

Enhancing Financial Flows for Energy Efficiency Investments

—Transcript of a webinar offered by the Clean Energy Solutions Center on 23 February 2016—
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Webinar Panelists

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Annie Degen-Neuville
Peter Sweatman
Bethany Speer

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United Nations Environment Programme Finance Initiative
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Sean Esterly

Hello everyone. I'm Sean Esterly with the National Renewable Energy Laboratory. And welcome to today's webinar which is hosted by the Clean Energy Solutions Center in partnership with the International Partnership for Energy Efficiency Cooperation, also known as IPEEC, and it's G20 Energy Efficiency Finance Task Group. Today's webinar is focused on Enhancing Financial Flows for Energy Efficiency Investments.

And before we begin one important note of mention is that the Clean Energy Solutions Center does not endorse or recommend specific products or services. Information provided in this webinar is featured in the Solutions Center's resource library as one of many best practices, resources reviewed and selected by technical experts.

And I just also want to go over some of the webinar features for you. For audio you have two options. You may either listen through your computer or over your telephone. If you choose to listen through your computer please select the "mic and speakers" option in the audio pane. Doing that will help eliminate the possibility of any feedback and echo. And if you choose to dial in by phone just select the "telephone" option and a box on the side will display the telephone number and audio PIN that you should use to dial in.

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And we do encourage anyone from the audience to ask questions at any point during the webinar. If you do have a question for our panelists please go ahead and submit it through the "Questions" pane in the GoToWebinar panel. And if you're having difficulty viewing the materials through the webinar portal we will be posting PDF copies of the presentations to <https://cleanenergysolutions.org/training> where you can download those for your own viewing.

Additionally an audio recording of today's webinar will be posted to the solutions center training page within a few days of today's broadcast. Additionally we are now adding recordings to the Solutions Center YouTube channel where you find other informative webinars as well as video interviews with thought leaders on clean energy policy topics.

And so we have a nice agenda for you today centered around the presentations from our guest panelists: Benoît Lebot, Peter Sweatman, and Annie Degen-Neuville. These panelists have been kind enough to join us to present the work of the G20 Efficiency Finance Task Group which aims to enhance the global financial flows toward energy efficiency highlighting the progress achieved and the key next steps. An overview of the Clean Energy Finance Solutions Center will also be provided.

And before our speakers begin their presentations I'll provide a short informative overview of the Clean Energy Solutions Center initiative. And then following the presentations we will have a question and answer session where the panelists will address questions submitted by the audience, closing remarks, and then a brief survey.

So this slide provides a bit of background in terms of how the Solutions Center came to be formed. The Solutions Center is one of 13 Initiatives of the Clean Energy Ministerial that was launched in April of 2011. It's primarily led by Australia, the United States, and other CEM partners. Some outcomes of this unique initiative include support of development countries and emerging economies through enhancement of resources and policies relating to energy access, no cost expert policy assistance, and peer-to-peer learning and training tools such as the webinar you're now attending.

There are four primary goals for the Solutions Center. The first goal is to serve as a clearinghouse of clean energy policy resources. The second is to share policy best practices, data, and analysis tools specific to clean energy policies and programs. Third is to deliver dynamic services that enable expert assistance, learning, and peer-to-peer sharing of experiences. And then lastly the Center fosters dialogue on emerging policy issues and innovation from around the globe.

The primary audience is typically energy policy makers and analysts from governments and technical organizations in all countries. But then we also strive to engage with the private sector, NGOs, and also civil society.

Another marquee feature that the Solutions Center provides is its no cost expert policy assistance known as the Ask-an-Expert program. And 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 to them. For example in the area of energy efficiency policy we're very pleased to have Jeff Deason, senior analyst at the Climate Policy Initiative as one of our experts.

So if you have a need for policy assistance in energy efficiency policy 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. So if you have a question for our experts please feel free to submit it through our simple online form at cleanenergysolutions.org/expert. Or to find out how the Ask-an-Expert service can benefit your work please feel free to contact me directly: Sean Esterly at Sean.Esterly@nrel.gov. We'd also invite you to spread the word about this service to those in your networks and organizations.

And it does look like we'll be able to have Bethany give a brief overview of the Finance Solutions Center. So Stephanie if you want to show that first. Bethany will—There you go. Thanks Stephanie. Bethany is joining us from NREL and she has seven years of experience as an energy analyst at the National Renewable Energy laboratory. Her current focus is working with developing countries on mechanisms to engage private sector investments.

After Bethany we will be moving on to Benoît. Mr. Benoît Lebot is the executive director of IPEEC. During his extensive career he has worked for the French National Energy and Environment Agency, the International Energy Agency, and the United Nations Development Program.

Peter Sweatman will be our second speaker. Peter is the Chief Executive of Climate Strategy & partners, a strategic consultant in clean energy, clean technology, energy efficiency, and climate change strategies.

And then our final speaker today will be Annie Degen-Neuville who is in charge of coordinating the work on energy efficiency finance at the United Nations Environment Programme Finance Initiative, the global partnership between UNEP and the financial sector on sustainable finance.

