

SEAD Global Efficiency Medal Competition for Lighting Products

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Webinar Panelists

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Sean Hello everyone I'm Shawn Esterly with the National Renewable Energy Laboratory and welcome to today's webinar which is being hosted by the Clean Energy Solution Center in partnership with the Super-Efficient Equipment and Appliance Deployment initiative also known as SEAD and today's webinar we'll provide an overview of the SEAD Global Efficiency Medal Competition for Lighting Products, and one important note of mention before we begin our presentations is that the Clean Energy Solution Center does not endorse or recommend specific products or services. Information provided in this webinar is featured in the Solutions Center resource library as one of many best practices resources reviewed and selected by technical experts.

And you have two options for audio you may either listen through your computer or call in over the telephone. If you do choose to listen through your computer please select the mic and speakers option in the audio pane this will just help eliminate the possibility of any feedback and echo and if you choose to dial in by phone please select the telephone option in the box on the right side will display the telephone number and audio pane that you can use to dial in. And just to reminder panelists we ask that you

please mute your audio device at any time that you're not presenting and if anyone is having technical difficulties with the webinar you may contact the help desk at the number at the bottom of the slide and that number is 888-259-3826. If you'd like to ask a question at any point during the webinar please go ahead and type that question into the question pane and that will be submitted to us and presented to the panelists during the question answer session following the presentations. And if you're having difficulty viewing the materials in our webinar portal you will find PDF copies of the presentations at cleanenergysolutions.org/training and you may follow along as the speakers present and also an audio recording of the presentations will be posted to the Solutions Center Training page within about a week of today's broadcast and in addition just a reminder that we are now posting webinars to the Solutions Center YouTube channel where you'll find other informative webinars as well as video interviews with some thought leaders on Clean Energy policy topics.

And so, today's webinar agenda is send around the presentations from our guest panelists Doctor Chad Gallinat, Michael Scholand and Debbie Karpay Weil and these distinguish panelists will introduce the SEAD Global Efficiency Medal Competition to provide contest with the Efficient Lighting Competition within the SEAD initiative. Discuss the SEAD lighting competition rules in detail and then describe the nomination process and provide details about the mechanisms of the competition.

So before our speakers begin their presentations I'll provide a short informative overview of the Clean Energy Solution Center initiative and then following the presentations we'll have the question answer session where I can ask the questions submitted by the audience to the panelists and then we'll add some closing remarks and a very brief survey. Now this slide provides a bit of background in terms of how the Solution Center was formed and the Solutions Center was one of 13 initiatives of the Clean Energy Ministerial that was launched in April 2011 and is primarily lead by Australia, the United States and other CEM partners. Some outcomes of this unique initiative includes support of developing countries and emerging economies through enhancement of resources on policies relating to energy access no cost experts policy systems and computer repair leaning and training tools such as the webinar that you are attending today.

The Solution Center has four primary goals; first goal is to serve as a clearinghouse of Clean Energy policy resources. Second, is to share policy best practices data and analysis tools specific to Clean Energy policies and programs and third, the Solutions Center delivers dynamic services that enable experts assistance, learning and peer-to-peer sharing of experiences and then lastly the center also fosters dialogues on emerging policy issues and innovation from around the globe. And the primary audience is Energy Policy Makers and analyst from governments and technical organizations in all countries, but then we also strive to engage with the private sector NGO's and also civil society.

And now this slide now shows one of the marquee features that the Solutions Center provides which is the no cost expert policy assistance known as ask-an-expert. The ask-an-expert program has established a broad team of over 30 experts from around the globe who are each available to provide remote policy advice and analysis to all countries at no cost. So for example in the area of lighting we're very pleased to have Gustavo Manias Gomez the Enlighten Project Manager for the United Nations Environment Program serving as one of our experts. So if you have any policy assistance in lighting or any other Clean Energy sector we do encourage you to use this valuable service and again it's provided to you free of charge and to request a system simply go to cleanenergysolutions.org/expert and you can submit your request through the form on that page. And so in summary we just encourage you to do explore and take advantage of the Solutions Center resources and services, which include the expert policy assistance, the database of Clean Energy policy resources, subscribe to the newsletter for updates and participate in webinars like this one.

