

AACC SEED

Transcript of Webinar

**Connecting Sustainability, Student Engagement,
and Workforce Development**

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*Transcript by
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MR. : (In progress.) While you're doing that I'm going to turn things over to our moderator today, Todd Cohen. He is the director of the AACC SEED center.

Todd, take it away.

TODD COHEN: Thanks, Brian.

Welcome everyone to Connecting Sustainability, Student Engagement and Workforce Development. I appreciate you being here. This is part of our webinar series on sustainability in community colleges.

So today we've got a great story to share. It's a case example of a college that has really comprehensively brought sustainability throughout their entire institution and really used it as a sort of a platform for institutional transformation. And we're excited about sharing that story today.

They're going to take you through how they did it. And then along the way we're going to hit on a few key points that I think a lot of community colleges – and those of you that are pushing sustainability at your campuses, so a few points I think really will resonate. One is student engagement, how you engage students in the learning and recruit them to your sustainability education programs, your clean technology programs. Tying the learning to actual careers in your community, that's the second piece. And then building the overall culture, how do you do that, how do you build the culture so that you've got leadership in faculty and staff that are as excited about sustainability as you are?

And so that'll be the story that you hear today.

A quick plug for us – I'm sorry, go back. So there we are at AACC, that's building a nation of learners by advancing America's community colleges. We are the national association for the 1,100 community colleges across the country and the SEED center is a center within AACC that's supporting two-year colleges and educating for and building a green and sustainable economy. So if you haven't heard of us, please get involved (as the agent ?). We've got a lot of things going on.

One of the things that we do is an annual Green Genome Award. And this year, 2014, we were very excited to award five colleges as winners. It's a national awards program, a very prestigious panel. And out of the five we selected one as the overall winner, meaning they have really infused sustainability comprehensively across the entire institution. So the governance structure through the way that they design and deliver education and training programs, the partnerships that they've got in the community, with industry and others and then the way that they connect to their own community around sustainability-type issues.

So we're excited about Greenfield Community College, western Massachusetts, in part because it's a college I don't know in the sustainability world that a lot of folks really know about, and they've got a great story to tell. And I look forward to this conversation and I think you're going to learn a lot.

As I mentioned, the way we'll do this is they're going to give a quick overview of the college and then we'll hit on a few of these key points as they tell their story. So those of you, and I suspect most of you are from community colleges, are dealing with issues like this sort of internal credit-to-noncredit connection; Greenfield's done this in a really great way using sustainability as that bridge. I think that'll be really interesting for folks. The way that they've engaged students through experiential project-based learning, that should also be interesting from the best practices there. And then finally, how they're really engaging partners, industry, offering internships in the clean economy, clean technology-type industries.

And it's really impressive because they're in a rural geographical area, so to really identify and pull this many partners into what they're doing I think is really impressive.

And then we'll end with Q&A.

It's going to be a lot of information for you, but I think it will be really engaging.

And so with that I'm going to turn it over to the Greenfield team.

PETER ROSNICK: Hello, folks. Our slide – there we go. First we'd like to introduce ourselves. I am Peter Rosnick. I'm the director of the SAGE Education Center. SAGE is Sustainable Agriculture and Green Energy at Greenfield Community College.

TERESA JONES: And going clockwise there, I'm Teresa Jones. I'm a member of the science faculty and I also coordinate the Renewable Energy/Energy Efficiency Program.

CHRISTINE COPELAND: Hi, everybody. I'm Christine Copeland. I assist Teresa and I am also the internship coordinator for the college.

ABRAH DRESDALE: Hello, everybody. This is Abrah Dresdale. I'm the program coordinator for our Farm and Food Systems Program, and I'm also faculty for two of the required courses.

MR. ROSNICK: So I am going to introduce you to the college and get us going here a little bit. I'm going to have Gary help me advance the slide here, for some reason it's not working. And I'm going to introduce you to Greenfield Community College.

We are a small, rural, comprehensive college. We're the only institution of higher learning in our county. You see us nestled, tucked in here against the foothills of the Berkshires in western Massachusetts.

GCC has an annual enrollment of just under 3,000 credit and 2,700 not-for-credit students. We have among the highest graduation retention and transfer rates of the 15 Massachusetts community colleges.

GCC is one of the largest feeder schools – it is the largest feeder community college to Smith College. We send students to Mount Holyoke College, many students to UMass Amherst which is just down the road and they have their Stockbridge School of Agriculture there. That's just to name a few of the transfer institutions.

We are predominantly rural here in Franklin and Hampshire Counties of Massachusetts and our regional economy is comprised primarily of small to medium businesses.

Employment opportunities in the energy field in particular include traditional fuels, services, electrical infrastructure and generation, and in farming and agriculture they continue to be a very important part of our regional economy, tourism and cultural identity.

And in fact, in the past several years there has been a really significant increase in the number of businesses in both renewable energy and in sustainable agriculture like photovoltaic installers, and we have lots of new farms and food processing businesses.

