

**A MEETING
OF THE UNIVERSITY FACULTY SENATE
WEDNESDAY, DECEMBER 13, 2017**

1. CALL TO ORDER

Speaker Charles Walcott: “As always, the usual prologue; no phones, recordings, please turn off cell phones, tablets. Remind the body that senators have priority in speaking. Please, please identify yourself before you get the microphone, so we know who you are. It makes the transcript ever so much easier. I suggest a maximum speaking time of two minutes, and we will announce the number of Good and Welfare speakers. As far as I know, there is nobody, and so that gives us a minute or two of extra time.

“The dean of the faculty has announcements. Charlie?”

2. DEAN OF FACULTY ANNOUNCEMENTS

Dean of Faculty, Charles Van Loan: “Just a reminder we set an example for all the other assemblies about civility and so on.

“I have three things to say. Let me just go through them, and then happy to answer questions after. Here is something that Chris Schaffer and I have talked about for over a year, and it has to do with representation for academic title-holders who were not university faculty. University faculty is the tenured and tenured track faculty, of which there are about 1,500, but we have all these new titles over the last ten years. We have added quite a few. There are lecturers, instructors, different levels. We have a huge research staff, librarians, archivists, extension, and there are 550 post-docs. They are all represented through the Employee Assembly.

“In the Employee Assembly, there are 8,000 people, and they talk about real important stuff, but almost never is the topic of what they discuss dealing with research or teaching. I think we'll all agree that these colleagues are absolutely essential to the running of the university. They work with us very closely and so on, so the big question here is are they adequately represented.

“Chris and I say let's find out by asking them, so what we'd like to do is set up a very simple web page, with one question: Are you happy with the current setup? And we provide details, like on this slide, so they have a -- a lot of people don't know what assemblies are, but we give a little perspective about this, and simply ask that question.

“We aren't passing judgement on what we think is right or whatever. It is simply step zero, let's find out if these 1,500 colleagues feel they have the proper venue to express themselves, so we'll put that up on the web site, and people over the break can comment. We will see what comes in and we'll tell you about it in February and see if there's something to do.

“Interestingly, if you go back in senate archives, 2004, there was an ad hoc committee put together simply to review the whole non-tenured track scene. It was bigger than this thing we're talk about, but they did have a recommendation, which was that we should consider options for either a separate assembly or find some way they can work with us in the senate. So it's a topic that's been around for a long time. We will just find out what these folks think, and then take it from there.

“I have told you about this in September and November, and I'm telling you again; so this committee is working on the development of a consensual relationship policy. We have a pretty detailed web site. That web site is available now for you to register comments. We have ten sort of study questions that help us focus on the different parts of this issue.

“And this will be up there into early February, so I'm really encouraging you to visit this site. We all have strong feelings about this. And what we want to do before we start coming up with draft policy is to find out what everybody thinks.

“Martha wants this policy on her desk on May 1. That means we have to show up here in the March meeting with a pretty good rough draft, because we have to show up again in April to vote. In between those two senate meetings, there will be another public comment thing on the draft stuff. Right now, it's simply commenting on issues. The committee is busy thinking about these, and we want to know what the community thinks.

“Finally, I've received -- people seem okay with these Monday messages, so they'll continue in the spring.

“Those are the three things I wanted to mention. Are there any questions about them? Yeah.”

UNIDENTIFIED SPEAKER: “I have some relatives interested in the sort of consensual relationship situations in their corporations, businesses. They might

be interested in -- as the kind of outcome or availability to other people, what stage that will be and so forth, if this is an ongoing situation."

Dean Van Loan: "These policies exist in the business world, often much stricter than what we have at universities. This will culminate in the production of a policy 6.X, and that will crystallize all our thinking about this. There will be surrounding documents to help people interpret the document, but our web site is totally open now."

UNIDENTIFIED SPEAKER: "Open to the public, you're saying?"

[Dean Van Loan](#): "It is, yeah. It is totally anonymous. Turned out to be too much work just to restrict it to Cornell IDs, but we are looking for ideas. I don't really care really where they come from. It is not a referendum or anything like that. It is just we want ideas on how to do different things in this policy."

UNIDENTIFIED SPEAKER: (Off mic) -- "both librarians and non-tenure track faculty are represented at the -- in the SUNY faculty senate. The CALS faculty senate has research -- senior research associates represented, so is there any effort underway to look at peer institutions and evaluate what they are doing?"

[Dean Van Loan](#): "Yes, I always do that. Over the break, we'll collect -- we'll see how other schools do this, and we'll show up in February with that information; and then summarizing what we find, the comments we get online."

[Speaker Walcott](#): "Okay, we are now going to proceed with a report from the Financial Policy Committee, Professor Rayna Kalas, chair of the FPC."

3. [REPORT FROM THE FINANCIAL POLICY COMMITTEE](#)

[Professor Rayna Kalas, Chair of Financial Policy Committee](#): "Hi. So I'm Rayna Kalas, in the Department of English, and I have been chair of the FPC since January of this year. I am going to put up -- this is the composition of the committee. And I wanted to put this up for you, so you could see there's representation from the various colleges and units on the committee.

"There is not always an even distribution from the colleges, and that's because there's kind of a steep learning curve on this committee, so that if we have a lot of turnover, every three years, it makes it difficult for us to retain information; so we try whenever possible to renew people's appointments, so that we can get a sort of quorum of memory on the committee.

"I also wanted you to see the membership, so that you know who you may reach out to. What we think of ourselves as a -- by one of our charges, is to communicate to the central administration from the faculty and to communicate from the central administration back to the faculty, so we welcome input. You can always write to me with questions that you have or concerns that you have.

"I did not present to the faculty senate last spring, because I taught during that time, so I wanted to give you a little sketch of some thumbnails of some of the things that we talked about. I'm really -- we spent a lot of time this fall, I will focus on the first two things up here, because we spent a lot of time on this question of unfreezing the tuition distribution metric.

"And a second point, sort of related to it, the potential subvention of gateway courses, but I wanted to let you know about these other things. I will talk about them very briefly. If you have questions about them, you can ask me afterwards, or you can also consult the report, the annual report that I wrote, which is on the dean of faculty web site or the faculty senate web site.

"The first two, I'll be spending a lot of time on today, but the third one we talked to last spring, talked to Judy Appleton and Engaged Cornell. We specifically wanted to talk about the funding of Engaged Cornell and what happens after 2025, when the funding for Engaged Cornell goes back out to the units. If you are concerned or interested in that, I encourage you to read the paragraph I wrote up in my annual report, and then please direct questions to me, if you have continuing questions.

"At the request of one of the committee members, we looked into the number of non-tenure track faculty members who have professorial titles across the university. This is not including instructors and lecturers. This is just titles that have professor in them and that are non-tenured track. There are 71 of them across the unit. We have data going back to about 2001, so there aren't that many.

"We weren't particularly concerned, although there was a jump from the high 50s to 71 in one year, the last year, so it's obviously something we'll keep an eye on. A lot of these things are ongoing issues that we'll keep an eye on.

"We looked at recommendations from the Admissions and Financial Aid Working Group. We have talked a lot about the Johnson College of Business and the move of Dyson to Johnson. That is also something that will be an ongoing

conversation for us, and we have been talking about the allocation of new student enrollments across the universities.

“The committee meets regularly. I meet regularly with [Paul Streeter](#) and [Provost Kotlikoff](#), and the committee meets regularly with them. We raise questions and try to keep very open lines of communication with central administration.

“I also wanted to alert you to things, in addition to those ongoing issues, wanted to alert you to some things we want to look at. I also welcome input of agenda items, but things we want to look at. This looks like a small number of agenda items, but these are going to take a lot of time, both of these issues, so we'll have to start gathering data, start conversations, then gather more data and continue.