And so with that, Bethany if you're ready we can turn controls over to you if you have your slides all set.

Bethany Speer

Hi Sean. Yep, can you hear me?

Sean Esterly

Yes we can.

Bethany Speer

And I don't have any slides. I'm just going to make a couple of quick remarks.

Sean Esterly

Great, no problem.

Bethany Speer

Yeah so just talking a little bit about the Clean Energy Finance Solutions Center. So this is part of an expansion of the Clean Energy Solutions Center which was announced at the sixth Clean Energy Ministerial in June, 2015. The Finance Solutions Center was part of this expansion. It was formally

launched by U.S. Department of Energy Secretary Ernest Moniz at the 21st Conference of the Parties last December.

So the Finance Solutions Center really builds off of the Clean Energy Solutions Center cores services including an Ask-an-Expert technical assistance program. And as part of this finance specific effort we have on-boarded nearly 30 experts who have a wide variety of areas of specialization. And this network is really a global one. They can facilitate remote analyses and best practice recommendations on clean energy finance strategies, the design of specific mechanisms like loan guarantees, interest—just as a couple of examples.

They can help inform on structuring national clean energy funds and also analyze different means and levels of financial incentives such as the tariff component of a _____ tariff or _____. Or experts sit in Asia, Latin America, Africa, all around the world, and come from both the public and private sector. They include those with procurement experience and project development experience as well.

And so we're really glad to respond to any questions related to government engagement of private sector investment mobilization for renewable energy, energy efficiency, clean transport, and energy access. So if you're with the government or working closely with them with the endorsement we're glad to work with you to quickly respond and provide high quality objectives, technical analysis on those topics of your choice.

Another core part of this effort is to really serve as a key collaborator with other clean energy finance initiatives, financial institutions, and the private sector to really highlight those innovative programs and business models that serve to engage private sector capital. So we're glad to help amplify those efforts. And you should feel free to reach out if you're like to explore that collaboration.

With that I'll turn it back to Sean, thanks.

Sean Esterly

Great. Thank you very much for the overview Bethany. We do appreciate it. And right now I am showing the home page for the Finance Solutions Center. Please free to go out there and visit that page. And if anyone has any questions for the Finance Solutions Center you can go out there and submit those through that. Or you can also ask them here and we'll be sure to send those to Bethany so that she can respond.

With that we will now turn things over to Benoît for the G20 introduction.

Benoît Lebot

Good morning everyone, good afternoon. This is Benoît Lebot. I am the head of the IPEEC Secretariat. IPEEC stands for the International Partnership for Energy Efficiency Corporation, an international organization born in 2009 from the G8 which objective is to coordinate activity in energy efficiency among the large economies. Sean I don't see my presentation. Do I have access to my presentation? Oh yes, sorry.

Sean Esterly

Yep there you go.

Benoît Lebot

As you can see on the picture the International Partnership for Energy Efficiency Corporation is hosted in Paris. We are very close to the international energy agencies, to those who are coming to Paris and maybe visit some meetings there don't hesitate to come and visit us in Paris not to the Eiffel Tower. The current membership of the International Partnership for Energy Efficiency Corporation is 16 countries. As you can see all are large economies. All those countries belong to the G20 the group of the largest economy in the world. Turkey is soon to officially join IPEEC.

The vision of IPEEC is a world where key national policy makers view energy efficiency as a resource and implement consecutive policies to promote it. The benefit of working among the G20 is when you take into account the energy that is consumed by bringing, for instance, 16 member countries the energy consumption weight more than 75 percent of the world energy consumption. So if those countries accept to collaborate and to move on the energy efficiency path that is likely to have an impact on the world.

The mission of IPEEC is to accelerate the adoption of energy efficiency policies and practices through international corporation and information sharing on policy analysis, programs, _____, and proven practices. This is why we very much welcome the hosting of this webinar for the Clean Energy Solutions Center. This is a perfect opportunity to inform about the work currently done under IPEEC.

In 2014 under the G20 presidency of Australia the G20 countries have decided to implement an Energy Efficiency Action Plan. This Energy Efficiency Action Plan proposes a series of six international tasks to enhance energy efficiency and to collaboration specifically on key dimensions of energy efficiency. The G20 is requesting the IPEEC as an international organization to coordinate the implementation of the action plan.

Since November 2014 IPEEC is organizing this new activity, one of them being on energy efficiency and finance. So the action plan comprises those six activities. Enhancing information flow between the finance community and the energy efficiency community. There is a specific product targeting energy efficiency network devices—the Internet of Things. We have an international activity to promote energy efficiency in vehicles. Also in buildings, we have specific activity on industrial energy management and one to enhance energy efficiency in electricity generation.

The action plan was endorsed by G20 leaders in 2014 in Brisbane. The purpose is to encourage uptake of energy efficiency policies in major G20 economies. And the action is around those six work streams. We are going to present now one of our most active of our working group on finance. This working group has already produced a first set of recommendations that was presented to last year's energy ministers who met under the G20 in Turkey. And the work is continuing this year.