So my colleagues will soon speak to you about two programs in particular, our Renewable Energy/Energy Efficiency Program and Farm and Food Systems, and they will describe community connections, student engagement, our growing internship program. But to frame the rest of the webinar, I want to first highlight six ways in which GCC has broken through common barriers, broken down traditional silos and I think innovated in the creation of a campus culture that supports sustainability, education and practices.

So first, there has been a genuine cooperation between the Office of Workforce Development and credit-bearing academic departments. The deans of both of those divisions very early on recognized that cooperating was a clearly a win-win. Students from Workforce Development work side-by-side with students seeking a degree or certificate. And the diversity in the classroom absolutely enriches the experience for all. We think that's a big leap forward in terms of that cooperation.

Second, there has been a really nice cooperation between our regional employment board, you might know them as workforce investment boards, and the college. We partner on grants, we rely on each other's expertise, we work side-by-side in planning meetings, and we work from the premise that we each can better advance our goals when we work collaboratively with the other.

So as GCC, I think lots of people talk about valuing the input from our partners in the community. Our Renewable Energy, Energy Efficiency and Farm and Food Systems Programs have had 90 community partners – 90. It's pretty amazing. We invite these businesses and organizations to community forums. They sit on advisory boards. Their staff help teach our classes.

We reach out individually to them, asking them, how can the college program support their efforts? And here's the thing: We really listen to what they have to say. They mentor our interns, they hire our graduates. And the information loop, it stays open, the communication stays current.

The fourth GCC innovation I'd like to highlight is that we use the entire campus as a sustainability laboratory. When we teach energy systems, the first field trip taken is on this campus to observe PV, solar thermal, pellet, geothermal systems.

When the topic is energy efficiency, students look to our near-zero net energy greenhouse, the energy retrofit of the East Building and the reworking of air handling and energy control systems.

When permaculture or organic gardening is taught, students work hands-on in the expanding campus gardens.

The fifth innovation, SAGE, the Sustainable Agriculture and Green Energy Education Center, at GCC. After the energy and agriculture programs were created, we recognized that both become stronger when coordinated with the other. Lessons in energy efficiency and energy policy must include units on local sustainable agriculture. And farms are logical sites for energy efficiencies and energy generation.

Finally, and I can't emphasize this strongly enough, none of this would be possible if there was not a campus-wide culture of sustainability in place. So how is such a culture of sustainability created? At GCC it has happened bottom-up, top-down and middle-out.

President Pura has been inspirational and has fostered many innovations. But just as importantly, he and the whole administration have been responsive to the initiatives started by faculty or the Green Campus Committee or student leaders. At GCC, sustainability has many definitions, but underlying each is the desire to achieve and maintain the environmental, economic and social well-being of our world, both today and for future generations. Sustainability influences the way our courses are taught, the way our buildings and landscapes grow and change and the way we live and work in them.

So now Teresa Jones will take it over to tell you about the Renewable Energy/Energy Efficiency Program.

MS. JONES: Hi, Teresa again. And we call that long word just RE/EE for short to save our breath.

So the RE/EE program has been built collaboratively over the past eight years really as a bridge between academic and vocational learning and between theory and practice. So our commitment has been to provide fundamental knowledge in science and math combined with hands-on learning in technical areas across the spectrum, energy efficiency and renewable energy technologies which is a pretty broad and changing spectrum.

So as you can see here, important attributes of our program are the blended course offerings that Peter mentioned, credit or credit-free, that students can sit for certain industry certifications that are available. Many students, they're ready for employment when they complete and several students have started their own businesses, and some choose to transfer to four-year schools or even beyond.

The skill-building piece is crucial. It requires students have access to many different learning venues, so including labs, of course, field trips, job shadows and internships which you will hear more about later.

So structurally – (inaudible) – restructure into something that allows a participant to meet, you know, many different kinds of goals and those goals might even change as they come through their program, so they have options and they can earn credentials along the way.

So course sequences can make a student eligible to sit for industry exams in their chosen field. Nine or so courses roll together into the certificate and the certificate can roll right into the two-year associate's degree with that focus in renewable energy.

Specific workforce credentials are combined with existing industry credentials. I put IREC up there; I'll mention it again later. If you don't know that organization it really is worth your while. Two of our pathways have been accredited by them.

And there's a lot of pathways into our program and diverse options within it and diverse participants. So within the program, students can focus on areas like solar, which is, of course, very popular and often is what comes to mind first when people think of renewable energy, but policy is an incredibly important and emerging field. And here's one of our students with our governor, Deval Patrick.

Green a building, all aspects of it, design, construction, retrofit, is a very active sector in our region, attracts many students as does sustainable landscape design, land use and, increasingly, planning, land-use planning.

Energy auditing, the backbone of energy efficiency, and then building retrofit, great interest and employment opportunities for our participants.