“One of the things we want to do, as a committee, is understand changes in the subventions from the center to the colleges. One of our committee members asked why we used the word "subvention. Aren't we just talking about subsidies?”

“And yes, we are talking about subsidies, but we like the word "subvention," because it brings air into the room, apparently. We can't only look at subsidies, because the budget model has actually shifted allocated costs out to the colleges, so we have to look at both of those together, and that is -- it's a very, very complicated system, and it's going to take a lot of time; but it's something that we'd like to do and we'll present to you, as we get more clarity on.

“The other thing we want to look at is we've spent a lot of time -- as my notes about the unfreezing of the undergraduate tuition metric, which I'll be talking about, we spent a lot of time understanding undergraduate tuition; but we don't really understand graduate tuition that well, so we want to pay attention to the professional master's programs, especially CIPA and PAM, to be the ones that are cross-college and interdisciplinary, but we also want to start talking about master's programs generally.

“And we want to understand graduate tuition generally, so that's something we'll be looking at in the spring, in addition to those ongoing issues. And if you want to weigh in or have questions or would like to raise concerns that you'd like the FPC to address, I hope you'll share them with me or one of the other members.

"I know this is a rehearsal that probably a lot of you know, but I thought it's worth rehearsing a little bit, and my slide even got more complicated since this morning, based on conversations with people, so I'm going to go over a little elementary budget model 101 to locate us in the conversation here, to talk about that distribution of tuition.

"In the old model, tuition and financial aid costs for AAP, Arts and Sciences and Engineering went to the center and funds were distributed ad hoc. Tuition and financial aid for the Hotel and contract colleges went directly to the contract colleges.

"The idea for the new budget model was to rationalize the distribution of resources and establish a single distribution model for all the colleges and ask colleges and units to work within a budget. The idea was that in the new budget model, tuition dollars would be initially pooled and then distributed in a consistent way to the various colleges, with financial aid costs distributed to colleges in proportion to tuition, and colleges would also be responsible for allocated costs.

"Then the question was how to distribute the tuition. And the thinking was that some of that tuition should go to the College of Enrollment and some should go to the College of Instruction, so I stole this slide. This the Paul's slide -- [Paul Streeter's](#) slide that he showed you at the faculty senate meeting in April, which is why I have due attribution down here.

"Paul asked me to reinforce to you that the distribution of tuition is net of financial aid costs, so please keep that in mind, as you are looking at this. But this is just a nice schematic for thinking about the fact the undergraduate tuition comes into a pool, there's a tax on it. Ten percent goes to the center, 90% goes to the colleges. Forty percent of that money goes to the College of Enrollment. Sixty percent of that money goes to the College of Instruction.

"A lot of what I'll talk about in the remainder is that question of the College of Instruction and how that money works. Let me just say at the outset that it works by a metric that measures both enrollments and credit hours.

"This is also a stolen slide from Paul Streeter's April presentation, and this was just a little outline of the budget model rollout, where initially the ratio that divided those tuition dollars was 25% to the College of Enrollment and 75% to the College of Instruction. That particular ratio benefited Arts and Sciences and

CIS, and every other college suffered; so there was a shift made to 40% going to the College of Enrollment and 60% going to the College of Instruction, with subvention to offset the impact of that shift.

“The ratio stayed the same, but those percentages were frozen at the fiscal year 16 level to kind of prevent volatility and to see how the budget model was working. Now in fiscal 19, we will unfreeze that metric.

“Third stolen slide from Paul Streeter. I am borrowing these slides, because I wanted to remind you about his presentation and to show you. The thing I need to point out to you about this slide, this is what the percentages would look like, based on course enrollments and credit hours, the various percentages of tuition dollars that would go to the various units.

“And the thing I need to point out to you is that, as you can see above, it is based on a six-semester average, so it's three years: For fiscal year 14, that's fiscal year 12. 13 and 14, averaged together. One of the things that data can show is sort of what the relative percentages will be for colleges and whether there are trends that we need to be looking at.

“At the time, it looked as though -- we've always known that enrollments are going up in Computing and Information Sciences. It looked as though Arts and Sciences was going down a little bit. We have some newer data that may revise that data, but I wanted to have this as the backdrop to this newer data, which might not make sense when I'm pointing it out.

“Talking about what it will mean to unfreeze the metric, one of the things that the administration has decided to do is instead of using three-year averages, the administration has decided to go to five-year averages, so that change -- so the flux volatility in student flow and changes in the distribution of tuition dollars will be a little steadier. And hopefully, that will sort of keep people from trying to game the system, but also to make things a little more predictable and reliable.

“The other question that comes up is subventions. If the distribution of tuition disadvantages certain units, do there need to be subventions, and what should the nature of those subventions be? Do they need to be targeted to specific things? And I think from -- we had a conversation yesterday in our FPC meeting that I think was interesting, which is that the budget model has the value of sort of even-handedly distributing money.

“There may also be a problem in that it even-handedly distributes money and doesn't necessarily, can't necessarily recognize the specific needs and the specific contributions of different colleges, and so the subventions can be used to address those specific challenges and specific contributions. And I think one of the ways that we can be helpful as a faculty is to really think about what the particular character of the colleges are and what we need help with.

“For instance, that Arts model, where Arts seems to benefit from 75% of instruction dollars versus 75% of the tuition dollars -- instructional dollars versus 60%, I think one of the things that we can learn from that is that Arts does provide a lot of service teaching to the university.

“And so one of the possible proposed subventions would be something that targets gateway courses; that is, courses that are taught to students all across the university, like prerequisites for many different majors in many other colleges, FWSs that students from all over the colleges take.

“Those gateway courses are not limited to Arts and Sciences, but there are a lot of Arts and Sciences courses in them, and I think thinking in those ways about what the different colleges have and need might be one of the ways of targeting subventions, so that the subventions are specific. They built up a kind of equity model that can be added onto the budget model, and I think it's something we all need to be in conversation about and thinking about.

“Paul also provided us with more recent data, provided us on the FPC with more recent data, and he asked me to emphasize this is not the final metric for the fiscal 19 unfreezing; but I wanted to look at this data, because it does suggest some different things, to me at least. And we also talked about this on the FPC yesterday, and I think the members agree that we should take note of this, knowing these numbers might not be the same. I can come back to this.

“Yeah.”

[Senator Dan Brown](#), Animal Science: “You keep mentioning credit hours as part of the metric. Why is that not done by contact hours? Before resources were allocated this way, didn't make much difference; but in terms of contact hours, actually teaching in a classroom with my students for four-credit course, I'm with them teaching lectures, labs and so on, nine hours a week.

“We have no less reading than Humanities courses, no less writing, no less out-of-course things, but I know there are numerous courses in some colleges, where for four credit hours, the instructor meets with the students two or three hours and that's it. It seems to me it would make a heck of a lot more sense if the resources were tied to the amount of faculty -- amount of time students and faculty are actually being in class than it is to credits, because you look at this discursion here. I guess that's supposed to be credit hours and enrollment, but the difference in these different classes are substantial.

“If you have lots of classes or people are getting four credits for two or three contact hours, and you have lots of them, as you'd see, even within Arts and Sciences, Chemistry, or in other colleges like Agriculture, where we need the tuition money in order to run labs and animal facilities and all this sort of thing, plus the fact that we adhere to the Carnegie unit system, where other colleges and departments don't.

“And that's their business, as long as funds aren't allocated that way; but if you're allocating it according to credit hours, it seems like there's a built-in inequity there in terms of matching the personnel needs and matching the resources.”

