

A Meeting of the
University Faculty Senate
Wednesday, September 10, 2014

1. ELECTION OF SPEAKER

Dean of the University Faculty, Joe Burns: "So before we start the official meeting, I would like to propose that we elect a speaker for the senate. And we have a candidate for that position, [Bruce Lewenstein](#); but for him to run the meeting, he's first got to be elected to be speaker. So I would ask Bruce to kindly step outside the door.

"And now I would like to, again, propose Bruce Lewenstein be speaker. All those in favor -- yes. There's a second. All in favor, please signify by saying aye.

(Ayes.)

"Opposed? Works better than the clickers, doesn't it? Really much better.

"Okay, Bruce."

2. CALL TO ORDER

Professor and Chair, Department of Science and Technology Studies, Speaker Bruce Lewenstein: "Thank you. I have come prepared with my timer, which I think is one of the major roles of the speaker, is to keep time.

"So I call the meeting to order; remind you, as always, that there are no tape recorders or photos to be taken during senate meetings. Ask everyone to please turn off or at least silence not just your cell phones, but your tablets and your e-mail notifications on your computers and everything else.

"Reminder that when you speak, please rise and identify yourself by name and by department, and wait for the microphone to come to you, so that the recordings can be used for creating the minutes.

"I want to suggest that, as we've started instituting about a year ago, that we try to hold each speaker, ask you to hold to two minutes, to allow time for other speakers to make their comments as well.

"And we have time set aside on the agenda for Good and Welfare. I have not received any notice that someone wants to speak there, so we have a little bit of

flex in the timing that we'll be allowing for items. First item on the agenda is remarks from the dean of the faculty."

3. REPORT BY THE DEAN OF THE UNIVERSITY FACULTY

Dean Burns: "So now that we are in the official part of the meeting, let me officially welcome you to the academic year '14-'15. I would like to begin by announcing we have at least two celebrities in the audience. And we have, for the first time ever, the chair of the general faculty council from Weill Cornell with us, [Pat Flynn](#) in the back. So we're going to try to improve connections between the two groups.

"And then we have one of our own, who you know from many senate meetings. [Risa Lieberwitz](#) has been an active member, now a member of the UFC, but also just been elected general counsel of the AAUP, American Association of University Professors. So the sort of thing she's known for here, she's now known nationwide, and appropriately so. Congratulations.

"So the typical thing we do, as you remember, those of you who have been here before, is we try to develop this feeling of collegiality and that we're all part of one university. We are not in the Arts College, we are not over in the law school. We are part of Cornell University, the Ithaca campus.

"At least I encourage you all to look around. There must be somebody within shouting distance of you. Just say who you are, if you don't know the person. Say who you are and what department you are from, just so we have a sense of, you know -- so for those that are new, that often is the high point of the meeting.

"Also, another tradition of ours is to try to show how practical part of our campus is, and that is to bring in the fruits of our labor. And this month it is actually the fruits. So coming out of the Cornell Orchard, off the trees out there on Dryden Road, we have some plums and some pears. We've had a testing of the pears, and you really should bring those home and give them to a loved one, because they are not ripe yet.

(LAUGHTER)

"Or not. Whatever you wish.

"So then I wanted to just move on to some remarks of my own, what sorts of things I have been doing over the summer and sort of remind you about the way

the university senate works, the faculty senate works; and that is about 25 years ago, the faculty as a whole ceded not all of its powers, but gave most of its powers to this body sitting here today.

“And our job is to represent the faculty. The University Faculty as a whole can call us back and overturn any decision we make; but basically, you know, we have enough trouble functioning with 100 people. If you try 1,700, it works even worse, so I think we're in pretty good shape in terms of getting things done. Yes.

“Okay, let me talk to you on that. I have a different opinion of that, very much so. So the bylaws say that the purview of our responsibilities are questions of educational policy and the establishment or dissolution of degrees.

“These are possibly also programs that go between colleges and also programs overseas; but as you well know, and much of our activity in the last year dealt with issues of national concern, so that we have the opportunity to speak out on broader issues.

“We are the most august body on the campus, I believe. So if there are issues of national concern, maybe we want to speak; but I do caution you that what we say about this national issue or that national issue is really unlikely to have much consequence. So I think that we have about two of those bullets in your quiver -- no, not quite. And we should use them sparingly, but we should use them.

“And then to the question that I was just asked, this is a university-wide body, and I think we should be representing the university; my opinion. And your department chair -- and he does pay your salary -- may have a different point of view.

“What I would like to see done here, we should be a conduit of information back and forth, where you say okay, here's an important item that's coming in front of the faculty senate. I have an opportunity to represent departmental interest; but like Congress, you don't represent your constituents, unless you want to. Yet, around this time of year -- maybe you do. Bring the issues to them and say tell me what you think I ought to be doing, and that will bring more wisdom to this group.

“And then you could go back and probably electronically tell them this is what we did; what do you think, or here are some of the things that are coming down

the pike. What do you think? And let's get some more engagement of the rest of our colleagues here.

“Obviously, we should be hearing from all sides on these issues and, as Bruce has already said, we are going to try to limit people to two minutes per speaker, until all have spoken, then we can cycle back as necessary.

“So some of the things I have been involved in over the summer; I'm a member of the presidential search committee. There are 19 members on that search committee, there are four faculty members. In a very noncommittal way, I will say that search is proceeding very smoothly. We are making great progress, because we have exceptionally good candidates, and we will report back soon. That is all for now.

“I thought you'd be interested to know that this year, the Faculty Advisory Committee on Tenure Appointments reviewed 36 cases. All 36 were passed. That's different than the previous year, where one case did not get approved by FACTA and was turned down for tenure.

“The thing to note here, there's a drop of about 20%-25% in those two years. And what you are looking at probably is the effect of the recession. Remember, there was a hiring freeze at that point, and so we should expect very few cases coming in front of FACTA. FACTA was rejoicing at their first meeting.

“We now have, as we have had in the recent past, faculty soup is being served over in the Statler. You need to buy tickets.

“And then the last thing on this is that we have a faculty forum. We have been doing these over the last couple of years. This faculty forum, in short, the longer form of that is international programs and partnerships, what are they and who decides what they are. And this seems very, very topical at the present time.

“There will be a panel chaired by Risa Lieberwitz. Fred Logevall, our Vice Provost for International Affairs, will speak, Becky Stoltzfus, and Shelley Feldman, a UFC member as well, and Eric Cheyfitz. So that should be a very interesting event. There will be reception afterwards for a half hour, and a half hour for questions, and an hour for presentations.

“I just thought I might mention some of the activities of the more active committees at the present time. Educational Policy has a batch of things on their

agenda, but the one I thought you might be most interested in is in about a week's time, they will be reviewing the proposed final exam schedule. And that will be out probably ten days, you think, Dave? Something like that. They are getting three possible mixes of the exam schedule, and they will decide between those.

“Financial Policy Committee continues to look at the new budget model and the implications thereof. As you know, there's a new vice president for financial type things, and that may help us understand the system better. And they will also continue to look at faculty salaries in consultation with the provost.

“Academic Freedom and Professional Status is continuing the discussion of research professorship, that title, and whether we want to do it and under what circumstances. And I would expect that would come out with a proposal probably by the end of this term.

