Webinar transcript

**Communicating the roles of nuclear energy in clean energy systems: Spotlight on young professionals and Africa**

The [NICE Future initiative](https://nice-future.org/) offered this webinar on 12 September 2019. It can be viewed at [www.youtube.com/watch?v=WSbJt58Sfb4](https://www.youtube.com/watch?v=WSbJt58Sfb4). For more information, see [nice-future.org/webinars](https://nice-future.org/webinars).

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**About the transcript**

Because this transcript was created using transcription software, its content might not precisely represent the webinar.
Hello, everyone. I'm Caroline Hughes with the National Renewable Energy Laboratory. Welcome to today's webinar, hosted by the NICE Future initiative, which is an initiative of the Clean Energy Ministerial. Today's webinar will focus on Communicating the Role of Nuclear Energy in Clean Energy Systems for Young Professionals in Africa. Before we begin I'll quickly go over some of the webinar features.

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Today's webinar agenda begins with a welcome from Carrie Edwards, followed by an introduction by Jeremy Gordon. We will then turn to our panel, who will share their experiences in the nuclear sector. Next we will open discussion for questions from the audience. Finally, Edwin Chesire and Jeremiah Mbazor will discuss upcoming events and opportunities for engagement.

I will now hand it over to Carrie to provide an introduction.

Carrie

Thank you so much. Hi, everybody. I'm Carrie Edwards. I'm a senior advisor on the communications and outreach team in the US Department of Energy Office of Nuclear Energy, and one of the members of the NICE Future team. I'd like to warmly welcome everyone on behalf of the NICE Future Initiative Lead Countries team, including the United States, Canada, and Japan, and our participant countries: Argentina, Poland, Romania, Russia, UAE, and the United Kingdom. This Clean Energy Ministerial, or CEM initiative, is a little over one year old. It was launched in May of 2018 in Copenhagen in the presence of ministers. This is a big deal because it puts the initiative for the first time, it puts the spotlight at CEM on nuclear and clean energy systems.

The NICE Future Initiative envisions a world in which innovative nuclear applications move flexibly to advance clean energy goals. Nuclear energy provides about a third of our emissions-free electricity and it operates both cleanly and reliably 24x7. As energy demand around the world grows nuclear energy and its exciting innovations will play a key role as global energy transitions towards a cleaner energy system landscape. These new systems have the potential to redraw the energy landscape while lifting up economies and those communities of the world with no energy access, and nowhere is it truer than in Africa.

Which brings us to why we've all tuned in today to this webinar. The key to building a clear energy future is by engaging the best and brightest talent in the workforce of the future to see if their innovations succeed. The NICE Future Initiative is partnering with the Millennial Nuclear Caucus and the International Youth Nuclear Congress to support young nuclear professionals. We are also partnering with Women in Nuclear Global to ensure that our workforce is gender diverse. Sharing our individual stories on the roles that nuclear technology and nuclear energy can play is vital to educating the world and expanding the nuclear energy workforce.

On our panel today I'm excited to have with me my co-moderator Jeremy Gordon, who has developed an amazing and very interactive method to help young professionals in nuclear technology and clean energy
technology industries share their stories. We've also invited several young professionals from Africa who will be sharing their thoughts and experiences on the roles that nuclear energy can play in enabling clean energy systems and the inspiring work that they're involved in within their respective countries.

As we begin today's interactive meeting it's important for everyone on the phone listening to really think about what Jeremy's saying and the process that he's going to take us through, because you can actually participate on your end as well. While we're going to hear and share and talk to two or three panelists, we would love to have your ideas and suggestions, hear your story, and if you're willing to share and turn that in at the end of the webinar, we'd love to maybe have you on a future webinar. We welcome you to send any comments or your stories to Jordan.Cox@NREL.gov. If you like today's webinar please spread the word the link will be available shortly.

And now I'd like to turn it over to my co-moderator, Jeremy, to kick things off.

Jeremy

Thank you very much, Carrie. Sorry for the small interruption.

My name's Jeremy Gordon. I'm a communication consultant with my own company, Fluent in Energy. I've been a communicator in the nuclear industry for about 15 years in different roles. I've always found it's a really, really interesting place, because from the point of view within the nuclear industry it feels really, really big. The companies I own, operate, and take responsibility. The nuclear plants are very big and very serious. The technology itself is heavy and expensive; everyone is highly qualified and very serious and professional. The regulation is very broad and deep and the systems for international governance and security are taken extremely seriously. Everything takes a really long time.