[Professor Kalas](#): “I understand your question, and I appreciate your question, and it's certainly something we've spent a lot of time talking about. Since I personally had nothing to do with coming up with the metric, I'm probably not the best person to ask that question of, but what I can say is that because I have also personally been banging my head against the wall trying to understand these metrics a lot recently, the metric is not measuring the cost of educating students and it's not measuring how many hours faculty are spending in the classroom.

“It is a kind of an arbitrary model for distributing dollars loosely, based on numbers of students. I recognize that's kind of frustrating, but it is an arbitrary model, and we can't think of -- first of all, we don't know what the cost of educating a student is.

“And if we were only distributing these tuition dollars based on the cost of teaching, we wouldn't be factoring the cost of research, we wouldn't be factoring a lot of other things; so as frustrating an answer I know I am giving you, but it is also a real answer, which is it is an arbitrary model that's meant to give us a sort

of baseline even distribution of monies based on numbers of students that then can be hopefully adjusted, based on particular needs of colleges.”

[Senator David Delchamps](#), Electrical & Computer Engineering: “I don't want to get sidetracked on this credit hour thing, but just wanted to let you know -- I'm David Delchamps, chair of the Educational Policy Committee, from Electrical and Computer Engineering. EPC has looked at great length at the credit hour thing.

“And working with the vice provost for undergraduate education, an edict has gone out from that office to all the colleges to try to ratchet their credit hours onto the Carnegie system; that you obey, and that Engineering largely obeys, but not completely -- and I only know the effects at my level, my local part of the university, but our undergraduate associate dean has not -- has started telling people look, if your new course only meets this many times, you can only have three credit hours, that kind of thing, and has gotten all the departments to correct their credit hours, so they reflect the contact hours.

“And I'm not sure how that's seeping down in Arts and other colleges, but that's what's happening in Engineering, so that move is afoot.”

[Senator Robert Thorne](#), Physics: “On the same issue -- Rob Thorne from Physics: “I think if you look in the Arts College, you'll find that, for example, the physics courses, the big physics courses are under-credited and they have far more enrollment, so in terms of -- I suspect if you looked across the Arts College and didn't average that the college as a whole is not problematic in this formula, so it's a kind of internal issue for the college, then, to sort of how it's allocating its resources.”

Professor Kalas: “I can see I have to wrap this up. Could I just say just a couple more words about that data, and I can flip back to it. I just wanted to point out, if we start measuring the data later than the previous file -- remember, it was going back three years before the first entry -- then it looks like there might be a downward trend in enrollments in Arts and Sciences.

“But these are single-year averages, and then a five-year total. And though Arts will lose probably, when the metric is unfrozen, probably will lose a little money in that transition, it does look like the enrollments in the Arts -- the Art enrollments are steady. I am afraid the news may not be so good for CALS, and

so that looks different as well, too, to me, so I think it's something we need to keep our eyes on and think about potential subvention there.

“And the last thing, it looks like CIS's numbers might be more exponential than we thought. CIS is a particular case. I am not sure that I'm going to have time to go into the details. My little speech bubble – I am about three minutes?

“CIS is an interesting case for me, and one I hope the Financial Policy Committee will spend time looking at, because it is not an enrolling college. CIS doesn't see any of that 40% of enrollment dollars that the other colleges get. They only see the 60% of tuition dollars.

“On top of that, those tuition dollars, the instructional dollars that are coming in to CIS don't all go to CIS either; because though engineering faculty are hard-coded into CIS, so engineering faculty teaching in CIS get those instructional dollars going to CIS, that's not the case, as far as I understand it, for Arts and Sciences and CALS people teaching in CIS. Those instructional dollars are going back to CALS and Arts and Sciences.

“So CIS, though the enrollments are rising really rapidly, and they'll benefit from those increased enrollments, is an unusual budgets case that I think we need to look at, and I think it might provide us a good model for thinking about inter-college collaboration.

“And one of my concerns about the budget model has always been that, though I don't think this was its intention, I think inadvertently, it makes people circle the wagons and think within colleges. So I think it's especially important, at least from my perspective, and I know there are others on the Financial Policy Committee who agree, to think about CIS as a model for you, we might think about inter-college collaboration.

“I will stop there. I think there was another question over here.”

[Professor Kalas](#): “Just to make it more visible. They are the ones that jumped out at me as not looking the same as the previous data, and I think I also just wanted to point out the data is emerging, as we get closer to that fiscal 19 unfreezing moment; so we should keep looking at it and keep thinking about the way it's going to affect the colleges and the way it's going to affect the potential need for subventions or not.”

[Senator Risa Lieberwitz](#), ILR: "I wonder if the FPC is looking at this information with an eye towards making recommendations of some kind. Do you anticipate bringing resolutions to the senate on policies that you think might be changed in some ways? Are you thinking about those kinds of issues?"

[Professor Kalas](#): "We certainly are thinking about recommendations; but at this point, I will confess that the learning curve in this position is pretty high for me, so I'm getting myself up to speed and trying to understand both what -- trying to understand what I've learned. I have been on the FPC since about 2013, so I am sort of -- I've gathered a lot of information, but I'm still sort of feeling the way.

"I really think of the FPC right now as an advisory body. That is what its charge is. And sometimes I, myself, have been frustrated that the FPC doesn't really have any muscle, that we're just an advisory body, but I really am very confident in the members of the FPC. I think it's a really, really good group. And I think for now, I really appreciate having the capacity to think this stuff through.

"To the extent we are making recommendations, they tend largely to be recommendations up; that is, these are our concerns, these are the things we are seeing on the ground that might be negative effects, unintended effects of the budget model. We have some recommendations we want to make about potential subventions and potential places for unit initiatives that might be between colleges to help provide more than what the budget model does. So those are the kind of recommendations we are making now.

"But I do also -- part of what I really want to do for the time being is to be dispensing more information to the faculty, and I really do hope that -- it's quite fascinating to read through the annual reports of the FPC all the way back for a while. They are pretty volatile and I think they tell a story about faculty governance, which I think is important to all of us, so I would encourage people to inform themselves.

"Right now, I sort of feel like I'd like to do the best I can to try to pass along information, so that faculty can participate more in these matters."

[Senator Lieberwitz](#): "I think everything you said is great, but that also, if it gets to a point where a vote -- a discussion and vote in the senate can help increase the influence of an advisory group, that that is a positive thing."

[Professor Kalas](#): "Okay."

[Senator Michel Louge](#), Mechanical Engineering: “Will the Committee include US income tax reform in its Spring 2018 discussions, particularly on financial consequences if the US Senate adopts the taxing of graduate student tuition.”

[Professor Kalas](#): “Thank you. So I have heard, but anecdotally, so I don't want to speak with authority about this, but I had somebody on the FPC mention this yesterday, that I think Cornell tuition is sort of -- is distributed under a kind of a loophole that is going to exempt some graduate students from those taxes. I don't know that for sure, but do you know that for sure?”

UNIDENTIFIED SPEAKER: “Looks like the deal that the House and Senate made have killed that provision.”

[Professor Kalas](#): “That was one of our concerns, and it was one of the reasons we wanted to look at graduate tuition overall. Thank you. Thank you all.”

[Speaker Walcott](#): “Now we have a presentation on student housing update, [Provost Kotlikoff](#) and [Vice President Ryan Lombardi](#).”

4. STUDENT HOUSING UPDATE [SLIDES](#) – [MIKE KOTLIKOFF](#), [PROVOST](#) AND [RYAN LOMBARDI](#), VICE PRESIDENT FOR [STUDENT AND CAMPUS LIFE](#)

[Ryan Lombardi, Vice President for Student and Campus Life](#): “Good afternoon. Thank you for allowing me the chance to be with you this afternoon and take some of your agenda. I have been in front of this body before to talk about student housing and where we're going with that, and I thought it would be prudent to provide an update so that you could hear where we're at today.