“The program review group has been reactivated, after being dormant for a couple of years, again, driven by no money, essentially. Coming out of our MOOC report or distance learning report last wintertime, one of the recommendations is that there should be a continuing online oversight committee. That committee has now been formed. It's predominantly faculty members, but it does have a few administrators on it.

“And then finally, and we'll see this later today, coming out of another one of our resolutions, there was a formation of a committee to look at our carbon neutrality posture, and that will be reported back at the end of this meeting.

“That's all I have, but it was a very busy summer actually, for me, for various matters. Any questions?

“Good. Let's move on with the rest of the agenda.”

Speaker Lewenstein: Next item on the agenda is report from Nominations and Elections Committee, Mike Fontaine.”

4. NOMINATIONS AND ELECTIONS REPORT BY THE ASSOCIATE DEAN OF THE UNIVERSITY FACULTY

Associate Dean of the University Faculty, Michael Fontaine, Department of Classics: “Good afternoon. We have a really bumper crop of new people signing up for committees. We got a ton of committees filled, which is good. Not always

the way things go. So if you have a look at the slides up here -- do it by acclamation. So I just was going to show you the names, as we scroll through, but there's scores of people to talk about. We filled assignments on 13 committees, so we'll do it by acclamation."

Speaker Lewenstein: "Without objection, to accept the slate by acclamation? Hearing no objections, accept the slate. Thank you. I believe the list will be available on the university faculty web site.

"The next item is the approval of the minutes of the last two meetings, from March and April. Those minutes have been available on the university faculty web site. Does anybody have any corrections or changes to the minutes? Without objections, we accept the minutes. Hearing no objections, I'll accept them as approved.

"And now we move to our first major substantive issue, which is a report on student health issues here at the university. I welcome vice president for student and academic services, Susan Murphy."

5. REPORT FROM THE VICE PRESIDENT FOR STUDENT AND ACADEMIC SERVICES

Susan Murphy, Vice President for Student and Academic Services: "Thank you, Bruce. Thank you, Joe, and thanks to the UFC for inviting me to talk to you a little bit about what's going on in the health and well-being of our students. I'm joined here this afternoon by my colleague, Dr. Tim Marchell, Director of Mental Health Initiatives. Tim is the guru of much of this programming and the data, and so I asked him to join me, in case you ask questions at a level beyond my expertise.

"You all remember, I hope, in the authoring of the strategic plan done by the faculty, the strategic plan from '10 to '15, that in the objective outlining educational excellence, there was a call for us to promote the health and well-being of students, looking at undergraduate and graduate and professional students, as a foundation for academic and life success.

"If you just think about it, without their being healthy and well, they cannot take advantage of all of the intellectual challenges that are before them, all of the personal growth we know they will experience, let alone all of the activities.

"So those of us in student and academic services were delighted to see this as a foundation in the educational program, because it certainly underscores the

work that we do. We have a set of strategic initiatives in our own division, but health and well-being anchors the work that we do.

“We have approached our work with students from a public health model, which has us looking at both preventing and responding to the health and safety issues. Very often you might think about us in a response mode, when there's a crisis, be it a fire in a residence hall or, heaven forbid, the awful year we had with the student suicides or H1N1; but in fact, much of our work is directed at trying to prevent situations before they occur.

“So we view this as looking at it from a public health perspective. We are looking at it, as you will see here, in a comprehensive way that looks at individual issues, interpersonal issues, institutional and community, as well as societal.

“If you work closely with us, you will come to see this framework adapted in other issues; it's actually modeled after something that was created by The Jed Foundation around mental health. I'm not going to go through all of it in detail, but I do want to just touch upon the key areas.

“We start at 12:00, at the top, where we begin by together fostering a healthy educational environment. So what is the environment in which our students are here as emerging citizens? We look to have that be a healthy environment. It can be challenging. It also needs to be supporting, so we're trying to balance both of those efforts.

“We look to promote life skills and resilience. Particularly for our undergraduates, this is a prime time for their development, and we need to not assume they all come with well-developed skills in these areas. And one of the skills that I would observe over the 21 years I have been vice president that they need some of the greatest help is around resilience.

“Some of our students come fully prepared to take life's knocks and bounce back. And others have frankly had a safety net that's been so high in their life that the first knock they may have is that C plus on their first writing paper or the roommate with whom they don't get along. And so we need to help teach them resilience skills.

“We need to increase their help-seeking behavior. All of us could use that help, I dare say. How do we learn how to ask for help? We want for all of us to identify

people in need of care. So I'll talk a bit more about what we have been doing with you and across the campus with the students.

"We look to provide integrated mental and medical care. We are all of a body. Our brain is but another organ of our body that needs care. And when we're experiencing somatic illness, it may be triggered, frankly, by emotional or mental health issues and vice versa.

"We look to deliver coordinated crisis management across many units, and we also are very cognizant about how we reduce risks in the physical environment. Think of the nets under the bridges as an example, or the fact that we do not allow guns on campus or we lock up our chemicals. These are examples of the changes we make in the environment in trying to keep it healthier for those who are here.

"I'm going to touch briefly in the time that I have today -- and I hope I'll be successful in leaving plenty of time for discussion -- on four major areas that we address in our work: Alcohol and other drugs, mental health, sexual violence and hazing.

"And while I have put them as separate, they are intertwined, as Brian is nodding his head. And you will see, we have an executive committee on campus climate, health and safety that cuts across all of those, because indeed they are linked.

"Each of them also has a campus-wide committee or a council or a task force. They happen to have different names. The first was the president's council on alcohol and other drugs; I would say appropriately so, because frankly, that's the one that cuts across all of them, more than any. We created a council on mental health and welfare. Last year, we stood up a council on sexual violence prevention, together also launching last year a council on hazing prevention.

"I have not listed here one on gorge safety. That also does exist, but in some ways of a slightly different nature, so I will not be talking about that today. In each of the councils, we have faculty, we have staff, we have students and, several of them, we have alumni and community members, because these are community-wide issues, and we are looking to address them collectively.

"So let me share with you some data in each of these areas and use that as a way of talking about some of the programming. So in the case of mental health, one

of the questions that we ask on our biennial survey of undergraduates is a question addressing their ability to function academically.

“In the most recent version of the study done in 2013, 38% of our undergraduates indicated that they were unable to function academically. They missed classes, they were unable to study or they were unable to complete their homework for at least one week due to depression, anxiety or stress. That's probably a number that may catch some of you up short. It's actually one that although the wording may be slightly different in a national survey tracks a national response.

“Some of this is part of just the anxiety and stress of being an emerging adult. I think if we all reflect back on our own years of 18 to 22, because it is an undergraduate survey, there are matters that cause us to not be as productive as we might like; but what that also means is that in any given day, in any of your classes, you've got either students who are missing or students who are there who are not able to function at their best. And that's obviously an issue that we all need to be concerned about.

“We have been launching a variety of initiatives in trying to help our students learn to ask for help, as well as to help all of us notice who are those students who might be unable to function academically. Many of you have experienced the program that Tim and his colleagues especially have taken to the academic departments called Notice and Respond.

“We have hard copies of and have made available online books that are entitled Recognizing and Responding to Students In Distress. We wrote one for faculty, a slightly different one for staff. We adapted that as well for parents in a book called Voices.

“We've also created a program we have done in partnership with the class of Engineering 1050 called “Friend To Friend,” where we're trying to help our students learn how to recognize signs of depression or anxiety or dysfunction among their friends, and how to reach out and ask for help.