And just to reiterate that the certificate itself, which was co-created with employers and has workforce credential – and you can focus in any of those areas, the certificate is still the same certificate – rolls right into the associate's degree.

So I'm going to turn over to Abrah Dresdale who will talk about the program in Farm and Food Systems.

MS. DRESDALE: Great, thank you, Teresa.

Again, this is Abrah Dresdale. I coordinate the program and also teach a couple of the core classes. And this program is relatively new. We've been offering the degree for three years now, which was preceded by a pilot-year offering.

And just an overview to our approach, we're really preparing our students to think critically about our food system from a whole-system perspective and not just myopically focusing on one issue like sustainable farming or food policy. And all the pieces are important, but in order to leverage change

and create the resilient food economy we want, we have students thinking critically about the interconnections between all these pieces as well as the whole.

Permaculture, which is also known as regenerative design, a practice of going out into nature and observing the patterns and processes found in ecosystems and then mimicking those patterns and the beneficial relationship to the design of, say, backyards or homesteads or urban designs is another trademark of our Farm and Food Systems Program. And so students have real clients in the community and they help contribute to self-sufficiency while restoring ecosystem health.

Community engagement is extremely important to the program. So in the required courses, students undertake service-learning projects. We have a comprehensive internship program where students gain college credit while having experience out in the field in developing their professional network. And we also have eight or nine hands-on agriculture classes that go beyond the walls of the classroom and students apply their skills and really contribute to the world around them.

And then there are four disciplines that the Farm and Food Systems Program rests on and is informed by. We have classes in environmental studies which is in our social science department, we have classes in the natural sciences, classes in hands-on agricultural skills and classes in our business department.

And just wanted to highlight a couple, we've had nine graduates so far and a couple of them and their success stories with employment.

We've had one student who actually is still in the program who has completed two internships and has worked very closely with establishing an organic garden at our local house of corrections through a GCC organic gardening class we offered inside the jail. And he has now been hired to offer educational programming using the garden as an outdoor classroom for the men in transition as they come out of the jail.

A second student who recently graduated is now an employee of Real Pickles which is a Greenfield owned and run artisan fermentation cooperative, and she's learning much about the supply chain in our regional food system.

And lastly, Jon Shina is a member-owner and staff at Greenfield's Market, a natural foods co-op. And many of the students learn about cooperatives through one of our classes and then go out and use that training they get at GCC to secure these jobs.

And now I will pass this back to Teresa.

MS. JONES: Thank you. So I'm going to talk about engaging partners and pathways to success, which are really one in the same in our experience. And "engaging partners" is almost a buzz word these days. I think we want to delve into what it actually has meant in our day to day and what it's enabled us to build here. So you'll hear different angles on engagement from everybody on the team here and you'll

also, if I have time at the end, hear more about this company, Northeast Solar, as their company really encompasses all aspects of how partner engagement, student engagement, curriculum relevancy and job opportunities all come together.

So I will focus on four key things. I know each of these could be an entire webinar, but I won't indulge myself in that. They're critical to engaging partners to building a successful program. So knowing your region's green job opportunities, know what skills and knowledge people need to take advantage of those opportunities, integrating theory and hands-on applied learning and helping build demand for green products and services, which isn't as elusive as it might sound.

So IREC, again, and – (inaudible) – I saw a – (inaudible) – person logged on, were really critical in getting us started. And as I was reflecting on this, I was reminded that starting small was very helpful for us, figuring out our model and then we could really ramp up quickly.

And that small start was at a conference sponsored by IREC, Interstate Rural Energy Council. That conference runs every year or two and I highly recommend it.

And back in 2006, they put on our radar screen that some good green jobs were coming, that the PV industry was going to explode, that's the solar electric industry, and by 2015 there weren't going to be enough professionals to install the systems and it would slow down the growth of solar.

So that seemed kind of silly to us since we could do something about it. So we came back to GCC and decided to do something about it.

We were very, very fortunate to have access to great talent in this region, that's Richard Gottlieb, we call him the godfather of solar, and he had been in the profession for decades and developed and taught two technical courses on PV linked to the industry gold standard of NABCEP, which I had on the last slide.

So we adopted that blended model. Credit and credit-free students are all sitting there, you can't tell who's who, they're having the same experience and adding to each other's. And that was a very successful model. We saw the power of bringing together the kind of two sides of the house as we call it and the power of combining academic fundamentals with technical skill-building under the facilitation of people with job-based experience.

We also discovered that teaching technical skills requires technical equipment and sites to use it were not a technical college, so that was a bit of a challenge. We had some small capacity on campus, like that (pole mount ?). This is, you know, back in 2007. But we knew we needed to get a lot more creative about finding hands-on opportunities.

We also realized we could do a lot more if we had a broader partnership. We wanted to expand to serve more students and to serve this much broader green sector. And really, as Peter said, our goal in

our heart of hearts was to grow our local green economy, grow opportunities for people who live here, grow career possibilities and then help them be able to step into those careers.