“Before I jump into this, I want to pause to thank many of you and your colleagues. This was a really hard fall on campus for our students in terms of a lot of the local and national climate, and I know they felt an incredible amount of support from the faculty in all foras, so I appreciate that. I hear that frequently from them, so I am grateful for your efforts in that front.

“In regards to housing, we have been working on this since very shortly after I arrived here at Cornell in the summer of 2015. Just after my first semester, we launched the housing master plan. You see the timeline of the different steps we've taken on the slide before you.

“Why I thought it would be good to be in front of you today is that after this past summer, when we received board of trustees approval to advance and move forward with the plan, we presented to this group and other campus bodies before, to move that forward. There is a lot of work left to go to now implement the plan, and that's what I'm going to give you an update on.

“One of the next key steps, and I've had a correspondence, at Bruce Lewenstein's very good suggestion with Chris and with Charlie, about standing up a Faculty Advisory Committee next semester, as we begin to look at the design of the residence halls and really start to operationalize this plan. I thought that was a great suggestion and look forward to standing up a group as we start next semester, to make sure as this project takes shape over the coming years, we are thinking of all the different elements.

“What are we doing? Just as a reminder, you have heard this before. We are growing our on-campus residential capacity at a scale of about 2,000 beds, which is significant; about a 30% increase. And as a part of that, because we'll have that many more students living on campus, we'll have to augment additional dining.

“And you'll see, with the site placement, that we'll also have to address some of our outdoor recreation spaces, because some of them will be impacted and we want to make sure we are re-purposing them. I will explain that a little bit more.

“Most importantly, why are we doing this? I would like to put this back up and remind people of why this is important to us. I will also talk about some more operational reasons why this is important, but I'd like to start with the fundamental, philosophical reasons why this is important. It is really critical in why I jumped into this so early; is to stabilize the student residential experience.

“For those of you unfamiliar with the current conditions on campus and that it's our relationship to off-campus, our extreme lack of housing for undergraduate students creates an untenable amount of pressure on them, to the extent where a new first-year student who arrives to campus, within their first month or so, has to already be making decisions about their second year and subsequent years before they have even established the firm footing academically, before they found social groups, are having to make decisions because of our shortage of on-campus housing, yet we've guaranteed housing to first- and second-year and transfer students, up until two falls ago, for the last 20 years; but in all sincerity, have never been able to meet that.

"If all students took us up on that guarantee, we would have fallen short, so we really have to stabilize this. And the vision I have for the future of the residential experience is the first two years will be firmly planted on campus, that essentially all our students will be living on campus. And I'll explain what I mean by on campus. And the second two years will largely be off-campus, not exclusively.

"We now house about 1,200 students, juniors and seniors on campus. We want to continue that at at least a steady state, maybe grow that a little bit, too, especially in the west campus house system, where having a few more active citizens could be a really good thing for that program; but in this on-campus first two years, the first year, of course, we want to remain very focused with the first-year experience that's been in place and been very successful.

"In the second year, we see expanding number of options. West campus is certainly a very compelling option right now. That will certainly continue. And in talking to the house professors, I think we'll have even a better chance of realizing its mission of being a true living/learning component, as opposed to being simply the newest and best residences on campus. So I think some of the house professors are really excited about that opportunity to bring it back to its founding principles.

"The second-year students will also be able to pursue other living options in this on-campus envelope co-op, cooperative living. Places like the Center for Jewish Life, sororities and fraternities will remain in that; and of course, what we'll be building on north campus and residence halls. With all of those options as second years, we will effectively be able to house all first-year, all second-year and all transfer students in that broad on-campus envelope. So that means no more will our second-year students be going off into Collegetown or other places.

"Now, there will be exceptions to that, certainly. There will be students who have families, there will be nontraditional students, et cetera, where it's more appropriate for them to be in a private residence off-campus, but we really want those first two years to be stabilized on campus.

"How are we planning to do this? Again, you have seen some of these, but I want to go through, when we started thinking about site selection, and that's what we have been spending a lot of our time on now, is really refining our plan here, you see the criterion which we were considering as we thought about

where we could place these and how we could do so effectively, expeditiously, from a timing perspective, et cetera.

“That really focused our attention very quickly up into north campus as a space where we have area to develop, land to develop, that meets these criteria, that's not in a historic district, that's not topographically challenged, like many of the west campus areas, some of those types of things. That immediately drew us to these two sites you see highlighted up on north campus.

“Then we actually engaged the Meinig Scholars Program to do a research project for us last year, and they came up with this concept for north campus, the future of north campus, which has the first -- preserves the first-year experience, but then creates a sophomore village up there as well, to accommodate those sophomores that would have previously moved off campus because we didn't have that occupancy and retain them on campus.

“One of the most telling comments we heard repeatedly through our surveys and focus groups through this process is our students, from a housing perspective, said they always felt like they had one foot out the door, no continuity whatsoever in their housing experience. So for those students who do enjoy the north campus experience, and there are a lot of them, they will be able to remain in the north campus with this village.

“These here, existing properties, those are the townhouses, if you are familiar with those townhouses, just across Jessup Road. Right now, those townhouses are fully occupied by first-year students because of our capacity crunch. I am quite certain that the vision of north campus and first-year residential experience was not to put first-year students in a townhouse living environment.

“The whole idea is to put them in communal environments; so we will transition those townhouses back into sophomore upper-level housing, and then also build new on this lot over here. That is the CC parking lot, which is, if you are up there on north campus very often, you know that most days it's probably about half full.

“It does get busier in the summertime, conference and Surge, and events like that -- and looking at Chris, because I know he lives up there and probably sees that frequently, but that is a site, as well as the fields here adjacent to Appel Commons. This is Appel Commons right here, one of the dining halls, and then these fields.

“The concept here will be to build on this lot here and to build on this lot here. These, the buildings on this site, will be primarily sophomore residences. And the buildings on these sites will be predominantly first-year residences.

“It is important to note that distinction, because there are some differences in terms of the way we'll design these buildings, based on fostering community within them, but I'm trying to be really mindful, too, and think many, many years ahead, probably well past my tenure, to make sure that if circumstances change at Cornell, that we create physical structures that aren't so distinct that they could never be re-purposed for -- students could be shuffled around in some other way maybe the future university decides is appropriate.

“Again, we are shading in here on these sites to give you a little better perspective of some of the other factors that we have to consider here, one of which is dining. I mentioned that we will do new dining. Currently, we have a dining hall here, Appel Commons and a dining hall here, RPCC. We will be building a new dining hall in this lot and effectively we'll be closing down the dining hall in RPCC.

“Everyone that used to go to this site to eat will now move to that dining hall to eat. It will be large enough to accommodate everyone who previously would have eaten in RPCC, plus the new growth that will take place in there. We are also helping -- still way too early in the process to know if we'll accomplish this, but hoping to create a nice venue space as well on north campus. There is an extreme shortage of programming space for student organizations and things like this, so we are hoping it can have some multipurpose function, but likely we'll also have relief in RPCC for that same purpose, since we'll be vacating the dining out of RPCC.

“At the same time, we have the issue with recreation fields. These fields right now, where we're going to do some development, they are used for club sports, which are essentially student organizations, so they are not the organized through Athletics or something like that.

“These are student organizations, students-run, et cetera, that use those fields. If any of you have had students or advisors of club sports, you know those fields are not in very good shape at all. In fact, we get a lot of complaints from students because they haven't been maintained over the years. They are actually not very safe for playing and running on, unless you want a sprained ankle or something along those lines.