“This year as well, the School of Hotel Administration did a session around issues such as this for their first-year students. We have also partnered with the ILR School over the years. So in addition to what we do through the residence halls, what we do through Greek life, in athletics, we are looking to form partnerships with you in the academic realm to come in and do some resilience

screening and education, as well as helping them learn skills that we know will be life skills.

“We also address the mental health issue, as we mentioned in the slide, in an integrated way with mental and medical treatment. So now, when you go in, if you are a student, for any medical appointment, sprained ankle, mono test, whatever it may be, we'll take your blood pressure first, we're going to ask you some questions that will screen you for depression, also going to ask you questions to screen for alcohol dependency.

“That's just a standard part of what we do, because we also know in the mental health area that there will be some cultures, some individuals for whom talking about mental health issues is just not acceptable. Instead, they have talked about their migraines, their stomach aches, back ache, all kinds of other issues, that these issues may be surfacing somatically and we are trying to do some screening.

“Also, as I'll mention in a second, as we design our new facility, we are not going to have a separate counseling and psych services and a separate medical services. They will be integrated into an integrated module. You are waiting to see someone. I don't know whether you are going to see a therapist, you are having your knee checked, you are there for your regular doctor's appointment. It is going to be all integrated.

“The second issue is alcohol. You all saw the same headlines we did. It was an active start of the school year. I'm not entirely surprised when we have all of our students back in Collegetown with no classes yet started. They have been in their apartments for a week or so, and they're excited to see one another. They are going to engage in some party behavior. Unfortunately, some of them do it in a risky way and find themselves having consumed too much alcohol and in need of help.

“One of the reasons we saw some increase in medical transports is that we have had increased patrols in partnership between Cornell University police and Ithaca police. As you know, from our campus code of conduct, our campus code does not extend off-campus, unless it is for an egregious matter. Public urination, open containers would not fall into that category; loud parties would not fall into that category. So we need to partner with the Ithaca police when we're addressing that.

“We also have both on-campus and now, in New York State, a Good Samaritan law. So if you call for help, if you call for medical transport and you're underage, you will not get into trouble on the campus code of conduct or New York State law. We have been avidly promoting that to our students. We want them to call. So you may see calls going up because, in fact, more people are willing to make the call.

“And then sadly, we know there are just some students, and as we talked at Rotary today, where Tim gave a presentation, this happens to be a generation that is looking more to hard alcohol than to beer and wine that some of our earlier generations may have been more focused on. Whether that's related now to the ability to advertise hard alcohol, one could surmise.

“Often when we talk about alcohol, it becomes a discussion of well, if you would only change the drinking age back to 18, you wouldn't have this bad behavior in the freshmen. And I don't know whether you engage in those conversations, but I have that at least once a month, if not more often. In fact, this is the data that we see from our students.

“In a question that we ask in an alcohol and social life survey, in the past two weeks, have you consumed more than five drinks, if you were a male; more than four drinks, if you were a female, in a single sitting. Now, how the student defines that single sitting, it could be all day. More likely, it is an evening.

“This is the common definition of binge drinking in the literature of Harry Wechsler, coming out of the Harvard School of Public Health. And no surprise, I would say, where it's illegal for them to be drinking, they have less access to alcohol, they do it less frequently. Our seniors, who most of whom are legal age, actually consume more alcohol.

“And it's true, both at this binge level -- and if I were to show you a chart with a phrase I have come to love, the ERAC, extreme ritualistic alcohol consumption; i.e., nine or more drinks in a setting, you will find that our over-21 students are much more prone to do that than our under-21 students. That's not a large percentage of students, but those are the students that we are most concerned about.

“So our seniors -- and this would have been borne out, if you looked at the volume of the transports over the weekend, of opening weekend and Labor Day as well -- what happens when they drink? This shows you data for Cornell, fall

of 2013, compared to fall of 2012, compared to national data that comes out of the core alcohol and drug survey that has continued for years.

“Memory loss is among the most frequent. Ours went down a little bit; probably not statistically significant. That's part of that problem that students have: Missed class and poor academic performance.

“Interestingly, a piece of data that Tim shared at noon today, there's a study that looked at high school level drinking for some 30-some years. 1972 was the high point among high school students who drank while they were in high school. Something over 70% had had a drink while they were in high school. This year is a low point, at 39%. So there are clearly some changes that have occurred because of that environmental strategy of change of access to alcohol.

“What are some of the strategies? I have mentioned already our screening for alcohol problems in medical visits. We are doing a lot about trying to change misperceived norms. When you ask students how much they think their friends are drinking, it's here. When you ask how much they drink, it can be here. They are trying to reach an artificial norm. So the social norming campaigns have been part of our work.

“I mentioned already the coordinated work with IPD. One of the things that I'm most proud of with our students is the creation of Cayuga's Watchers. This is a stand-alone 501(c)(3) organization which gives them the ability to go into private parties and fraternities owned privately or into private parties in Collegetown, because they are not Cornell employees. They are being trained as active bystanders.

“So they are invited to come to parties, they stay sober, they are trained to look out for people who are drinking too much, who have an encounter that's about to go bad, and they have learned ways of non-confrontational intervention. They have a buzz about campus already. They have been invited to over a dozen social events in this coming week. So they are doing some very good work. And I've mentioned the Good Samaritan already.

“Moving along quickly, so we have time for questions, sexual violence, there isn't a newspaper or magazine you can pick up where this is not in the news. The White House has been involved, as well as legislatively. We've actually been at this business for over 30 years with the work coming out from Andrea Parrot's work and our own Gannett work.

“There was a letter called a Dear Colleague Letter in 2011 from the federal government, Office of Civil Rights, that began to signal some changes. One of the significant ones for Cornell was saying that when you are adjudicated in cases around sexual violence, it must be using a standard of evidence which is a preponderance of evidence, not clear and convincing, not the criminal level of beyond a reasonable doubt.

“Our campus code of conduct is a clear and convincing evidence standard, so we needed to make a change either for the whole campus code -- that wasn't likely to happen, given where we are as a community. So we pulled the adjudication of the sexual violence cases and folded them into Policy 6.4 that's been there for faculty and staff all along and have been proceeding along following that path.

“We have also had changes of regulation. The Violence Against Women Act was passed a year ago. There are regulations that will be forthcoming this fall, and we can anticipate those. There's new legislation being discussed by our own Senator Kirsten Gillibrand and Senators McCaskill and Blumenthal called the CASA legislation.

“So when we look at our own data again, this alcohol and social life survey: Have our students experienced nonconsensual sexual experiences. Here are two examples of sexual penetration or attempted penetration or sexual touching. And you can see about 3.4% of our women would say they have had unwanted sexual penetration, and over 7%, almost 8% around sexual touching.

“What you most often hear in the media is a 1 in 5 number. 1 in 5 or 1 in 4 women at college have been victims of sexual violence or -- depending on sometimes how it is claimed, sexual harassment. If you actually look at survey data nationally and our own, you don't see that same number.

“And there's some work to be done to understand is that a cumulative -- if you added sexual touching and you added sexual penetration and you added, and you added, do you get to the 1 in 5. You probably would. These are not discrete. I could be one who's also had nonconsensual sexual touching and I could be in that sexual penetration.

“One is too many. So I don't want to belittle the small numbers, because when you begin to think about our 22,000 students, you can calculate how many students are having this experience.

