ECONOMIC DEVELOPMENT, HIGHER EDUCATION

and

ENERGY COMMITTEE

of the

SUFFOLK COUNTY LEGISLATURE

Minutes

A special meeting of the Economic Development, Higher Education & Energy Committee of the Suffolk County Legislature was held in the Sagtikos Arts & Sciences Theatre located on the Michael J. Grant Campus of Suffolk County Community College, Crooked Hill Road, Brentwood, New York, on Wednesday, January 30, 2008.

MEMBERS PRESENT:
Legislator Wayne Horsley - Chairman
Legislator Steve Stern - Vice-Chair
Legislator Lou D'Amaro
Legislator John Kennedy

MEMBER NOT PRESENT:
Legislator Cameron Alden

ALSO IN ATTENDANCE:
Joe Schroeder - Budget Review Office
Joe Muncey - Budget Review Office
Carolyn Fahey - Economic Development
Charles Stein - Vice-President Suffolk Community College
George Gatta - Suffolk Community College
Dr. Shirley Pippins - President SCCC
Brian Appel - Changing World Technologies
Tom Butcher - Changing World Technologies
Alan Ellenbogen - Viridia Energy
Dr. Paula Marie Ward - Viridia Energy
Peter Quinn - Resident of West Islip
Debra Alloncius - Legislative Director of AME
All other interested parties

MINUTES TAKEN BY:
Donna Catalano - Court Stenographer

(*THE MEETING WAS CALLED TO ORDER AT 2:46 P.M.*)

CHAIRMAN HORSLEY:
Before we start this meeting, may we all please stand for the Pledge of Allegiance.

SALUTATION

And may we just stand for a moment of silence in respect for all those young men and women who are defending our freedoms both in Afghanistan as well as Iraq and around the world.

MOMENT OF SILENCE

Thank you. Please be seated.

DR. PIPPINS:
I understand that Legislator Kennedy joined us. He's a good friend, wouldn't want to leave you out. He represents the 12th Legislative District, including Smithtown, Nesconset, Hauppauge, Lake Grove, and part of Commack and Ronkonkoma. I'm glad I've been here long enough to pronounce these towns. In addition to this committee, he is the member of Budget and Finance, Health and Human Services, Public Works, Veterans and Seniors Committee. Would you please stand and be recognized.

APPLAUSE

LEG. KENNEDY:
Thank you.

DR. PIPPINS:
Are there are students here from Smithtown, Nesconset, Hauppauge, Lake Grove, Commack and Ronkonkoma? All right. Thank you, again.

CHAIRMAN HORSLEY:
Again, thank you very much, Dr. Pippins. Please give a hand to
Dr. Pippins, the best college president we know beyond this County and across the United States. What a wonderful job she does.

APPLAUSE

For the edification of our students that are here today, I just wanted to touch base on what the college -- what the college is to the County Legislature and why we're here. This is special day, as Dr. Pippins mentions, because this is part of the family of Suffolk County, Suffolk County Community College, and we're very proud of it. And what we do as a Legislature, we every year sit with the administration and the teachers, faculty and students and Board of Trustees of the College and we discuss budgetary issues.

And those budgetary issues are how much should Suffolk County taxpayers pay towards your tuition. And that discussion goes back and forth. So you understand this, Suffolk County basically, you know, where -- there's always a discussion -- pays about one-third of the bills for Suffolk Community College, the State of New York pays about a third, and then you pay approximately a third. I know that we can argue that, but that is -- that is how it's set up to be.

In addition, the Suffolk County Legislature is involved with the Capital Budget, meaning -- Capital Budget meaning -- the theater here today, if we were to build it, that monies would come through Suffolk County. We're planning on buildings as far ranging the Culinary Arts Building in Riverhead, which recently went on line, which we're so very proud of; the Nursing School in Sayville, and the

list goes on and on. Major improvements to this college are approved by the Suffolk County Legislature and paid for by the taxpayers of Suffolk County. So you are part of your family.

We recognize how important education is, an affordable education, is to the residents of Suffolk County and to you, most importantly, the students. So that is why we're here today. Not to talk about budget issues, but to be kind of be part of your Student Appreciation Day and let you know that we respect you, you are the future. In fact, I want one of you guys in the future to replace some of us up here on this board. It's a good thing. We recognize that you are -- you are the future. And so with that -- with that, that is what the Legislature is -- the relationship of the Legislature is to -- is to the college. With that, I'm going to turn it over to Legislator Stern who would like to say a word.

LEG. STERN:
Yes. Thank you, Mr. Chairman. I'm excited to be here today. I just wanted to point out that Legislator Kennedy has always been a tremendous supporter of the college, Legislator D'Amaro as well. It was pointed out earlier, his family goes was back in being a tremendous supporter of the Community College; Chairman Horsley himself serves as an Adjunct Professor, I've served as an Adjunct Professor for law school, so I just wanted to say that we are pleased to be here with our partners at the college and to just let everybody here know that certainly for those of us up on this stage today, we get it. And so we're all very proud and pleased to be with you today.

CHAIRMAN HORSLEY:
Legislator Kennedy.

LEG. KENNEDY:
Thank you, Mr. Chair. I'll echo the sentiments of my colleagues here, and I think I'll even go one further than that. Some of who sit around the horseshoe actually sat in the very same classrooms you as students sit in now. Many, many years ago, I struggled to try to master Calculus, didn't succeed, but it was not because of the want of good teachers here at Suffolk Community.

I have the good fortune to be married to a Suffolk Community College nurse. I can you -- any of you in the medical programs that Suffolk Community College's medical training; nurses, health care techs, have an outstanding reputation amongst all of the health care facilities here, not only on Long Island, but in the Tri-State area. And it is due in large part to the rigorous curriculum that overseen by your college administration, and which we, at a County Legislative level, know firsthand as we struggle to try to go ahead and meet the important health care needs of all of our 1.4 million residents. We look to Suffolk College -- Suffolk Community College as a resource and reservoir for capable, able, competent individuals to go out there and assist us.

I'm also directly familiar with your Automotive Tech Program. And once again, I commend the administration for aggressively pursuing collaborations with our large automobile manufacturers; GMAC, Honda and some of the other major United States and foreign automobile manufacturers to turn out individuals who go through a 66-credit academic program and who can enter the workforce immediately with extremely competitive salaries and excellent training.

So all of you have an outstanding opportunity here, but you bring to us a reciprocity that we've drawn immensely. This morning, I sat in Microsoft Intermediate Training Program over in Civil Service that is being assisted through Suffolk Community College. So as much as we have on our side the obligation to go ahead and make sure we have excellent educational opportunities for you, we collaboratively and collectively are also benefitting all of the excellent academic standards that are here. So I'd say it's my privilege, I'm pleased to be part of this, and I commend the Chairman for having this committee meeting here today. Definitely the right thing to do.

CHAIRMAN HORSLEY:
Thank you, Legislator Kennedy. Legislator D'Amaro.

LEG. D'AMARO:
Yes. Good afternoon, everyone. As Legislator Kennedy stated, I'm also very, very proud to be here today. As Dr. Pippins had mentioned, I was sworn in roughly two years ago to my first term in the Legislature. And when you get sworn in and you start dealing with County issues, as our Chairman pointed out, one of the things we always deal with is the college and its budget. And I have to tell you, I've never seen such a high level of professionalism for the folks that come into the Legislature during budget time and deal with us and talk to us and explain to us what the priorities of the school are. They do a wonderful job of representing the school and have really achieved this high academic excellence that we're all benefitting from here in Suffolk County today.

So I'm very proud to be a part of that process. I'm proud of all the students that are dedicated to going to college to better themselves as well as to give back to the community. And it really is something that we have to continue to make a high priority in the Legislature, because education is really the foundation that everything else that we do is built upon. So we're going to continue doing that, and that's why we're here today. Thank you.

CHAIRMAN HORSLEY:
Thank you very much, Legislator D'Amaro. The process in which this committee runs is generally we have -- we have questions that are asked by the public, and that is in first order; then secondly, we would have presentations, people that want to bring forth ideas and concepts and platforms to the Legislature to hear; and then we vote upon different resolutions.
Today, we don't have any resolutions in front of us. And it was kind of by design because we knew we were coming here, and we didn't want to bod you down in some of the real nitty gritty of our -- of our processes. But I'm going to call up -- in the open portion, what it's called -- several people that have requested to speak to this committee.

And then secondly, what we're going to do today -- and this committee is Economic Development, Energy and Higher Education. It's kind of an interesting combination. But what we're going to be discussing today is we have several companies that are looking to expand Suffolk County and our -- our economic base in Suffolk County to produce waste products -- now, you're going to love this, gang -- waste products like human waste or grease from restaurants and the like into energy. And that's what's we're going to have several presentations on today. So I hope you enjoy that.

Certainly I know it's an interesting topic. Not everyone would feel the same way, but it is part of the making Suffolk County green, which we have a huge commitment to in Suffolk County. We are in the forefront by far than -- further than most other counties across the country. And so that's -- we're going to be discussing those two topics. So with that, I'm going to start the open portion of this meeting and call up Lisa Broughton of the Suffolk County Economic Development.

MS. BROUGHTON:
Good afternoon. I'm been working with your staff on bringing these presentations to you, and it was thought that maybe some just broad overview on not just this industry, but the clean energy industry and how we as Suffolk County Economic Development and Workforce Housing are trying to support this industry.

One thing that jumps out right away is they're not job intensive, they're not labor intensive companies. The companies that you will hear from photovoltaics and others industries that really are sort of small and starting out, so they don't fit with our general economic development benefits that other bigger companies could get. So we try to connect them to New York State and to Federal research grants at the Department of Energy. And we've been putting some special emphasis on that, because of the disconnect between what we can give a company that's creating say, you know, a dozen or two dozen jobs and some of these smaller companies.