“So while we will develop them, part of what we're planning in that strategy and development is to whatever fields we're able to preserve, and we certainly want to preserve some, we actually want to enhance that playing surface, perhaps with turf, perhaps with some lighting, a way to actually get more mileage out of the fields, as opposed to what we're able to glean now, with no lighting and with the natural soil, which means for a large portion of the year, it's very unusable, so we are exploring that too. And also, these are the Jessup Fields adjacent to Cayuga Heights that we'll look at, too, in terms of augmentation.

“The other thing that certainly will be heavily studied as a part of this will be transportation and circulation, and this is a slide borrowed from my colleagues in Infrastructure, Properties and Planning, really going to have to look at some of these key pressure points from a traffic mitigation perspective.

“And they are going to go through a comprehensive study, as we begin to develop these sites to look at how we mitigate flow and make sure the circulation and the density -- the increased density on campus, how we can accommodate that from a transit perspective on campus. You all have experienced that in some way, shape or form, as have I, so we need to be very mindful of that.

“Our goal here, of course, is to develop, but really, at the end of this, a cohesive north campus. Of course, it's come up in different generations in different iterations, but we are trying to create a real thread there, make sure we are honoring some of the historic structures that exist, places like Risley, Dickson, Balch, but also recognizing these will be new buildings.

“We don't want to have mass superstructures, though they are going to be fairly large and dense. We are trying to be mindful of height limits, trying to be mindful to have really active ground floor planes, where these are walkups, and the ground floor, you have programming space activates out to green space. I don't think we do that well on that front up on north campus now. The green space, to me, feels quite often like the pass-through, as opposed to a place where students are really engaging from exterior to interior, so we really want to focus on that and certainly make sure we are incorporating sustainable design strategies.

“I mentioned some of this already, as we were going through this; we will be taking a lot of parking on CC, so we'll have to be strategic and dispersing into smaller lots, thinking about whether or not we need to expand the A Lot that sits

back behind that structure; and again, doing this real circulation traffic study, as we go along this path.

“And we really want to make sure we are trying to minimize, as you see, the impact on our neighboring communities. Cayuga Heights is adjacent to this district, although obviously, with a buffer, as is Forest Home, I believe is the other one, so we need to be very mindful of that as well.

“A couple other development guidelines that we are aware of, because of municipal restrictions are a 55-foot height limit, which tends to be in the four or five stories, as we've talked about; we want to be really mindful of excessive truck traffic. Of course, we already have dining truck traffic up there already, but we want to be thoughtful as that develops on Site 1.

“On Site 2, by the fields, we have a couple other sensitivities we have to be thoughtful about as we are developing that with Fuertes Observatory, how we manage the outdoor recreation. And also, there are some topographical challenge with the fields. They are quite elevated against the space below, so there will be some storm water things to consider there and really work through.

“At the end of this, which, from a timing perspective, we anticipate the first phase being Site 1 on Lot CC. We are estimating and hopeful for an opening in fall 2021 at the latest -- I'm sorry. Go ahead. You want to add something?

“But once both phases are done and all this is done, which is likely to be more in the 2023, 2024 framework, we'll get a better sense of that as we develop timelines and really understand how long this is going to take. We'll be able to start addressing our deferred maintenance, because we'll have a capacity now also to close down some of our historic buildings for a year, renovate them fully; for example, Balch, which needs it desperately, displace those students into new housing, get them back into the old housing.

“We will be able to really address this capacity issue that our current students are experiencing, in this pressure and crunch we have placed on them. And finally, we'll be able to accommodate any future enrollment growth as well.

“That is really what got us to the number of 2,000, to make sure we could accomplish all the things you see on this screen, identified as outcomes. I know you have seen this screen before, but at the end of this, we'll be able to

accomplish all those things, while maintaining that philosophy of those first two-year residential experience.

“Mike, did you want to.”

[Provost Michael Kotlikoff](#): “That was terrific. The one other point I wanted to make was when I came to the faculty senate, I believe last year in the spring, we talked about ways of financing this project. And this project started out as something that was estimated in the upper \$300 million price range.

“We went through a process where we considered both having external sources fund this or funding it ourselves. The key issue for me was not to have this project displace academic investment, so the key thing was doing this in a way that it didn't further constrain the budget, some of which issues you have heard about from Reyna.

“Through the process, we got national developers to bid this. They bid the price down significantly. The total price is now around \$217 million. We think we gained about \$100 million in this process of competitive bidding; but also, we got the trustees to understand and approve the fact that we could do this with our debt capacity. And that came from the fact that these external components that would use their own equity to build this would charge us so much over a 40- or 50-year life span, that it was a terrible deal for the university.

“Having gone through that and looking carefully at the financial models, we decided to do it on debt service. We got the trustees to expand our debt capacity to be able to do it, and these new residences themselves will generate the revenue to pay back the interest and principal of this debt. And it also forced us to do a ten-year look at what our other needs for debt were for the university, so I think the process worked very well.

“In the end, the main point I wanted to make was this is not coming at the expense of academic investment or crowding out the academic program. This is something that we needed to do for students and the student experience, and we are doing it in a way that pays back itself.”

[Vice President Lombardi](#): “One additional point on that. The other element that you might imagine was important to me was the affordability of this. I will be paying for this based on the room revenues that students pay to live in there, so we have a very aggressive budget, because I wasn't going to accept a significant

increase in room rates, so we are planning no increase over what students have to pay already to live in any other residence on campus for them to be able to live in these new buildings.

"That is driving us to have a very aggressive budget, but I wanted to make sure we weren't just passing those costs through some exorbitant room rate to students either. I think the outcome economically is looking very positive in that regard.

"That is the end of our slides, but I don't know if we have any time for questions."

[Speaker Walcott](#): "I am afraid we don't. Are there any questions? Yes, sir."

[Senator Richard Bensel](#), Government: "Two questions. One is really simple. Looked like the ratio was 500 sophomore beds to 1,500 undergraduates?"

[Vice President Lombardi](#): "It is about 800 to 1,200."

[Senator Bensel](#): "The second question is more broad. In the last presentation last year, we talked about Collegetown, west campus and fraternities. What are the implications for the ratio of housing -- in those alternatives, what is the impact of this plan upon those?"

[Vice President Lombardi](#): "I appreciate you asking that question very much. I will be really candid to say my hope is that the growth of these beds on campus will significantly soften the Collegetown market and help relieve some of the pressure that's on it now with the exorbitant rents and the sub-standard conditions, because quite frankly, there will be roughly 1,000 fewer students living in Collegetown once this is done than are today, and so I would think that would have a market effect on the Collegetown property and incentivize the landlords to take better care or soften the economic conditions.

"I mentioned the fraternities and sororities would continue to be a part of considered sophomore residency, because if we took them out of the factor, this wouldn't accommodate all our sophomores; but again, I think it will add a level of pressure, frankly, to them, in terms of the quality of experience that's being provided within those types of living environments as well.

"I am keenly aware, from talking to a lot of students, that they will consider in many cases joining a Greek organization because they have to find suitable housing for their second year. They won't have that pressure anymore. They won't have to worry about that as a motivator. That doesn't mean they might not still choose to join, and that's okay, but it wouldn't be motivated by simply trying to find a place to live, as is sometimes the case now."

[Senator Louge](#): "I am delighted to hear there's going to be a study of the pressure point in front of Risley, where there's absolutely no crosswalk. We lost a student, unfortunately, who died in the 1990s being hit by a bus at that very intersection, and I'm always surprised when I go there at night, that we have these ghosts crossing the street. Would there be a move by the administration to actually make that assessment ahead of time and as soon as possible, so we avoid having another casualty there?"