Thank you very much for being with us this morning. And I'm now handing over to some of the leaders of this task group, Peter Sweatman, the floor is yours. Thank you very much.

Peter Sweatman

Thank you very much Benoît. Let me just show my screen. Yes my name is Peter Sweatman. I for the last year have been part of the Energy Efficiency Finance Task Group secretariat helping to support the work of the finance task group whose goal is to enhance capital flows to energy efficiency investments. Now each of the six work streams under the G20's Energy Efficiency Action Plan have different participating countries. This work stream is currently co-chaired by France and Mexico. And it has the 13 countries whose flags can be seen at the bottom of this slide.

The first country that's relevant to understand this work is why energy efficiency investments are particularly important as a contribution to the action plan. These slide shows some IEA analysis that looks at the current aggregation of the individually determined national contributions to greenhouse gas reductions globally—the INDC scenario—and then looks at a bridge scenario which achieves a peak in emissions in 2020 and brings down the greenhouse gas emissions curve to meet the two degrees trajectory.

Under that bridge scenario, on the right-hand side—it is clear that energy efficiency represents around one-half of the greenhouse gas emissions savings required for that trajectory. Looked at across the world with focus on G20 countries you can see that the blue slice of energy efficiency greenhouse gas emissions reductions produced in the bridge scenario varies by region but that in the European Union China, India, Latin America, and the United States it still remains an enormous proportion of the necessary greenhouse gas reductions.

When we look at the finance and investment needs for this two degrees target we can see that compared with 2013 the amount of increased investments needed on an aggregate basis from 2014 to 2040 are some eight times more than the current amounts. Now this when compared for example to the increase necessary or renewals is renewals requires to be increased by a factor of two times whereas energy efficiency investments need to go up by a factor of eight times. And this disparity is the thing that makes this G20 finance task group's work so important

Building on what Benoît had said having been launched in March of 2015 the Energy Efficiency Finance Task Group worked through last year to appoint where it had produced a series of Voluntary Energy Efficiency Investment Principles for G20 participating countries which were referenced by the G20 ministers when they met for the first time in Istanbul in October. And it was highlighted from among the work of the different task groups of the IPEEC.

Those principles were created through a highly transparent and engaged process which required consultations with over 180 experts through 5 workshops held in various geographies in the world trying to bring together both stakeholders from the policy making communities and stakeholders from the financial institution communities and experts in the energy efficiency

sector. The principles themselves were developed with collective and bilateral input from each of the member countries to the Energy Efficiency Finance Task Group—the 13.

And then was open for consultation to all of the members of the Energy and Sustainability Working Group of the G20. The detailed part of that process together with case studies was published in a detailed report by IPEEC last year and there certainly is a strong consensus among countries to continue to develop and build upon these principles this year.

So briefly what are the principles? The principles were based on an initial foundation of two years' worth of work bringing European countries together in a series of areas which was then able to seed the work of the G20. So there are five principles. The principles begin with the clear recognition of the importance of energy efficiency but not just as a delivery agent for greenhouse gas savings but also as an economic and development priority.

So the positioning of energy efficiency in the overall strategies of countries is important and the work believes that there is a number of considerations which make energy efficiency attractive as an investment area. The second principle encourages countries to consider both supply and demand side investments in a balanced way. What this drives towards is that when countries plan their energy systems it is often the supply side or the generation and transmission side investments which have historically received greater support and focus.

In a world with targets to significantly reduce below 2 degrees C and a world in which energy efficiency is an attractive and development priority it is important that energy planners in countries consider how energy consumption can be reduced and how energy intensities can be improved as a policy which sits alongside and balances and countervails the needs to build supply side infrastructures.

Principles three and four in the detail of the work have a series of sub-principles. The methodology undertaken by the Energy Efficiency Finance Task Group separated the demand for energy efficiency investments, i.e. why building owners, why industry owners would wish to invest in their facilities or their infrastructure to save energy from the supply of finance, i.e. why financial institutions should prioritize and focus on energy efficiency investments as a core and strategic part of their product offerings.

So on the demand side the country level review of measures and policies that stimulate the demand for efficiency investments was called for, including within there the provision of clear regulatory and investment signals to encourage the uptake of energy efficiency investments within the upgrade cycles of infrastructure. So when the infrastructure needs to be renewed energy efficiency considerations would be paramount. To stimulate improved energy management and support energy efficiency in efficient investment choices with improved awareness of the energy efficiency investments at the key decision making level.

To facilitate national and where appropriate regional mechanisms that make the data for energy efficiency measures and investments easily accessible to market participants. And those involved in considering clear systems of labels and certificates and other in-country communication protocols. There is a need to aggregate, standardize, and bundle energy efficiency investments because they typically tend to be heterogeneous and spread around with a particular focus on upscaling retail and SME energy efficiency investments.

