**Workforce 3One**

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**Energy**

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CHRIS WATSON: This point I'd like to move it to the PowerPoint presentation. I'm going to introduce our moderator for today. Our moderator is Cheryl Martin. Cheryl is the TAACCCT program manager here at the Department of Labor. Cheryl, why don't you take it away?

CHERYL MARTIN: Thank you, Chris. And welcome. We have a small – but this is what we call our team here, the TAACCCT team, small but mighty. So we have a small but mighty group of folks on this webinar today, and I'm guessing a few more will be joining us as well. Actually, it's not as small as I thought. I just was looking at the folks in the welcome chat and saying hello to Chasey (ph) and San Juan College and Hazard and lake area and the trend grant in North Dakota and Casper and the rest of you who joined us. Look forward to seeing who you are as well.

So I notice that it's mostly round four grantees. That's great because that's exactly one of the reasons why we wanted to do this is to pass on some of the hard-earned knowledge and information from previous rounds to those of you in the later rounds. So we're glad that that is happening.

I wanted to just say very briefly a little bit about where we are in terms of the TAACCCT Learning Network. So the TAACCCT Learning Network is the name that we give for all the different groups that help provide technical assistance to TAACCCT grantees, and there are a lot.

And so I wanted to just say very briefly where we are in that picture today. So Department of Labor works directly with Jobs for the Future who has a couple of subcontractors and with CalState/Merlot who's developed the SkillsCommons website and repository. And then there's a couple of other groups. NSF is doing things, and Creative Commons and CAST and The Transformative Changes Institute. So all those are names that you may have heard in terms of offering technical assistance.

Today we are on a webinar that has been organized as a collaboration between DOL and Jobs for the Future, and of course with some subject matter experts who come from earlier rounds of grants and that type of thing. And so I'd like to introduce Erica Acevedo who will be our moderator for the webinar today. She is with Jobs for the Future.

And then Rick Lumadue who is with SkillsCommons.org at CalState/Merlot is probably a name that many of you have already heard and that's good if you have because he is like your FPO. Rick is your friend when it comes to finding things on SkillsCommons or loading things onto SkillsCommons, and he's going to walk you through some of that today.

And then we are really delighted to have Marilyn Smith who is the grants coordinator for Colorado Community College System grant that just ended in round one, but they also have a round three grant. But their round one grant was focused on energy, and we're going to be hearing about some of the exciting things that they did today. So I'm going to turn it over to Erica and our subject matter experts, and am looking forward to what you have to say. Thank you for being with us.

ERICA ACEVEDO: Thank you, Cheryl, for that great introduction and for kicking off today's energy industry webinar. Again, like Cheryl said, my name is Erica Acevedo, and I'm a senior program manager at Jobs for the Future and part of the TAACCCT Learning Network that she just described. We're really excited to have you all join us today, and before I hand it over to our grantee expert and Rick, I wanted to do a quick overview of the agenda for you.

And so as you – as you'll note, there are two key pieces that we'll be touching on. We'll be hearing and highlighting from our grantee the work – their work as it relates to the energy industry. We'll do a review of SkillsCommons. Rick will walk us through curriculum and resources focused on energy for all of you to access. And we'll be weaving throughout the discussion or throughout the webinar discussion around employer and industry engagement and – which we all know is key to the work.

We're also making sure to slot in some time for Q&A throughout the webinar, but we also want to encourage you to post questions that come up for you as our presenters are speaking and do those right into the chat box. It will be our goal today to try and answer as many questions as time allows. So just make note of that.

And again, before I turn it over to our presenters, we want to do a quick poll. I know some folks probably logged in after the first poll was up, but please let us know what round of TAACCCT you represent.

The other poll, which should be coming up shortly, is around what is the strategic focus of your grant when it comes to the energy industry? Is it capacity building, improved employer engagement, curriculum development, other, and if there's an other, please specify within the chat box or the main welcome chat. And again, the last one is what job level are you training for? Is it entry level, middle skills, or advanced level? So we'll just give you a quick minute to log in your answers.

And so yes. We're definitely seeing that there's a lot of round four, a couple of round two. We didn't really expect any round one, but we still left it there. Let's see here as far as question number two. Oh, here we go. What is the strategic focus? So clean energy, natural gas, I see the other and I see what other folks are saying, energy, technology, and operations. And yup. As most – as we guessed, most of you are training for that entry level. Oil, gas, coal, renewables. Awesome. So another couple seconds and then we'll move on.