In addition to all that, the unseen component of nuclear power is equally big. For example, the billions of tons of fossil fuels and their pollution that nuclear power helps us to avoid. So the incredible resource efficiency of nuclear energy is one of the main reasons it was developed. It's one of nuclear power's unique advantages. In fact, one pellet of nuclear fuel as small as the end of your finger can give us the same energy as one tone of coal. But this key advantage of nuclear is also a kind of we- [audio cuts out 0:07:15]

Princess

That _____ _____. Thank you so much.

Jeremy

Thank you, Princess. I personally love that story and I really identify with the part where – the last part you explained, where when you first worked at NECSA you didn't understand what the organization was doing or how it did it or why, and at some point you decided to ask some people and to learn about it, and then you became an advocate for nuclear power. And it took you forward in your career. It reminds me about myself; I was a journalist and I began to write about nuclear power. And at the start of it I wasn't particularly supportive of nuclear; I just thought it was an interesting subject. But at some point I changed my mind and I became an advocate of it now and try to support the industry.

Do you think that helps you when you meet people in your work as a liaison officer, to be able to say, "Like you, I didn't know anything about nuclear, but these certain facts made me interested in it, made me support it"? Does that help you in your work?

Princess

It definitely does _____ me, because believe me that some people, when they talked, I remember that I could not ask – I could not understand what they were trying to say. So yeah. And I never gave up. I kept on trying. Like I kept on asking until I found those people who could just try and like sit down and explain the whole concept to me in the layman's language, that they tell me.
Carrie

I love that. This is Carrie. Hi, Princess. How are you?

Princess

I'm fine, yes.

Carrie

I have a question. I have a thought and a question. I love your natural curiosity that led you to continue asking people questions and then your determination to continue your work and to continue learning. I wonder – and now look at you, you're a wonderful role model for others who think it might be a little intimidating to accomplish the same thing. So that's very inspiring to our audience, I'm sure.

I'm wondering how you've been able to evolve the way that you talk about nuclear energy? What strategies, what communications are working for you based on your advancement?

Princess

Thanks for the question, Carrie.

Carrie

That's no problem.

Princess

Thank you. Carrie, I would say the strategies that work for me is, first of all is to go to the people and for the fact that I do not have a _____ background. I'm sort of – it's easy for me to relate to people who do not have a science background at all. So what works is the language that I use, number one. Because I use the simple language and I am able to explain to people the _____ technology in touch and in a way it does not intimidate them, because I am one of them. I feel like I'm one of them when I talk to them. And they also appreciate the fact that the person who's explaining this thing now is sort of – is sounding like them; she speaks their language, yeah, that works.

And when I also go to school, so they get a lot of experts – educational experts. Yeah, you find that when you speak to learners, to kids at school they actually understand and they pay attention other than when somebody who has a lot of technical background, who would come and speak a technical language with them. Sometimes it concerns that there's no understanding and they are just listening for the fact of listening. Whereas when I talk I speak their language, and yeah, they pay attention.

Carrie

And that's so important. People don't want to be lectured to you know, they want somebody who understands where they're coming from and understands the fear or understands what maybe shapes some of their thinking and their attitude. And we have found in our research in the United States that with especially the young generation is that with education comes much greater acceptance and understanding. And as we talk about the amazing innovations in nuclear energy and the new technologies, they are perceived as safer and it becomes a much easier thing for them to envision. But first, like you said, you have to be relatable to them and get where they're coming from. So that's a great story. Thank you.

Princess

Thank you so much.
Caroline: Hello. So since we got a little out of order here we're going to try to go back to Abdul. Abdul, are you ready to present?

**Male 1**

Tell him you still can't hear him.

**Caroline**

We still can't hear you. Is your microphone on? Abdul, it looks like you're still muted; could you please unmute so we can hear you?

**Abdul**

Now, you can hear me now?

**Caroline**

Yes, we can. Thank you.

**Abdul**

Okay. You're welcome.