And so now I would like to provide brief introductions for today's panelists and the first presenter that we'll be hearing from is Doctor Chad Gallinat the chair of the SEAD organization working group with the US Department of Energy. And then following Chad we will hear from Michael Scholand the Operating Agent Support for the IEA 4 East Solid State Lighting Annex where he works and support governments and the private sectors and the development and implementation of energy efficiency programs and policies. And then our final panelist today is Debbie Karpay Weil a Senior Associate at CLASP where she provides programmatic support to the SEAD Global efficiency Medal Competition. And so with those introductions I'll now like to welcome Chad to the webinar.

Chad

Thanks Sean. So if I can get this going, there. Yes so thanks for—everyone for listening in on our webinar. Kind of a point of this webinar is to provide some sort of almost tutorial for people that are—for manufactures that are interested in participating in this lighting product competition and the way it'll work. Is, I'll introduce the competition from the perspective of the SEAD initiative and the Clean Energy Ministerial and then Mike Scholand our lighting expert will go into the details of the products that are eligible and some of the criteria. Then finally Debbie will take over and talk about the logistics of the competition as well from the timeline. So this is a program that's run by the Super-Efficient Equipment of Appliance Deployment Initiative, which is one of the initiatives under the Clean Energy Ministerial. The Clean Energy Ministerial you know unites these 23 participating governments to really increase energy efficiency expansion of Clean Energy supplies and enhance Clean Energy access. The ministerial itself is an annual meeting between High Level Ministers, the Energy Secretaries, Energy Ministers from all around the world get together talk about Clean Energy technologies and we really

look to engage the public sector as well—the private sector as well as we have this public/private engagement to sort of build this industry bridge. The meetings themselves happen once a year but other than those meetings the work is done by these 13 different initiatives that can be sort of grouped off into these four pillars so; Energy Efficiency; Clean Energy; Energy Integration and Human Capacity; and the Clients Efficiency.

The SEAD initiative is under the Energy Efficiency pillar. So that's sort of how SEAD relates to the Clean Energy Ministerial. SEAD itself is made up of 18 member governments and the awards working group is made up for those seven highlighted flags that you can see on the screen right now. The membership of the awards working group kind of determines the elegance to the different product categories in the competition so it's kind of important to highlight these who work very closely with whoever represented us from all these governments in putting on all of our SEAD global efficiency medal competitions. SEAD is an initiative under the Clean Energy Ministerial as I just said. It's also an initiative under IP international Partnership for Energy Efficiency Cooperation. We have Clasp acts as our operating agent and so Debbie works for Clasp and she will be the point of contact for anyone that is participating in this competition. So going forward most of your interactions will be with her. We get a lot of technical analysis form our friends that works with the National Lab and we worked very closely with our strong collaboration with the International Energy Agency of Agreement for 'EE' the Energy Efficient and Used Equipment implementing agreement. That's divided into a few different annexes the solid-state lighting annexes the one that Make represents and we work most closely with for this efficient lighting competition. The focus of SEAD is really to accelerate the pace of our transformation for energy efficient products. We want to make big impact on the market and we do that through a series of five different work streams. There's the World's Work Stream, which is what we're taking about today there's an extensive piece, a procurement piece, a base standard and labeling pace and a technical and analysis piece, which sort of provides the foundation for all of the other pieces. There's a certain technical assistance work stream that supports the limitation in governments that are interested in adopting polices for appliance efficiency. So the goals the Global Efficiency Medal Competitions first of all is to really showcase the leadership in energy efficiency. We hope to realize the greater savings potential by applying the most efficient products in the space in the region.

We hope to increase the market shares of these—most of these sufficient products and efficient products in general. We hope that the competition actually spur innovations so that manufacturers will increase the efficiency of product lines for their products to win the competition. Our competition support test method harmonization to help lower market barriers by comparing products similarly throughout the world. We build test lab capacity in counters that don't currently have the capacity to measure— to

test products the way other countries might be and we'd hope finally that these competitions will really complement standards and labeling policies throughout the world. We've earned two competitions to completion it's relatively sort of a new competition in the SEAD Global Efficiency Medal Competitions. Flat penalty these in 201 and computer monitors displays in 2013 so those have been run to completion.