So we wanted to know more about jobs. So who do we go to? Our regional employment board, the Franklin Hampshire Career Center – in your state you may know it as the Workforce Investment Board – those are the job people that can help you network with businesses and identify funding opportunities.

Of course, businesses can tell you things that only the private sector can, like who are they going to hire? What skills do those potential employees need? And what value could they bring to expand the business? What credential would be valuable to the employer? And how can we help grow activities in the green sector?

High school collaborations are crucial. Lots of nonprofits in this area we partnered with. And then those movers and shakers in the community that if they want to jump onboard, fantastic.

Partnerships are very helpful in partners who will come, particularly once or twice if you feed them. But over the long term, there needs to be a working incentive for them to continue. So one major benefit of a diverse partnership is you can go after certain resources. And particularly that first big chunk of a grant we were able to get was crucial to ramp up our program quickly and also to subsidize a couple hundred people coming through courses.

So that is great for enrollment and it's great for enhancing capacity in your community.

So the core group involved in that first grant, 40-something partners, have continued to be part of our advising group, have continued to be part of grant possibilities moving forward.

So we ask a lot of our partners and this is some of the things they help us do, forecast jobs, guide curriculum. This industry is always changing, we want to stay relevant.

Our partners and collaborators help develop and teach our classes. That professional, Peter Talmage, came from industry and then we stole him as a full-time renewable energy professor for several years.

Our partners host site visits. This is an energy efficient pioneer in greenhouse growing.

We help partners. We've built technical space over at our technical high school, and then our students and their students can use it. So here's a mock roof for installing solar. There's a building where you can learn and conduct an entire energy audit. We don't have that kind of space and facility here; our technical high school does. We leverage resources to do that with them.

Our partners mentor and hire interns. And of these three, two on the left are now full-time employees and the one on the right maybe soon.

So it's what our partners do for us. So how does the engagement process go both ways? GCC contributes a great deal. We developed 20 technical courses with the help of that big grant, in response to what our partners said they wanted their employees or prospective employees to know and be able to do. Because of the grant, they could send their people to those courses for free. And even though that grant is over, our program is workforce eligible, so that means all the federal funds that support training and retraining can support participants to come and participate in our program.

And any business will tell you their success is all about their people. And surprisingly, it's hard to find good people. So when they get to have an intern coming from our program and try that person out and see the value both ways, it's a tremendous contribution to what they're able to do.

The college also has brought businesses together who maybe weren't connected before and then businesses have gone on to make their own networks. This green professional organization has hundreds of people in it, some of whom meet monthly and they're making all kinds of things happen that we couldn't do directly, but we helped facilitate.

The college sponsors community events. There's so many activities going on related to sustainability and we can be the convener for those activities that help build a resilient economy.

And finally, our activities really help raise awareness across the community. It's surprising, when you get a buzz about something, suddenly people are interested, the demand for those activities goes up, now they're finding ways to pay for that energy retrofit in their home or their solar systems. So we're contributing to the growth of that sector in our local economy, even as we're educating and training people to work in that sector. So it really can be self-amplifying.

And I just want to close with Northeast Solar, kind of our poster child of what partnership means across the board. So this company when we first started eight years ago had three people, husband-and-wife team, one employee doing solar hot water, wanted to grow. They employed our first graduate and then they employed a graduate just a little bit later who had a financial background, committed to growing that company and making it the preeminent PV installer in the region. So now it has 14 employees, 12 of whom came through GCC. It's contributed over a million-and-a-half dollars back to the community. They've come up with creative financing strategies for towns, for businesses, for homeowners to help grow the solar possibilities for all those entities.

And they keep taking interns and then hiring them. So it's no wonder they come to mind when I think about community engagement and pathways to success for our students, for our businesses, our organizations and for the college. So for me it's a real living example of how the whole is much greater than the sum of its parts.

So I'm going to hand back off to Abrah who will focus on the Farm and Food Program, how it engages students.

MS. DRESDALE: Thanks, Teresa.

So we're just going to look at a few angles that we employ here at the college for engaging our students. And the first one is developing professional networks while they're still in school.

So I mentioned earlier that students have service-learning projects are a few of their required courses. And so here students are meeting with the design professionals in their area and getting feedback.

We also take field trips to places like our local community develop corporation which also incubates food entrepreneurs, and the students get to connect with the CDC and understand the workshops and services that they offer after graduation.

Co-curricular offerings where we actually get vans and take students to other four-year schools to collaborate on agricultural projects on their campus so they're meeting faculty, potential transfer institutions and peers, like they are here at Wellesley College.

We also have the abundance and gift of so many wonderful demonstration sites here in western Massachusetts for local agriculture, sustainable food systems and permaculture, so there's demonstration sites like here, this Holyoke edible forest garden where students actually get to meet the practitioners who are frontiers in these fields.