“Again, we've created a council on sexual violence prevention to try to look at education, research and outreach. We've done some bystander education. All of our freshmen went through a program called “Speak About It,” and there was information provided to all of our graduate and professional students.

“Last year, the HR rolled out “Respect at Cornell.” There's a new video that's been updated, given the legislation that will be coming out this fall. And I already mentioned Policy 6.4.

“Lastly, let me just talk briefly about hazing, then we'll have about ten minutes for questions and answers. This is another area that our students need to learn about, and then also need to learn how to accomplish their goals for bonding in different ways.

“When we asked our students, have they had experiences of hazing, comparing Cornell data to national data, you see that across here. Thirty-nine percent of our students would say yes. We've described a set of behaviors that would be classified, have you had this experience, have you had that experience, have you had this experience; because one of the things that we have learned is you just ask them have they been hazed, they may often say no.

“Then you say have you had to do forced calisthenics, have you had to consume alcohol unwantingly. Have you had to be deprived of sleep and sleep in a basement without a mattress for a week before you were initiated into a group. And they will say yes. Have you been hazed? Oh, no, no. That wasn't hazing. So you have to ask them about their behaviors.

“We see, as you see at the national level, if they are members of social fraternities or sororities or varsity athletes, that's more likely than not; but you also see that our students are much less than at the national level. Again, nonetheless, any of this is inappropriate. It occurs as well in project teams, a cappella groups, the marching band. This is not a Greek-only, athlete-only activity, and it's something we are taking very seriously.

“We experienced the worst experience with one of our students three years ago, dying of an alcohol-related hazing incident, and we're fortunate in the persons Tim and also Travis Apgar, to have two folks that are recognized nationally around this area.

“We've made some changes to the Greek new member process, shortening the period. In my day, it was a twelve-week time frame. It is now four weeks. We have had them focus on what is it you need to know before you decide to become a member of an organization. Get that done and move on.

“We've also created the council on hazing prevention. We have a very interesting web site called hazing.cornell.edu. I wanted to call it nohazing.cornell.edu, but was convinced by the students they wouldn't read a nohazing.cornell.edu. They will go to this web site. It is an educational web site, it is a resource web site.

“It's also for confidential reporting. And that's been vital. We even get reports about other institutions that we then send to them, because there's really no other place out there that's serving in that way.

“And we have the same issue around social norming. 82% of our students would say it's never okay to humiliate or intimidate new members. Now, that means 18% say it is okay. We could talk about that issue, but 82% say it isn't okay.

“When you ask them what do they think their friends think, less than half of them think their friends think it's never okay. So we have a lot of social norming to do.

“Finally, because there was a particular question, we are going to have -- if we succeed with our fundraising -- an expansion and renovation of university health services, using the same footprint that we're on at the corner of Campus Road and Ho Plaza. It will be accessed right off the plaza with ramps that will make it more accessible, and it will have an expansion in the back, which is now an ugly parking lot, where we will build the integrated care modules on several levels.

“This is a project that's been funded in a way that no other project I know at Cornell. We've paid from reserves we have had in administration, the deans are paying because it's their students, and we are also seeking philanthropy. So it is literally a university-wide effort. If all goes well, we will break ground in March.

“Lastly, let me just say, I brought you a couple of resources. One is a SHARE card. This is our web site around sexual harassment, assault, response and

education. We've also sent this out -- thank you, Joe -- as a thing to put up for your large classes, just to make people aware.

"And my colleague, Kathy Zoner, the chief of Cornell police, has issued the annual campus watch. This is our communication to the community about what's going on and how to stay safe. And I just want to make sure you had both of those resources. I believe I have five minutes for Q&A. So I would be pleased to have questions or comments. Hi."

Speaker Lewenstein: "Please wait for the microphone."

Professor Michael Fontaine: "I'm concerned about the mental health initiative and especially that 38% statistic, and the decision to medicalize students' distress. You are saying that Cornell is going to -- and given that mental health situations are inherently involuntary, I wonder if it's a good idea to intrude on these students who come in with a hurt arm, to begin asking them about their mental health situations. I'm not 100% sure that all psychiatrists and psychotherapists think that is the way to go."

Vice President Murphy: "So let me try to -- I didn't intend to say it that way. You may interpret it. So in the case of our outreach for mental health, first of all, not all of it does go on in University Health Services.

"Many of you may be aware of our "Let's Talk" program that we put out in academic units, international student and scholar units and others, because we do know there are many students who frankly want to, need to talk to a concerned adult, but absolutely aren't ready to medicalize it, to use your phrase, or aren't even ready to put a label on it.

"So we are trying -- that's also why we are doing the training for peers and for faculty, for you to recognize signs of concern. What the depression screening -- this has been a study launched by Dr. Henry Chung, who was at NYU when he began the depression screening. He is now at Montefiore.

"He's led a national study about the impact of the depression screening and its ability to identify folks who are not otherwise able to identify what is causing their distress may actually be a mental health issue, not a medical health.

"So the questions -- and here's where Tim can help me -- the questions are really trying to ask about it in the way my doctor asks me about environmental issues,

do I wear my seatbelt? Do I have a smoke detector? do I have a carbon monoxide detector? -- He doesn't immediately check my blood pressure and do my exam. He is asking me about the life I am living. That's some of the way the questions are trying to do a slightly more holistic assessment of the student.

"Yes, you are coming in, complain of migraine headaches and you want to be treated for your migraine headache; but in addition to asking about the headaches, well, I want to ask you two or three questions that might give me a sense that there's something else going on here.

"So if that's interpreted to be medicalizing, then I will take that label, but the intent is really to try to screen, and then to try to get you where you might get some help. We are also actually going to be trying another intervention this year that is being used in -- I believe it's one of the national models around a behavior health consultant that we are going to embed right there for easy access for conversation. So we are actually trying to lower the barriers. So that's the intent."

Professor Fontaine: "Thank you, but do you inform students immediately when they present that mental health situations are inherently involuntary?"

Vice President Murphy: "Do we let them know at the point we are doing the depression screening? No. When you say mental health is involuntary, you are talking about the involuntary leave policy?"

Unidentified Speaker: "If a student says he is going to kill himself, the psychiatrist is obligated to bring him to the hospital. The student could be given pills against his or her will."

Vice President Murphy: "Can I ask Tim to help a little bit? Then I am going to go to the next question, because I will be at a level of detail that I can't answer, but it's a very important set of issues.

Dr. Timothy Marchell, Associate Director for Health Promotion; Director of Mental Health Initiatives, Gannett Health Services: "Sure. When students disclose that they are having suicidal thoughts or feelings, it does not automatically result in a hospitalization. There are many students that we see that are having suicidal thoughts or feelings that we work with on a regular basis who are still on campus and going about their lives, and we're providing support

as they're struggling with that. Doesn't necessarily translate directly to a hospitalization.

"In extreme cases, where there's an imminent danger, what we do is we try to work to have the student go voluntarily to the hospital; and in the vast majority of cases, that's the way it works. We say, you know, we really think that what you need right now is to be in a safe environment. This is what it would look like. And usually, what happens is they will go voluntarily.

"It is really a rare situation where there's an involuntary hospitalization, but it does occur. And sometimes students may have, for example, an extreme manic episode or a psychotic break of some kind that really necessitates that type of action."

Vice President Murphy: "Thank you."