MR. WATSON: Just a reminder you can click whichever option you choose by selecting the radio button to the left of whatever option is appropriate for you. Back to you, Erica.

MS. ACEVEDO: Thanks. All right. And so yeah. If you want to continue to add those – any other specific focus, do that into the welcome chat. And so thanks again, and this will again help us set up – we'll get a sense of where you are, where you're coming from, where your questions are kind of stemmed from and – as we go throughout the webinar. And with that I'll hand it over to Marilyn Smith who will walk with us through the core curriculum, program design, and industry engagement strategies of the Colorado Online Energy Training Consortium.

Marilyn? May be on mute, Marilyn.

MARILYN SMITH: Thank you for telling me that. I was talking madly away. So thank you. Thanks. No problem.

I'm really excited to have an opportunity to talk about what Colorado accomplished with the Colorado Online Energy Training Consortium, and the word consortium is really important here because this was a consortium of educational partners across the state of Colorado, of employers across the state of Colorado, and workforce entities as well.

And it was them working together to figure out what would be the best way to provide educational programs for participants in Colorado that would get them ready for real jobs that existed with good wages. So it was very, very exciting project for me involved in.

And in looking at this, I wanted to talk about this grant and how it helped the colleges in Colorado really rethink our career and technical education programs. And we were focused on these energy programs at seven of our colleges, but what this work did is it helped give us a foundation for other work that we have done with succeeding TAACCCT grants, round two and round three, but also just generally in new ways that we've had of approaching how you develop and what goes on in a CTE educational program.

The round one grant gave us the time and the dollars for us to intentionally review what we were doing in our instructional programs, and we were able to do it through the lens of employment and employability. How good were our programs at preparing students for the workforce, and how were our students doing once they were hired by employers? Very important concepts for us to have.

The co-ed grant helped Colorado make some fundamental innovations, and in doing this presentation I want to focus on what I think are three innovations that Colorado was able to accomplish. One were the use of mobile labs. I'll talk very specific – a little bit about the mobile labs at three of our colleges, Red Rocks Community College with the water quality program, Northeastern Junior College with the wind energy program, and Colorado Mountain College solar program.

Another innovation change in some of the ways that we were offering our programs were that this grant helped us build some instructional environments that better mirror the work environment. This happened at all of the colleges that were involved in this grant, but I want to focus on two that I think were just stellar examples of how you can take the classroom and turn the classroom into something that looks and feels like what happens on the job. And it was a power plant project at Front Range Community College and a nacelle Lab at Northeastern Junior College.

And then overall something that was fundamental and in the background to everything that we did was the curriculum redesign of all the courses in our energy programs. The focus for all of this was how can we help students be prepared for the workforce? And secondly, how can we make sure that employers have access to trained employees for their jobs?

The overall focus, when we take a look at it, our TAACCCT1 grant required that all consortium colleges develop their courses in online or hybrid format. This was done so it provide more opportunities for students to complete certificates and degrees. What that would be is that – Colorado's a pretty big state, and each of our colleges had specific programs.

What if someone who was in the southern part of the state, let's say Trinidad, wanted and was interested in water quality management. Making a literal move to Lakewood, Colorado – that's a good four-hour drive for someone – might not be possible. So how could we provide that curriculum instruction to somebody who was not near the actual college?

So if we had online and hybrid formats of courses, we would be better able to accommodate those students. And also online and hybrid would simply be more accessible to students who have busy lives, who may be already employed. How could we then have education happen in a way that fit their schedules and their needs? All of this meant that faculty needed to rethink their courses. Which skills can I teach in an online environment? Which ones need to be face-to-face instruction?

The employers were integral parts of this process. There were many meetings where employers sat down with their list of skills, what they needed someone to have on the job, and where our faculty and program leads would sit down with the courses and do a mapping of this is a skill that an employer says they need. Where is that in my curriculum? It's in this course. Maybe it's in two or three different courses. Aw, maybe that's not a skill that I'm actually even teaching in my courses.

So it was an intentional process where the industry and the education partners sat down together and had really honest conversations about what the employer needed and what was happening in the educational program. The result of this for all of us was a much more intentional curriculum that was competency-based and that was focused very specifically on what students needed to become proficient employees, what employers needed for their workforce.