And then we go to regular residents' backyards and homesteads where students gain employment working for those residents doing garden and farm work, management, while they're in school and after graduating.

And lastly, as much as possible, we try to secure free or reduced-rate tickets to regional conferences so students can connect with the larger agricultural region.

I mentioned earlier that through our agriculture classes students learn hands-on skills. And this is extremely engaging. I go out to many of the high schools to do recruitment for the programs, and as soon as students realize that they can get outside of the walls of the classroom and get their hands dirty they're immediately interested in the program.

Students here are taking the four seasons farming class and it's really engaging because it offers both content and practice, so both for the brain and for the hands.

We have collaborative learning as much as possible. Here on the left we see an organic gardening class. And students are asked to solve real-life challenges. So on the right they're calculating how many gallons of rainwater can they capture from roof runoff in the permaculture installation class.

And right here, as much as we can, we have wonderful access to the woods here on campus. And so taking students out into nature and discovering what kind of wild foods are abundant in our backyard

and woods, like we do in our wild foods class here with our elderberry. And on the left, students are actually taking the food that they've foraged and create value-added products in classes such as our food preservation and storage class.

So I want to share a little story which is an exciting case study for our college. The permaculture students' forum was a one-time offering where six inspired students who had taken the food systems class with me said, well, can we get together and advocate for, do research for and design an educational permaculture garden on campus? So there they are on the upper left. And we took several field trips and conducted stakeholder interviews. So in the middle, we visited UMass's permaculture garden on campus. On the bottom right, they have convened 50 stakeholders in the college and in the greater community to gather input about what folks would like to see happening here in their community college on campus and how could it serve multiple stakeholders at once.

The result was three different phases of design that students generated graphics for. Here, this is the first phase, which is a living laboratory on campus. It was approved summer 2012. You see that rectangle on the center there? That is our near-zero net energy greenhouse. This site was already under construction, so it seemed like a great opportunity to come in and re-vegetate with productive annuals and perennials.

The design concept for this community common, as I mentioned, which was to serve both the college, but also the broader community, to offer a place for experiential education, to propagate and share plant stock to more than just the students, for the students to gain hands-on nursery management and gardening skills and to have a place for faculty, staff, administrators, students to eat lunch and have a place of beauty and tranquility on our campus.

And thinking more broadly, there's so many classes that can use the living laboratory and integrate it as an outdoor classroom. And here are just a few examples of the classes we offer at the college who have now incorporated the garden into their curriculum.

These are just a little smatterings of what's to come for the future. On the top, again, student-generated design from micro orchard on campus was approved this past spring and we're working with professional designers now to incorporate it into a plan for a botanical garden just down slope from the greenhouse and permaculture gardens.

And on the bottom here is, yet to be approved, edible landscaping demonstrations from the students to show out front of our core building what can be done with landscaping and how can it be both beautiful and productive.

And we, as much as possible, try to engage students in every aspect of the garden. We find that redundancy in roles equals resiliency for the success and longevity of the garden. We have a permaculture club on campus. We have four credit internships that interns work in the garden over the summer. We have permaculture and other related classes. Occasionally, our department work study

will help in the greenhouse or the garden. There are service-learning class projects and, of course, we're always open to volunteers.

And as much as possible, I try to inspire our students to be leaders, to envision the change they want to see, to advocate for that change and implement it is a really powerful teaching tool. And these students here have all become leaders in their own right throughout this project.

And here's just a few images. This is the site on the left before it was transformed, getting the community together, loosening, aerating the soil. We had very close to a zero budget, so using on-site resources like the cardboard from a waste stream to build and sheet mulch the soil, we used compost from the leaves collected – piles of leaves collected on campus, excuse me. And we had a huge community planting day where we got 35 people to come out for five hours and create a beautiful community-engaged project and dedication. We had vets, we had faculty and staff and students and even the president came out for a little while, and it was an incredible transformation.

So these are some images of what the garden looks like today. And the organic gardening class has also installed raised beds for annual veggies, which you see on the left here. And the student on the right is bringing a fresh head of lettuce to the food pantry and to the dining common. And it's really exciting because we've created a great relationship with our food service providers, and every time that we harvest from the garden there's a sign out so people who are eating in our dining commons know where their food is coming from.

And I will hand this over now to Christine to talk with us a little bit about our internship program.

MS. COPELAND: Thanks, Abrah.

So internships – internships have great value. I don't think I need to convince anyone of that, that's a given. We see internship initiatives all over the country.

Here at GCC we have supported internships in the Renewable Energy Program since 2008. And internships are integral to the new Farm and Food Systems Program.

Here's a shot of just a few of our recent interns. They have installed solar panels, gotten their hands dirty in local CSA and community farms. And they even helped organize international building conferences. We hear great things.