Professor Yuval Grossman, Department of Physics: "So we have been talking to you about sport clubs, and I still believe the sports club is an amazing, good thing to help student -- our students -- [Inaudible] compared to like -- compared to the intramural sports and we talked about -- do more to support our sport club. We talked about it, as I know, we talked, nothing really happened. And I hope we can keep on doing something in this direction."

Vice President Murphy: "So a couple things have happened, but I happen to agree with you. Sports clubs, any kind of fitness can be a good thing. I'm frankly thrilled as a university we still have a P.E. requirement, because it gets them out and gets them physically active, which is a life skill for resilience.

"The students themselves have organized in a way with the sports club council. I agree with you; we do look at sport clubs like other clubs. Different from intramurals, different from varsity athletics, but we don't look at them differently from the chess club or debate club. They are a student-run initiative.

"I have given, thanks to some of the gift money I have, I have put that in the hands of the sport club council for them now to distribute as they wish and need to, when teams are qualifying for championship, whether they can be able to take advantage of that.

"And we are in very active conversation about how we can refurbish our fields up on north campus that are in desperate need of it; but again, when people say

what's changed in 21 years, we have 78 sport club teams, and they compete now at a national level.

“So your water polo team went to San Diego to compete as a club team. Fabulous for them. Really a wonderful opportunity; but in the old days, sport clubs went to IC or to Elmira. So it is a challenge that we have to keep up with our students' expectation of what they want. I don't have a philosophic disagreement with you. We have a practical difference. One more question? Yes, sir. In the blue, on the edge. I saw you first. Sorry, Rob.”

Professor John Brady, Department of Food Science: “ I was wondering -- probably my ignorance, being first time here -- what do you do to try to promote the adoption of a healthy diet by students when they show up here for the first time, choosing what they are going to eat?”

Vice President Murphy: “So the question is an excellent one, because we actually see dining as our partner in the health and well-being agenda. The first thing we do is the kind of food that we serve. So we do a lot of training with our staff around healthy ingredients, healthy portion size.

“All of the ingredients are loaded in a pretty sophisticated database, so students that come with food allergies have access to that. They understand how the food is prepared. You will notice now, we don't have trays in the dining halls. Virtually all of our dining halls are trayless.

“That's intentional, both to limit food waste, because people don't just pile stuff on their tray. They have to go up and go back for seconds or thirds, and you could put a plate, and a plate. You can't put five plates on a tray at once.

“So we have managed the environment a little bit to try to promote healthier eating. We have the full range of vegan, vegetarian. So it's ingredients, its menu, its portion size, it's kind of the environment that we create around our food program.

“Do we go in and do classes, per se, in the residence halls about healthy level of eating? No, but we have partnered with nutritionists on interesting studies, and I think there will be more coming along that we'll be happy to have as a research partner, along the way.

"I thank you for the opportunity. All of this will be out on the faculty senate web site, and Tim and I are ready to assist your departments or any of you, if there are any questions. So thank you very much for inviting me."

(APPLAUSE)

Speaker Lewenstein: "Thank you very much, Susan. The next item on the agenda is the climate action plan. We have Robert Bland and Mike Hoffman here to present and talk about that.

6. REPORT FROM THE WORKING GROUP ON CARBON NEUTRALITY

Dean Burns: "So this is just a circling back. You may remember again in December, there was a resolution about divestment and reinvestment, and then a part of that dealt with carbon neutrality and trying to accelerate our carbon neutrality to achieve our carbon neutrality by 2035, rather than the previously stated 2050.

"And in February, when the president responded to that report here in the senate, he appointed -- or asked myself and Kyu Whang, the Vice President for Facilities, to appoint a committee of staff and faculty. We have a marvelous staff who have accomplished a lot in this area.

"And so we did so. That committee got started maybe in February, and they have been working extraordinarily hard and involving lots of the community. And they are here to report to you on their findings and proposals for the future. These will then be going on through the administrative structure and onto the board of trustees.

Professor Michael Hoffman, Department of Entomology and Director of Cornell's Agricultural Experiment Station: "We appreciate the opportunity to offer comments on the report we put together. There were 13 of us that came together. And I personally found it to be inspiring, and to bring this group together, took the charge to heart and I think accomplished a lot, so we'll report on it.

"There are four of us here this morning. I'm Mike Hoffman. I'm an associate dean in the College of Agriculture and Life Sciences; Brian Chabot from Ecology and Evolutionary Biology; Todd Cowen from Civil and Environmental Engineering; and Katherine McComas from Communications.

“We've already reported out to the president and his senior staff, and we engaged individual senior staff who were not at that meeting. We met with a few deans. We will soon meet with the provost, when he brings the deans together, and at some point also report to the trustees.

“So I will start, and just a little background. Cornell has done a good job to date in reducing our carbon footprint. Units have adopted sustainability. If you are not aware, the skills for success, which all staff have to go through an annual review, now is under the umbrella of sustainability.

“We have a climate change science major. You are aware of lake-source cooling projects that's been accomplished, energy conservation. We have eleven LEED-certified buildings. If you are not aware, over the last 10 or 20 years, the campus has grown in square footage by 20%, yet energy use only increased by 4%. A lot to be proud of what's been accomplished to date.

“We've also been recognized by a number of organizations for the success to date. Sierra Club ranks Cornell one of the top five greenest. The Princeton Review puts us in the 99 percentile as far as a green campus, and the Association for Advancement of Sustainability in Higher Education has given us a stars gold certification.

“So again, a lot of national recognition. Alumni are certainly supporting us. David Atkinson is a good example of that.

“So we are at a crossroads. I think we are all convinced we need to do everything possible to address this issue of climate change. So again, this committee took this to heart and came up with a set of recommendations, so go to Brian next.”

Professor Brian Chabot, Department of Ecology and Evolutionary Biology:

“Thank you. So as Mike has pointed out, Cornell has been remarkably successful in making progress toward the 2050 climate neutrality goal. We have done very innovative things as an institution. If you look at the progress of other institutions of our size, we're definitely in the lead.

“When we proposed to this body a more aggressive goal, we did so because it is essential to remain – a leader. An institution like Cornell is looked to as a role model for how we should be solving what is, in the mind of many, the world's

biggest problem that we have ever faced. So it is essential that we adopt a more aggressive goal.

“And the study committee determined it was quite feasible for us to do so. So that is one important message. We can achieve climate neutrality by 2035 or sooner, if we all work together. And we make that point, because that is probably the biggest challenge we face; getting all of us involved and all of us engaged, because we are all part of the problem. So it is essential that we have that behind us and essential we have that as a common goal.

“So we need to involve the entire faculty, the entire student body, and the entire staff in this progress. And if you imagine 25,000 minds working on the same problem, imagine what we can achieve by working together on this. So we see this as essential.

“We also see this as essential in terms of opening up Cornell to new partnerships with the local community, with the City of Ithaca, the Tompkins County, with businesses and with public agencies that will look to us as places to test out ideas and to examine new ways of approaching this problem.

“So there are a number of benefits to our taking this on. One of the clearest is that we will remain in the leadership and we will be seen as a place for creative and committed people to come to participate in this grand venture.

“Secondly, we will gain control over our energy future. The transition away from fossil fuel, in the ways we propose it, will put under our control in ways we do not have now how we generate our power and heat. And so this is important. And we should see reductions in the costs of those services.