We're currently running an electric motors competition where we are right now in the process of procuring the presume winning products and sending them off to laboratories for verification testing and our fourth competition is the one we're talking about today our efficient lighting competition which is currently opened for nominations. It's really the only global mark of energy efficiency. The thing I'd really like to point out it's a recognition award. There's no financial award we don't have any money to give to the winning products, the winning manufacturers but you are able to use the global efficiency medal of product marketing strategies. So those are the four competitions that we have currently run or are currently running or have ran. We'd like to have some sort of value proposition for the manufacturer to encourage them to participate. We feel that we've made a very low barrier for manufacturers to compete. Entry form is very simple, for this completion entry is not only free but there's no need to submit products themselves so SEAD will actually go out, the SEED Government actually go out for a few example products and then send them off and okay for the verification testing. Entry is confidential so only the winners are every publicized and only the SEAD awards organizers and working groups actually knows who has entered. So non-winning products are never released to the public. We feel that this competition gives manufacturer winning products branding rights over other products that are in the market place and we feel that this is especially important in the lighting competition because it's a very crowded and changing market so this could really differentiate most of these products amongst their peers. Finally we've— there's a free marketing aspect to it so SEAD will promote the winners, will work with the winners to support marketing strategies and we look to promote you know both the winners and the SEAD completion sort of more general. So you know that we have quite a bit to offer manufacturers when they do participate and win our competition.

A little more specifically about the previous competitions so, for TV Samsung and LGs where the winners. Computer monitor, Samsung LG and Acer were the winners. The competitions receive really significant media coverage you could see this picture in Time Square with a little notification. We work with the winning team to really optimize media strategies through trade journal press releases Energy Efficiency adversary groups. Finally we have award ceremony. The biggest award ceremony is actually at the Clean Energy Ministerial meeting so there's really high-level audience of energy ministers, Energy secretaries where we invite the winning products, the winning manufacturers to come out to the Clean

Energy Ministerial to present them with awards to honor and we have a big award ceremony surrounding them. Just a little more about the promotion we have good relationships with IPEEC top ten other websites that promotes energy efficient products and then of course our ceremonies here so this top picture here shows the Global Award ceremony at the two energy ministerial ago in Delhi and you can see USDO secretary Hugh presenting awards to the winners for the ops available. We also are doing regional awards ceremonies hoping to expand that with the lighting. This is a picture from the European IFA Fair. I mean of course we go to conferences to promote the competition and to promote the winners as well. So, we try to hit as many audiences as possible for promoting both the competition and the winners.

So these are pictures from the most recent Clean Energy Ministerial in May here is undersecretary Beltran from Mexico presenting the awards to Samsung and LGs so see that you go up there with the Energy Minister and get your picture taken on stage in front of all of the participating energy ministerial attendees. So that kind of gives you an overview of what happened previously and I'm just going to quickly introduce the lighting awards so we— I hope to identify the most efficient products within sub-category and the region. We have 32 available region awards and all we do is compare all the regions award to find a global winner per category. So we have eight different categories in this competition and we'll have 32 regional winners and 8 global winners for each category. We hope to recognize both established and new technology products Mike will get into this a little bit later and the winners are selected from self-nominations from selected manufacturers. Then the winners based on these nominations we go out procure the samples and test some criteria to make sure that they indeed hold up to their claims. A nomination period is currently open until October 3rd and we hope to announce the winners in April 2015 to coincide with the next Clean Energy Ministerial, which will happen in Mexico City. With that, I will hand it over to Mike to go into the specifics on the product category and production criteria.

Michael

Right. Thanks very much Chad, Mike Scholand here from the IEA for the 4E Solid-State Lighting Annex and as Chad said, I'm going to walk you through some of the competition products categories and the competition criteria I just want to start out though by saying that the— everything I'm going to tell you in this section of the presentation is available on the website for the SEAD Global Efficiency Medal award and it's actually a rule book that walks you through all of the criteria. Talks about you know, essentially the test method that you use to measure what the assessment criteria are, the threshold values and so on. So you don't need to take copious notes while I'm speaking you'll be able to find everything online and these criteria's were developed over the course of about a year. We started with the Solid Safe lighting annex performance tiers and went through a process of review with the SEAD country representative experts and then also the experts for the 4 East also lighting annex, so this is the

combination of a lot of input from many countries from around the world and in particular Australia, Denmark, the UK— sorry the US, the UK and Sweden so it's been a good international collaboration to get to the point where we are now. Next slide please.

The chart now shows how the— The competition is built around forming product categories which you can see on the slide two of them are retrofit lamps and two of them are motivators fixtures that basic— well the lamps have a— or sentiment to be direct replacements for conventional technologies. The first one is a general lighting service lamp and omnidirectional or non-directional lamp in Europe and these are screwed into a main voltage socket with a tight fitting and are meant to emit light in all directions and primarily used in the residential sector but also some commercial and industrial applications.