For countries to look into accelerating replacement cycles in different facilities with a focus on the upgrade of worst in class facilities and buildings with respect to their energy performance, and to help build a bankable pipeline of replicable energy efficiency projects. That was under three. And under four on the supply side it was important to unlock the barriers that are preventing financial institutions from supply of finance and energy efficiency.

Some of those barriers including the accounting and regulatory treatment for energy efficiency investments which need to fairly reflect the net benefits and the business risks of these investments. To develop national and/or regional standards and policies that will support energy efficiency processes in key market segments consistent with regional and national priorities and conditions. To develop finance mechanisms where relevant that can enhance the credit worthiness of the repayment streams of energy efficiency investments such as including these repayments within existing payment collection mechanisms such as on-bill finance and the property access clean energy mechanism available in the United States.

Finally the simplicity of public support programs is needed to enable their efficient combination and the mobilization of private finance streams to maximize the overall funding flows meaning that over time there needs to be a move away from grant-based programs towards financial instruments to combine public and private financing. And that the involvement of public finance institutions should help formulate lending policies to prioritize the mobilization of private capital towards energy efficiency investments in the respective countries.

So finally to finish there is an importance in energy efficiency to build capacity both within public and private sector financial institutions. And I think this points to the proactive sharing of good practice. This points to the need of increasing technical assistance to energy efficiency to help build the investment grade pipelines which were referred to earlier.

I'm going to hand the microphone to Annie but suffice it to say that our process—We're proud of the fact that the process of the Energy Efficiency Finance Task Group was not just focused on the delivery of these principles and the work with the G20 policymakers, but simultaneously the task group was able to coordinate with partners to deliver to the COP21 a bank declaration on their intent to build energy efficiency into their business process.

And the G20 Energy Efficiency Investor Statement where long term investors holding the key to large quantities of investment capital globally were

engaged to upgrade the visibility and the integration of energy efficiency within their own investment processes. So with that thank you and I turn the floor to Annie.

Annie Degen-Neuville Okay I'll share my screen. Good morning, good afternoon everybody. I'm very pleased to be with you here to represent the Finance _____ Unit which is a member for the _____'s G20 work. And so as Peter mentioned we are leading the outreach to the private finance sector. In terms of our—Can I see my first slide?

Sean Esterly Yes we can Annie.

Annie Degen-Neuville Okay so just following on what Peter introduced for the COP21 we managed to have an unprecedented result showing how much the topic resonates as a priority for financial institutions, both banks and investors. Here you see on the slide that 106 and \$4 trillion USD worth of assets managed by investors have actually joined us for this first year of mobilization of financial institutions on energy efficiency. That aspect is very important because we cannot stress enough that one of the specific features, and trends of this G20 work is to work both with countries on the policy side and with the finance sector private so far for the first year of work of this G20 group and expanding as we want to develop later.

We'll start with banks because it makes sense. Banks are those usually financing the first level project in various sectors. For that mobilization we unified joint forces with EBRD for their well-known expertise in energy efficiency in finance with their partner banks. So as you can see on the screen the bank statement actually does cover nine points. And this is acknowledging their unique role to finance energy efficiency. They recognize that there is a finance gap. So that's their role at the beginning—as channeling finance.

Also they already provide some financing. But we know that it is key to change scale and to be able to measure the progress we'll need to track deployment. But currently the issue is not so much a question of transparency in volumes, than missing data or data which does not exist to show what is actually being channeled towards their energy efficiency projects.

Then the next point is with regards to embedding energy efficiency through the process within banks and also guide clients towards the best practice financing decisions. It has to be part of the offer of banks. It is also key that banks do work together by sharing experiences and oh we can articulate public and private sources of financings. These are the last two points. Then on the next slide you can see that actually these banks—There are many, many names and it was quite an impressive mobilization in size and geographic coverage as well.

Then we move to the investor and the Energy Efficiency Investor Statement. This is another key category of financial actors. They can invest historically in the economy. They can also invest in the refinancing of banks which is key if we want to have a change of scale. So you UNEP FI here led the

mobilization with two partners: Ceres and Investor Network in North America and the PRI, a globally investor initiative. Signatories here are really of the view that energy efficiency has positive economic and social benefits.

And it is part of their important investors' fiduciary duty to take that into account and support more energy efficiency investment. If we start from the top that's the beginning of any investment process. You first evaluate companies. Then you engage with investors. Then if this is relevant you may consider energy efficiency when it comes to voting in an AGM. Then the selection of manager which is at the bottom of the slide is very important because truly most assets are managed externally. And the first three points actually were covering _____, _____ equity, portfolios and these kinds of assets. Afterwards when it comes to monitoring and reporting that's very relevant for real estate assets.

And the last point is with regard to seeking energy efficiency opportunities at _____ because not any investment is it the right time depending on the building life cycle or other considerations. Is it the right time to promote energy efficiency? But if you look at it at the portfolio level there's always something that you can push for.