[Vice President Lombardi](#): "I actually wasn't aware of that casualty, but I appreciate you raising that. I don't know the timeline of that study. I know it will be done certainly before we get into any development of these properties. I think it's going to launch expeditiously, but I don't know when it will be resolved and when we'll be at that point, but I think we can certainly raise that."

[Speaker Walcott](#): "One more question."

[Senator Dan Brown](#), Animal Science: "Is the plan to require students to live on campus? Or can they choose to live where they want?"

[Vice President Lombardi](#): "No. The plan, once we have that capacity, which is likely to be in the 2023, 2024 range, at that point, to have all first- and second-year students live in that broad on-campus envelope as a requirement, with exceptions, of course, like I mentioned, nontraditional students, students with families, other accommodations that might be necessary."

"Thank you all very much. Appreciate your time."

[Speaker Walcott](#): "We now have a report on sustainability and the climate action plan, a progress report, Rick Burgess and a variety of other folk."

5. SUSTAINABILITY AND CLIMATE ACTION PLAN: A PROGRESS REPORT – [RICK BURGESS](#), IPP VICE PRESIDENT AND CO-CHAIR OF SLCAG; [MIKE HOFFMAN](#), PROFESSOR OF ENTOMOLOGY,

**DIRECTOR OF CICSS AND CO-CHAIR OF PSCC; [BRIAN CHABOT](#),
PROFESSOR EMERITUS OF ECOLOGY AND EVOLUTIONARY
BIOLOGY, PSCC EXECUTIVE COMMITTEE -- [SLIDES](#)**

[Sustainable Campus](#)

[Climate Action Plan](#)

[Sustainability Plan](#)

[Cornell Institute for Climate Smart Solutions](#) (CICSS)

[Presidents Sustainable Campus Committee](#) (PSCC)

[Senior Leaders Climate Action Group](#) (SLCAG)

[Infrastructure, Properties, and Planning](#) (IPP)

[Bert Bland](#): “[Rick Burgess](#) is the vice president for the Structure, Properties and Planning, was not able to attend. I am [Bert Bland](#). I work for Rick. He is my boss. I am the associate vice president for Energy and Sustainability, so I'll be presenting with [Professor Hoffman](#) and [Professor Chabot](#) today.

“[Mike Hoffman](#) and I are co-chairs to the president's Sustainable Campus Committee, and [Brian](#) is on that committee also, so I'm just going to introduce. And Mike, you can come on up. So we will be talking today about progress towards -- through our climate action plan for carbon-neutral campus by 2035 and other sustainable areas focus, including food and water and land use. With that, Mike's got a few slides to present, and I'll be back.”

[Professor Michael Hoffman](#): “We appreciate the opportunity to update you on a lot of the activities related to sustainability, but first, I think it was important to recognize all the work that the faculty are doing in research, teaching and outreach related to sustainability. We have great capacity in this area at Cornell, and we should be proud of that.

“First, I'd like to just offer a couple highlights, and we now have three solar farms, 35,000 panels brought online recently. A total of five that currently provides about 7% of our electricity. Another 2%, roughly, is from the hydroelectric plant. If you are not aware, Cornell is one -- probably the only campus in the U.S. that actually has a hydroelectric plant. At one time, that produced all the electricity for Ithaca and Cornell. Things have changed.

“Also launched, a Behavioral Change Working Group. This was one of the options from the senior leadership Climate Action Group that involves helping all of us be climate change literate; staff, faculty and students. It also involves

how do we change our behaviors to reduce our carbon footprint, and there's a leadership development component to this.

“My personal opinion, no student should graduate from Cornell not being climate change literate. Just to make it clear, this committee does not have any insight or control of the curriculum. We are focused primarily on extracurricular activities. Curricular activities are being formulated. It is in very initial stages, by a group of associate deans. I met with [Mike Thompson](#) from Engineering, to be brought up to speed on that yesterday.

“Couple other news-worthy things: 88% of our incoming students surveyed on sustainability literacy and engagement said a top reason that's why they came to Cornell, because of our strengths in sustainability. Ninety-five percent of students believe Cornell can play a role in addressing climate change.

“An older survey, done by Katherine McComas in Communications, showed that 85% of all of us believe it is our responsibility to reduce our energy use. Our food budget, 45% of that budget now goes to sustainable food purchases on campus; includes local, sustainable produced and organic food across our facilities. Dining Services is working hard to roll out new projects, including reusable to-go containers.

“Our composting rates doubled in the last couple of years. And if you have seen it, our campus launched Anabel's Grocery this year, a food outlet run by volunteers to provide our students access to help address food insecurity and provide healthy, affordable food on campus, all run by volunteers.

“Big red bikes has been relaunched. 50 bikes available to share on campus. We now have 20 green buildings that's LEED-certified. Forth of those are platinum, and seven more are under certification. There is a lot more going on on campus, and we provided a report that covers much of that.

“A few more highlights, updates. We launched a number of new sustainable tools as a campus this year. The first is a comprehensive digital map of sustainability resources on campus. I took a look at it, and there's a lot of dots on the map. Lots of interesting things; green roofs, green buildings, water bottle filling stations, research centers and much more.

“The farmer student green guide was updated to the Cornell guide for sustainable living with a greater focus on health and well-being, and social

justice and climate action for undergrad students. We continue to roll out a series of tools under the quadruple bottom line sustainability framework, helping staff and faculty across the campus examine and prioritize decision-making and actions we can all take.

“Finally, faculty have a critical role in playing and advancing one of the most successful targeted sustainability initiatives on campus, and that's the green lab. Our labs use lots of energy. An open fume hood can cost between \$3,000 and \$4,000 a year, as it pulls air-conditioned air out of the room in the summer and warm air out in the winter. Close the sash, save cash.

“Just wanted to provide a few updates, and I think it's back to Bert.”

[Mr. Bland](#): “The Senior Leader Climate Action Group was formed to focus on the campus sustainable carbon commitment, signed by President Skorton in 2007, and then updated to a commitment to be carbon-neutral by 2035. So several members of that. [Bob Howarth](#) is on Senior Leader Climate Action. [Mike Kotlikoff](#) was on that also.

“Nine priorities were created, and I will go through them quickly. In addition to that, [Provost Kotlikoff](#) asked the SLCAG to create a report and delineate options and costs for moving the time frame for a carbon-neutral campus up to 2035, which we did in 2016, and that was published in the fall of 2016.

“Mike, would you go over the first line here about your idea of the work on the campus engagement; then I can take the rest?”

“Okay, so we have nine priorities. Mike has covered the first one. The second one, and there's a -- [Paul Streeter](#), the vice provost for budget is the lead there. Energy-efficient buildings is pretty well launched. As a way of our successes to date, since the year 2000, the campus has grown in square footage, in surface area buildings by 22%, and we have held the energy demand of the campus completely flat during that time of 20% growth.

“And that's because of the buildings -- for the most part, the buildings we are building are high-performing. The renovations we are doing are high-performing. We go in and do special energy conservation initiatives to do heat recovery or installation or better controls, and we do continuous optimization of the building controls with a team of control technicians.

"The next one is mission-linked carbon offsets, and [Bob Howarth](#), who's here, a senator, will talk about one of the major components of that right after this, I think. I am in charge of the greenhouse gas inventory, even though there are established methodologies and protocols; there are several. And it's a developing field, as I will talk a little about later. And we do file a greenhouse gas inventory every year now.

"Electricity, we have five solar farms online, equal to 7% of the campus power. We hope after about a year of work, the east side of campus, to actually build 110 acres or 18 more megawatts to bring the total of renewable energy for campus up to about 20%. That is after we get through our last approval.