“We also will see Cornell as becoming a more attractive place for students interested in this problem, for faculty interested in this problem. And so there are a bunch of clear benefits. There are some opportunities we see for businesses and organizations who want to use us as a test bed for these concepts.

“Okay, so what is the plan? The plan begins in this book here that hopefully all of you have read and committed to memory. So this is the 2013 Climate Action Plan and Road Map. This is where the committee started. In a sense, we have simply gone into greater depth about how we achieve the goals that are already laid out here, because this proposes how to achieve climate neutrality by 2050.

“And if you look at the details of that plan, there's actually relatively little that we need to do to move the date ahead to 2035, because all of the big activities of converting away from fossil fuel, reducing demand happen before 2035.

“So the plan involves three components, in terms of the general strategy: Involves changing our fuel sources away from fossil fuels to renewable energy sources. It involves reducing demand for energy, and it involves becoming part of the offset market. And the offsets in this plan were envisioned primarily for business travel, which we have no real substitute for.

“Now, as we looked at the details and developed more detail about how we move through these steps, we realized that by moving the offset component, which was saved until 2035, to begin now, we could achieve a bunch of important advantages, one of which is to find a way to sell our carbon credits, the credits we are creating by moving away from fossil fuel, onto the market and gaining some resources for the projects we have envisioned.

“We've also proposed, which is not in this booklet, an internal carbon tax, so that we can incentivize -- this is something that we will phase in over a period of time, and then phase out as we see a need for providing a tax on fossil fuel use. So we have that as part of the initiative here to accentuate the demand reduction activities of the plan.”

Professor Todd Cowen, Department of Civil and Environmental Engineering:
“I'm also the faculty director for energy at the Atkinson Center. So we produced a series of milestones that are important for us to achieve over the next twelve months, to basically help ensure the campus leadership that we are on a track that suggests we have a chance to make climate neutrality by 2035.

“And I think many of us on the committee -- personally, I would argue if we can't demonstrate that in the next twelve months, then we as a campus community, at a cutting-edge research university at our own scale get to that goal, then as a country, as a world, we are in big trouble. So hopefully, we are all on the same page there.

“So the first milestone is we need to, as an entire campus community, work together toward this goal. So the reality, it will take not just technological change -- I sit in the College of Engineering. Many people think climate change will be solved technologically. I would argue that's the easy part. That just takes money. Engineers are pretty good at finding money.

“The reality is we need cultural and behavioral change. Many of you come from the rest of the university that can help us achieve that. This is a campus-wide problem. We need staff, we need students, we need the arts, we need the social science, and we need everybody to be thinking about how do we change our cultural behavior, so we can, as a community, achieve this goal. The technology will come. What we need to do is change the way we approach this and think about this as a problem. We all have to work together.

“So one of the key pieces is to actually change a few issues that are core in the next twelve months. There are two pieces: One, we need to actually deal with reducing the goal, change the goal for new buildings. So if we are going to build new buildings, I think we can all look to the new Gates Hall and think wow, we just built in 2010, a building constructed of glass. Most of us know that glass probably isn't the best choice for building in Ithaca, New York.

“We can do all kinds of great things as engineers to improve that ability, and we did -- these buildings are relatively good for traditional construction, but we can't be building that kind of building anymore.

“So we needed to change the construction approach on campus and change essentially the rules of how we look at buildings and evaluate buildings, so we have very low energy intensity per building.

“We also need to extend the payback need for how we retrofit buildings. We know that the campus is not going to see a lot of new buildings in the next 20 years. We have gone through that phase.

“Money is tight. We are left with a very significant infrastructure that's going to have to be modernized, but to pay for that modernization, we are going to have to think in terms of a little different payback period. So we need to extend the payback period out to 15 or 20 years for these types of projects, so we can afford to do them; because the reality is most of the retrofits are moderately expensive and will take long payback periods to see their returns. But the ROI can still be positive, the rate of the return on investment.

“So my problem is I have -- I had on my phone my presentation. I will put it back up. I went to sleep.

“So as Brian mentioned, we need to incorporate carbon offset to our program. We'll deal with carbon in two ways: One, we are going to implement a carbon tax on campus. This is going to be phased in, as Brian said. Of course, in many ways, this is where the first place, where the changes, cultural changes on campus might hit budgets.

“You are all faced with really tough budgets in 2014, when we thought we were beyond that crisis. So hearing about a new tax is not something that people are going to like; but if we want to change effectively the behavior on campus, we need to do this for a couple of reasons. We need the financial resources. That's a nice little benefit. It is not a lot of money. So those resources, while critical to get going, aren't that significant, but we need cultural change.

“And we all know when we see a cost item in a budget that highlights what's going on, you see a cost item, you can drive that to zero. So it will identify to all of us what we are doing in terms of carbon use on campus and help us figure out how to reduce it.

“We also need to work with carbon offsets in a traditional sense. So we commute to campus. There are a variety of ways to capture the costs on campus and work. The idea is to work locally and have a budget that renews locally within the community. So as carbon offsets are within the community, so we are not offsetting in the Amazon basin. We are offsetting in Ithaca and Tompkins County.

“So secure renewable energy supplies. We have several projects in the books right now through utilities. We have one of the most innovative utilities group for any campus. So hopefully you are aware of that. If not, it is incredible what Burt and his team has done, under Kyu Whang. The reality is, we have several projects coming online.

“You are aware, perhaps, of the solar panels out near the airport. That project should be started -- under construction. It should come online this fall. We have proposals in the pipes to buy renewable energy through wind farms.

“We have hydroelectric plants, not just the one in Beebe Lake. We have a megawatt plant in Beebe Lake, but look at other plants off-campus that will be allowed to be brought online through remote net metering. Cornell was instrumental in changing the laws to allow remote net metering at a scale of up to 2 megawatts, so we can put a project in the Adirondacks and put the electrons

off the grid here and still take credits for that carbon credit. We don't need a pipe or a line running from the Adirondacks down to here.

“So that's a change in the laws in the state of New York because of the work that our utilities group has already done. This is the kind of innovation Cornell is already known for in the state. We are just looking to continue that innovation and move forward. We want to make sure those current projects get funded. That should happen in this budget year.

“This is the biggest one, in many ways, shapes and forms. Some like to call it deep hot rock. If I think about Ithaca, I haven't been to a local hot spring, but we sit locally on a moderate source of thermal energy, about 5 kilometers down. We don't know how far down it is. We don't know how hot it is. Maybe it's only deep warm rock.

“We can tap that energy, if it's a lower grade resource, to do things in a little different way. What many of you don't realize -- and if you look at your home bill, maybe you do -- one of the biggest expenses for energy we face as a campus is heating the buildings.

“Taking electricity to heat the buildings is not the most efficient way to use electricity; but we take heat out of the core of the earth and pump it through radiators, like we take lake source cooling. That's very efficient. On the order of 90% efficiency. So we can heat water by going five kilometers down and circulate it through a campus-scale infrastructure, then we can heat very efficiently and take off one of our biggest carbon loads.

“So this is a very significant component of the plan. It's about 30% of the energy reduction on campus. The reality is, no one to the northeast is doing this. It's a high-risk, high-return. Faculty are good at thinking about things that way. We are meant to move that direction. Cornell needs to invest quickly in trying to figure out if this resource is usable.

“There are all kind of complicated issues that many faculty will need to be involved in. One of the most significant components will be involving faculty and students thinking about the research, the public perception, the public adaptation of technologies like this in regions like Ithaca.