This slide shows the over 40 investors which actually supported and signed on the Energy Efficiency Investor Statement. They represent a massive amount of assets from the _____ and they're all from the G20 zone. And that was really an unprecedented mobilization both on the investor and bank side. It is important to stress that of course that was achieved on the way to COP21 last December despite a crowded space of imitative. But it cannot stop here. This is why those statements remain open this year to collect further support, while developing content as affiliated with the statement and sharing experience.

The next two slides will _____ actually the development taking place since the beginning of this year with regard to content and tools. First of all UNEP FI seeks to identify interesting research work and help disseminate them within the finance community. So I also take advantage of this call to say that if you're aware of some very interesting research, not well-known please do reach out to us.

The first point is an interesting research project which was developed by ClimateWorks Australia and ClimateWorks Foundation. It covers six sectors: airlines, automobiles, paper, steel, chemicals, and construction material for now. And this is a way for investors to benchmark with a sector a particular company they're invested in and engage with that company to promote more energy efficiency at their level.

The second major development this year was the release two weeks ago of the Sustainable Real Estate Investment report implementing the various Climate Agreement and Action Framework directly for investors—investors only. And for that we joined with partners which are listed. And real estate we know has a very strong impact as a sector and is one of the focuses [audio cuts out].

[inaudible comment] the next slide and my next slide is actually showing a major development this year. We've covered banks. We've covered investors. And we continue. We've deepened and expanded in terms of the number of parties joining us. But there was one group very important and missing so far which is the insurance company sector. We're happy to share with you that this will be a development this year. This will be the first time. And this _____ of _____ is very important to involve as they've developed still at the niche level some products.

And there are some pilots but we really want to start with the largest group of them at the global level on sustainability. This is called the PSI, the Principle for Sustainable Insurance. And with them we're looking forward to connecting with our last group of financial players. With that I turn back to Peter.

Peter Sweatman

Thank you Annie. Hopefully you can see now this slide that describes where this task group's activities will go for this year. I think that 2015 was marked by a number of successes which you've just heard. The development of the G20's Voluntary Energy Efficiency Investment Principles for participating countries, the commitment of 106 banks, the commitment of \$4 trillion worth of investors, and the establishment of a strong platform through the IPEEC. And thanks to the co-chairs and the participating countries for a strong application implementation phase in 2016.

With 2016 Work Plan consists of three main areas. The first is to build an implementation framework for the Voluntary Energy Efficiency Investment Principles for G20 participating countries. One of the strengths of the G20 Forum is that it's a place of learning and sharing where a number of initiatives in different countries can be expounded and a country can take the best solutions which are being implementing globally.

In our area what we plan to do is try and work to understand a little bit more deeply how each of our participating countries is working on policies which fit into the five key areas of our principles. So we'll talk to this but we hope using surveys and similar types of technical engagement. And by actual engagement well be able to deepen our understanding and the collective understanding of those countries as to how each one of the principles is being seen and operated on in the national and regional markets.

The second area of our activity will be to together with the UNEP FI and our partners to broaden and deepen the engagement of private sector financial institutions to finance more energy efficiency. That means investors building on the \$4 trillion of committed investors that Annie has described, the 106 banks and adding additionally the insurance industry. Because we feel that there is an important role in the development of energy efficiency investments where energy efficiency is an asset class and the kinds of uncertainties and risks which that new asset class contains important and can be resolved in cases by insurance product. And there are a number of those which we are aware of.

Then the third area of focus for us will be to mobilize International Financial Institutions to support energy efficiency capacity building, investment, and finance. Clearly the policy-driven financial institutions have been and will continue to be leaders in deployment of energy efficiency financing programs and instruments globally. And we think that particularly capacity building falls well within their remit.

And this is something which those institutions can lead on and many are. And we can look towards the sharing of best practice and the building of greater proactivity and understanding of how to stimulate these energy efficiency investments [audio cuts out].

[inaudible comment] calendar just shows in a very approximate way some of the highlights in terms of dates and events that the Energy Efficiency Finance Task Group have noted for 2016. We will continue to deliver our findings into the Energy and Sustainability Working Group of the G20. That working group has already met in January in _____ in China and will meet for the next time in Shenzhen in April from April 12 to April 14. So for that meeting our task group plans to launch an online survey.

That online survey will be achieving that deepening of our understanding of how the principles are in operation in G20 countries. It will be identifying best practices, fee implementation principles, and it will be allowing our member countries and finance and policy experts globally to contribute to the body of understanding which the task group will work on and present into a workshop co-located with the G20's Energy and Sustainability Working Group in April in Shenzhen.

And of course together with the input from those countries and from the ESWG meetings itself we hope to continue to develop concurrently with our partners a new and deeper engagement and results in the context of the third and final ESWG meeting taking place in June in—sorry. I'm referring to the final ESWG meeting which then directly connects to the G20 Energy Minister ministerial taking place we think in Beijing from June 28 to June 30.

With that I think we've finished our formal presentation of the Energy Efficiency Finance Task Group's achievements and plans for 2016. And I turn the floor back I think Sean to you to coordinate any questions.