Colorado community colleges have always done this. We say we've always done this because on all of our colleges for our CTE programs, they're required to have advisory boards that are industry-led. What I think happened here with this process with this grant and it's continued in our other grants is that the employers aren't just advisors to our programs. They're really partners in developing what those programs need to look like.

In that way we can better meet the needs of the industry to make sure that we are teaching the skills that need to be taught, that we're teaching those skills in a way that they need to be taught as well. So it's not just we're teaching what needs to be taught, but we're teaching it in a way that makes sense for the industry. This Colorado grant has helped us do that. And now what I want to do is to take a look at some of the just very practical things that came out of that.

One were mobile labs. Three of our colleges developed mobile labs. They used TAACCCT money to invest and to outfit mobile labs. These labs would allow the colleges to do a couple of things. What were the first uses of these labs? We actually found out it may not have been an intentional use of it, but it was something that happened just naturally for the people involved in the program but that these labs became things that we could take to employer events and workforce events so that the colleges could actually show what happened in the program.

You didn't have to just sit at a table and have handouts to say, oh, by the way, here's the curriculum and, oh, by the way, this is what the program looks like. You could actually take someone who was interested in let's say water quality, and you could take them into the mobile lab and you could show them the kind of work that they would be doing in the field. Very often people who come to job fairs, they don't know about the job content. They don't know what it's like to be on the jobs, and these mobile labs were some of the first times that they could experience what it would be like.

In addition to that, these mobile labs allowed the colleges to take instruction directly to the employers, and very often that's how these labs were used, that the colleges would have an employer and he would need a specific training for his staff, and the college would then take the lab out to that site. Sometimes they would do them as credit classes. Other times they would do them as non-credit offerings. In addition to that, these labs were also used for field trips within the instructional program.

Right here in this slide, this shows the water quality mobile lab that Red Rocks developed, and you see the mobile lab and then you also see the students working in the lab. And this was from a water quality class 121. It's the introduction to water quality, and this was where the students went out and they learned how to do water sampling.

They would go out and actually pull water samples from water sources, and then they would take them into the lab right there in the classroom and do the testing of the water. So in addition to taking these to employers, we were able to use these labs to enhance the classroom experience of the students. This was a way that the students could mimic what it's like to be out in the field where you would be pulling water samples and then doing the testing of those water samples. So again, an amazing kind of experience that students can have.

We also had mobile labs at – this is an example from Colorado Mountain College, and here we have a mobile lab. And what you see here is an actual install of a solar array that students in the solar program at Colorado Mountain College did. Again, instead of sitting in the classroom and talking about a solar array or even doing an in a lab at your college, well, how do you install these? Instead, here we had students who were able to actually go out on the site and do a solar installation, and all of this was made possible by having the mobile lab.

And finally, another college that did mobile labs was Pueblo Community College. Actually, Pueblo Community College has seven different mobile labs. They have found this technology to be such a boon to both their credit and their non-credit programs in their colleges that they keep developing them for more and more programs.

For this one this is one that they took to the Lisbon Valley Mine. It's one of the mines in the southeastern part of the state, and they actually did six different classes for the Lisbon Mine for the people who were employed in the mine. They took the instruction right to the mine site, and the participants who were working during the day but the employer would give them time off from the time that they were working to come in and take the class.

Again, instead of waiting and asking all of those students to come to us, the colleges were figuring out ways to take the instruction where the instruction needed to be, on the site, in the field, and for students to then be able to have an experience that was much more related to the kind of experience they would have when they came into the classroom.

Pueblo uses most of their mobile labs mostly for non-credit offerings. Those then are offerings that are specific to a need that an employer has. So it's not bringing a whole course to the mine or to the industry, but the employer saying, this is the specific skill I need help with. Can you provide training? And then the Pueblo Community College would take out one of the mobile labs to that site. Again, a phenomenal way of meeting the needs both of participants, students in these programs, but also of employers.

Here's the Northeastern Junior College nacelle lab. Wind energy programs are really phenomenal programs, and in addition to having mobile labs that we take out to places, we had colleges step back and say, how can we make sure that the classroom environment that we're creating mimics or mirrors the work environment that they will have when they're on the job?

The program at Northeastern Junior College trains people to be technicians who work on turbines, on wind turbines. And if you look at those and you see them out in the field, you see they're pretty high up off the ground, and when you look at the mechanism on top and on the actual turbine blades, you look at them and you think, boy, that would probably be pretty hard to work in.