There's a different way that government can support this industry, and that is by using it. And I think Suffolk has made a big commitment to doing that in our building, in wanting to have our -- any new construction be LEED certified, and in our commitment to buy bio fuel when it's available. What

I've heard anecdotally is that there's much more demand for bio fuel than there is supply, that we could be -- our homeowners will use in their -- as heating oil, our industry will use to fuel their trucks, and certainly our governments would want to use it if it's availability for our machinery. So there certainly would be the demand if in fact it could be available in large quantities here.

What you are going to hear are some very specific presentations about a way to get this grease out of our sewers and be useful to us as fuel. But in general, the bio fuel industry is something that is here, it's trying to grow, and our department is doing everything we can to support the industry of bio fuel production and use.

CHAIRMAN HORSLEY:
Thank you. Legislator Stern has a quick question for you, if I may.

LEG. STERN:
Thank you, Mr. Chairman. Lisa, do you have any idea approximately how many -- how many suppliers, how many companies. We have in Suffolk County that provide this type of bio fuel?

MS. BROUGHTON:
Right now the two companies that you're hearing from today are not necessarily manufacturing on Long Island. There is a third company, and I don't know if they made it, they were invited -- there they are -- that are -- in fact, thanks for coming, guys -- that are looking to start up some production in Bohemia. In fact, Dave Butler had with a small project in Bohemia that you may all be aware of and now is looking to take that to the next level.

The gentlemen who are speaking here want to partner in a public-private way and use County facilities. So they will be here in Suffolk County if, in fact, we find a way that makes sense to everybody. But there really is not a lot of manufacturing going on as far as distribution. We are bringing in bio fuel from other areas. And there are -- I want to say -- a half dozen or so distributors who are -- this is Tom from Brookhaven Lab.

MR. BUTCHER:
It's getting mixed in with the fuel pool broadly. So it's hard to say, you know, a small number. It's getting to the point where almost everyone is using a little bio like it or not, know it or not.

MS. BROUGHTON:
All of the home heating oil companies.

CHAIRMAN HORSLEY:
Lisa, just for the edification of the -- of the audience, what bio fuels are; making grease -- for instance, when you go to the chinese restaurant and you get your egg roll fried in oil, that, at the end of the day, they throw that out -- or they don't throw it out, they
recycle it, and that -- that that grease, that oil, will -- has a potential of becoming a fuel, as being added to your -- your gasoline so that you can run your car or the public's cars. The list is ad infinitum as to how many different uses the bio fuels could be. But basically what it is is turning waste of bio degeneratable materials and making into energy. It's the future. And that's what we're talking about.

MS. BROUGHTON:
Right. And there will be jobs, there will be the opportunity to lower some of our greenhouse gasses and to really make a dent in an ongoing global problem, and at the same time, make a real investment in our economy.

CHAIRMAN HORSLEY:
Right. Well, thank you very much, Lisa --

LEG. KENNEDY:
Mr. Chair.

CHAIRMAN HORSLEY:
-- for bringing these -- was anyone else -- Mr. Kennedy.

LEG. KENNEDY:
Yeah. Just a quick question. Just a quick follow-up question for Lisa. Particularly with kitchen waste, this plant -- I guess this is a pilot opportunity that's going on in Bohemia now that we're looking to happy to possibly expand?

MS. BROUGHTON:
Unfortunately, this company contacted me after this was set up, but maybe as part of public portion they can give us an update. They really just came in in the last week to say, "We're ready to do something."

CHAIRMAN HORSLEY:
Did they want to fill out a card?

MS. BROUGHTON:
Did you want to do that?

UNKNOWN AUDIENCE MEMBER:
Sure.

MS. BROUGHTON:
I'm just getting the details, and as soon as they kind of wrote in, I let them know we were meeting here today.

LEG. KENNEDY:
Again, I think part of the other side of the equation here is, as know is, as important as it is to diversify the fuel source, the conventional way to handle kitchen waste or actually rendering waste at this point is traditional shipping and trucking off island, I believe.

CHAIRMAN HORSLEY:
That's correct.

LEG. KENNEDY:
You're looking at a lot of vehicular traffic that's engaging in tailpipe emission. And really, the only place that's it's going is to be carted away. So that we would have additional benefit, I believe, if we could bring this to fruition, because we would reduce truck traffic or some of the other routes that are going on at this point and just exporting waste off island.

CHAIRMAN HORSLEY:
And I hate to sat it, that sometimes this waste doesn't even make it to those trucks to go off Island, it just gets lost in the process.

LEG. KENNEDY:
Or we deal with by and through our Health Department, unfortunately, where we have enforcement actions going on where establishments don't operate in the proper fashion, and then you have to bring out sanitarians or waste inspectors who are looking at fat and renderings and things like that put into storm drains and into the regular waste system. It wreaks havoc on any kind of municipal sewer system that's in place as well. So there's a variety of benefits coming from this effort.

MS. BROUGHTON:
I think you will certainly hear about that from our two presenters, and then if our company from Bohemia gets involved too.

CHAIRMAN HORSLEY:
Okay. Thank you very much, Lisa. Appreciate it. Peter Quinn.

MR. QUINN:
Good afternoon, Presiding Officer Horsley (sic) and Members of the Legislative Committee and the audience. I came across an exciting -- excuse me -- exciting new technology in solar technology. I read it in the Londian -- London newspaper, The Guardian. And it's a California company, a private company, well funded, and their claim -- what they do is the third stage of solar technology, the first two being thick film silicon photovoltaics 30 years ago; then ten years ago, the thin film photovoltaics; and now aluminum foil with -- embedded on it is solar photovoltaics.

And the beauty of it is that it can be run off an aluminum -- on a roller much the way print -- ink is imprinted on a newspaper. And the other beauty is that its cost is reduced to under a dollar a watt. That's the equivalent of what coal technology, the cheapest technology that is used by utilities across the country with oil and natural gas being much higher. So this could conceivably displace much of the energy we consume through solar radiation.

I was so excited about it, I called Pat Foye, who is the -- Governor Spitzer's energy -- economic development czar for southern New York, and I said, "Let's get on it and get this -- the company coming to Long Island." It turns out that the company had all of its supply purchased by Germany. They were well in advance of the United States. They grabbed up all of the supply. And they have no addition supply available until the Summer of 2009. So I think it's critical for the economic development agencies to get on this.

If their technology proves to be true, and if the cost proves to be true, then I would say let's give them the incentives to come here. I've already urged that they come to Brentwood, because that area is somewhat depressed with Entemann's losing 350 jobs by March and American Home Mortgage Company having lost 1400 in Melville just a few months back. It's important for this County. And I hope that you Legislators will push that effort so that we have a company here on line operating by next summer. Thank you.

CHAIRMAN HORSLEY:
Thank you very much, Mr. Quinn. We appreciate your advice as always. All right. Is there anyone else -- would anyone else like to be heard by this committee? Would anyone else like to be heard? Okay. That being the case, we're going to move them to our presentation. I have Mr. Brian Appel, CEO, Changing World Technologies, Incorporated;
Dr. Tom Butcher from the Brookhaven National Lab, and they are going to be discussing Changing World Technologies, Incorporated's new projects and where Suffolk County could go with this. Gentlemen. Good seeing you again.

MR. APPEL:
Good to see you. Thank you, Mr. Chairman and thank you other Legislators for having Tom Butcher and myself come and present to this group. I'm the Chairman, CEO of Changing World Technologies. And we're a local company to Long Island. We're West Hempstead. We put $150 million of private money to develop our technology from an idea to a commercial technology. And we're here to talk about some potential growth opportunities to stimulate and have alternative energies grow in the state.

We, as a nation, we're clearly at crossroads regarding alternative energy. Suffolk County clearly has the vision and the leadership -- I was at a forum last Friday, and it was incredible. If you can lock up all that passion and harness it, we wouldn't need to buy any oil from foreign nations. The success ultimately going forward is going to be how we carve and craft our programs going forward. And the market will need clear direction. They can't be teasers what we're throwing out to industry

in order to attract more investments in this arena.

We're going to discuss our waste to oil, the desires, the energy dilemma, converting waste to oil, the challenges of renewable fuel, and then the investment in our future. Tom and I will be sharing the presentation back and forth.

Our programs are alternative, green, competitive. Our offer to our customers is very compelling. We do this now. This is commercial, this is not something that needs to piloted. We actually take all this nasty waste right now and produce over 20,000 gallons a day of renewable diesel out of all sorts of mixed waste. The framework is very clear. Those who utilize existing infrastructures are going to get to the market quicker. There are so many regulatory and incentives in place. One of things that are going to be demanded of these new fuels is life cycle analysis. Well, we had MIT do a life cycle analysis on our food waste, and Ford GM did one on shredder residue for that waste. As we look at what's happened with the demand for these bio fuels, there seems to be a stress as a food versus fuel fight. So these life cycle analysis are going to become more important.

CHAIRMAN HORSLEY:
Brian, can I interrupt for just one second?

MR. APPEL:
Sure.

CHAIRMAN HORSLEY:
Is it possible that maybe that you could tell the audience -- because there's some of these young people here -- some of the products that would be used to make this bio fuel?

MR. APPEL:
Sure. I actually have some slides --

CHAIRMAN HORSLEY:
Oh, okay. I'm sorry. I didn't mean to --

MR. APPEL:
Specifically, we have some ideas for a commercial demonstration plant here. It's fats, it's sludges, it's trap grease, it's industrial waste from companies like Estee Lauder or Entemann's who have these waste streams. And then the future is very promising, because it will be all the municipal solid-type waste.