“Now I finally understand what double-wall construction actually looks like,” says Mariah (sp) interning at Habitat for Humanity, or, “The residents watch us through their windows and then they come out and grab a shovel and a rake,” says Ian who installed a permaculture garden at a retirement community.

By the same token, businesses have said things like, what, you can put our schedule on the cloud so we can all see it and you can tell us how Instagram works? Or faculty have said things like this is so good, through my student I keep in touch with what's going on out there.

And for our college, internships deepen and enrich our connections with our regional partners. We even, for example, had two internships in green energy at the local regional employment board that Teresa had mentioned.

So I wasn't going to bore you with a bunch of numbers, but I have to give you this one. Out of 16 recent grads who are employed, 11 of them had internships, not necessarily at their workplace, but in the field.

So let me tell you two short internship stories. One exemplifies the connection with the larger community and one exemplifies the connection between these two programs.

Brandon started out as an auto mechanic. As part of his renewable energy associates degree he did an internship with a local solar thermal installer. He later subcontracted with one of our other local partners, the Solar Store, then he struck out on his own with his business called Renewed by the Sun. Brandon has been an amazing teaching resource for us because he allows students to job shadow with him, which are usually just, you know, half a day of silent observation. But more importantly, Brandon has helped us teach our students by taking on interns to help him with installations. In the last three years he's had three interns, two of whom he later hired.

This is Jenny. Jenny is a U.S. Army vet who came home from service abroad with many mechanical and systems skills. She entered our Renewable Energy Program and was quickly able to focus on a subject of real interest to her, which was energy efficient greenhouses and growing food. The timing could not have been more perfect because right as she was finishing her renewable energy work we were starting up the farm and food degree. Her movement over to that program was fairly seamless and facilitated by her GI Bill benefits. She interned in the greenhouse at our local tech school partner, got greatly involved in the permaculture club, was a TA and one of the – (inaudible) – at the food and farm classes and is now subcontracting with local farms and a local landscaping firm and also with local partners.

So what have we learned? As our program has developed and grown, we have had to define internships more specifically. Different terms are used by different institutions. You've heard co-ops at Northeastern, nursing, quote, “practicums,” unquote, work study, there's civic engagement, there's volunteerism.

At GCC, an internship is a credit-awarded work experience that counts towards the certificate or the degree. This way the college and the program supports a student throughout and maintains that liaison for the students and the business.

We have also created a tool shown here, our website, which has a page for students, a page for businesses where they can post their internships and a page for faculty. Don't try doing this with email

and attach documents, you'll drown. Move forward slowly. Don't make your internships mandatory, for example, if you don't have enough host sites. And make sure that you have buy-in from your internal parties before seeking many outside sites because you don't want to disappoint your businesses by not having students for them.

And finally, find your assets. Here in Massachusetts we have been greatly supported by the Massachusetts Clean Energy Center which has funded many of our renewable energy internships.

And I also ask the businesses themselves to pay students if they can because they are an asset.

So that's what I have for today. Please feel free to explore our website and use processes or forms that might be helpful to you. This is paying forward for me as I have used other resources to create this for us.

So thank you all.

MR. ROSNICK: And so this is Peter again.

Just to wrap up, at Greenfield Community College we say SAGE is where science, civic responsibility and workforce development meet. Our program is about preparing people for good green jobs, it's about building a sustainable academic foundation for the energy and agricultural leaders of the future, and it is all developed with an eye towards environmental and civic responsibility and social justice.

Greenfield Community College has crafted our sustainability footprint in the programs that we have developed, the facilities that we have enhanced and through our also important partnerships in the community.

So before moving to questions, I just want to thank the AACC SEED Center for giving us the opportunity to share our story. On the screen you see those that we thank on this campus who helped us – the college be honored by the SEED award. And we thank you for listening in.

And we're happy to take your questions now. I guess Todd is going to facilitate that process.

MR. COHEN: Great. So wow, that's just impressive. You know, I mean, we knew you were doing a lot, we saw on paper in your application for the award, but to just see it and hear it, visually see it, too, I mean, it's really impressive what you're doing, not just sustainability, but I mean just as you're operating as a community college. I think it's just – you're doing so many things so well.

So we've got a bunch of questions. Please all post. You know, now is your time to post some more. But let me kick it off.

And I'd ask the Greenfield team, you know, let's try to run through them. We've got a bunch, so let's answer as quickly as we could, but you know, still keep it – so let me – the first question I guess is more on just the career opportunities, especially in renewable energy efficiency and let's take ag, too. What we see nationally are programs that start in these areas and then die because there just isn't – there aren't the opportunities.

And so, you know, you obviously have an industry in those areas, or it sounds like. I wonder if you could just take us through how, you know, tell us a little bit about the industry. Are students coming in? They're getting their certificates or they are getting into a career or they're getting – they're transferring. And then what is happening in Massachusetts a little bit from a state level, a local level that might be spurring growth in those areas in sort of the renewable and energy efficiency areas?