Doing instruction in a classroom where you try to train someone to do the repairs that they might have to do on those blades that are high up in the air, if you're just sitting in a classroom, it doesn't quite mimic that. So what NJC has tried to do is to say, how can we make our environment look like and feel like the environment in the field when the student is actually working?

So luckily, they got a donation of a nacelle. That's the outer covering on a wind turbine that had been damaged. General Electric and Alliance Power donated that to the college. Using some of the grant's money from COETC, they were then able to create a lab environment that would actually simulate a wind turbine, and they used students to do it. So the second-year students in their wind program did all of the work on this lab.

So you see here two pictures of two students, Justin and Garrett, who did the box schematics and Courtney and Jayden who did the pitch schematics. So the students had to design what the lab would actually look like. And when the students are working in the lab, they're actually up in the air. I think this one only goes up 70 feet. So it doesn't quite go up as high as what you'll actually find in the field, but you are then off the ground. You have to put on all the equipment that you would need to be if you were working on a job to be in this lab. And you're also working in the same confined space that you have to work in when you're actually on the job.

Let's see what else we have here. The other cool thing for me about this is that this lab was developed specifically because the advisory committee, the people in industry, said that students – they need people who have experience performing medium duty repair activities such as doing bearing replacements in a wind turbine.

All of the advisory committee said we need employees who can do this, that in this nacelle lab developed by NJC partnering with employers both for donations and instructional equipment and advice, they are able to replicate that. So this nacelle acts as an outside classroom for the students. They gain critical experience working at heights and in enclosed environments so that the lab mimics the site that they will find when they get to the workforce.

This is an example of the cooperation between our industry partners, the employers in the area and the educational program, the educational program being willing to listen to what the needs of the employers had and the employers being able to say, and here's some resources that we can give you to make sure that you will give us potential employees that meet our needs.

Another project that shows this kind of cooperation between industry and colleges but also focuses on trying to replicate the working environment in our classrooms at our community colleges came with Front Range Community College. And Front Range Community College had an opportunity working both with employers and with a four-year school, CSU, that they could actually develop a working power plant for students in their programs so that in this power plant it replicates what happens in a working power plant, and students get experience doing the kinds of things that they will have to do.

It's a closed system, a steam power plant, and as far as we can see that this is a one-of-a-kind setup that offers utilities training opportunities, opportunities for people to be trained in the kinds of jobs that utility companies need. We use it – it's being used for training and certification of students for their employment in power generation, power plant management, and smart grid industries, so being able to meet the needs of several employment pathways.

This power plant is also being used in thermodynamics classes. It's being used in research, and it's being used for training for new engineers and technicians. This site I think is – another reason this is I think a quite phenomenal site is it's actually a historic building. The power house is a historical site. It was – this is a building that had been used in 1936 as the home of the original Fort Collins Municipal Power Plant. Now, because it was a historic site, that gave both CSU, the four-year partner, and Front Range Community College some real challenges because they had lots of rules that they had to follow because it was a historic building. Anyone who's ever worked with the Historic Preservation Society and the rules and regulations regarding sites that have that status knows that lots of rules and lots of regulations. But they were able to solve all of those problems so that they could have this new power plant used for instructional purposes but that also generates power that is assumed into the power grid and give our students a chance to have some real-life experiences.

This lab is a steam boiler, turbine generator, condenser, and system. It can generate up to 20 kilowatts of electricity. It's connected in such a way that it comes back into the smart grid. They've also built this plant so that they can add some other instructional things to it as it moves on. It became operational in September of 2014 and has become an ideal location for training students and training already – people who were working in the industry on the kind of skills that they need for the industry. This is a classroom, but it's also a work environment. And being able to have work experience for our students, Colorado community colleges and our industry partners say that this is one of the best ways that we can ensure that people who are in programs, one, actually want to be in that program. They have a sense of what it's going to be like to work in that field. They get a better idea of this is what I will do when I am working. And then our employers get people who have the specific skills they need to be successful in the jobs that they have.

The power plant wasn't the only way that Front Range Community College created the working environment for the students. They also used a solar array. They created a lab on top of the roof where they installed a solar array, and each semester students in their program have the experience of actually assembling, hooking up, and turning on the grid-tie photovoltaic array. This would be just what they would do if they were working for a solar company.