LEG. KENNEDY:
Mr. Chair, can I follow up on that for a second? You spoke about sludge waste.

MR. APPEL:
Yes.

LEG. KENNEDY:
Okay. You're taking about bi-product then from regular sewage treatment plants?

MR. APPEL:
Yes. When we were funded by and part by Philadelphia, we were on Discovery Channel on sewage treatment waste that needs to be developed where you could take the greases and the skimmings right now. I actually take those now at a commercial application in Missouri.

LEG. KENNEDY:
I'd be very interested in that.

MR. APPEL:
There's lots of tax incentives. There's one thing I want to stress at the slide show. They say politics is local, this group has one of the greatest opportunities, because for the time in our history, the tax, the Federal tax systems, all tax must come out of House Ways and Means. Charlie Rangel is the Chairman of the House Ways and Means Committee. This group should lean on that group in order to put parity in the system. And instead of just funding vegetable crops, we should be looking to fund the things we need in the -- where there's high density people. And this is a great opportunity for this Legislature to get with our local committee and the most powerful person right now, the Chairman of the House Ways and Means Committee, and put parity in the system so that you could leverage what you want to do.

The dilemma. We read a lot about where this energy is going to come from. There's a fundamental dilemma. I was funded in part by the oil companies. They called me "Mini Kuwait" when BP was funding those early days. They want a big pipe. They want 100,000 barrels an hour coming from some big field. Well, all these sources, if it's from a butcher or from vegetable oil, at best it comes on a barge. So the dilemma is how do you get this into the existing infrastructures.

So it all sounds very good. These really are flange leaks for these refineries. We have to learn use these in equipment that's suitable for the kind of volumes that we're going to produce. So the hype is actually hurting this business a little bit, but I want to put some -- a dose of reality here; this is not going to go into a refinery, this is going to be something that we're going to produce the waste locally, convert the waste locally, and then use the fuel locally in boilers and engines.

The displacement of fossil fuels, we hear all the hype and everything. There's no longer Big Oil, being Exxon-Mobile. Big Oil is now not seven sisters, it's the seven nations; it's Saudi Arabia, it's Venezuela, it's countries. The only one who can compete with these realistically -- and our energy costs are very high -- are energy companies, because we're going to be going to plug in electric hybrids, we're going to be no longer having a two-tier rate system when we large electricity; base and off-peak. We're going to be going to change our CAFE standards, which was in the 2007 Energy Bill.

The rest of the world, liquid fuels are equal on whether it's transportation or power fuels. Since we didn't have a CAFE regulation that was meaningful, we're out of whack, so it's two-third-one-third. So we're a proponent to Long Island using these fuels in a stationary environment. And over 75% of all power actually is used for something other than transportation fuels. We're enamored with transportation fuels because we're bothered with eight inch placards every -- every two days that we fill up. But when you get your $8100 home heating bill, that's not fun either. We just get that less frequently.

Fixed energy is extremely important. We take for granted that the lights go and they're coming from power plants. We take for granted that the heat in the wintertime in the Northeast comes fuel, natural gas. These are very important, these fixed energy applications. It's a natural progression to learn how to use the new fuels in a fixed energy environment; it's a larger volume, and then we can learn to deal with all the hurdles that we're going to have to deal with. And more importantly, we're funded by Ford GM and Daimler in one part. We're not changing these carburetter for eight, ten years, but we can change a boiler, as Tom has proven at Brookhaven National Labs, in one month and immediately get to use these fuels. So it's a much easier he hurdle to deal with in converter fixed energy equipment than getting the car companies to be able use these new boutique fuels. The volume is just not there.

The process converting waste to oil -- I'm the patent holder of this, it's conventional equipment -- there's no combustion, which means that the permitting should be relatively easy when nothing is hitting an open flame to make dioxins and other problems. Basically what happens is -- and since I'm short on time here, could talk for hours on this -- we prepare the waste. This is actual plant in Missouri that does 250 tons a day of waste producing 20,000 gallons of renewable diesel. We go through a depolinization step we call this. So we straight the solid material; the bones, from the

things that you can turn into oil, which would be the fats and the proteins and the carbohydrates.

In the case of shredder residue, which is from the leftover pieces from the cars and the appliances after they recover the metal and the glass, that's where the metal would drop out away from the mixed plastics and the rubber. We then go through a much higher temperature and pressure. This is all in water, so we don't use natural resources. It all comes in the material, so we're not a bid burden on natural resources. Water at this temperature and pressure breaks any kind of chlorine or bromine bond, which is really good, because we want to avoid that from any of the fuels so when we burn, it's going to burn it clean.

And then we just go through a collection and separation step. This plant -- this is the size of the plant -- so 20 tons of fats bones, feathers, sludges, this is not the cream of the crop which would -- you know, bio diesel is only the pure vegetable oil from soybean and grape seed. This is all the nasty material that gets dumped into a hopper, and we process this material. It comes in regular trucks. We're not waiting to change infrastructure, we don't need railcars or barges this way, so it comes locally. So we get use the existing infrastructure, which means we can make an impact very quickly.

Future applications, we're really excited. I was just featured with General Motors on the Discovery Channel. They call this car cannibalism, fuel your new car on your old car parts. So they go through this -- this shredder residue end of life recycling program where they get metal and the glass, and they're left with all the stuff that we want to turn into oil. Our separation equipment is to get rid of metal. So we don't want that, so they can have that back. So shredders, the car, the appliance, your refrigerator, your cell phones, your computers all get ground up to recover the metals. You're left with the shredder residue. There's a photo of that; broken down mixed glass, foam, fiber and rubber. And that's the kind of stuff we can turn into fuel.

LEG. KENNEDY:
Just I ask just one? Can you speak just a little bit about rubber component? I noticed on your previous thing you focused on tires. You are actually able to go ahead and take waste tires, used tires and work with them in your process?

MR. APPEL:
Yes. My largest investors is actually the largest distributor in the world of Good Year Tires. When we did all the work with Good Year and the Finkelstein Family, a local Queens company, we found out very realistically that the car is part of the -- the tire is part of car. So it naturally led to the automobile manufacturers end of life recycling. So we don't look at that as separate, we look at that as part of being on the car, the car gets recycled, and it all goes in it -- there's rubber hoses, so there's a bigger rubber component than just the tires. Tires are really identifiable to us. And they seem to be a big burden, but it is actually a small percentage overall. But we can do tires.

LEG. KENNEDY:
Agreed. But also, in my Legislature District -- or actually just north of my district up the Smithtown -- northern Smithtown area, there's probably one of the hugest tire graveyards that exists on the eastern seaboard. So if there is the ability to go ahead and actually capture some of that for your waste cycle process, that would be something that would be of interest as well.

CHAIRMAN HORSLEY:
You're sending them over tomorrow?

LEG. KENNEDY:
I'll see what the Supervisor has to say about that, Wayne?

MR. APPEL:
We expect to have some plans for a commercial demonstration for shredder residue and rubber by

the end of this year completed. So we're well into this with the car companies and some other engineering firm.

LEG. KENNEDY:
Very good.

MR. APPEL:
A lot of what we do is under the microscope. We've been -- certain aspects of our technology have been validated by independent authorities; MIT, the top one, did a life cycle analysis on our food waste; KeySpan, which is now National Grid did a very large study with Brookhaven National Lab and NYSERDA to burn actually the fuel Ravens Wood or in Northport to make sure it wouldn't affect their power generation equipment. And we passed all the tests, and it was a very extensive test; vehicle recycling partnership, Ford, GM and Daimler, the County of Los Angeles five year study on eliminating landfills and incinerators. We're the only liquid technology that passed the gating issues. We don't have a commercial plant for municipal waste, but it was just all the testing that we did on pilot.

Renewable diesel, a rapid diesel deployment platform for the military, that concept has been embraced by them, and there's been some work with the military on actually forward-based operating using our technology. Been through three environmental assessments under the National Environmental Policy Act. And we have a Medical Infectious Waste Permit in New York State. Plum Island was looking to go to a bio level four facility. They put us up against some rigorous nasty material, I think it was anthrax and visalia-strepomopolos all these things. And we got total destruction in the testing conducted with the Department of Health and the US Army down in Philadelphia in the Navy Yard.

So we have a permit for medical infectious waste, which means we can destroy all these bad things. Commercial applications, this is where we're concentrating. We think this is the fastest biggest bang for the buck. And it's an easier market to penetrate. Industrial boilers, which put the heat in this building, schools, hospitals, municipal facilities. We should be doing schools to educate all the children and all the students and the university people to get them to embrace so we can really make a shift away from fossil fuels.
This is going to be a BTU parity pricing. As long as we get the same thing that ethenol and soybean and everything else gets, we can deliver the fuel at $1.60 to $1.80 a gallon. We're confident. This is not a pro forma that's pie-in-the-sky. This is a commercial plant. So we're confident in these numbers. The 2005 bids, before we see a spike in oil under the Freedom of Information Act was two -- $1.97 to $2.13 for 500,000 gallons from a supplier called Quoque in General. So we can come in below that for a green fuel, and without any green credits -- because we haven't figured out how to monetize CO2 credits in this country yet. A lot of talk about it, but it's not monetized.

By the way, low conversion -- very quick -- we can change a boiler out 20-30,000 gallons for a school that can use a million dollars worth of fuel in one month, not wait for a car company for ten years and millions of dollars in development costs, and I do that now. This is -- we do this now.

