share Of Medicaid –NYS Senate Bill S5889-B And Assembly Bill No. A8644

There was no discussion on the resolution.

Legislator Robert Parete motioned, seconded by Legislator Ronk to approve the resolution. Approved: 7 – 0

Resolution: Appointing Member To Fill Vacancy On The Ulster County Fire Advisory Board

There was no discussion on the resolution.

Legislator Robert Parete motioned, seconded by Legislator Ronk to approve the resolution. Approved: 7 – 0

Resolution: Request To Extend The Emergency Authorization For Emergency Operations In Response To Hurricane Irene

There was no discussion on the resolution.

Legislator Fabiano motioned, seconded by Legislator Ronk to approve the resolution. Approved: 7 – 0

Resolution: Request To Extend The Emergency Authorization For Emergency Operations In Response To Tropical Storm Lee

There was no discussion on the resolution.

Legislator Ronk motioned, seconded by Legislator Fabiano to approve the resolution. Approved: 7 – 0

Resolution: In Support Of Reinstating The 1905 Stock Transfer Tax To Generate Much Needed Revenue For Maintenance And Growth In New York State

There was a brief discussion regarding the above resolution. The Committee Members agreed to do their due diligence and further research this matter. No action was taken on the resolution at this time.

5. New Business

There was discussion regarding the Taylor Biomass presentation and the impact on current operations:

Contracts expiring and termination clauses;
Current tipping fees;
Average trucking costs;

Fuel supplied by Agency;
Taylor's need for Ulster County's trash – leverage;
Issues with Taylor not looking to reduce the waste stream;
All options need to be presented;
Need to Reduce, Reuse and Recycle; and
Any decisions resting with the Board of the Ulster County Resource Recovery Agency.

6. Motion to adjourn:

Legislator Fabiano motioned, seconded by Legislator Roberts to adjourn. All in favor.

Meeting adjourned at 7:26 PM.

Respectfully submitted,

Karen L. Binder, Clerk
Ulster County Legislature