So this lab that they have on their roof – and this is actually at the Front Range Community College campus – is a place where students can get experience of what it would be like doing the job on the job while they're in the classroom in the program. And these are to us at the community colleges just wonderful examples of a way that we can take classroom instruction and make it real for our students.

Overall, what – here's a schematic – and I'm not going to spend a lot of time on it – of what the CSU/Front Range Community College power plant does in terms of doing the power. For us what it came down to was how do we change our curriculum to make it meet the needs of our employers?

And the COETC demand that we do our curriculum in hybrid and online format gave us the opportunity to do that very intentional, very specific review of all of our curriculum to ensure that we were teaching what employers needed to teach, that we had thought about the best way to provide that instruction for our students, which of the things that we taught could be taught in an online environment, which of the things that we taught had to be done in a face-to-face environment, and if it had to be done in a face-to-face environment, what was the best way to do that instruction? Can we use a mobile lab? Can we use a lab like the nacelle lab at NJC or the power plant at Front Range Community College?

The whole focus then became a much more intentional look at what we taught so that the curriculum that we have in our programs is much closer to what industry needs than we had before. And that's a result of the round one grant, and now all that work that was done in the round one we've been able to capture in – well, here in two places.

One is our Weebly where we have cataloged all of the work that we've done both in the course development and then a lot of support materials there, resources for faculty and how to teach the courses, advisor resources in terms of how to use the curriculum, how to advise students, things like that and then the SkillsCommons that looks where we then take all we have and made it available nationally to not just the consortium but across the world, that here's where you can access that.

I'm proud of what we've done in Colorado, and just looking at these three things, the mobile labs, the trying to mimic the workplace environment like the Front Range power plant and the nacelle lab at Northeastern Junior College and the curriculum revision are part of Colorado's commitment to build an educated workforce that meets the needs of our employers.

We were able to do this because of the TAACCCT grant, but because of the TAACCCT grant we've also changed the way we do business. We take these lessons, and we are now trying to apply them in everything that we do.

MS. ACEVEDO: Thank you, Marilyn. So here we'll pause for a couple minutes just to see if there are any questions from folks. Chris just pulled up the main chat here in the middle. So if you have any questions at this moment on any aspect of Marilyn's presentation, please enter it here.

But wow, that's a really great program, Marilyn. A great set of examples, the hands-on experience, the great employer engagement. Yeah. I'm curious. You said the employers were really key to kind of developing your curriculum and also everything you did was in response to kind of what they were asking. What have been some of the feedback from employers that you've worked along the way?

MS. SMITH: Well, the employers within NJC, they're thrilled with – when they saw what we were doing with the nacelle lab, they even came forward with more equipment donations so that we could improve what was going on in the lab. There the employers come to the program at NJC to hire the folks who are in the field. One I haven't talked about but TFJC has the lineman program, and one of the things that they do out of that lineman program is they do a rodeo where the end of a semester the students put on a display of the skills that they've learned.

Again, the industry is the one who's come to us and say, these are the skills that we need. And in this rodeo where the students are showcasing their talents and their skills, many of the students are employed right there on the spot as the employers see the work that the students have done. So the employers feel that they're getting employees who are better able to do the job. They feel like they have employees who have a better understanding of what it's like to work in the workplace.

Employers talk often not just about content skills, but they want employability skills. They want people who know that they have to come to work on time, that they have to come to work prepared, that they have some sense of professionalism about working in the field.

And that's one of the things that our employers are giving us feedback that, wow, we like that the students have a sense of the kind of environment that they will be working in, and when they come to us on day one, they're ready for that environment.

MS. ACEVEDO: Wow, that's awesome. And I think, Cheryl, you have a question?

MS. MARTIN: Yes. This is Cheryl Martin with the TAACCCT program at DOL. I'm curious, Marilyn. I'm sure that as you developed your energy program you talked with other TAACCCT grantees, whether it's round one or other rounds. I'm just curious what are some of the similarities and differences that you noticed between what you did and what other grantees did with their initiatives.

MS. SMITH: I think – I don't know of – and they may have done this. I just don't – I didn't see or hear them talk about that kind of specific mapping between employers, these are the skills that we need, and our faculty really looking at their curriculum and saying how it fits into their curriculum and what's missing.

I also think that what's been different is the focus on employability, of getting the feel for the work, for what it's like to be on the job while you're in the program so that students don't wait until after they've graduated to go, oh, this is what it's like to work in the field.