Yeah, hi, everyone. First, I'm grateful to be part of this webinar, sharing my journey in the nuclear industry and trying to learn a lot of experiences from other participants. I'm Abdul Byamukama Ateenyi. I'm working with the Atomic Energy Council, which is a government or electorate body for peaceful application of atomic energy in Uganda. I've been working as a radiation protection officer since 2012.

Well, I can say my interest in the nuclear industry came naturally, because from childhood throughout my secondary I was so much interested in science, which I had selected by choice for higher and best education. Mostly I was interested in the area that we call modern physics, which had all the applications of atomic energy in different fields: medical, industrial, and for electricity generation. It appeared quite simple to me and very interesting, but yet theoretical. That was the biggest challenge.

So in my earlier profession in secondary schools I taught for some time, three years. But I got a bit bored teaching that modern physics. The course was Moderate ______ and it became monotonous, telling the kids similar things year in and year out. So my turning point came in 2011, when I got appointed for to work with the ______ body as a radiation protection person. So due to my normal routine as a radiation protection officer and the work involves moving out of the country and attend IA conferences and like, so I have acquired enormous experience and practical at seeing what I used to see theoretical. And now I feel more comfortable commentating nuclear and its roles to socioeconomic development of my country.

Now during my master studies in _____ between 2013 and 2015 I did my masters in nuclear and quantum engineering. I obtained a deeper understanding of the field and fell deep in love with nuclear till now to the extent that I feel everyone should feel the way I do 'cause of the beauty of nuclear being a stable energy source and carbon-free, among others.

So my country, Uganda, currently has continued to express from interest to devolve nuclear power for electric generation and we are in the first run of the IA ______ approach. So from 2017 I was interested with the responsibility of heading nuclear power regulation, where my key role is providing advice to management and to an extent the NEPU on all the issues that relate to devoting their literal infrastructure for nuclear power. Of course this responsibility is quite big. We have a small team we work with, so it came with some bit of challenges. That is by section of nuclear power, both by the internal and external audiences.

By external I mean my own stuff of the electorate body. So being with the role of each audience, my team and I developed internal training materials for our staff and we have delivered a series of trainings.
Right now I can say there is a change in behavior in terms of understanding the nuclear power and electricity generation among the staff.

For the external audience, that's the public and other stakeholders, we have what very closely was the communications department to develop a [audio cuts out from 0:18:14 to 0:18:29].

Male 1

Hi, Abdul. We lost you there for a second. Are you still with us?

Abdul

... develop a proper communication for this and ____ ____ proper materials.

So it was quite a challenge, but again, largely because it requires being steadfast, updated with letters to ensure and events taking place in the nuclear industry. So I always have spared extra hours to do some report and get ready every day to equip myself with new information. I also expect that by the end of this interaction here that my network for sharing information will have extended. Over time I've learned the uniqueness of nuclear power, that despite the differences in geographic locations and cultures in the different countries, there is some bit of harmony or what I would call standardization of ____ requirements. And this makes it quite easier to share information and experiences. We don't need to reinvent the wheels over and over again.

So my responsibility involved moving in and out of the country, meeting experienced leaders in the nuclear industry, sharing experiences on the communication strategies, and then let have met one, Jeremy here, whom I've learned a lot from since the time we met. And we borrow and bring that knowledge back home to improve on our communication activities for stakeholders.

Lastly, the challenge that we still feel currently is effective, stakeholder communication is still a big challenge, given that we are in the initial stages of our nuclear power program. So this is where our emphasis lies; that is creating understanding of nuclear amongst the different stakeholders through underscoring the role of nuclear in the different sectors of the economy and what can go wrong if we do not have the requisite infrastructure in place. So we have already done the state for the ____ and output strategies for each stakeholder, such as career sessions in schools, sponsoring in debates in universities and schools, holding colloquiums in universities, among others that we intend to roll out within this running financial.

So feeling working with my nuclear _____. thank you for listening to me.

Jeremy

Thank you, Abdul. That's a very fascinating story. I think I'm detecting a trend among our commentators here from Africa that when people first hear about nuclear energy in African communities they think of the accidents of the power plants, Chernobyl and Fukushima. And that's the first thing they think of, and so you sort of have to overcome that by talking about the benefits of nuclear and remind them the reasons why we're using this. Obviously bad things can happen and nuclear power comes with risks, but I think in most peoples’ view in this community the benefits outweigh those risks.