“So there's a huge opportunity, but there's a bit of a risk. We need to jump on this right away, because if it is not going to work, we need a Plan B. There are Plan Bs, but they are very different from what Plan A is, which is geothermal.

“Luckily, we are a university that's already known for its sustainability in renewable energy and climate change research, and we have been the recipients of lots of significant contributions and many, many small ones. So we know about David Atkinson's generous gift, but there's been a lot of money raised already around sustainability.

“So not only our students are phenomenally interested in sustainability; in fact, CUSD, Cornell University Sustainable Design, received 8,000 applicants last year for 200 spots. So whether we like it or not, our students want us to be thinking about sustainability. They are. There's not enough spots for them to get involved.

“We know our faculty are interested. It is for the faculty senate we put pressure to adopt this target and think about adopting this target. Finally, we know our alumni are interested, because they have already contributed significant funds in this area.

“Finally, a significant investment is required. So we are looking at something on the order -- this has not been priced out in detail yet -- of \$500 million, a half a billion, over 10 to 20 years. As an investment, we are looking at \$50 million a year, through a combination of fundraising, large-scale fronts from the federal government to state government, and other sources of income, potentially from partners in the industrial area.

“One of the things we have recommended is having somebody at the Day Hall level, the administrative level, think about corporate relations in the area of this climate action plan that can engage companies that would be interested in using, as mentioned before, our campus as a test bed.

“We are a campus of roughly 30,000 individuals. It's a great microcosm to test technologies and look at how adaptation, behavior meets technology.”

Professor Katherine McComas, Department of Communication: “So just to summarize here, the accelerated working group believes that Cornell can reach carbon neutrality by 2035, if Cornell is willing to commit to meeting these

milestones. And we believe that is a question that has to be addressed sooner than later, and we are still in the wait-and-see mode on that.

“To be sure, there will be challenges along the way, and Todd has mentioned a few. I think that there will be others. There will be different motivations to do this, but I believe if we wanted to look at the Cornell campus community and the surrounding community, that there is an attitude and motivations that are supportive of these efforts.

“And some of the research that has been done looking at undergraduates' opinions toward global warming, 84% believe it was a serious problem, 67% believe that they could do something to address it, and 72% thought that Cornell could do something to address it.

“In a survey of CALS and Engineering and Johnson faculty, staff and graduate students, 80% believed climate change was a serious problem, 63% felt that they could do something about it, and 74% believe that Cornell should do something about it.

“In a survey of Tompkins County residents, which include Cornell employees and non-Cornell employees, 78% agreed that climate change was a problem, 86% thought that they were responsible for addressing these issues, and 89% felt that universities and colleges were essential in addressing these issues.

“So there is momentum in public opinion that these are the right things to do. So I just leave that with you, as a measure of support, that this isn't going to fall on unfertile ground. And so, in short, if we believe that it's a serious problem and that we can do something to address it, then we have an obligation to do this, so the next 150 years, you know, we are still around and thriving. Thank you very much, and look forward to your questions and discussion.”

Speaker Lewenstein: “Thank you very much, to the panel. We have heard the panel's report and now invite questions and comments. And a reminder to please wait for the microphone and to identify yourself. We will start down here.”

Professor Bruce Turnbull, Operations Research and Statistical Science: “First, point of information: Geothermal is available to private homes by installers. Often there are the same people who are installing the solar panels.

"I realize that's different from heating Gates Hall, but if Cornell was -- seems to me if Cornell was serious about it, they would divest from their endowment portfolio those companies that are going against your goals.

"I mean, some people think there's sort of two types of companies; one is ones who are spending their money, their profits employing the new technology, and the other that are spending their money, funding lobbyists in Congress to fight any regulations. So I think that one thing to look at would be this financial issue, which would be to look at divestment."

Unidentified Speaker: "As you may know, there was a resolution before the senate that included divestment and progressing faster on climate neutrality. That was taken to President Skorton. He has not responded as enthusiastically to the divestment issue as he has to the issues that are before us on achieving climate neutrality. So we're going to make progress where we can."

Unidentified Speaker: "Doesn't disagree with you necessarily. We have individual opinions, but we have taken charge from the president, which is to run as fast as we can with the 2035 cap. I would encourage any of you that think that is a serious approach to continue to work on that approach.

Unidentified Speaker: "Yes, there are many in this room who agree with you, so _"

Unidentified Speaker: "Thank you."

Professor Elizabeth Sanders, Government Department: "I worked with some students on campus who are very enthusiastic about helping to stop or mitigate climate change, and we sent a report to the committee. I think that the committee probably felt these were a lot of little things, and I think it's perfectly appropriate to look at big technological changes; but I'd still like to hear some response on the sorts of things that we brought up in that report. For example, we mentioned food as a part of a healthy life for our students; but also, to support our communities and to make our students healthier, what about encouraging Cornell dining to use local, organic foods? I think we could have a tremendous organic food industry in this area. Those that shop at the farmer's market and use community agriculture, the basis for that is there already, but I think Cornell dining could do a lot more than that. Cornell dining flies in apples from Washington State and sushi full of MSG from California. And these are things that we produce locally. I have students working here who would like to

give more of the food that is produced on campus, and very large quantities from the dining halls are thrown away.

“Likewise, food taken to functions on campus, it is all thrown away after a certain time, and much of it is perfectly edible, and there are local food programs that really need that food. So I have -- some of my students have been working on that, without tremendous support from the university. The light issue is another one we brought up. Lights in buildings. Light and heat, going 24-7, when there's nobody there, when the building is locked, when there's plenty of light on the outside. You mentioned, I think, architectural design. Some of us did protest the very un-greenness of Milstein and the new computer building, but I wonder how building designs are approved. They seem also often not to pay much attention to the ecological aspects and they use -- I suspect the architects use light, really profligate light, as with the Forest Home parking lot, as with the Cornell plantations. There's way too much light and it's all --”

Speaker Lewenstein: “Can I ask you to bring your comments to a close?”

Professor Sanders: “I will. So bus transportation, bike lanes, a lot of little things perhaps, but I think they would encourage people to think this way. I think they would have good educational influence.”

Professor McComas: “I think just to respond to that, an overall campaign approach, public engagement approach around these is very much foremost among this effort. It's not superseded by technological solutions, because I believe everybody here realizes that technology alone will not address these issues.

“And so although we didn't get into the weeds in the plan that we submitted to the president, there's very much an effort to assist with bottom-up grassroots efforts toward greater sustainability to support student efforts, faculty efforts, staff efforts across the campus and the different units.

“So these are the types of creative ideas and that energy that I believe will only help us to move forward. So I believe that those elements are very much a part of the spirit of this, if not the particular details as of yet, because we haven't gotten down to those details.”

Unidentified Speaker: “The other thing I will point out, on the building side, in fact, that is very much part of the current plan. The rules of how a building is

evaluated and brought to full fruition, it will be looked at in a very different way, if the plan is adopted.”

Professor Hoffman: “If I could respond, the Cornell dining actually strives very hard to purchase locally grown, like within 300 miles. I think it's about 40% of what they bring in, which is pretty good.”

Speaker Lewenstein: “Professor Dear.”

Professor Peter Dear, Department of History: “I have probably a rather annoyingly academic question. I'm Peter Dear from the History Department. So if you think it's trivial, let it go, but obvious we're all familiar with the term carbon neutrality. I was interested in the fact that the presentation began with this term climate neutrality. This is a communications kind of question, I suppose. What's the idea there and what exactly is that supposed to mean?”