The directional lamps are lamps that emit light in a direction. They're sometimes referred to as reflector lamps in North America and these are you know sort of MR16 or PAR38 are the names of them and they also operate on the mains voltage or on the low voltage. So you find depending on how the situation is for your installation you may find other voltage and these are found commonly in both the residential and commercial sectors. Planar Luminators are replacements for fluorescent lamps so you might find these for instance in a commercial office building or in the hospital and they sit in the ceiling and produce beautiful white light distributed uniformly across the space and of course the Planar Luminators are the LED replacements for those fluorescent luminaire lamps and that's that category.

Finally the fourth one down light Luminaires these are fixtures that are recessed and function as a spotlight or down lights in application around commercial and residential sector. So this screen on this slide shows you essentially the— as we were saying the four award categories— of product categories where Chad has mentioned there are eight set of product classes within those. So you see the four categories across the top the General Lighting Service lamp the GLS lamps, the directional lamps, The Plane Luminators and the Down lights and then within them we have specific categories relating to performance aspect of the resources. So just starting with the GLS lamps— I'm sorry we go down the left hand side of the small table you find the regions for the SEAD and awards. So there's Australia, Europe, India, North America those are the four regions where SEAD will be making awards in these eight product classes. Then there's a global award that comes across the bottom which is for all of the— which is one award for all four regions and what we have put on to that is that essentially you could see the GLS lamp category and in the mains voltage directional lamp. We're going to specify those voltages of the regions because North America is the odd one out with 120 volts. The Global Award is going to be on the basis of 230 volts so north American products unfortunately will not be competing for the global awards for those four product classes. But they will be competing for the 12 voltage

directional and the other planar and the down lights that will be across all four regions so that went into too much detail I'm sorry about that just to make sure that's clear. Now in the GLS lamps you could see we have commercially available product that will have 800 lumens or higher and the color temperature there 2800 lumens 2700 to 3000k is meant to represent a warm white product which will be replacing for example an incandescent or halogen light source and then there's a better than 800 lumen which is 4000-5500k which is a cooler light it has more blue content in the spectrum and that would be replacing something like for example the CSL product. Both of those around 800 lumens or greater will be the equivalent of a sort of a 60 watt incandescent.

Now the new category of the new technology that is next to that is looking at a light source that has almost doubled the lumen optic, 1500 lumens this is sort of in the range of equivalent to a 90 or 100 watt incandescent lamp and the color temperature there's also cool white it is 4550 lumens. We look on this new technology because of these high flux energy lamps are really just emerging unto the market now and they're sort of a new technology where this 800-lumen package has been commercially available for a number of years. So we wanted to create a special pin for this to recognize high flux substitution products in the LED group. On the directional lamps you can see we've split these into two pins one is a low voltage and the other is a mains voltage. The low voltage are running on 12 volts input and the mains voltage are running on whatever the mains voltage is for the region. In North America is 120 and the other regions are 230 and the light output there are greater than 800 to 600 lumens of volts and this s meant to represent a 50 watt MR16 replacement. On the Planar Luminaires we looked at a product here just one category of 600 by 600 millimeter square lumens around a 2 by 2 foot product and the light in out there should be greater than 2000 lumens. On the down lights we have two lumens one is for small diameter one is for large diameter and the lumens are requirements there are also different 700 is for the small diameter and 1500 for the large and the color temperature is a little bit different. So these categories were somehow elected because they represent the certain involvement volume products in the region that we see globally producing most of the light around the world and we felt these were the ones to have the first lighting competition based on. Next slide please.

So they are three clusters of competition criteria. I've got one slide on each of these topics to speak to and essentially there are criteria that are submitted that SEAD as Chad mentioned will actually go out and purchase lamps in the market and product verification testing in an accredited laboratory to make sure that these claim values are valid. Then our criteria that SEAD requires you to submit manufacturers to submit supporting documentation on those and when you see the criteria you'll understand why but there is a validation testing conducted on this but the paper work submitted by manufacturers applying to this should be from accredited resources to be more easy to validate. There is a testing based on those and

then finally there's a cost criteria where sort of a maximum price point has been established and so the product needs to have a suggested reach out price at or below that level and that's to make sure that the endorsement is not applied to something like a 50 or 60 dollars LED lamp that really work on a very low volume.