But I wonder how that links, Abdul, to your experience as a teacher. Do you find that as a useful experience to enable you to explain the benefits to people in stakeholder relations and also to get people inside the Ugandan nuclear community behind the project?

Abdul

Yeah, I think it's much more relevant, because as a teacher, like emission, it used to be theoretical, just go read the textbooks, come back and teach. But being here and getting involved and reaching out to nuclear power plants, know how they look like sharing experience with nuclear leaders, it gives me, first
of all a practical bit of it, talking from an informed point of view with the facts, but also sharing experiences at length from theoretical experience with us. So when I got down there to communicate with the different stakeholders and schools and communities it becomes easier for me to explain not only what I've read about in the literature, but what I've also seen and felt.

Carrie

It's Carrie. Abdul, thank you so much for sharing your story. It's amazing and you're doing very important work there. I wonder, I have a question. Because you are a teacher and I see that you have sort of held focus groups, you know, you've listened to the constructive compliments and criticisms from the public. I wonder if you're seeing any changes in attitude from the public in Uganda.

Abdul

Yeah. Thank you, Carrie. First of all, before I rate the public, there was a very negative perception within our own staff of the regulatory body; they didn't have a good understanding of nuclear energy and how it is regulated. So from a series of trainings that we conducted, we also _____ conducted four training series, there is a change in behavior in terms of perception, and right now every member of my staff or my regulatory body technical staff can go out and freely talk about nuclear.

As regard the public, as a regulatory body we have not yet, because it's still the work of the NEPU to do dissemination of information. We have not yet reached there, but we are working closely with them. So apparently when we are going to do our _____, because by law we are not supposed to use the language which is promoting. So we sit together with them and then we discuss our training methodologies and approaches to see that we deliver the right information. But we are starting that one just by _____ and by the end of the year we should be able to carve out some base to see the change in behavior amongst the public.

Jeremy

That's excellent, Abdul. Thank you.

Carrie

That's terrific. Yes, that's excellent. Yes, thank you.

Abdul

You're welcome.

Jeremy

Okay, so let's move on to our next panelist, which is Raphael Chesori, who is an IAEA PhD fellow. He's from Kenya. He's currently studying in Poland. Are you on the line, Raphael?

Raphael

Yes, Jeremy. Thank you very much online.

Jeremy

It's great to have you. Please go ahead and let us know your story.

Raphael

All right. Maybe I'd like first of all to thank everyone who is online listening to this great discussion. _____ _____, I might say that my journey to science dates back to my primary school days, because I've
had a good maybe environment back home, where I grew up. It was small, a rural setting, and I used to
be a cowboy and also did some small, small activities in the garden. But what actually inspired me to do
science is first interaction with my science teacher in primary school, who was very good in explaining the
science of things around life and what the nature can offer. Well, when I got in high school I met also a
team of science teachers who were very good. And especially the chemistry teacher, he was a very close
friend of mine, and he was the deputy of the school and we became very great friends. And I was a top
performer in chemistry and most of the science subjects.

And actually I was elected to serve as a chairman, science club chairman while in high school. And I think
for the first time we were able to have our school participate in science congress competitions to the
highest level. And we formed the team that played a critical role in that setting that kind of foundation in
that school.

Well, after my high school I was privileged to join University of Nairobi. And because of my passion and
my decide to do chemistry I joined in a program, industrial chemistry at the University of Nairobi. And it
was during this time that I learned much about chemistry, advanced chemistry, and how chemistry can
really transform us through converting raw materials to finished product for consumer consumption and
kind of many applications of chemistry in the industry. And we were also able to team up as industrial
chemistry students and we came up with a student organization, and I served as the first chairman at the
University of Nairobi. And today this student organization is doing great in terms of promoting chemistry
and many of the applications of science as far as student training, education is concerned.

So that was I ________ a lot of learnings with the industry, and even training institutions outside
Africa. We have students joining universities in the US, in the UK, in Europe in general, and they are
doing great in terms of pursuing their studies.

Well, after my undergraduate I was privileged to get a university scholarship. Because of my desire for
chemistry I enrolled for a nuclear program. I mean Masters in Nuclear Science and Technology with a
bias on Radiochemistry. And it is during this time at the Institute of Nuclear Science and Technology that
I learned of many opportunities about the IAEA technical corporation programs and how it is really
transforming the landscape in Africa in terms of utilizing peaceful applications of nuclear science and
technology. And it’s during this time that I participated in a number of programs.