What we propose is an investment in your future, and it's developing, constructing and supporting a commercial demonstration facility in Suffolk County. We're a local company. You have a very aggressive Suffolk County leadership, I'm really proud to be part of it. I was on the front page of Newsday a couple of years ago, a big picture of my mug, and it said, "Can This Man Safe The World From The Energy Crisis?" So I am really excited to be having this conversation since we are a local company.

We have support from a first class local national laboratory. We've conducted numerous meetings with your Public Works, with your Department of Health at Brookhaven National labs. We're comfortable we can cite this facility and make a difference. A facility -- this will be a commercial demonstration room. Talk about a $20 million investment, 30 high paying technical jobs, small footprint. That's with lots of setback. We probably only need two acres. A 120 tons initial capacity,

20,000 gallons a day of renewable diesel. That's plenty for the school. Potential expansion over 50,000 gallons, pricing competitive with fossil fuels.

I'm not going to go through the technology advantage. We've been drilled by everybody. I want to keep moving. We're really excited. There's huge technical resources here. I loved listening to the speeches Friday with Mr. Levy and Mr. Suozzi and Congressman Steve Israel, a champion for these causes.

CHAIRMAN HORSLEY:
And Mr. Stern was there too.

MR. APPEL:
And Mr. Stern and everybody who was there. I was in the back, you didn't notice me. The technical resources, they're local. We just received word that there's a $2 million grant from the Department of Energy to go to Brookhaven National Labs and Changing World Technologies to further develop these fuels. I'm honored that Brookhaven National Labs has looked to embrace these fuels. This is the only lab that I know in the country that has experience in both bio diesel and renewable diesel. We're renewable diesel. I know that because we're the pioneers of renewable diesel, and they did that study. So I'm going to turn over the next few slides to Tom Butcher.

MR. BUTCHER:
Okay. Thanks. And thanks for the invitation to be here today, I appreciate it. I wanted to -- I wanted to talk a little bit about what their interests are at Brookhaven National Lab in this whole business. It's really broad. We do a lot of different things in the area of bio fuels. It's such a timely topic. But I guess what I can do is break it into two major chunks; one is what I call the basic science of fuel production, and this involves many, many folks, it involves things like genetic modifications of plants to produce more oil, to produce oils with different properties, a lot of focus on studies of ways to degrade wood waste and other cellulous-type waste products so that we can start to ferment those and do other processes to convert them into other fuels; transportation fuels such as ethanol; stationary fuels such as oil. So there's a big emphasis on plant degradation and bio mass degradation as a pre step for fuel production.

We're also on the other end of the spectrum. We're very interested in the applications of these fuels. We have long standing interest.
We think that those are really good opportunities for bio fuels such as bio diesel, which is a very well established, well designed fuel, but also many other fuels that could -- are kind of on the edges of the market and are sort of getting in there.

So a quick overview of the work that we have done in this area. We have done lots of lab studies, we have done lots of field studies. We're involved now in the bio diesel project at the Sagamore Hill, the Teddy Roosevelt Museum. The we did 100 homes Upstate for four years. We're very involved with laboratory proving the combustion performance. We've also been very involved with work to change the standards. It's a very important aspect of these alternative fuels that these fuels -- there are standards about the use of these fuels and the properties associated with these fuels, and it's very important to pay attention to the properties of these fuels, degradation over time, interaction with materials, seals, rubber, things like that, for example, to ensure that these are used in a way that is consistent with the high level of reliability and safety with which we use fuels now for many, many years.

CHAIRMAN HORSLEY:
Dr. Butcher, could I just interrupt just one second? Now, who -- is that a Federal prerogative to oversee those -- those regulations, or is that state? Where do those regulations come from?

MR. BUTCHER:
Those regulations are primarily ASTM standards that define fuel; what is fuel, for example, is defined there. Different building codes will reference those ASTM standards. For example, you may have a

home heating boiler that a local building code says that home heating burner must be -- must be UL approved, or must be approved against a UL standard. So that standard specifically says, okay, this fuel, this burner, is rated to burn these following fuels; those fuels are defined by ASTM. That's kind of how that -- that process works.

MR. APPEL:
If I could add a point. These standards have evolved over time from the equipment manufacturers who need to guarantee the performance of the equipment and also the emission profile of the fuel that's being burned.

CHAIRMAN HORSLEY:
So it's a DEC maybe. I'm thinking the standards as far as the air qualities and stuff like that.

MR. APPEL:
You must meet AP 42, which is emissions on NOx and Sox and particulates and VOC if you're going to be burning any fuel. And then it goes even further; EPA 211, which it's under if it's transportation fuels.

CHAIRMAN HORSLEY:
Okay.

MR. BUTCHER:
DEC, for example, would very specifically regulate sulfur content to those fuels. And, you know, that -- that's their role, it's very important. So to finish that, we've been very instrumental along with a lot of other folks in getting the definitions of what heating fuel is changed to include bio diesel content now, and that's -- that's almost completely approved now. So that's -- it's hard to change the world.

We've done a lot of fuel property studies; stability, low temperature flow properties, interaction with materials. We've also done a lot of looking at a wide range of novel fuels that are -- that are now coming on the market; levulinates, for example, biobutanol is kind of very interesting. And, of course, as Brian said, we've done a lot of work the CWT fuel in cooperation with KeySpan for possible use with utility boilers on Long Island.

Just a couple of comments on this whole area. As I look at waste grease -- ans there's been several different important studies on this -- I guess the first point is that the resource nationally is really big. There's a lot of this stuff out there. And so Suffolk County is absolutely not alone in wrestling in how to deal with this. There are other cities involved, and I think that there's a lot of advantage to be taken by cooperating with sister regions who are considering these kinds of processes. And believe me, you are not alone.

Also, waste grease typically has a very high free fatty acid content, which basically means it's hard to convert to a bio diesel via conventional processes. So it's a bit of a challenge, which is why folks like Changing World Technologies and others are involved.

Okay. Finally, just a couple of comments. CWT has done some pilot tests on some material in this category. I find the results very interesting, where basically the free fatty acid content is extremely high, and that gives us certain options in terms of possible downstream to conversion to either bio diesels of true ASTM grade diesels or in direct use, which may, in fact, be the most economical approach in industrial and utility boilers. So that's the end of my presentation. Thanks.

CHAIRMAN HORSLEY:
Okay. Thank you very much, gentlemen. Are there any questions from the Legislators?

MR. APPEL:
This is where the waste comes in -- to answer your question. We said $2 million funding from the

DOE sponsored program, which is a good thing to show the importance of what this is all about. Feedstock locally, important; trap grease; DAF sludges from industry, we had a company that makes cosmetics in Melville approach us, they pay a lot of money to get rid of these wastes and these greases, so all of that material. And we want to be able to offer a service to get that waste out of here. The skimmings from the treatment plants; the fats, oils and greases. We know plenty about that. Why do we want to regulate? It has a negative impact. Your maintenance costs go up. So if there's a home for this, people are going to want to collect this. So it will help on the maintenance and those costs. Same with the enforcement issues. People are not going to want to worry about the enforcement police coming out. They're going to want to collect this, because it's going to be a cheaper alternative for them, you know, for them.

Next step is to reaffirm the things we've already done; take some samples, if the County is interested, get them involved, determine off-take agreements, is there a school, a hospital, municipal facility that would like to save money and reduce their CO2 footprint, how do we modernize the green attributes, get involved with a public-private partnership. Today, this is the Wall Street Journal, it says, "Nations Rush To Tap Into Clean Energy." It says, " Who Will Profit?" It's going to GE or Caterpillar. We're an advocate, we're private. We could build this ourselves. But we're an advocate. There should be a public benefit with all the things that we're doing, because there's so many other systems in place for us to leverage this in a meaningful way.

And that comes to this last slide. And I opened with the House Ways and Means. There are a myriad of often camouflaged subsidies that are out there. A lot of these are for the farmers; these are for soybeans and for corn. They exist. And right now, there's talk about taking renewable diesel and only giving a 50 cent a gallon credit as opposed to the dollar, where the other fuels get a dollar because they're supported by the "red states," so to speak. We need to leverage these investment tax credits whether it's State, local. And instead of acting, like alone many times we all feel like we're doing, that we all roll in the same direction. And as I said, we have opportunity because of the Chairman of the House Ways and Means Committee being here in New York to take advantage of that. So I thank you, I thank the committee.

CHAIRMAN HORSLEY:
Thank you very much, Mr. Appel. Mr. D'Amaro -- just for my fellow Legislators, be mindful we have another presentation that's going to be made.

LEG. D'AMARO:
Just very quickly. Mr. Appel, thank you for coming today. I am very pessimistic when it comes to energy issues. I was at that summit organized by Congressman Israel on Friday. And it seems to me that we have a lot of meetings about energy and alternative fuels, but I don't know, I feel like we're running backwards sometimes on all of this. So I'm encouraged by your presentation. It's nice to hear that you're not just having meetings, you're actually producing, and that's a nice thing.

There's probably a lot more out there that I'm not aware of. One of purposes of that energy summit on Friday was to kind of collectively bring that all together so one hand can be talking to the other. Just a couple of quick questions. You have a process that collects certain waste products and at a plant can convert them into oil, usable oil, home heating oil; is that -- is that a fair summary of what you do?

MR. APPEL:
Yes.

LEG. D'AMARO:
Okay. Is it an oil supplement or is it oil in its own right?

MR. APPEL:
It's an oil. It's a bio derived oil.

LEG. D'AMARO:
Would it be added to other fuel oils to be used today, or is it something that can -- you know, you'd have to retrofit burners in order to burn exclusively your product?

MR. APPEL:
We actually encourage people to use it 100% neat, because blending is a whole different world --

LEG. D'AMARO:
Okay.