The SEAD program really wants to transform market so the focus here is to say okay let's find a certain mid-point price and make sure that the award is given to a product that is at or below that level so that consumers would really engage the product and buy lots of them. But on enterprise criteria as it says on the box the competition is really based on efficacy it's the ability to convert watt into lumens efficiently that will ultimately determine the winner. So these other criteria's about color and lifetime and the performance these are quality threshold benchmarks not all of the products in the competition have to achieve. But then the— once they've achieved those and demonstrate they've achieved those. The award will actually be done on the basis of ethics. Okay. Next slide please.

This one— these are the criteria's that will be verified through testing and the way we set these slide up is to show the four product and then the criteria I'm going down the left hand side for each of them and we put a little tick in the box to tell you if that criteria applies to that specific product. So just looking at the first group there of efficacy and light output and all of the products obviously are tested for lumens efficacy and lumens per watt that is the main basis of the competition as I said. Light output is obviously measured as part of that function. The prevalence claims with replacement lamps applies to the two replacement lamps, the General Service and the Directional and that something that if the claim is made on the packaging then it replaces certain know light output such as the 60 watt incandescent and consumers will be satisfied but this isn't a prevalent and not something that is less bright to become critical of the technology.

There's also luminous intensity distribution measurement which applies to general lighting service because the GLS lamp is an omnidirectional lamp you don't want to replace it with luminous light source that only emits in a certain— one direction for example. So there's a requirement around that and then for products that are directional such as directional lamps, planar and down lights there's the sort of lumens requirements as well. Then the center of the luminous intensity requirement applies to the very directional because they're very directional down lights in SEAD criteria as I mention in the rule but we don't go into details in the slides obviously but there are specifications around these requirements in the blue book. Then on color and light quality there's a color rendering requirements which includes CRI as well as an R9 so it's a double requirements are both thresholds. There's a correlated color temperature requirement those are also outlined in the product categories and the chromaticity tolerance a minimum power

factor and a flicker and for the flicker requirement we're using the flicker index. Next slide please and all of those are subject to verification testing those are relatively short test to conduct, SEAD will identify the top performers from the products submitted and then we'll go on procure those tops and professionally validate those test results in an accredited lab. You know these criteria's are ones that will be established on the basis of supporting documentation.

So the first one is, number three there is lifetime and for this you know these lifetime performance apply to all four product categories overtime at this to be all 70 value. It's the first one there's color maintenance of the U-prime D-prime hours. There's an endurance test and which is a switching test, switching the light source on and off according to the IEC test method and then also warranty duration requirement, and, and I have a slide that just on the Lumina maintenance it's currently actually an important one and we've had a few questions about that one yesterday on the previous call. The second—the fourth group there is on environment and this one looks at safety making sure that the products reach the requirements of the reach sold used as a substances to be avoided a blue light for the biological CLASP and for planar and down light lumens is also a requirement of participation.

Okay next slide thank you. So this is the third of three slides on product criteria. This s the prices that are the maximum price point for these categories of product where the price essentially your product need to be of the lowest level when it enters the competition and you see there's some variations in pricing here and that's the been established through the process with manufacturers and these prices are meant to represent other state and regional midpoint for other LED product that's being sold in these categories. There will of course be products that are higher than this but in general we wanted to get something at or below a moderate level that still would give you a good quality efficient LED lamp. Next Slide please.

This is my last slide. This will just talk a little bit more about the lumen maintenance requirements and essentially here what we're doing is modeling lifetime of lumen around the US Energy Start criteria that was established in last year in August of 2013. So this is primarily and LM80 test method of the LED source itself that the LED in a lamp or in an luminary is the LM80 value of the chip level test and essentially, the degradation of that light source according to LM80 and TM21 for the forecasting words on that and so if the LM80 data is available all 6000 ounce of data are available when a manufactures emits their application of course they are very welcome to submit that at the time it's in the competition. If it's not available we have this timeline here in the bottom whit shows the so that we can get 6000 horse of data prior to the, to the winners being announced. So basically you know that by October 13 you need to have at least 2000 ounce of data available and then within a month of that in early November 3000 hours and then by March 6 of 2015, 6000

hours exactly. So that's where another way to do the competition but the LM8 data is known at the chip levels for these when the application is submitted and all 6000 hours is submitted for instance. So I hope that's clear if it isn't you can come back with questions during the question answer period at the end of this call and I'll now hand over to Debbie through competition logistics. Debbie?