Sean Esterly

Yeah thank you very much Peter. We're actually going to put up your last slide for the audience so they can have that information in front of them as well. And we did receive a few questions from the audience. The first one actually Peter is for you. It's from someone operating in Thailand and they note that in Thailand for example the move from grant to more private sector collaboration is often very difficult.

Governments lack knowledge in de-risking mechanisms. Do you know of any examples in emerging economies where capacity has been built or where the government has done such a transition successfully?

Peter Sweatman

So thank you for that question and it's a very, very relevant question. Certainly it is a difficult transition. The grant-based culture that is present in many countries and regions that has led the building of capacity and interest in energy efficiency is something which should really be a transition time. The problem with the transition is it's hard to change and to find the transitioning instruments which will allow gradually grants to give way to financial instruments.

The reason of course why energy efficiency is an appropriate investment class for financial instruments is because it delivers energy savings. And energy savings have value to the asset owner, the building owner, or the industrial facility owner. That value is and should be valued in economic terms. And so therefore grant funds or public financing will give rise to those private benefits in many cases depending on the asset owner's characteristics.

So an interim solution and one which is being used in various countries is to reduce the size of the grant and to offer a soft loan program alongside the grant. So moving from 100 percent grant to 30 percent grant with the 70 percent remaining provided by soft loan mechanism. And that of course itself should be a transition to potentially risk sharing instruments which will allow private sector institutions to come to fully fund the energy efficiency solution.

The question asks for specific case studies. One of the case studies that we wrote about in our 2015 report was the case study of EESL in India which is a mechanism that's being used to promote the prime minister's promotion of LED lighting solutions for municipalities. And the other buildings related finance migration which has been led by the German development bank KfW. Building off the German experience in this area is another case study which I think is useful to look at.

Sean Esterly

Great thank you Peter. Moving on now to the next question. It doesn't specify who this is for so I would assume either you or Annie. At the higher level how is the task group approaching the energy efficiency lending program and its longer term outlook and work program over the next 15 years under China's G20 leadership?

Peter Sweatman

So Annie why don't I talk to that quickly and then you might be able to add something. We are particularly happy that the task group was able to co-arrange a technical engagement workshop last year in Beijing as a way of engaging directly with finance and policy experts in China on the creation of the Energy Efficiency Investment Principles. It's those relationships that we are keen to build on in the context of the Chinese presidency's G20 objectives.

It is this task group's view that the longer term energy efficiency planning and products which are very necessary and which are being worked on will all have a finance and investment component. And we very much hope that our work in 2016 will be the work which can be drawn up and drawn upon directly by the presidency in the presentation of its specific proposals. And we hope that we can add to give strength to those proposals in the area of the finance and investment piece.

[0:52:17 through 52:52—no audio]

Sean Esterly

We'll move ahead to the next question. This one was for Annie and asks have you considered involving leasing companies within the task group especially under the aspect that energy efficiency finance often involves small amounts of investment that might not be attractive enough to larger banks?

Annie Degen-Neuville

Actually among some of the partners of EBRD and among actually what we call the 106 banks there's one leasing company. So definitely they're invited. They're not excluded. And if there are more parties interested to join and share expertise absolutely. Because a key aspect in energy efficiency—and that's a difference with renewable energy—is a granularity.

And so that's why it's very important to cover the whole spectrum from the way you can finance at the very local level a small project. And then aggregate them into pools which can then allow you to reach scale and then refinance and turn that into investment products.

Sean Esterly

Great thank you Annie. And this question is again for anyone. Could you please comment on the need for robust monitoring of gains and value of energy efficiency in order to stimulate and support investment?

Peter Sweatman

So if you want I'll take that one again first. I think it raises a critical point. There are multiple benefits from energy efficiency investments. And in fact energy savings is an important component. But it's just one component of the final investment both economic and supporting benefits which energy efficiency provides.

So in the case of buildings for example the commercial buildings sector globally is very aware of the green premium which gets created by having a high performing, high energy performing building, one that is certified by the BREEAM or the lead performance indicators and can not only be worth more at sale but also can provide better rents and lower obsolescence periods. The residential market I've seen various studies that look at different markets to see whether there is a price premium or in some cases a brown discount for energy efficient properties.

It depends it seems to me from market to market. The more developed the market is the more likely there is to be a notable difference in asset value. I think that over time we will see greater support to this trend. It's clear that real estate developers the world over are looking to deliver buildings where the lifetime cost of occupancy is lower as a result of existing technologies that can be installed nowadays at very, very little marginal additional cost to existing standards.

I think that the value flow from asset appreciation through energy efficiency is a horizon that is becoming more important alongside the other multiple benefits such as for commercial environment and increased productivity, for the home environment improved comfort and acoustics, and of course not forgetting for the global environment the reduced greenhouse gas emissions.

Sean Esterly

Great thank you Peter. And Peter another question for you. Would it be possible to name some of the—Sorry? Would it be possible to name some of the insurance products for energy efficiency investment that you are aware of?