MR. APPEL:
-- and there's a lot of problems that you get into.

LEG. D'AMARO:
Okay. That was just a preliminary question. So you can produce this oil, which you are doing -- speaking in global terms, you're doing on a small scale right now, right? I mean, it's not -- it's not a large scale production of oil obviously.

MR. APPEL:
Twenty thousand gallons a day of fuel from waste is pretty large scale.

LEG. D'AMARO:
Okay. But in comparison to what this country consumes in a day in oil products, it's small scale.

MR. APPEL:
It's a beginning of a way of --

LEG. D'AMARO:
Right. It's wonderful. Don't get me wrong, I'm not -- I'm not saying that's a bad thing. Here's my point. You know, when you start to try and actually make this economically viable as an alternative, you are going to have to produce vast quantities of this oil, and once you start getting into higher volumes, my question is have you projected to determine whether or not it's actually cheaper once you get into the entire infrastructure that you would need from collection to processing to distribution? It is actually going to be cheaper to produce this than what we're doing right now?

MR. APPEL:
It's going to be much cheaper. We were quoted in papers, we put a number out that we were going to be at a number, and we would up -- this country still feeds animals back to animals, so we pay for waste still. The rest of the world will pay us for waste. So it is a -- you have to look at the whole equation of feedstock and the production cost and then the final product. This is the first out plant, so this is very encouraging that we're competitive with fossil fuels on a first out commercial demonstration plant. Bigger is better, and that's why we build big power plants and big production facilities. So as you go to thousand ton a day facilities, the production costs go very low.

This -- we're dealing with solids in Missouri; metal and bones. Here this would be -- the demonstration plant would be liquid wastes. So if companies that were producing cosmetics in Melville on 110 or the trap greases, the restaurant greases, it would be a much easier plant. But to show the nation -- and we'd build a couple of these -- how take to take these liquid wastes to lower the energy footprint and keep industries here from leaving, because of our high energy costs and waste disposal.

LEG. D'AMARO:
Okay. So ultimately, especially if you do -- the higher the volume you do, the cheaper the product should become just as an economies of scale analysis.

MR. APPEL:

Absolutely.

LEG. D'AMARO:
Okay. Then you get into the -- the next question is when you burn this fuel, is it cleaner? And if so, how much cleaner is it than what we're doing now with all of the -- all the mandated emission standards and other standards that are set at the State and Federal level? Is this actually a cleaner fuel?

MR. APPEL:
Tom will -- I'll do one part of the question, he'll answer it, because they did an evaluation. The answer is this fuel will burn clean.

LEG. D'AMARO:
Right.

MR. APPEL:
In an AP42 test, which is the Federal EPA test, that we conducted on a 100% neat on a 1000 horsepower boiler fuel burned, our fuel burned as -- cleaner than any liquid fuel. And in some characteristics, as clean as natural gas. But, Tom, you can --

MR. BUTCHER:
Yeah. We did a bunch of commercial tests on it, and I would agree. One -- one question, I guess, is the nitrogen content of the fuel that's a function of the feedstock that needs to be look at. If we have elevated nitrogen content in the feedstock, we'll need to pay attention to that as it carries through to the end product. But in what we've been looking at so far, we've been -- it burns well.

LEG. D'AMARO:
So that's encouraging. That's moving also, so that's good for the environment. Is the fuel efficient to produce? In other words, are you using so much energy to produce it that in effect it's wash in the sense that sometimes you need so much energy to produce a fuel, it doesn't really make economic sense to produce it if you're not saving energy?

MR. APPEL:
Well, it's one of the remarkable points of this story. Nobody believed us either. It's over 85% energy efficient. And if you do a net energy balance the way they do some of these purported other fuels, they'll be somewhere between 1.3 for corn ethanol; bio diesel is a three. Well, we're between a seven and an 11. And if we do it the way most people calculate it, we will be an 11. So we're an order of magnitude higher, and the reason is we're not boiling off all that water. We use the water. We're not evaporating it up a pipe and spending all that energy to vaporize the water.

LEG. D'AMARO:
And I know we're short on time. Just one more question. Just in your opinion, you know, I've thought a lot about energy dependence in this country, and, you know, if you listen to Congressman Israel, he'll tell you it's really a national defense issue where we really need to get off our addition to foreign oil because that involves our national security.

My opinion is that you can have all of these new technologies, and entrepreneurs like yourself being at the forefront of this, and that's exactly what we need, but until the government mandates use of alternate fuel, how are you ever going to create the demand? How are you going to kick start an entire industry without the demand out there and with the free flow of oil and other petroleum coming into this country given our dependancy? So in other words, if you don't have government mandates, how do you actually develop a market for this product?

MR. APPEL:
Well, there are now officially government mandates for 36 billion gallons of alternative fuel to go into the system, including displacement of home heating oil. That was in the Energy Security and Independence Act of '07 that was signed at the end of the year.

The second thing is nobody is waiting for the Federal Government to do this. So companies like WalMart and everybody are demanding, if you're in the international arena, to reduce your CO2 footprint. So industry has already taken the lead on this. So I don't think we're going to wait for the Federal Government. We put a foreign policy together, we came up with these bio diesels, these ethanol credits, now we have to extend it to where we have a density issue, because we don't have the farms any more or less of them, so we can't turn the potatoes into ethanol, maybe vodka, because it's got a value. But we don't have these -- these farming communities where we can take advantage. The mandates now are clearly in place for the next 20 years. And there's a bunch of states that are demanding that the fuel be green, some kind of renewable portfolio standard or requirement.

LEG. D'AMARO:
All right. Just a very last comment, and then I'll yield. By the way, when I said I was pessimistic, I didn't mean about your product, I meant about the whole energy picture. It's a very difficult thing to address. So you're here today -- as you know. You are here today asking Suffolk County to join with you in constructing and operating a demonstration center. Is that the focus of what you are doing, what you are asking?

MR. APPEL:
Yes.

LEG. D'AMARO:
And the purpose of that demonstration center would be to create the market, the interest, the demand, to show the product. I mean, what -- you know, how do you envision that?

MR. APPEL:
I'm not fully sure of the vision. We're flexible. The Bergen Points and all these people with trap grease -- they stop taking trap grease a number of years ago -- the came to us asked us can we help because they saw the Discovery with sewage sludge. And we've been looking at this and talking with all these different groups in Suffolk County. We thought because of the -- after KeySpan and National Grid got Brookhaven involved and the interest with a national lab, that it would be important to forge a public-private partnership. We remain flexible. We can go do this ourselves, commercially. But since you are so aggressive in this County -- I go all over the world, this is -- I'm proud of this County and what it is doing; moving an alternative energy platform forward. I think that -- that this could be a showcase technology for the County then instead of it being rhetoric and talk, that this is actually something that we can be proud of and say, look, here's a commercial demonstration plant that we're --

LEG. D'AMARO:
And it would give us a chance to walk before we run. Maybe we start it at a County level and go from there. Okay. Well, I appreciate you're answering -- by the way, has EXXON-Mobil made a tender offer for your company yet?

MR. APPEL:
We were funded early on by all the oil companies, and as I said our name was "Mini Kuwait." And at the end of the day, all these advertising campaigns, their flange leaks for the oil companies. It's really not that interesting.

LEG. D'AMARO:
Are you publically traded?

MR. APPEL:
No, we're not. We're a private company. We're based right here in New York, and most of our shareholders are from Long Island.

LEG. D'AMARO:
Terrific. I think it's a great -- it's a great product. What you are trying to do is just very encouraging, at least to me, and I appreciate it. Thank you.

MR. APPEL:
Thank you, sir.

CHAIRMAN HORSLEY:
Thank you very much, Mr. D'Amaro. And Mr. Kennedy, with the caveat that we have another speaker, very quickly. Get right down to the nuts and bolts.

LEG. KENNEDY:
Absolutely. Thank you, Mr. Chair. As a matter of fact, I'm going to go this quick, I want to go to Frame 20 where you talked about the actual conversion. I thing earlier you spoke 250 tons a day yielding 20,000 gallons of product a day. I want to just talk a little bit about your metrics, and then I want you to speak about how this demo plant would be fueled if, in fact, there is something that's needed to operate it, and whether or not you've got the ability to go ahead and convert all waste as it's trucked in or do you have to stockpile on-site.

I mean, in the world of a politician, I'll give it to you like a three year old. If we can cite this somewhere where we do not alienate or have to deal with some of the negative consequences that we get when we try to do anything, we probably could fly with this. I think it's absolutely intriguing. We spend $5 million a year to truck sewage sludge off island and put it in rail cars. And at the end of the day, we have zip. I'd be very interested in a collaborative effort where we have some owner interest in a demonstration plant that could probably pay for itself within four years. If you could go ahead and show us how convert with that.

MR. APPEL:
We do not need any kind of new power, and we're not going to burden and kind of electrical grid or power grid to get the supply for this plant. We produce oil, and the energy efficiency is very high. So we won't have to worry about new transmission lines and new pipeline connects. I thought I heard about three questions in there; one was the energy.

LEG. KENNEDY:
They know me well, as a matter of fact.

CHAIRMAN HORSLEY:
I'm pushing Mr. Kennedy that we do have another speaker, so be fair.

MR. APPEL:
The feedstock, this is pretty much liquid, so it will go in big storage tanks. And we're talking about a plant that's only going to be producing 20,000 gallons a day. So that small tankage on the output, about half water comes in, so you are not talking about a very large plant for storage, for the material coming in. Obviously, there's going to be trucks coming in to drop off the material.

LEG. KENNEDY:
How many a day?