Debbie

Thank you very much Mike. So yes my name is Debbie Karpay Weil and I am with CLASP and we are the operating agents for the SEED and we'll be handling all the competition logistics so you'll see an email address through some of the slides as I speak about the logistics. The email address is awards@superefficient.org and that email address comes to me. So I'm going to walk through how we actually execute the competition. As Chad mentioned in the beginning of this webinar the nomination period closes on the 3rd of October and it's a self-nominating competition so manufacturers or retailers in order to nominate a product the first step is to fill out the declaration of performance form and I'll go into this into more details a little bit later on but essentially this form is a straight forward form that list all of the previous criteria that Mike mentioned and information about the product. Along with that you have to submit at least 2000 hours of maintenance testing although as Mike said because it's the chip level test we're very happy to have 6000 hours efficient and then in addition there will be information on the declaration of performance will come from and LM79 generally. Next slide please.

Once the product nomination period closes you will enter into the judging and validation period and so we'll be going through this period by reviewing the nomination form and using the declared luminous efficacy of product. We will determine for each category and region which product is the presumed winner on the luminous speed. And then we will go into the market place and we will procure samples of the presumed winning products and we'll test them for the relevant criteria at an accredited lab or several labs. For past competitions we have depending on the product category, we assisted in regional lab in multiple labs after having done a round robin testing to make sure that everything was aligned. We've also tested in a single lab and so it will either be in one lab or regional lab that will certainly be all of the up to the package sample. Then at the end of the validation period we will notify the manufacturers of the winning product that have been vetted and validated through testing. Next slide.

Finally, in the April or May of 2015 we will enter into the winner announcement phase and this is really the exciting part of the competition since we get to work with the manufacturers of the winning product to promote those. As we have, have mentioned we have the regional award ceremonies and the global award ceremonies of the global winning product at the six Clean Energy Ministerial in Mexico City, and I believe that Chad mentioned let me that the global award in each categories and so it's a direct comparison among those three regional winners. In addition you saw the pictures of the SEAD award medals in the square in the New

York where we publicized the winners through press releases and we work with our partners at various organizations and energy efficiency to make sure that product won global efficiency award the only global recognition award that there is. Next slide.

So in order to nominate a product, going back to the nomination period. First I want to make clear that all manufacturers and retailers are encouraged to nominate product criteria and so those who participate which again we'll look at it again in a minute and you'll submit that from through your email to awards@superefficient.org and sometimes of course there'd going to be a little bit of— there may be a little bit of confusion if you have questions if you're not sure how to fill out a app you can always email that address and I will get back to you. And also if as we're going through those declaration of performance forms in the section about something on that form we will also contact you. So it's not a closed-door process we can talk to you after the nomination period have closed to figure out any issues that might be outstanding on the forms.

Competition materials, all them including the official rule that Mike presented the tables from can also be found at superefficient.org/lightingawards and the declaration of performance for itself can be found at superefficient.org/lightingorg that declaration of performance form is also on the lighting but we wanted to make it very clear where that is so if you wanted to make that interest on the from the lighting page is the fastest way to get to. Next slide.

Okay, so now to talk a little bit more about the declaration performance form itself. It contains pretty straight forward information that we really think impact competition not to be a big burden for manufactures to complete the first section is simply applicant contact information about the point of contact and manufacturers and then the product nomination details include information about the products itself branding the model and which categories the product is being nominated for award category and award region.

The next sections are about product characteristics and this includes both the declared product characteristics which I'll talk about more in a minute but those are the ones that we will test through verification testing and then as well additional product characteristics with the supporting and that will be probably the lifetime testing 6000 hours testing and then finally the last two pieces of information that we'll ask you to submit our product image and our packaging image and the packaging is primarily for any of those claim equivalency claims just like that they can see what the packaging looks like, next slide.