Peter Sweatman

So in the European environment I have seen several insurance companies talk about providing energy efficiency savings guarantees: insurance companies that will stand behind, for example, energy services companies that have signed large energy performance contracts with the public sector for example. I'm also aware of a program that's being worked on by the IADB in Mexico where they too will be looking to provide insurance for the energy savings that are predicted by upgrading technologies in industrial facilities.

Annie Degen-Neuville

Actually when it comes to insurance products—so definitely there is even now a tender by the Inter-American Development and several countries in Latin America. We're also aware of some pilots and interests in Asia. And in Europe there are some subsidiaries of very large insurance groups already providing such products. And through the survey we'll conduct this year from the insurance world not to forget anybody or product one product over another where another product offered by another one will be able to definitely go in depth in that aspect.

It is a very important one because insurance companies can actually make some projects which are otherwise not bankable—bankable.

Sean Esterly

Okay thank you both. And in order to achieve the proposed timeline for CO2 reductions presented and decided by G20 what do you expect when the actual implementation of these policies will penetrate into the markets?

Peter Sweatman

So first of all energy efficiency is not a new topic. And one of the things that we're delighted to see is that this conversation that the Energy Efficiency Finance Task Group has opened with its member countries is definitely a two-way dialog in the sense that many of these principles are really the collection of activities that are already ongoing. So what we expect to hear from the 13 countries interviewed or surveyed in the coming months will be to what degree each of these guiding principles is being implemented and where the successes and the experiences of the countries can be relevant to one another.

So we don't think that in a year we will be implementing principles. More to the point the principles are already in various stages of implementation—depending on country, depending on principle. So it's our job to try and get our hands around that experience and allow countries to come forward to share the experience that they've had in these areas and for us to use the framework of the principles to organize that experience.

And to allow it to be clearer to other countries so that in a way the principles become an organizing framework for policy makers to share and understand the different ways to stimulate energy efficiency investments because energy efficiency is not just about one sector or one technology or one investment instrument. It's really a multitude of things. And we think that one of the

strongest purposes of principles is to facilitate the organization of that discussion which is very much what we hope to do this year.

Benoît Lebot

If I may add, this is Benoît Lebot from the IPEEC Secretariat. I'd like to say that first energy efficiency needs time. It's a long term process. The biggest _____ need some time to be prepared, to be organized, to receive the investments. One of the values that I personally expect from the work we do under the finance task group is for instance to make sure that energy efficiency is understood in different forms. The climate change community is working hard to develop low carbon scenarios.

Energy efficiency is a great part of it. We are trained to be the fundamentals for energy efficiency investment to be heard—to be perceived—so that our work feeds the process of any carbon development in the world. We have also in the world trained towards the greening of the economy, the green growth, green finance, green many things right? We would like to make sure that this greening fully understands what energy efficiency can bring.

So we really hope that through this high level work currently done by the finance task group we feel all those organizations and people working in the greening of the world economy because energy efficiency needs special attention because it's granular as was explained and because it takes time. So I believe this is one way to perceive that the work we do will have some short term impact. But we expect certainly an impact on a the low medium, to longer term.

Annie Degen-Neuville

I'd like to add that actually when it comes to buildings we know that buildings are long term assets. And it's very interesting to see that long term investors, institutional investors, have already come to the conclusion that for instance going for deep retrofits you know, not just the easy stuff with a short return or payback and so on. That's really what they want to go for because that's really value on the long term. That's why it is also transformative for society. So this is the kind of thing we'd like to stress.

And what is very important is also to see that from the finance industry we've noticed that there are two drivers. Indeed climate change, reducing emissions and energy use, but for sure the resource efficiency aspect of things is very important as well because we're not living in a world with unlimited resources.

Sean Esterly

Great thanks again everyone. The next question that came in asks what is your opinion on the UK private rented sector minimum energy efficiency standards regulations and the possible impact that this type of legislation could have on the uptake of energy lead improvements at scale across CRE?

Peter Sweatman

So Sean I'll talk a bit about that not just because I'm from the UK but in the context of some European work we did in the Energy Efficiency Financial Institution group which is a European collaboration coordinated by the European Commission and the United Nations Environment Programme Finance Initiative. We looked at European policies from 2013 to 2015

producing a report in February of last year looking at the questions of upscaling energy efficiency investments in Europe.

And we looked at a number of policies and policy areas. We also looked at what drove demand for energy efficiency investments and what drove financial institutions in Europe again to supply them. And we in the context of that did have a conversation about the minimum energy performance standards in the UK. And how when you apply a criteria to a market such as the rental market and you say that there is a minimum energy performance on properties or a requirement on properties before they can be commercially rented out that has a very significant impact on markets.

And I think we took the view in those conversations that when you exclude the worst performing from an energy efficiency perspective buildings in countries whose building stock is deficient in energy characteristics and in countries who have climates which require high amounts of heating input or potentially cooling input, but in the UK's case heating input. Low quality buildings or low energy performing buildings high need for heating in the winter time and cost effective solutions.