Professor Chabot: “You are asking which we mean, whether we mean carbon or climate?”

Well, you are getting into somewhat of a technical issue, but basically, for our purposes, they mean the same thing. That is the anthropogenic emission of carbon, what is now anthropogenic emission of carbon in the atmosphere, both through our industrial processes, but also increasingly with the release of methane from exploration of natural gas. Both of these are sources we need to bring under control. And so getting away from the use of fossil carbon is a prime objective. No. That's a term of art. We probably ought to examine what that really means. We do not have a neutral climate in Ithaca, New York.”

Speaker Lewenstein: “Professor Clark.”

Professor Ted Clark, Microbiology and Immunology: “Just wondering how hard your numbers are in terms of buildings versus commuting and business travel. It seemed like commuting and business travel were a minor percentage of energy use, compared to buildings. Are those hard numbers?”

Unidentified Speaker: “That's correct, but the process -- the agreement that the president agreed to in 2007 requires us to make efforts to estimate these. Our buildings estimates are improving. Burt can probably say more about this, but most of our buildings are metered now.”

"You can go onto a dashboard web site and see how much your building is using. The business travel gets softer in terms of how we are estimating, but we do have ways -- there's a protocol for estimating those numbers.

"Burt says that each of those are 15% of our total. So they are not insignificant, but they are estimates, the best we can make."

Speaker Lewenstein: "Professor Stein."

Professor Peter Stein, Department of Physics: "I had a couple of questions and an observation. The first was, at some point, I believe you talked about selling a carbon lottery or something like that. I wondered, A, I was surprised, because I didn't think we had such a lottery --

Unidentified Speaker: "It's not a lottery."

Professor Stein: "Or market, I should say. I didn't realize we had such a market in the United States. And secondly, it seems to me that if you, in fact, do something and then sell to someone else the right to do what you didn't do, you are actually not accomplishing anything. So that was one thing.

"And the second question I had was the geothermal, the thing that you say it was very risky. And I wondered why it was risky, because that's sort of a standard thing that's going on all over the world, as far as I know. So what is it about this that makes it such..."

Professor Cowen: "Hopefully I didn't say very risky. It is riskier than what we currently do, because no one has done sort of what we would call moderately hot rock at five kilometers deep. There's been few wells dug into the basement rock in this area.

"So we have only sort of geological estimates of what that heat gradient looks like as you go down. So if the gradient is about what we think it is, with relatively moderate uncertainties and we are able to tap it and get the kind of water flows through the rock and the wells that we would need, we are pretty sure we can do this. The uncertainties on each of those pieces are moderate.

"And you add it all up, there's enough uncertainty there, we could do much better than we think, and it could be more expensive than we think. The problem is essentially, the well drilling cost is very high. So if we need two more

wells than we think we need, the cost gets significantly more. If we need ten more wells, may become insurmountable.

“So we need to get a pilot well done, so we can characterize that at relatively significant expense early on, but it's on the order of millions of dollars. That would then really bound that uncertainty, so we know really what the design would look like in terms of number of wells, expected flow rates, amount of heat flux we could get and know what the cost would be.”

Professor Stein: “Okay. Then the third...”

Speaker Lewenstein: “In the interest of getting other questions, I think we've got your two. We could move on.”

Professor Chabot: “So I will answer the first of the questions, and that is the carbon market is -- I was assigned to the subgroup, knowing nothing about carbon markets in the beginning, so I have learned a lot about this. It's a huge financial market, and getting larger, faster, really fast, driven mostly by involuntary compliance regulations in Europe and California and some other places.

“So the concept of -- it is the concept of paying someone else to save the carbon that you are not able to save, but if we have projects like the deep hot rock, where we are reducing our reliance on fossil fuel, it creates a carbon credit, not just for us, but for somebody who wants to pay us to do that. So it's a fairly simple, quote, unquote, financial transaction, yes.”

Speaker Lewenstein: “Professor Franck.”

Professor Carl Franck, Department of Physics: “It's my understanding that we benefit currently a lot from cogeneration, and I just wondered how important it is and if that's something that goes ahead in a big way as part of the plan.”

“Unidentified Speaker: “So essentially, cogeneration, certainly in the near-term, will continue. We have reduced significantly our carbon footprint by stopping the burning of coal, and we now generate electricity and heat, combined in a more efficient way through the cogeneration plan; but we are still burning methane. So the idea is by 2035, that feed stock would not be methane. And if we are doing cogeneration, it would be through other means, bio feed stocks and the like.”

BRUCE LEWENSTEIN: "One last question down here. Wait for the microphone, please. The recording part, not the projection part."

Professor Dan Brown, Department of Animal Science: "I was just wondering, there seems to be a lot of focus on carbon here and that sort of thing. That's fine, but that's only one of many aspects of sustainability and it's only one of the aspects in which Cornell needs to improve massively."

"I mean, in some of our -- something like the vet school feeding its dairy animals, they buy their feed from 28 miles away, truck it in, field it to the animals. Manure is just sort of spread, without any plan, pattern, management."

"And those nutrients are just splattered all over Cornell -- it's really embarrassing. And it dwarfs some of the produce we waste in the dining commons. I mean, we are talking about hundred of tons."

"Have you examined or addressed or prioritized these many other places where Cornell can improve things by -- you could do the same academic work, you could do the same teaching, but do it right and wouldn't require new technology or anything else."

"Is your committee addressing things other than just carbon, or is there a committee like yours that's looking around for low-hanging fruit like practicing the nutrient management that this university is famous for researching? I mean, to me, that dwarfs everything we talked about, and that's only one little thing."

Professor Hoffman: "I will reply to the nutrient management. Most of the dining hall waste and all the manure, et cetera, from our facilities are composted, which was the best way. There's consideration for an anaerobic digester at the dairy facility at Harford."

Professor Brown: "I'm just talking about the vet school. Just the vet school, not Harford. That's a whole..."

Professor Hoffman: "The new teaching lab?"

Professor Brown: "Yeah. They have 200 cows being fed by..."

Professor Hoffman: "We compost all of that material."

Professor Brown: "No. Anyway, what I'm asking, is anyone examining that stuff? Because those nutrients are -- it's embarrassing to have it happen on -- the other thing, just quick, you are talking about deep rock geothermal. Just starting out with cooler water from shallow wells in the summer and the same temperature be warmer water to start, as starting material for heating systems in the winter, so you don't have to drill that deep to benefit from geothermal."

Professor Chabot: "This committee was given seven weeks to deal with the question of can we accelerate the elimination of fossil carbon fuels, and that's all we could accomplish in seven weeks. There is a larger effort, which Dan Roth, behind you, is leading for the university, on a broader sustainability agenda, which includes composting and recycling and reusing and a whole bunch of other things. So there is a broader agenda than what we were asked to look at."

Unidentified Speaker: "The other thing I will point out, I think one of the pieces that is critical to our plan is the culture of change on campus. So if we all start thinking about how we impact sustainability as driven by the climate action plan, it's going to have all kind of positive fallout on many of the issues you have talked about."

Speaker Lewenstein: "I want to thank the panel very much. In the interest of establishing the proper traditions at the beginning of the semester, we should end on time. Lacking objection, meeting is adjourned."

(APPLAUSE)