So maybe, Teresa, I don't know if that's you, but if somebody wants to take a crack at that.

MS. JONES: So I have an hour to answer that question? (Chuckles.)

So Massachusetts, I think, three years running, we'll see if we get it a fourth year, is the leading state in energy efficiency, so there's a lot of incentives in this state, whether they're utility driven or, you know, legislation driven. So we're very fortunate to have that as a context.

This region of Pioneer Valley has a history of three decades of green activities, or more. So we're sort of lucky to be in the right place at the right time in that way.

But thinking about, you know, many programs, and we have struggled with this, too, you build something that fits perfectly and then things change, in fact they're changing as you're building your program. So that continual conversation with your partners and with people who are in policy, the Mass Clean Energy Center Christine mentioned, being plugged into the regional employment board who can point us toward what's coming, all that is critical. The policies change then the incentives change, the work changes. And we have seen that and we're sort of continually revising where do we focus.

We're shifting away now – we have a lot of people trained in solar. So now there's more of an emphasis on green design and regional planning and sustainability directors and program managers. That's where the greater opportunity is for students. So it is a constant work in progress and it can make you a little tired just trying to stay on top of that.

But I also think we have a tremendously entrepreneurial area. And Abrah's really actively building that in the Food and Farm Program as well. So people are starting their own businesses, they're responding in the private sector all the time, so we don't have to do that work, just keep in touch with what they're doing.

And I wonder if Abrah wants to add anything to that.

MS. DRESDALE: Just very briefly, there's a long, long history of agricultural farming families here where we live and we have some of the richest topsoil in the planet. So that context certainly helps, along with all the other nonprofits and advocates that are going for local food and farming.

MS. JONES: Did we answer the question, Todd?

MR. COHEN: Yeah. No, that's great, that's great.

So tell – let's talk about the internship. I mean, the tool you showed is great. Tell us a little bit about the pipeline that's there. You have lots of companies that are banging on the door there. Are you constantly trying to find them? Is it an easy process? Or just give us a sense.

MS. COPELAND: Well, it's a network. You know, many of the companies in the area have – either were started by our grads or have grads employed, and they come back to us asking for interns. So we, you know, we post those internships, they know about our website. So one thing sort of leads to the next.

I told the story of Brandon who has taken on – he was a student and then he took on more interns in the past three years.

MS. JONES: And can I just jump in there because in the early days of building the internships in renewable energy it really helped that we had grant resources both to engage partners, but also to subsidize stipends for paying interns. Our students need to be paid, most of them, because they have jobs, so to do an internship and have it be paid is a crucial piece. So being able to leverage some resources to helping launch internship programs, help stipend, paying the intern, and working out some of the kinks was really helpful.

Now we have a track record. So as Christine said, businesses want our interns. But you have to establish that track record first.

MR. COHEN: That's great.

MS. COPELAND: And like I mentioned also when I was talking about internships, we have this Clean Energy Center in Massachusetts that has funded many of our renewable energy internships and that has made a huge difference because some of these businesses are small, so whatever financial support they can get in terms of student stipends helps enormously.

MR. COHEN: Excellent. So here's a great question somebody – I'm going to ask it basically just as it is. We're working on a co-curricular assessment and transcribing at my institution. Any thoughts or recommendations that you have on assessing your students' skills, knowledge gained would be welcomed.

So you mentioned the co-curricular piece there in the middle there. Thoughts on that?

MS. DRESDALE: And to clarify, is the question about assessment for the academic piece or a co-curricular piece?

MR. COHEN: Well, let's focus on the co-curricular if we could.

MS. DRESDALE: Yeah. So we actually have not, I have not in the Farm and Food Systems Program done much assessment on that. You know, we have anecdotal stories that we keep track of and the co-curricular piece is extremely important in creating a culture of inclusion and engagement because we are not a residential campus so, you know, students are not around often. So having that culture is really key.

But we've mostly done assessment in terms of our program-level learning outcomes.

MR. COHEN: Great. So one of the pieces here, I mean, it seems the way you discuss what you're doing across the campus, it's connected so well. Is there a person that's accountability for sustainability, sustainability coordinator, sustainability director – someone asks – that is tying these pieces together? Or is it just natural relationships that exist? And I'm going beyond just faculty here, but faculty and obviously you have facilities that are involved somehow in pieces here. So just give a sense of how that all gets coordinated.

MR. ROSNICK: So the answer to the question is there one person who directs it all, the answer is no. We do have a president who is just very committed to these issues and has been so for a very long time. He helped institute the Green Campus Committee made up of faculty and staff who are passionate about moving the college forward.

I know it sounds small now, but years ago they instituted a college-wide recycling program against resistance at the time, and the president was very helpful in moving that forward.

We are small, very are very personal. The president is Bob, the facilities manager is Jeff (sp). And so these kinds of decisions and these kinds of actions are done on a personal level with lots of collegial conversations.