"This is actually all done with not our capital. We have a developer who, when Dryden is built, will have invested \$78 million. We are the credit-worthy power off-taker, so we promised to buy the electricity, and it really doesn't cost us any more than -- the green electricity we buy does not cost us any more than the brown power, so we'll be at 20% by 2035. To be a carbon-neutral campus, we have to be at 100%. We have a long way to go, so we are looking into further wind projects, solar projects and maybe some hydro/water projects.

"Earth-source heat has been announced. It was just in "The Chronicle" this past week. There is a leadership team created, called Streeter. [Dean Lance Collins](#), Engineering School, and [Rick Burgess](#), Vice President of IPP, so we're working on a preparation phase to be drill-rig ready, so in the next couple years, we hope to be fully funded to have the designs and permits and local approvals to do a first test well for deeper source heat, which is not geothermal that you normally hear about. This is going down 3 to 5 kilometers, where it's actually hot enough to heat the campus without the use of electric-driven heat pumps.

"Finally, there's robust labs going, with a living lab collaboration between our director of transportation, Bridgette Brady, and Professor Gao in Engineering. A lot of activity looking into electric vehicle transmission; and certainly, the big challenge there is to have less single-occupied vehicles coming into campus and more mass transit, other modes.

"This is the inventory, the conventional inventory. I will talk about the unconventional part of this, but our inventory puts us somewhere up in the top of the nation for reductions since the president's climate committee was committed to. So we reduced by 33%. There are several portions of our mission's inventory. One is the on-site combustion to make energy. We, in 2009,

went from coal, where we separately procured electricity from the grid and coal for our heat, we went to combined heat and power natural gas, so the inventory here is based on the direct CO2 emissions from the combustion of the natural gas. It is highly efficient, much more so than the separate combustion. It is about 50% more efficient than separate power and heat, combined heat and power.

“The other important components of that, we inventory the travel, air travel for work and commuting, which is about 25% of the inventory. And then we have a forced sequestration by managed lands and other reductions that we claim. Then, the offsets by solar PV is a small amount right now.

“This is the methane leakage cloud behind our inventory. Not part of the formal inventory procedure is to look at upstream, what's called Scope 3. We know that now, as opposed to when we planned the combined heat and power plant, it was mostly conventional gas. Now our gas comes from basically the high-volume hydro fracking fields of Pennsylvania, and it's generally recognized that there's methane leakage occurring there.

“There are various estimates. Bob was appointed by [Provost Kotlikoff](#) to our committee, so we want Bob's number, and that is because methane is such a more powerful greenhouse gas than CO2. If we were to include that in our inventory, it would basically quadruple the amount of global warming from our current footprint.

“This is a work in progress, as far as how we are going to present this information, and we actually accounted for this in our 2016 options report for carbon-neutral campus, and that helped drive the decision towards we need to stop burning gas, regardless of how much the leakage is and how much it changed. So by 2035, the idea would be to shut down the central energy plant, no longer burn natural gas, and procure electric from wind, water and solar off-campus; and hopefully earth-source heat will pan out as production for the heat.

“I am going to say we have been rated by Princeton Review, number one Ivy for sustainability. Number seven of all colleges and universities, and we are a gold star for the Association for Sustainability.

“With that, I'm going to ask [Professor Chabot](#) to come up and talk about the planning for the future goals of sustainability.”

[Professor Brian Chabot](#), Ecology & Evolutionary Biology: “We have had a sustainability plan for quite a few years at this point, but there is a need for constant upgrading and revision and reconsideration of the goals of the plan, and we would encourage and even need your help to undertake this.

“So we have a fairly large group of individuals, of faculty, staff and students and people from the surrounding community involved in working on revised goals in 18 different areas, clustered into five larger areas of consideration. We are working diligently. We had a couple of open meetings. This began last summer. We will continue through the spring semester, so we have opportunities for you to find out what is going on and to play a role in commenting and critiquing the goals.

“We need to point out that this is not just for the committees involved in this. At the lead committee is the president's sustainability campus committee and a subcommittee appointed to move the process forward, so the plan is not just for these committees, but it is for the entirety of campus, everyone in this room. And also, we are engaged with people in the local community.

“As you'll see, in terms of our aspirations, we have six overriding aspirations for the entire plan, which does include climate literacy leadership and achieving our 2030 goal, and also being a leader for the Finger Lakes region in terms of sustainability. This is a fairly large undertaking, and we have an opportunity for you to be part of this. As Charlie is moving toward the podium, it means our time is up.

“We open this up to any questions or comments you might have.”

[Senator Andre Kessler](#), Ecology & Evolutionary Biology: “Is there an emergency plan, if the earth-source heating doesn't work out? Because it's still kind of up in the air, but what do we do then? Because a lot of that -- a lot depends on that, right?”

[Professor Chabot](#): “That is an area that is an exciting, potentially new development. There are other ways of achieving climate neutrality, using more conventional approaches, but they'd be probably more difficult to achieve in that time frame; but no, we don't have a clear backup option. You are suggesting we should.”

[Speaker Walcott](#): “[Bob Howarth](#) is going to tell us about traffic.”

6. **A PROPOSAL FOR A CARBON FEE FOR CORNELL BUSINESS TRAVEL - [PROFESSOR BOB HOWARTH](#), ECOLOGY AND EVOLUTIONARY BIOLOGY – [SLIDES](#)**

[Professor Robert Howarth](#), Ecology and Evolutionary Biology: “I want to talk with you about the aspect of the carbon neutrality plan, which is our carbon offsets for business travel, and Bert showed you this, of what the SLCAG is up to. I have been asked to take the leadership on what we are calling mission-linked carbon offsets. The biggest of those, to me, is what we do with business-related travel, and I will explain in a minute the scale of business-related travel. It's not an easy thing to offset.

“Basically, this is the carbon dioxide emissions, which Bert Bland just showed you, and the whole greenhouse gas footprint for our campus, if you include methane. That 26% right there is what's involved in transportation and, of that, air traffic for business-related travel, there's a lot of it. Commuting is a lot of it, but also car-driven business traffic. Roughly 26% of the total carbon dioxide emissions are 8%, even if we include all that methane, are things which are really difficult for us to reduce, given the current world.

“If we are going to be carbon-neutral by 2035, as the SLCAG report has asked for, long-term we will have renewable transportation, 50, 100 years out, who knows. Jet travel with aviation fuel, perhaps, that's bio sustainable, electric cars, perhaps even electric airplanes, but not in the short- term; so if we are really going to be carbon-neutral, we need to buy some offsets to compensate for that.

“What are offsets? Basically, for where we can't reduce the emissions, we are making some substitute, making emission reductions elsewhere. And people often think of this, you travel, you give some money and you plant trees and they're -- the proposal we are coming to is something which I think is nicer, more creative, and it is based on what the Finger Lakes Climate Fund of Sustainable Tompkins has done, so I'll tell you a little about them and how it might play out for us, if we are interested.

“Basically, this is a voluntary program. You travel, you pay a fee to them for the amount of carbon that you emit, and they use it to invest in local energy-saving in local homes. People put in high-efficiency heat pumps or better insulation or things like that. So it's a real reduction in carbon offsets, and it happens locally in our community.

"The proposal that I'm bringing to you today, and it really is a proposal for discussion, I really want the community to broadly think about this, but starting with the senate, that for -- when each of us takes a business trip, we estimate what the carbon emissions associated with that are.