MR. APPEL:
That will be about 12.

LEG. KENNEDY:
Twelve trucks per day to the site?

MR. APPEL:
Yes.

LEG. KENNEDY:
Okay. And then trucking to product back out as far as delivery goes.

MR. APPEL:
About one-third of that to a half, getting because you're getting rid of all the water that's going down the drain into a sewage treatment plant. We discharge water, so you're then processing that -- 6000 gallons go in a typical truck that we send to an industrial user that has, say, a thousand horsepower boiler. This building probably has 2000 horsepower boiler.

LEG. KENNEDY:
Last question, then I'll yield.

CHAIRMAN HORSLEY:
Thank you.

LEG. KENNEDY:
For new construct that we contemplate in Suffolk County, like the new Fourth Precinct, which will be a LEEDs building, the boilers that you speak about that can operate off this product, are they manufactured now out there in the industry, is it a special conversion, what would we do to look for a boiler that would have capacity to operate off this.

MR. BUTCHER:
I think that would take some cooperation with the boiler manufacturers to be -- you know, to be sure that this fuel as its final products come out are suitable for their equipment. I don't -- I don't think that -- we can't go to a boiler manufacture today and say I want a boiler that you will certify for this fuel. It's just too new.

MR. APPEL:
All of the boilers, Clever, Bronx, all the boilers that we've converted already, there's been no issues with the manufacturers, because they burn fuel now, anyone who is burning liquid fuel. If you were burning natural gas, we'd have to put a tank, a pump, a fuel delivery system, change the nozzle. The equipment guarantees that a new boiler. Most of them are frowning on these alternative fuels, but we have not had any issue on burning the fuels in discussions with the manufacturer, because we need replacement parts or upgrades. They take about a month and they're very inexpensive. If it's a natural gas boiler, you need a liquid storage and you need a pump and you need a different nozzle at your facility.

LEG. KENNEDY:
All right. I'll yield, Mr. Chair.

CHAIRMAN HORSLEY:
Mr. Kennedy, what we'll do is I'll be glad to give their telephone numbers, you can certainly change cards, so that we can carry this -- I want that to occur that we carry this forward. Quickly, Dr. Butcher, what do you think about Brookhaven National Labs, would you like to house it there?

MR. BUTCHER:
Would we like to house the plant at Brookhaven Lab? There are Federal regulations associated with it that may make it more difficult than anywhere else.

CHAIRMAN HORSLEY:
Okay. Just checking.

MR. BUTCHER:

We'd like to.

CHAIRMAN HORSLEY:
That's worth the conversation. Okay. Gentlemen, thank you very much. We could go on forever on topic, because it is -- it is so interesting. I know that we have to plan on how we follow up with this into the future so we can take it to the next step. I wanted to entertain your conversation today, because it is so vital to the interest of the Suffolk County as well as the United States. Gentlemen, thank you very much.

All right. I'd like to introduce -- I have Alan S. Ellenbogen, CEO of Viridia Energy and Paula Marie L. Ward, PhD. I have a long bio in front of me, would you mind if I defer until -- we just recognize that you are very -- you are expert witnesses. I hate to rush you.

MR. ELLENBOGEN:
We do give special credence to Mr. Kennedy, because his questions will be more part one, two and three.

CHAIRMAN HORSLEY:
We're used to him.

LEG. KENNEDY:
They put up with me.

DR. WARD:
Our intention is that we will be revealed through this very brief presentation. We're here to talk about the beneficial conversion of brown and yellow greases to bio diesel through a relatively simple process. Okay. Very quick overview. I'd like to just tell you just a little bit about Viridia Energy, and then talk about the feed stock strategy, our process, the products that come out of the system, their benefits, the costs involved, our strategic partners.

Viridi Energy's bio diesel conversion technologies provide green solutions for undesirable fats, oils and greases, otherwise known as FOG, plaguing major city sewer infrastructures while satisfying all the mandates, State and Federal, for environmentally-friendly alternative bio diesel. Viridia Energy is a New Jersey-based company, it was formed in 2007. It has a licensed patent-pending grease separation technology that is coupled with Viridia Energy's proprietary conversion process. It has a special strategy and that is -- or the primary strategy, and that is to locate their plants at waste water treatment plant sites to capitalize on the economic permitting and operational advantages, but there are other strategies that allow the system to be sited without relationship to waste water treatment plants. The value proposition is that the VEI strategy combine strong economics with a beneficial environment impact.

What makes Viridia different is that its interest is in processing fog. Either trap grease or yellow grease as well as animal fats and other seed oils. Viridia does not process feed stocks that contribute to deforestation or those used for human consumption, so there's no soy or corn involvement. And Viridia's feedstocks are not subject to volatile price fluctuations because of that, so there' s no agflation associated with commodity feedstocks like soybean or corn.

Viridia charges grease haulers -- and this is a different twist -- they charge grease haulers reduced tipping fees for trapped grease with a higher concentration of oil residual. And by changing this dynamic, they expect to attract additional grease for its process.

The typical plant will occupy a two-acre site located at a waste water treatment plant. It produces four to $5 million gallons of bio-diesel a year, that's between 15 and 20,000 gallons a day. Oil is processed and sold as bio-diesel or used on site for heat and electricity production, and its plants

can also be sited at other commercial locations at ports and on barges.

The process is simple, it's two stages. Stage one is the receipt and preparation of the feedstock through the licensed SV-2 technology, and the stage two is turning it in to bio-diesel through its own proprietary system.

Very quickly, the SV-2 is actually a fascinating little machine. It -- if you know anything about trap-grease; do you?

CHAIRMAN HORSLEY:
We know what it is.

DR. WARD:
You know what it is, okay. Well, it can contain just about anything from a food preparation facility; boots, gloves, kitchenware, bones.

CHAIRMAN HORSLEY:
Diamond rings and things like that.

DR. WARD:
Just about anything. So this little machine takes out the very large bits that end up in those trucks. And then once it separates those parts out, then it allows the brown grease and the BOD water and the food bits to go through into a separation tank. The effluent and emissions from the process are that there are no waste products that come out of the process, except for those occasional boots and tablecloths. The water component is usable at the waste water treatment plant and each plant has an air exchange filter system.
The critical air emissions are carbon treated coming from tanker trucks, the reagents are in sealed containers, then the process has -- is a closed process with scrubbed filtration.

The process has two types of fuel that it produces; one is a trap-grease bio-diesel, we recommend that it be used for off-road use because of the variability of trap grease and the various solvents in cleaning fluids that happen to be used in kitchens, so when bio-diesel is made from that material, I think that it is best if it's in stationary production use. Seventy percent of the fuel in this country goes to stationary use and there are scrubbers and that sort of thing on stats. So it is just an extra precaution for any errant emissions that might come out of this fuel.

The beneficial reuse of trap grease creates a bio-diesel that is a high quality renewable energy source and suitable for these off-road applications. The yellow grease, on the other hand, can be turned into ASTM certified bio-diesel and that is suitable for on-road trucks and home heating oil and marine engines. Bio-diesel from yellow grease is also eligible for State and Federal tax credits. And as you undoubtedly know, New York State has just come out with its own set of bio-diesel mandates for this year through 2020.

There are benefits to the waste water treatment site, if this plant is sited there. Viridia's process removes trapped grease before it reaches the sewer system infrastructure and it burns cleaner than current petroleum-based fuels, accordingly providing an environmentally clean power source for the waste water treatment plant. Viridia's bio-diesel makes waste water treatment plants eligible for carbon credits and State and Federal incentives if used on-site for heat and electricity production. The process also brings previously untapped, millions of gallons of water directly to the waste water treatment plant, consequently bringing new revenue to the site and over a contract term can run into millions of dollars for that municipal site.

The general benefits of the fuel and by-products are that the technologies enable waste water treatment plants and port-based production of cost-efficient bio-diesel for multiple feedstocks on a commercial scale. The compact design can be placed in close proximity with fuel usage areas,

saving the plant operating and infrastructure costs. The process also use -- yields beneficial by-products for the waste water treatment plant. First of all, it degreases the BOD water so that they don't have that oil layer in the system. It reduces the particles and the glycerin and glycerol from the process provide a good carbon sub-straight for secondary sludge reactors and denitrification processes.

In the case of Viridia, the plant cost is solely borne by the company or through a joint venture partnership. Revenue sharing with the host site is contracted based on the incoming tipping fees from the waste haulers and, if necessary or desired, they can provide them with a lower cost fuel for the site. Viridia carries full liability insurance on all of its employs and their facilities. Right now the strategic partners include Brick Waste who's licensed SB-2, we showed you; Agritech Systems which is another oil aggregating pre-sort system, plus our engineering associates.

The overall competitive advantage is that unite urban design includes cost savings for infrastructure and operation of bio-fuel plants and the close proximity to the fuel use results in a cost saving to the customers, it cuts down the trucking, it cuts down the relays. For these conversion of lower cost, grease feedstocks allows the company to produce bio-diesel at competitive prices. And its business plan is profitable even without the Federal tax incentives and credits on which most companies do rely.

Viridia Energy bio-diesel conversion technology processes a wide range of feedstocks, reducing the disposal problems of major urban pollutants and provides new revenue streams for waste water treatment sites. The cost efficient model produces low cost ASTM Certified bio-diesel, a renewable bio-fuel for cogeneration and a carbon concentrate for local waste water treatment plants. Thank you.

CHAIRMAN HORSLEY:
Thank you very much.

DR. WARD:
You're welcome. We'll answer your specific questions rather than --

CHAIRMAN HORSLEY:
Specific questions, that sounds great.

DR. WARD:
Yes.