So now to get into the product characteristics a little bit more the uses of the declared product characteristics and then again these will look familiar as they match the characteristics and criteria that Mike went through. So you have light power in on mode and on standby mode, a few of them

only apply to some of the categories again that was shown in the table that Mike had (43:25) [inaudible] will apply only to the omnidirectional lamp so the luminous density for directional and planar and down light and so on and so these—the final ones on the declared characteristics is the manufacturers reach out price and that's actually the maximum price threshold that is set to make sure that the products in the market are really sort of moving by customers. Then for additional product characteristics then again this is taken directly from the nomination form. We're asking for evidence of usage characteristics in addition to the actual criteria in order to lumen maintenance of 6000 hours for instance. We'll be asking for LM80 and the so that we can be at the test that's connected by an independent lab and accredited lab and this is because we can't do 6000 hours of testing it would take a really long time in the competition and we understand that LED market is moving so fast that would really delay. You know we'd be awarding products that were perhaps the generation older if we were to the additional fix and the testing in half of them. So we are asking instead for evidence that these test listed on the original characteristics have been performed by an accredited lab. Next slide.

So again we wanted to touch on the wash manufacture who participates you saw this earlier Chad spoke of these things as well but just to reiterate the entry form is very simple. Entry is completely free and SEAD will procure sample products for verification testing. Entry is confidential. We have actually have some interest from manufacturers who they'd ask whether we could provide information about how their product stands as far as sees against the other ones that were submitted in that category and we'd be happy to assure that information as well obviously any information about other manufacturers products will be anonymous. But we'll be happy to if you've nominate a product that doesn't win. We'd be happy to share information about where that product does fall in the spectrum of nominated products. Importantly in a crowded and rather the involving market the Global Efficiency Medal provides rights at free marketing. Next Slide, so that is it on the competition logistics and again if you have any questions or comments following this webinar and if you want to get on this webinar feel free to contact me at awards@superefficient.org and we will certainly get back to you on with any answer to your question if you may have.

Sean

Great thank you very much Debbie and also Michael and Chad for the presentations and we will move along now for the question answer session of the webinar. I had a couple of questions come in and before we start just want to remind the audience that if you do have any questions for any of the panelists you can go ahead and submit those through the question pane in the webinar window. The first question that we have come in asks, are there outdoor street light luminaries included in the product categories?

Chad

Yeah so currently now we don't have any outdoor lighting categories but we certainly consider these when coming up with the product categories

and we hope to have future competitions that will cover these sorts of products.

Sean Great thank you Chad. Next question ask if there any fees associated with entering the competition.

Chad Nope. No fees at all there— it's completely free other than the time when it takes to submit your product declaration forms so you know it feel like it's a free of value.

Presenter Great thank you again and that was actually the second of the questions that I've received so at this point as long as any more questions come in I'd just like to turn over to you Chad in case you have any last details and your remarks that you like to add.

Chad Thanks Sean. I just wanted to thank all of the participants listening in. Thank you Shawn and Heather for putting this together in the clean Energy Solutions Center and thanks to Mike and Debbie for working on this— working on the competition for presenting this— these webinar product nomination you still have a couple months to think about the products that are eligible and please do get those product nominations in and once again thanks everyone.

Sean Great thanks again Chad and we did have one more question come and we'll go ahead and address that one since we still have plenty of time and the questions there maybe manufacturers who for logical marketing strategy maybe only selling online and through the limited retail outlets, how do you collect the samples for those?

Debbie That's a great question so in that case we will certainly work with the manufacturers to find out what those retail outlets are right so we actually you know obviously something being sold like IKEA that's very easy for us to procure and if it's being sold in— anywhere online it's also straightforward for us here. On the retails and smaller outlets we will work with the manufacture of those nominated product to make sure that they can procure samples from those places where it is being sold.

Sean Great thank you Debbie. So now at this point I'd just like to go ahead and ask the audience if they could help evaluate the webinar providing three quick questions on what we have in or little survey. The first question which can be answered right in the go to webinar. The webinar content provided me with useful information and insight. Great and the second question is the webinars presenters were effective. Then the final question is overall the webinar met my expectations. Great and thank you for answering our survey and on behalf of the Clean Energy Solutions Center we'd just like to again thank our panelists and our attendees for joining us for today's webinar. We very much appreciate everyone's time and I do invite attendees to check the Solutions Center website if you'd like to download PDF version of the slides or listen our recordings of today's

webinar as well as any previous help webinars it takes one week for the recordings to be posted to the website. Additionally on the Clean Energy Solution site you will find information on other webinars and training events and just a reminder that we are posting webinar recordings to YouTube channel where there are also links to other relevant clean energy policies videos and with that I hope that everyone have a great rest of your day and we hope to see you again at future Clean Energy Solutions events. This concludes our webinar.

DRAFT