So I also want to mention Jeff (sp) and his staff, the tradespeople, the maintainers who, when there's recycling, when there's composting, when there is changes to the energy systems in the buildings, it is their responsibility to manage that and they have done that willingly and very, very well.

MR. COHEN: So let me follow up on that. Going back to the living labs stuff, great concept, a lot of colleges are trying to do it. Where they get stuck sometimes is getting the facilities side onboard to allow students access to some of the components, are they going to be safe. And so just, I mean, take us through, if you would, just a little bit of how that relationship works. Are faculty going to the facility

side and just saying here's a project idea I have, I want students working or looking at this building? Just take us a little bit. How does that work?

MS. JONES: So yes, that is, as Peter – this is Teresa again – as Peter mentioned, the facilities folks. I mean, Jeff (sp), our director of facilities, is a busy person, but always willing. He took my students and I through the bowels of this building that was fascinating. And we can do projects. The renewable energy professor has students measure and assess energy use on campus and we can access the computer information, the energy management information without having to really bother anybody.

In terms of getting students access to, like, the photovoltaic panels, some stuff we don't play with on campus. The stuff we play with – (inaudible) – is not actively in use at the time, so that's why we have these facilities at Franklin County Technical School or equipment we use in the labs and outside. But it's for that purpose because we can't be climbing around in the photovoltaic array and unwiring stuff.

I think I'll let Abrah speak on the biological side. You know, gardens and things have fewer of the safety issues, but certainly maintenance changes and we want to be mindful of those.

So Abrah.

MS. DRESDALE: Yeah. I would say the key thing was having numerous stakeholder – on-campus stakeholder interviews and making sure that, you know, physical plant's, in particular, concerns were addressed because, you know, as anybody knows, you have a garden, it goes to the weeds and we can't have that on a college campus.

So with the students, I supported them, we came up with really clear criteria and a process and an outline for implementation and, as I said, redundancy equals resiliency for the management plan and the long-term sustainability of the project.

And so we put together a comprehensive report. It was 15-or-so pages that outlined who was in charge of what and what the contingency plans were going to be, showing all the different levels of student engagement. But beyond that, it was more secure because there are two staff that are responsible for different facets. And having that permanent piece amidst the transient student culture is really key for the success of these projects.

And that proposal was submitted to the president's staff and was approved. And so we basically got everybody onboard, presented it publicly. And I gave a presentation to the president's staff and everyone voted and said yes, we can move ahead with this project. But getting that buy-in and doing that research ahead of time is extremely essential.

MR. COHEN: That's great. I mean, you know, I'm just thinking that criteria that you mentioned, I mean, may want to take a look at that and see if it's something that we might want to share with the rest of

the audience around the country because it might be really interesting to help jump-start some of that (local lab work ?).

Let me end. So well, one or two things here. So let me – I'm really interested in the two-year, four-year collaborations you've got going on. I think you said Wellesley. If you could in just, you know, really 30 seconds, I mean, just say a little bit more about how that connection works. It sounds like it is based on actual, you know, academics. So if you could just kind of say a little, I think it was the ag piece.

MS. DRESDALE: Sure, yes. Well, we have right now two articulation agreements with the University of Massachusetts down the road in Amherst and one with Green Mountain College in Vermont, both four-year schools with really progressive, sustainable food and farming bachelor's degrees. And so in that agreement we have our full 60 credits transfer as a block and are accepted and our students go in as juniors.

And we also have a piece if they have a certain minimum GPA, they have some other tuition fees waived so that our students who are used to paying community college tuition don't have such a steep hike when they transfer.

MR. COHEN: That's excellent.

Let me end on this. It's so – the – (inaudible) – person you mentioned, that they love it there, they want to come visit. Do you all host? How do you – if folks want to come see you, who should they get in touch with?

MR. ROSNICK: We are a beautiful, beautiful place and we would love to have visitors. We'd love to share what we've done with folks who want to come to see us.

MR. COHEN: Peter, why don't you or does somebody want to just throw out their email?

MR. ROSNICK: Oh, so I am rosnick – r-o-s-n-i-c-k – @GCC.mass – m-a-s-s – .edu.

MR. COHEN: Great, and I – let me make – so I must thank the Greenfield team. You did such an absolutely phenomenal presentation. So thank you all, congratulations to you.

And then let me put in a plug for – so if you liked what you heard with the living labs stuff, we actually do some workshops, full-day workshops on that entire topic. And we've got one coming up in a couple of weeks, that's a little soon, but there's another one that's coming up December 4th and it's in Chicago at the College of Lake County. And we have a couple of stipends left for folks that might want to travel there. So if you just inquire, my email is sustainability@aacc.nche.edu. It's a great – some best-practice colleges from across the country. I'm going to get Greenfield in there one of these times.

So if you're interested in that, just send me an email.

But thank you all for being here. Thanks to the Greenfield team, great job. And we will see you next time.

(END)