They get some experience of that. I think those are some unique pieces of what Colorado has done, at least in terms of – as I've had conversations with people at gatherings and in online conversations that this is unique to what our process was in Colorado. And it wasn't perfect, and it certainly isn't perfect now.

I maybe shouldn't be doing this, but I'm looking at a question that's coming from Rachel, and she says, "How did you get industry partners and faculty to work together in the redesign?" Well, I will tell you that wasn't always easy because when you – faculty are content area specialists, and they believe very strongly that they know what students need in their programs. So it was hard getting people to meetings might not have been hard, but it was sometimes very hard to have them listen to each other, for the faculty to listen to the employer.

But what I think was the most effective was when employers said, these are the skills we need and why, and faculty were able to look at their curriculum to see where those skills actually were or when they were missing or when they were doing a lot of skills that might not be relevant to employers in the field. So again, a process, something we always need to keep working on, always need to be bringing people back to the table to ensure that the program is meeting the needs of the employers.

That's why the students are there. They're in these programs because they want to get a job. They want to get a job where they can make a salary that will allow them a good standard of living. That's what we're all about, and faculty understanding that and industry employers, that's – they can't always fill all the jobs they have. So they're very willing to come to the table and work with educational partners, particularly when those educational partners are willing to not just listen but to do something based on what they learn.

MS. ACEVEDO: Awesome. Thank you. Great, Marilyn, for answering those questions.

And so now, let's move on back to the presentation and I will now hand it over to Rick Lumadue who will walk us through a quick poll and give us an overview of SkillsCommons, focusing primarily on the resources and curriculum available in the energy industry. Rick?

RICK LUMADUE: Thanks, Erica. Hi, everybody. Glad to be with you this afternoon. So yeah. Go ahead and fill that poll question out. Since we have an audience mainly of round four, I'm not expecting too many people to have uploaded already, but there are a few round four grants that actually have put some materials in SkillsCommons. And if there's earlier rounds here as well, I'm sure you'll add those ones too.

So that looks good, but feel free at any time to upload materials to SkillsCommons. If you need feedback about how you cataloged your material and all that kind of stuff, just send me an e-mail. It will be on this next slide here, and support@skillscommons.org. Send me the handle, the URL link that you get once your submission has been added to the repository, and then be more than happy to provide feedback, if you'd like it. It's not required, but some people just like it just to make sure they're on the right track. All right.

At this point I think what we'll do is I'm just going to do a web tour of the SkillsCommons site. I'm sure most of you have been on the site already, and if not, this is the main page here that you see up. And what I'd like to do is to show you a little bit how to browse for the energy materials that are in SkillsCommons, so do a specific searches for energy and then even be able to refine those searches. But before we do that, I'd like to take you into our support center and look at our industry support pages.

We have four support pages for the major industries that TAACCCT has funded, and as you'll see I'm clicking through here under the support services center, finding materials in SkillsCommons, and browse by industry. And you see that the four major industries here, and today's focus is on energy. So just click the energy icon there or the word, and you'll see here it's just some help here on just kind of how things have been cataloged within SkillsCommons as people have already uploaded their materials and are in the process of doing that as well.

We've also highlighted some grant projects here to the right in energy and in different areas that you might want to look at and then just some help here about searching. And we're going to go into more depth in that a little bit, but then also just want to draw your attention to this tree that we – graphic that we developed on how SkillsCommons is organized.

Basically, this is based off of the NAICS codes that you all have grown familiar with, and so you see here utilities. Air conditioning and ventilation fall under that. In manufacturing energy really does fall under manufacturing, but you'll see that there's some areas that you'll want to look at within the manufacturing sort.

So I wanted to draw your attention to that and also show you that when we get to that in the browse feature and then also in construction of buildings and petroleum mining, oil, and gas extraction. And you can download this image, this tree of the energy resources either through the PDF or the Word document, depending on how you would like to view that. OK.

So at this point then we'll go back up here, and we'll click on the browse just under these headings here. And we'll just look at industry. We'll click on the word industry first, and you'll see here that it comes up with all these nice organized areas of industry categories based on the NAICS codes.

And we have mining, quarrying, and oil and gas extraction. So if you just click that, you'll see that it kind of unfolds like an accordion, and then you'll see there's some subcategories in here as people have cataloged their material. You can click view all or you can go in here and go to the smaller categories.