CHAIRMAN HORSLEY:
Are there any questions from my colleagues?

LEG. D'AMARO:
Yeah, just when are we going to build one of these?

DR. WARD:
We need a site.

CHAIRMAN HORSLEY:
Yeah, it sounds great.
DR. WARD:
We need to know -- we need to know the best site. That's why we were here, not so much to ask for anything else, but we need to know where you think the best site might be. And Alan, do you want to add to that?

MR. ELLENBOGEN:
Well, you might suggest that we just -- we don't have to be focused on a waste water treatment

site, there are other models.

DR. WARD:
Yes, I did mention that there are other models. We don't have to be at a site. So many of your local waste treatment sites are in such very close, small neighborhoods that the trucking, the increase in trucking might be a problem.

CHAIRMAN HORSLEY:
You're speaking my language.

DR. WARD:
Am I?

CHAIRMAN HORSLEY:
Yes.

LEG. D'AMARO:
Could I just --

DR. WARD:
Well, you know, Long Island still has many Brownfield sites.

CHAIRMAN HORSLEY:
Yeah.

DR. WARD:
And if you had a Brownfield site, what we could do is couple the technology with another technology that will take all of the acquiesce fraction and food particles and maximize them by turning them into bio-gas for electrical production.

CHAIRMAN HORSLEY:
Now, I know you said this is a self-contained operation.

DR. WARD:
Yes.

CHAIRMAN HORSLEY:
What are the -- and people that advise me tell me that no matter how contained it is, we're still talking about a major voter issue. What do you say to that?

DR. WARD:
Well, there isn't if the whole system is closed. And you're venting through carbon, so the odors which tend to come from short-chain, fatty acids and that sort of thing.

CHAIRMAN HORSLEY:
Yeah, they usually say the brown grease is --

DR. WARD:
The brown grease is outrageous.

CHAIRMAN HORSLEY:
It's outrageous, yeah.

DR. WARD:
It's outrageous, but the magic of that little front-end locket, as I call it, it hooks up immediately to the truck, the truck's gas is vented through carbons so the vacuum displacement is not being -- is

not fugitive, it's going through carbons, so that's being scrubbed. And it is piped directly into this rocket which then immediately goes right through the system which is totally closed, so any venting is being processed through carbon.

CHAIRMAN HORSLEY:
I'm sorry --

DR. WARD:
We will have to meet all air emissions permitting standards, so.

CHAIRMAN HORSLEY:
Right. Okay, well, that's good to know. Legislator Stern.

LEG. STERN:
What is the approximate cost of the construction?

DR. WARD:
It's about $5 million, so that would be the investment.

LEG. STERN:
And/or --

DR. WARD:
And that's if it's only the bio-diesel plant; if it's the larger plant it will be about 15 to 20 thousand -- million dollars if it's not located at a waste water treatment site.

LEG. STERN:
Thanks.

CHAIRMAN HORSLEY:
Legislator Kennedy.

LEG. KENNEDY:
Thank you, Doctor, it was an interesting presentation. As you can see from the previous presenters, some of the things that I had talked about, it's very interesting that you have this methodology to locate the best TP's, but I guess I have a more basis question, threshold question. And I'm not going to ask you to comment on the previous presenter, but they had a patented technology to address this handling of waste.

DR. WARD:
Yes.

LEG. KENNEDY:
Viridia has a patented technology to address the waste.

DR. WARD:
Yes.

LEG. KENNEDY:
I wish I could tell you that I knew more about this but I don't.

DR. WARD:
Okay.

LEG. KENNEDY:
Are there multiple patents out there to handle this type of waste or there are only relatively few?

Are you unique, are you one of many? You have a very interesting presentation --

DR. WARD:
Yeah.

LEG. KENNEDY:
-- and it offers many things, but help educate me. I'm a dirt lawyer, Doctor.

DR. WARD:
Well, what I can tell you is that you can open any high school chemistry text book and learn how to make bio-diesel.

LEG. KENNEDY:
Okay.

DR. WARD:
So the act of making bio-diesel is not a mystery, and if you like, you know, I'll sit with you for five minutes in a corner and tell you very quickly how it can be done. There are nuances that people patent so that they can corner some part of the market place, but just about any student here could make bio-diesel. We make it -- we take the whole consideration of feed stocks as well as siting issues, as well as engineering flow-through into consideration and try and make it as efficient as possible and bring together the best current technologies to make it as efficient as possible; I think that that's our edge at the moment.

LEG. KENNEDY:
Okay.

DR. WARD:
Another edge is that not many people handle trap grease. I think Mr. Butler is here and he handles trap grease.

LEG. KENNEDY:
Okay.

DR. WARD:
And of course, Mr. Appel now also on Long Island will handle trap grease. But the important thing is to get somebody out there who's willing to handle these waste streams, formally waste streams and turn them into something beneficial. The least path of resistance is to use virgin oil because it has none of the associated problems that you have with these waste streams, but then you're also dealing with a commodity and you see from this last year what that does.

LEG. KENNEDY:
You have other applications throughout the country that are up and going now?

DR. WARD:
No, we have one that's opening up in New Jersey and we have requests for siting in other places. Do you want to address Long Island and why you're talking about Long Island?

MR. ELLENBOGEN:
Yes. I would like to point out that the -- what Dr. Ward frames is that, you know, we've been making bio-diesel since the turn of the century, that's the previous century, so people really know quite a bit about what's going on and how to make it. What is a nuance, which I think is important to point out -- there's two that I'd like to point out. One is the front end, the ability to take the trap grease and be able to process it, deal with the odor problem and get it ready to even be processed is what the nuance is that we, I think, largely bring to the table, you have to parce it out. Secondly, we bring the investment to the table, so basically we see in it -- we're not -- we're a for-profit

company and we see in bio-diesel a huge market, as was pointed out, it's a larger market than there is product.

And so consequently, it's really -- whether you're in it formally as a joint partner, which we're doing in New Jersey, they went down, took a look at it and said, "Gee, we want a part of this," "fine." But if not, it is a profit making venture. We ask your support of it in terms of cradle-go-grave, which I'm sure you've heard --

CHAIRMAN HORSLEY:
Uh-huh.

MR. ELLENBOGEN:
-- manifesting, that kind of thing, and I think that should be done for anybody you choose. But we're basically -- in Long Island, we see a special case and it's very, very -- and your weakness is your strength. To get anything off this place or on to this place, you have to go through bridges, tolls and miles before you sleep. So consequently, you have population; we have population here and that population breeds an urban farmer, it breeds waste products, it breeds problematic waste streams to be solved, to be generated into renewable energy. And you have it hoistered here, they can't get it off the Island, so you have basically a huge farm that anybody in this room making a presentation wants to take advantage of. So you're taking lemons, as they used to say, and you're making lemonade out of it. So we're suggesting that we're -- it is very focused, we can do it at a waste water treatment site or at another site. We're willing to put up the funds for that and we think we have a unique nuance in the front end to be able to accept this very bad, problematic waste stream and get it ready for processing. That's basically what we're presenting.

CHAIRMAN HORSLEY:
Very interesting. Thank you very much. Thank you very much, Legislator Kennedy.

MR. ELLENBOGEN:
Thank you.

CHAIRMAN HORSLEY:
I do have two -- wait, if I may. I have two students that have requested -- I know it's a little unusual, but certainly because of us being here at the college, this is important -- two students that wanted to ask questions. I wonder if you may --

MR. ELLENBOGEN:
Oh, absolutely.

CHAIRMAN HORSLEY:
I have a Jeremy Grabsh; Jeremy? Welcome, Jeremy.

MR. GRABSH:
Hi. Mr. D'Amaro, I actually work for your town as a First Aid Squad.

LEG. D'AMARO:
Oh, great.

MR. GRABSH:
A big concern of mine, because I see an upcoming crisis, especially with oil, with either conflicts or any other things that are upcoming. And our country is severely dependent upon fossil fuels, hydrocarbons, things like that, and my problem with this is if we run out of our supply or an embargo, anything like that, or oil companies just stop dealing with us, it literally will cripple our nation. I served two years in the Infantry, I know what our vehicles run off of, you take oil out, our ambulances run off the same hydrocarbons.

Questions; since both your group up there and your group are pioneering companies in this field, will you help design politics that improve emissions stands so that it can get greener energies out there faster to other companies?

DR. WARD:
Actually, the emissions standards are out there, they already exist. The problem was supply. You know, if you don't have production and you don't have supply generated, you can't do very much to support these changes in environmental regulation, but they are set. And if you just check the recent national diesel regulations, the particulate numbers must come down, the sulfur numbers must come down. And so I think just recently the ultra low sulfur diesel is now a national retirement, and part of that -- and also, there are national grants being given for the retrofitting of long-haul tractor trailer trucks, school buses so that the particulates come down and the nox and sox come down.

When Mr. Appel was talking about his technology and gave you all the science, which I was grateful for because I didn't have to fill it in in between these slides, he talked about the difference between the emissions of bio-diesel and the emissions associated with fossil diesel, and they are considerably lower.

The problem in this country is that there isn't enough bio-diesel out there. His company can function, our company can function, Mr. Butler's company can function and there still won't be enough bio-diesel out there, which is why all of the mandates for bio-diesel use are ramping up by very small degrees. The lowest mandates are at 5% and ramping up over time, capping at 20%. New York State just put these mandates in your own state. So it is on the way, but we need many more companies to produce these fuels in order to provide that offset and the displacement of fossil use.

MR. GRABSH:
Will your companies assist in creating these companies?

DR. WARD:
Pardon?

MR. GRABSH:
Will you assist other companies to create this, actually make a bigger field, will you actually invest in from the ground up?