"I am suggesting we use very simple metrics, we use average vehicle mileage, we use average emissions for an average airplane flight, regardless of distance, et cetera. We place a dollar value on that, and this is a little tricky, but the SLCAG report actually did so, through the work of Bill Schultze, the report said carbon dioxide emissions hurt the planet in terms of public health and climate at a rate of \$57 per metric ton of carbon dioxide.

"I am suggesting we stay with that. We collect the funds and we use the model similar to what the Finger Lakes climate fund is doing; that is, invest in local individuals who otherwise might not be able to afford to reduce their emissions, improve their homes.

"Now, there are a few considerations with regard to this Finger Lakes climate fund model. One is their fee right now is low, compared to what SLCAG and Cornell endorsed is a more accurate value of the harm. It's less than half of that, so I think we should use the Cornell-endorsed value. They only work within Tompkins County. Of course, a lot of the people who clean our buildings and serve us food and all don't live in Tompkins County, and I'd like to see this extended to all Cornell employees.

"And the current plan is relatively small. If we were to institute a plan of this sort at Cornell and fully collect the funds, which is not likely, of course, but it would be about a 200-fold expansion over what Sustainable Tompkins is currently doing, so that is a big change.

"Just to give you a little sense of what the costs here are, how it would play out, and I'm giving you some examples. For cars, we are suggesting taking an average mileage for a vehicle in the United States, a little over 25 miles per gallon. If there's one person in a car, that works out to a carbon fee of about 2 cents per mile.

"If we do it for airplanes and use average occupancies and average efficiencies, et cetera, it works out to just over a cent per mile; less than driving. And for buses, it's considerably better yet. So those are the natures of the costs we are talking about.

“Just to put this in context, that sort of a fee, if we were to charge it, works out to about a 50 cents per gallon charge. That is the magnitude we are talking about. There are some contentious and critical issues here.

“We gave a presentation -- I didn't, but this was presented to the SLCAG back in September, at a meeting I couldn't get, and there was not a lot of buy-in, which is part of the reason we are stepping back now and seeing what you and the faculty senate think and what the community thinks more broadly, but the most contentious issue is who pays. And of course, you cannot charge federal or state grants fees for that sort of carbon retention, and no one else in the university really wants to pay it.

“The suggestion which I put forward to the SLCAG is that the traveler pay for it. There's no reason the traveler should do that, other than the fact, if we are serious about becoming carbon-neutral and we take climate change seriously, perhaps we, as a community, would be willing to do that. My suggestion is that as you get your travel reimbursement, the proportion of the fee that is going for the carbon cost of your travel be subtracted from that, so it's your money. It is not grant money.

“I will give you an example of what that might look like, and I'm giving you two examples. Say one were to take one overnight trip to New York City, 450 miles round trip. That works out to a carbon fee of about \$9. This might be what your other costs were; \$240 for mileage, it works out to. You are paying for hotel, meals, et cetera. You might be asking for reimbursement of a little under \$600, so if you were to pay this fee, that amount would be minus \$9.12. It is a hit of 1.5%, and you get that reimbursement rather than that. That is the magnitude we are talking about.

“Or if you were to take a business trip to San Francisco for a few nights, the carbon fee for air travel would be about \$60. If you look at the other costs of the trip, you might be asking for reimbursement of a little over \$2,000; and if you reduced it by this fee, you would get \$2,100 instead of \$2,165, so that's the magnitude, coming out of the pocket of employees.

“This would be voluntary. It is potentially tax deductible, depending on how it's structured, and there are a bunch of ways we could do this. One suggestion is we simply do this as an information campaign. When you go to ask for your reimbursement, you are told through your contracting system that the real cost

to the environment of your trip was this amount, and would you like to make some voluntary payment for it. That is certainly one way to go.

“Another is that we take it a step further and say this is the cost to the environment of your trip and would you like to opt in and pay for it. You check a box.”

“Or a third way is to continue to make it voluntary, but to opt out. This is the cost of your trip. You are going to be charged that, unless you check this little box saying no, I object to this. It's too much money, I'm not going to do it. It is still voluntary.

“Couple of other things to consider. Within the SLCAG, there was strong opposition to including students in particular, but also employees in this, so perhaps we should start just by faculty, unless of course the faculty object as well. This is part of the reason I'm here.

“Since time is short, let me just say this would be -- if it worked and people voluntarily participated, it actually is a substantial amount of money, but I think it would be good for the community, and it actually does result in reductions in carbon emissions, which would, in fact, help us reach the 2035 goal.

“So with that, I'll handle questions, if we have two or three minutes left. Five minutes. Charlie's being generous. Thank you.

“Questions or thoughts?”

[Senator Ted Clark](#), Microbiology, Immunology. “Does this include the costs for commuting?”

[Professor Howarth](#): “No. You could make a similar sort of calculation, obviously, and it would be two cents per mile.”

[Senator Clark](#): “It would just be business travel?”

[Professor Howarth](#): “The way I'm thinking it. My original suggestion was to make it as a subtraction from your travel reimbursement, and do it as you will be charged, unless you object and opt out, which I think would get pretty high compliance. And I think for most faculty at least, these are reasonably small

amounts of money that people probably would be comfortable with. That is my sense, but I'm here to find out what others think."

[Senator Ken Birman](#), Computer Science. "I like the goal of this, but I'm concerned about colleagues; not myself, I should say, and not even in Computer Science, who need to travel for their work or involved in external engagements which might be in places like India and Africa.

"And it strikes me that there's a kind of a different impact that this proposal has, in which Cornell turns inward in order to reduce our carbon footprint, but we have less impact on the world, and I would urge that be studied before we would go further with a proposal like this, because of the possibility that we help ourselves, but we do much less for the world."

[Professor Howarth](#): "I think that's an excellent point, and it would not necessarily -- I travel a lot on business. I do think about it, as I travel. I think my business travel is worthwhile, but I also think that compensating for that damage in some way is important, at least it is for me, but I think that's a good point to discuss."

[Senator Nick Admussen](#), Asian Studies. "I just went to Taipei, and we travel an awful lot, and I was wondering if you guys have given any thought to business travel prevention and the use of digital -- because my field is so distributed around the world, it would be much easier for us to do virtual conferences, to just not have to do this kind of travel in the first place; but in some circumstances, we lack or other regions lack the sort of infrastructure to do that. Have you thought through this."

[Professor Howarth](#): "That has not been a big topic of conversation so far. I think it should be. And I will say, I was in Berlin a couple weeks ago for the UN COP 23 meetings on climate, and one of my colleagues there, who works for the Tyndall Center, the U.K. big climate change thing, say there they have created a room, probably about half the size of this, as he's described it, where it's a video conferencing center, but they have three-dimensional cameras.

"And he said you take breaks and you can sit there and you are talking with the person right next to them, while you are drinking coffee. You can't shake their hand, but in any other way, it's the same as being in the room with them, because of course, it's one thing to give a lecture remotely and all, but it's another thing to

go and talk to people, have that informal interaction, which is part of why we travel and we don't want to give that up.

“But I think it's a great suggestion and I would love the community to explore things like being done there and see if that would help, and maybe we should invest in one or more such facilities on the campus.

“We have good video conferencing, but it's traditional. You are talking, two people who are sitting on a TV camera, but this gentlemen said it made all the difference in the world to him, and he's cut his travel by two-thirds, because it feels the same.”

[Speaker Walcott](#): “One more question. Last question.”

[Senator Louge](#): “Does the study include the Weill-Cornell Medical campus in Doha, Qatar?”

[Professor Howarth](#): “No. The carbon inventory is focused totally on the Ithaca campus, and our focus has been on how to make the Ithaca campus carbon-neutral by 2035. The commitment of the university does not cover the other campuses, as far as I know. Thank you for your time.”

[Speaker Walcott](#): “I declare the meeting adjourned.”