Also want to draw your attention to into utilities. Again, within utilities there's the breakdown, the subcategories there, and so that's available there. And then in manufacturing here are some of the other areas, petroleum and coal products manufacturing. So that may be of interest to folks in energy. So I just wanted to make sure you're aware of sort of how those things are cataloged.

So let's just go and view for example here on the mining and quarrying, gas and oil extraction, you'll see here there's 180 results come up. This is for all of the materials that have been cataloged under mining, quarrying, and gas – oil and gas extraction. And so you see there although – basically what you can do is you can click one of these.

So here's an assessment tool from the Delaware County Community College. You can click these hyperlinks here, and it will actually take you into the item submission page for where that material is. You can click the file and download it and then view it, if you'd like. And so that's available, and then you see here it's part of the Pennsylvania Consortium of Community Colleges. All right.

And then I'll go back here, and this takes me back. And I'll see here's my major search that I've been looking for. And then if I want to go back again and say, well, I didn't really see what I wanted there. I'm going to go down into utilities. So I'm going to click the utilities view all, and again here's 214 projects – materials that come up. And on this side over here you'll see that you can sort – refine your sort or your search by material type.

So if you're just looking for an online course or a hybrid blended course, you can click it, and you'll see there's 86 listed in parentheses. For online courses there's 32, and student support materials in utilities there's 14. There's 10 syllabi, and then you see down here you can sort by credential type, if you're looking for certificates, associate degrees, materials with associate degrees, stacked and latticed credential models that materials have been built upon by different grantees that they put in. You'll see here's by institution.

So if you want to sort there and some of the things that Marilyn was highlighting, some of the institutions in their consortium, Northeastern Junior College had 23. Colorado Mountain College has 11, and Colorado Community College System Pueblo. And so you can basically just come in and click within the energy and sort in that way by institution – OK – on this side we know over here which we call the aspect. And then of course you can also refine your search, NAICS code search down here, if you're looking for something even more specific.

All right. And then one other feature we have built in is the browse feature by industry wheel. And so this is kind of a fun interactive area, and so you can just kind of go around the wheel and look for the area that you're looking for. And so here's mining, quarrying, gas and oil extraction. You'll see a total of 151.

So we just click this area and then it opens up and you can refine it even more based on what the area that you want. So let's click in this area, and we pull up 151 in oil, gas extraction in the – except oil and gas. So we're looking at mining, oil, and gas except oil and gas. We're just looking at coal mining in this area. All right. So and there again, there's your material types, your credential types, institution. So people have fun doing that.

So I'm just going to go back up again to the industry wheel and show here's utilities. So you can refine even within utilities and then again the searches will come up. So here we're looking at water sewage and other systems. All right. So there's many ways that you can search. You can also just enter the title. You can just do a search by let's say wind energy, for example. Type that in, and I'll come up with 357. And there again you can go by material type, credential type, institution. You can refine your searches.

I wanted to draw your attention also to a few examples that we have in SkillsCommons. Here's one from a round one grantee called IGEN, Illinois Green Energy Network. They just finished up a learning resource collection, and this is title here so you all can see enough. And if you're having trouble viewing the font or the image here, you can click the – just above the window where the view is for the presentation.

There's four arrows going in four different directions. If you click that, that will pop the screen out the full screen, and you may be able to see a little bit better on your screen, if you're on a smaller screen. But here's a description of the material. They have an IMS common cartridge file format. So it's been exported out of a learning management system or could be from another system like NTER, for example, that National Science Foundation. Several grants in the early round were using NTER to put their materials on.

So you can actually click this file, which I did, and download it, and then you can actually go through the file and look at it. But here just to get some more information about exactly what the material is, where it was developed, the institution, what the subjects are. So here are some of the keywords. If people were doing a search by keyword, these words would pop up. Industry occupation, so here's their partner, the industry sector, and you can just see all the other pieces of the metadata that this grantee entered in.

So, for example, I downloaded the file, and as you see on my screen here I've got a couple of images that came out of – this was in the unit three tab. So, for example, let's go ahead there, and I'll just blow this up maybe and I can see better. So they've got an image of an office building and doing some duct work on that.

OK. And then here's the actual kind of the schematic then for the different things that they needed to add to it as part of that course. But all of this is contained in a .zip file, this common cartridge that you saw on the page. So what it is, it came down as this common cartridge file, and I'll just go back here and show you again. I clicked on this and downloaded it and it will come down into an IMSCC and it will tell you, oh, I don't see – I don't have the program to open it with. But what you can do is you can actually just over – highlight the file name, the file extension, and just replace the last letters.