DR. WARD:
You know, I think -- I mean, this is my own personal opinion, I can't speak for the executives in the room. But in my opinion, because it's -- there's such a demand and so little supply, we all need to help each other to produce. And I think, Alan, you've talked to a lot of companies and potential competitors, giving them advice and giving them -- I give documents to other companies all the time, trying to encourage them to get off the ground, giving different kinds of strategies for collection of feedstocks so that they get off the ground. And a lot can come from student activism. You know, I come from an era where student activism was a huge thing and I don't see a lot of it these days, but this is something that isn't very threatening that students could jump on and get out there and beat the bushes on, I think.

MR. GRABSH:
My other question is involving production of some environmental things. You were talking about using water to create bio-diesel fuel; how much--

DR. WARD:
That's Mr. Appel; Mr. Appel uses water.

MR. GRABSH:

How much water?

MR. APPEL:
We can't mix up what's been proported --

CHAIRMAN HORSLEY:
Excuse me. For the stenographer, would you like to have Mr. Appel come down here?

MS. CATALANO:
Yes.

CHAIRMAN HORSLEY:
Would you like to come join us?

MR. APPEL:
Sure. There has been a lot of concern about the burden on natural resources, particularly water when it comes to making bio-fuels. We don't use new, virgin water, it comes in the feed stock. If you think about anything, whether it's a plant or an animal, it comes with a lot of water. If you ever killed an animal and you let the blood out, there's plenty of water in there. This is not growing a crop. Waste is a burdensome liability that's got to be dealt with anyway, so we're not growing a crop that takes anhydrous amonia from natural grass and putting it in the ground, the fossil fuel to make a crop in order to make a bio-fuel. So all of the concerns that have been, I guess, most recently reported by the Royal Society, which is the equivalent of the British National Academy of Science, these are very real questions. And why I emphasized lifecycle analysis, they're going to be very meaningful to address your very big concern where you're going to make these fuels and then you're going to burden natural resource and you're going to be using lots of fossil fuels to make it.

I think it's important to note that the hidden cost of oil published in 2003, I'm sure Congressman Israel uses this one as one of his backdrops, is we subsidize fossil fuels over $5 a gallon over the pump price and a myriad of hidden and often camouflaged subsidies. It takes a lot of energy to make fossil fuels and as we have less, light condensible fuels, we're relying more on things like tar sands and the Venezuelan Orimulsions. So it's going to even take more natural resources in order to even convert our fuels to make JP-8 and JP-5 which you were concerned with.

MR. GRABSH:
One last question; what is the impact on surrounding areas around your plants?

CHAIRMAN HORSLEY:
That's the one we're interested in, too.

MR. GRABSH:
What's the environmental impact of the plants being in the area? Because I know -- I don't know if anyone here reads Scientific American, but one of the things they just came out with was the impact of coal, one of the big impacts is radiation because they found that burning coal now creates I think uranium that's in there and it's just aggravating the environment, what waste products are going to be the by-product of --

DR. WARD:
Go ahead, you go first.
MR. APPEL:
We've probably been one of the most scrutinized companies in the planet because we built the first commercial plant of its kind in Missouri. And we had purported odor issues from the State and the Attorney General came in and put every possibly measuring device to see what kind of emissions were coming out of our plant. We got the green light to go ahead and continue operating, there were none of these hazardous emissions because we don't use any catalysts, we use water. So

there's no benzenes and there's none of these solvents where we have to make a chemical. So our solvent is water at elevated temperatures is a big pressure cooker, so our footprint is relatively small.

We happen to be in a neighborhood. Actually, we have homes that border our property line, we're only on two acres and we're able to operate with neighbors literally on our property line. ConAgra Foods was our partner, they own Butterball Turkeys, a big $30 billion food processing company at the time, they killed 35,000 36-pound turkeys every day. So we put the plant adjacent to their Butterball plant and we've been operating fine in the town. And we were singled out by the Attorney General and those are all public documents, so we passed that test, there's been plenty of officials through that plant. But no issues, including we've had internal tests on the atmosphere in the receiving room and in the process area and we have been scrutinized to death from any emissions that come from this plant. And we have to meet -- we went through New Source Review. New Source Review is one big pain in the neck and we're under different guidelines than people who have had an existing building or an existing operation. So the fact that we were able to build this plant in today's environment with all the extra scrutiny and the level of studies that go on, we can assure you that there won't be any of these pollutants and contaminants coming from our facility.

MR. GRABSH
One more question for you. In the event that -- does your factory contain any environmental hazards at all, like some sort of accident would impact or anything like that?

MR. APPEL:
We have high pressure, so you could have a steam leak and that's very dangerous. If you think of your radiator, 15 pounds on your car and it explodes, it could be dangerous; well, we're at 700 pounds of pressure. But as far as any toxic releases, no, because we're not using chemicals, we're not using solvents, we're not using catalyst. We use some reagents to reduce the volatile organic acids that have been known to cause odor, like sulfuric acid to bind them up, but there is no -- this is not a dangerous plant where you have a refinery, this is made from biological material without chemicals or catalysts.

MR. GRABSH:
Thank you.

CHAIRMAN HORSLEY:
Jeremy, thank you very much and we appreciate you coming down and joining our hearings.

DR. WARD:
Thank you. Good luck.

CHAIRMAN HORSLEY:
Yes, good luck. I have a request from Mari Wright-Schmidt; is Mari Wright here? Mary, why don't you ask the question.

MS. WRIGHT-SCHMIDT:
Hi. My name is Mary Wright-Schmidt, I'm a biology major here at Suffolk. I just had one very specific question for the folks from New Jersey; what would be the disadvantage of any -- if any, of using plant-based oils as opposed to the animal fats that you mentioned? You said that you didn't use plant-based oils?

DR. WARD:
No, we don't use seed oils, we don't use virgin oils.

MS. WRIGHT-SCHMIDT:
Any why is that?

DR. WARD:
Because they -- if you've been following the politics of this whole issue of ethanol and the cost of producing it over the last year, ethanol and bio-diesel made from seed crops like soy or corn are displacing food use and it moves up and down the food change.

MS. WRIGHT-SCHMIDT:
Uh-huh, I understand.

DR. WARD:
Okay. So if you're growing -- if farmers stop growing wheat so that they can grow an expensive corn or a soy crop, you don't have wheat for bread, you don't have wheat for cereal. If they're shunting soy and corn into fuel production it can't grow meat. The -- there are feed lots going out of business out west right now because there's no beef to go into the feedlot because there are companies who have decided not to grow beef so that they can put the --

MS. WRIGHT-SCHMIDT:
You mean grow corn.

DR. WARD:
No, beef.

MS. WRIGHT-SCHMIDT:
Oh, okay.

DR. WARD:
They're not growing cows and steers to create the beef for your table because the cost of feeding them corn and soy is too high.

MS. WRIGHT-SCHMIDT:
I see.

DR. WARD:
So they cut that down and favor the other. And this seesaw of commodities takes place when you throw in a wrench like needing to make alternative fuels out of food stuff. The EU has just made some very serious condemnations about making bio-diesel out of palm and other crops grown in other parts of the world that are taking food off the tables of the people in those countries. So you see as a biologist what happens,

MS. WRIGHT-SCHMIDT:
Yes, yes. Okay, thank you.

DR. WARD:
You're welcome.

MR. APPEL:
You know, i want to add something real quickly. The reality is we're shipping this into waste facilities. All of this material had another alternative use, okay.

MS. WRIGHT-SCHMIDT:
Right.

MR. APPEL:
Even the animal fats, it went to all the old chemicals, it went into lubricants, so all those

commodities have gone through the roof, soaps and everything else. So what we've done is by incentivizing these purported changes in alternative energy, we've created a mess in the commodities market, not just for food but for paints and everything else.

So there was -- ConAgra Foods, our developer, Armor Swift Eckrich Hebrew National, Butterball, Healthy Choice, they know how to do meats. We don't export beef anymore because of the Mad Cow Disease.

MS. WRIGHT-SCHMIDT:
Right.

MR. APPEL:
Okay, so it's not just the food, the food chain is a mess because of the practices of what we do. So we're going to, it's disruptive, that's why we focused on the waste. There was already markets for all this material except for the junk, and that's why we went after the junk because the junk had little value and it was local to where you had the energy need. And if you want to make a transportation fuel, then you better put a refinery on the back end to protect the quality of these fuels, you need a guard dog there in order to maintain that quality because you don't want to be in the cold, you want your car to start, your truck to start, your buses to roll and that's what we've done with these botique fuels blending into the market, we've got to be very careful in how we approach wherever this feedstock is coming from.

CHAIRMAN HORSLEY:
Okay? Thank you very much.

MS. WRIGHT-SCHMIDT:
Thank you for your time.

CHAIRMAN HORSLEY:
MS. Wright-Schmidt, thank you very much, we appreciate your question. Is there anything else that the Legislators would like to bring up at this time? Any other further word you'd like to -- I guess the bottom line to all of us is where do we go from here, I guess that's the question that's got to be answered after this meeting. But we do have to deal with that, that's something.

DR. WARD:
Thank you.

CHAIRMAN HORSLEY:
Okay, I'll take a motion to close.

LEG. STERN:
Motion to close. Excellent job, Mr. Chairman.

CHAIRMAN HORSLEY:
Thank you very much.

LEG. KENNEDY:
Second.

CHAIRMAN HORSLEY:
Second by Legislator Kennedy. All those in favor? Opposed? So moved. And thank you very much, you guys did a great job. It was most informative. We outlasted the students.

(*The meeting was adjourned at 4:34 P.M.*)