More importantly, the first IAEA event that I attended was really inspiring. I attended the School of
Nuclear Knowledge Management, and at this point, this is where I learned much about how we can
generate knowledge – this _____ knowledge, _____ knowledge, and more so try to retain the said
knowledge for sustainability of the industry. And my desire even to play a role in nuclear field was really
inspired.

And another one that I participated was the IAEA-supported program, which is an initiative of the World
Nuclear University. This was a ______ session of the program and it was held at the University of Oxford.
This was 2011 and participating in this event was mind-blowing because I was able to interact with many
of the professionals, young professionals from across the world, actually over 25 countries were
represented, with about 80 fellows participating in the program. And there was a lot of sharing
experiences and inspirations. And I got greatly inspired. And I felt that going back to Kenya, it will be
a good thing that we pursue a path that we can really contribute effectively to taking this conversation
forward.

I mean the issues surrounding nuclear, because this was about a nuclear community and a community
that is really taking care of the future, because bringing young people together and trying to see how
best these young people can realize their full potential and be able to bring changes in their countries
and in their own communities through peaceful application of nuclear science and technology. I was
actually something that got my heart and it was a turnaround in my career aspirations.

And to date we are working in the networks of the young professionals, and as I mentioned, we teamed
up in 2013 and we came up with a Kenyan Young Generation Network. And in 2017 we were able to
integrate our continental network, of course, with other very strong national networks in Africa, the South African Young Professionals Nuclear Society, the Nigerian Nuclear Young Generation, and others which are coming, and I'm glad to hear the young professional from Uganda, Abdul; he has spoken very well on what they are doing. And as the secretary general of AYGN our role is actually just to create a platform where we are facilitating knowledge transfer and we are doing this in tandem with the International Youth Nuclear Congress mandate, which is currently to just create and really inspire people into nuclear and many other applications of their technology. And we are having this going forward through the support of the senior professionals and authorities and many other stakeholders that continue to hold our arms as young people.

Perhaps I don't know if it's possible you can go through the few slides I have for AYGN, just a brief overview of what AYGN is about and what we are doing and most about the event coming.

Male 1

So I think we're running a little bit low on time, so we will probably make the slides available online with the webinar, if that's okay, Raphael?

Raphael

No problem at all. But maybe just a minute I can just summarize what is the upcoming event is all about. They _______ in South Africa, hosted by the South African Young Professional in Nuclear Society. It's the second summit, having hosted a very successful one in Nairobi in 2017. This summit really is bringing all the young professionals, senior professionals, and many other stakeholders in the nuclear to share and exchange knowledge. And more so for us, it's a platform that we want to continue growing the network and engaging the national governments and many other stakeholders in promoting peaceful application of science and technology in Africa. So we see a future of nuclear, especially in Africa, because many countries are having interest to address the issues of energies and many other challenges, even in health, it's _____ environment and many others. So this NICE Future initiative is really something that we as young professionals are embracing.

Thank you very much.

Male 1

Thank you so much, Raphael. And we do strongly support all participants that are interested to check out some of the resources that we will post on the website, as we think this is a great opportunity to get involved and we are so excited to see the leadership that's taking place with you.

I think for now we'll go to the last two presenters, who also will be discussing some of the upcoming events in Africa to support nuclear: Edwin Chesire and Jeremiah Mbazor.

Edwin, are you on the line?

Edwin

Thank you. Thank you for having me. Can you hear me now?

Male 1

Yes, we can hear you now. Thank you for joining us.

Edwin

Okay. Thank you so much. In Africa we say "jumbo." "Jumbo" means "How are you?" And I want to take this opportunity to thank the organizers for having us. And as I can say, my name is Edwin Chesire, not Chesori; Chesori is the person who has just talked after me. Where I was, from Kenya and personally I
work with a nuclear power and energy agency there is in the nomenclature of the IAEA; it is the Nuclear Energy Program Implementation Organization. And I’ve been in the organization for the last seven years, since we began in 2011, when we were a committee under the Ministry of Energy. And because of the need for affordable, reliable self-energy the government saw fit that we can start the journey of introducing nuclear in our energy mix.