Here's what I did this file here. It was an IMSCCC. I just highlighted that and change it to .zip, and it will prompt you, do you do want to change it to .zip or you want to keep both or whatever? And I just change it to .zip and then it comes up with this and then you can actually go in and you can look at all the different folders that are in this common cartridge.

What makes it nice to have it in a common cartridge format is you see up here, the way that the folks had uploaded it, is you can take this and then enter it into another learning management system and it will look just like it did in the previous one. So if you were using D2L and you wanted – Desire2Learn learning management system – you want to go to Blackboard or vice versa or Canvas, you can take it in and it would look just like it. You could just basically rebrand it. All right.

And then just one more example from our friends here at Colorado Online Energy. They also have an IMS common cartridge. It's a big file. So curious to see what's in there. Some really neat stuff in there as well. They've got a course competencies PDF here that you can read and then talk about but here's what they developed. Here is energy 130 solar photovoltaic grid-tie, as Marilyn was discussing here earlier.

But then once again, just all the metadata that they have filled out, and so we encourage you to begin to browse SkillsCommons. If you're – I know a lot of you round fours are getting going, and so – (inaudible) – already as you can tell and see in energy and will continue to be added as round two begins to put their materials in. So most all the round ones have completed theirs submissions right now. I think we have just over 3500 submissions, which include these large files like these IMS common cartridges. So that's pretty exciting. Just a lot of available material.

And just one last area I wanted to touch on. Go back to our support area, and segue into kind of as we wrap this session up about a follow-up webinar, if folks are interested. We have some reused and revised of open educational resources. We have a beta version up right now, but we would like to just offer that, if you're – something you would be interested in.

We would provide an additional webinar, a follow-up webinar to this one, and maybe make over some materials inside of SkillsCommons that we could showcase to you folks in the area of energy. Most of what we have on here right now is in energy. We've got book makeovers. We have learning management system makeovers, a video makeover large file, but we could actually show you the process to do that. We find that some grantees, that's kind of the stopping point for a lot of folks is they're not sure exactly how to do that. And so we could highlight in a follow-up webinar, if you'd be interested.

All right. Thank you so much for your time, and if you have any questions, let me know. Type them in the chat window or follow up with me later. Be interested to talk to you. OK. Back to you, Erica.

MS. ACEVEDO: Thanks. Yes. And definitely if you can just say in the main chat something that's come out of these webinars that we've done specific to industry, and we've done a manufacturing one and IT is – folks have really want something around reusing the materials, just as Rick was saying. So if you're interested in that, please just type yes into the main chat. That way we can get a good sense of the need.

And if there are any last minute questions for Rick or Marilyn, again, please type that in the chat as well. We can pause for a quick minute or so. I know we're getting up to the end time now.

And Chris is actually just pulling up two additional polls that we have. So part of what we want to do with these industry group sessions that have been focused on the different industries that the majority of our grantees – that you all are a part of is an ask to see if you would like to continue to convene as an energy industry group. Yes or no? And in what ways would you like to remain connected? There are – (inaudible) – conference calls or there's more verbal interaction? Do you want additional webinars, some live chat sessions that we can do and you guys can just chat amongst yourselves, a base camp which has been used by some? And if there are any other ways that you'd like to remain connected as a group, please type that into the chat box also.

Any last comments from either Chris or Marilyn before I close off? Chris, can you keep up the polls, please?

MS. SMITH: This is Marilyn just to let everyone know if they have any questions or comments and they don't want to do them here, they can send them to me, and I'd be glad to respond or give them – or they can give me a call.

MS. ACEVEDO: Awesome. And could you type your e-mail address into that main chat, and then folks can do that there? And you all saw Rick's e-mail in the presentation. So that is there as well.

Great. So, I mean, it seems like there are some folks that want to continue to meet as a group. So we'll definitely take that into consideration as we continue to form TA for all of you. And with that because I know we're down to the last minute, I want to just really thank you all for joining us this afternoon.

And we hope this is a valuable conversation for you all, and I especially want to thank our presenters Marilyn and Rick for taking their time to share their experiences and expertise with us today.

And I'll hand it over now to Chris because I think there are some last-minute stuff that he wants to share with you. Thanks. Thank you all.

(END)