And as my two other presenters have alluded to, their desire for sciences and technical things, it was because of nature. Me, personally, I’m a mechanical engineer and also an energy protector. After understanding the role of engineers in solving the world problem I believe that nuclear is one of the way that we can be able now to curb the issue of climate change, because we will allow to bring affordable electricity to the places where they don’t have. And also the innovative nature of nuclear. As we talk right now, we are talking about the small model reactors, and it's something that actually it is geared towards solving the major problem in Africa, and in particular the places where we don't have enough electricity.

And say that in my journey in the nuclear industry started in 2011, when we were recruited to do issues of bringing nuclear in our energy mix. Now possible, we were able now to get all of the strategic plan. The strategic plan covered majorly the 19 infrastructure issues that are within the International Atomic Energy Agency framework, but also we added other three, which were very, very important. Knowledge management, which actually we are doing right now. Number two, the issue of research and development, and external and internal environmental issues. And after that we did our feasibility study, which is a case study for us to have a national position for you now to be able now to engage the policymakers, for them to understand what it takes for you to have nuclear in your energy mix. And also having policymakers and opinion-shapers into the energy and particularly the nuclear industry.

For today I do believe that on one of the most important journey into my nuclear it is the World Nuclear University. I was a fellow in 2014 in Oxford Christchurch, which was a wonderful turning point in my career, made me want to push the world nuclear relation and also the IAEA for sponsorship. And next about it, it is about now what we are doing in Africa and especially as a _____. One of the activities that we are planning in the next coming month, that is the month of October, it is what is called African Nuclear Presenters Platform. These are platforms first of a kind in Africa, which we want _____ to bring the industry players together. We want to showcase that things can be done so that it can be able now to have people from Africa and also the industry to come together and showcase that having nuclear in Africa, it is possible and it can be done.

So this is going to be hosted by my organization, the Nuclear Power and Energy Agency. It has been endorsed by the African Commission on Nuclear Energy, the AFCON. And it has international backing, because as we speak right now, so far we have almost 100 people coming and we have sponsorship from various institutions, which actually are looking at how we can maneuver now to promote the nuclear industry in Kenya. So I think the topics that will be covered is project management; financing; regulation; fuel management; public communication, which is very, very important – and I'll just come back to public communication just for a while; small reactor; human resource, which is a big thing; and technical evolution.

So in public communication one thing that actually we have been able now to do is engaging the media. Because the people who are being so much depended upon in this era of digital, they are the media people. And in 2016 we were able now to bring the media people together, we've trained them so they can be able now to disseminate the right information to the public. And also in organization we do have an electorate that is purely engaged for publicity, and that is called Publicity _____ Democracy, just to advocate the issue of nuclear into the people that are going now to be had.

And lastly it's about the issue of engaging the young students. We have engagement with the universities, engagement with the high schoolers, engagement with the people who are coming from the primary level of education, so they can understand it. And also we have spoken with our curricular institute of development so that in our curriculum we want to introduce nuclear as early as possible so they can be able now to appreciate in that.
So in concurrently with the nuclear Africa business platform, which will be having exhibition, and then at the end of it all we want to say we are welcoming you all to this activity. You can register. There is a link there. And also even as we shall be winding up our nuclear African nuclear business platform, which I’ll be visiting at geothermal complex, because as we speak right now, Kenya is almost 80 to 90-percent renewable because of our geothermal. So we have one of the leading geothermal field carrier, where at the end of the day we shall have to visit there and they will be the national park just next to it. Because work all day and no play make Jack a dull boy.

So at the end of the day, as engineers and as nuclear specialists at least we need to relax and have a view of what the nature is in the national talks.

So thank you so much and if there's any questions I'm ready to address it. Thank you.

**Caroline**

Thank you, Edwin. And a huge thank you to all of our panelists for joining us today. It was so wonderful to hear all of your experiences. And thank you for sharing your stories. Thank you also to our webinar participants for bearing with us through some technical difficulties.

The full webinar and all of the resources we've described will be available our website www.nice-future.org/webinars.

So thank you so much for joining us. Again, if you have any unanswered questions or comments for our panelists please send them either to us or to the e-mail addresses our panelist provided for the presentation and we'll get back to you or connect you to the right people. Thanks again. Have a great day.