And I think that's key. The key here is that placing a minimum energy performance standard is and should be a policy that drives people to do things that in the long term are cost effective. One of the things that—One of the barriers that I think this potentially looks to get over is the fact that even today in the energy efficiency world both in industry and in buildings there is a tendency for people to look at energy efficiency but only to implement energy efficiency measures that have short term paybacks.

So home owners in the UK for example while of course many of them have done insulation measures many of those cavity wall insulation measure that are low cost and have relatively quick paybacks there needs to be also a greater consideration that as Annie mentioned most of the buildings currently in operation and in use in Europe will still be in use in Europe in 2050 when we need to have a substantially decarbonized society.

There should be policies that assist homeowners and building owners to look and to assess energy efficiency measures that match the lifetime, the useful lifetime, of their properties. And I think having minimum energy performance standards in a country with significant opportunities for cost effective long term upgrades—that is a way of strongly stimulating that market

Annie Degen-Neuville

I can only confirm what Peter just shared with you in the extent that from extensive work we've done with financial institutions including the UK and through our European work definitely we need to reconcile the arising of ____ city impacts we were looking at has been—We need time to do things which are really transformative, which really have an impact for the world of tomorrow that change in depth. And so we need to reconcile this policy with what the financial institutions and the investors do.

And unequivocally we heard from investors that they need—And that was the first conclusion in the report of the European level which Peter mentioned we

need—Investors need a clear regulatory signal but they need one which is stable and predictable. So that example was given quite often as a clear signal in helping the market to get organized. Another thing that parties hope for is that this will stay in place. Otherwise it will not be productive.

Sean Esterly

Thank you Peter and Annie. The next question is for you Peter. It states that you mentioned PACE and other off-balance sheet financing mechanisms earlier which also pay several regulatory and fiscal barriers to scaling up. Has the test group resolved the accounting issue? For example IFRS convergence in G20 countries facing the off-balance sheet models? And which models can still be considered off-balance?

Peter Sweatman

Thank you Sean and thank you for the question from the caller. First of in the reading of the question there was a slight error which is well PACE is an on-bill mechanism. There's a difference between on-bill and off-balance sheet. So first of all the on-bill characteristics of a finance recovery mechanism such as a payment being made or collected through a tax bill or a payment being collected through an energy bill paid to a utility is a way of enhancing the credit worthiness, improving the collection characteristics and the seniority of the repayment recovery which is a credit enhancing.

It has a credit enhancing purpose and it enables various of the financing flows to become more attractive to banks for example. So just if I can set that aside because I think the question is more about the accounting treatment and whether particular mechanisms, financing structures are on- or off-balance sheet for the host. So I'm not obviously on this _____ nor am I going to give _____ advice.

But it is clear that energy performance contracts for example at the point of contracting are entered into with the expectation that they will be of positive value to the asset owner. Meaning that if a third party provides equipment and upgrades to a building whose purpose is to save energy in the future. And if the calculations are correct and if the energy price evolution in that market is as expected the host—the beneficiary of the new equipment—anticipates that the value of that contract at signature will be positive.

Meaning that the value of the energy savings will be sufficient to repay the capital cost of the equipment as well as the interest cost, the financing cost, and on top of that produce and deliver savings to the host. For this reason it appears shall we say harsh or difficult for some particularly public sector potentially interested parties in signing energy performance contracts to have them to be seen as debt. So a conservative accounting view of an energy performance contract appears to be a debt to the provider of the equipment.

So ESCO provides equipment to public sector body. Public sector body owes ESCO payments—fixed payments—for the provision of the equipment. That is a sort of simplistic view of a conservative accounting treatment. There have been ways of recognition through lease contracts and through other mechanisms of allowing financial controllers to achieve off-balance sheet characteristics due to the ownership of the assets and accounting tests which are in the process of review in many areas.

And it appears to us that when accounting considerations of any new performance contracts particularly and other energy efficiency investments are considered the full expected benefits should be incorporated into that analysis.

Sean Esterly

Thank you Peter. Another questions—one of the attendees was just impressed by the large amount of bank statements and investor statements and is wondering if there are any real case or real life applying the bank investment to energy efficiency projects.

Annie Degen-Neuville

I guess I will answer that. Is the question to know whether we have specific case studies of how to do that? I mean the _____ reason we've turned that _____ scale or —?

Sean Esterly

I believe so.

Annie Degen-Neuville

[inaudible comment] those case studies?

Sean Esterly

Or if you're aware of any case studies in general.

Annie Degen-Neuville

I know that this year partner _____ as indicated we've developed some material to share. This year—I mean it was the first year of this G20 work. We definitely reach out to parties interested. Some are more _____ than others. So some have case studies some don't yet at the _____ level but this is definitely part of the plan to deepen. And as we deepen we'll—And as I mentioned we'll highlight what has worked and so on. But I really stress as well very often we're trained to track volumes of our investment made in energy efficiency.

And before transparency we just need to make sure that data are available within banks, within institutions. So it's a very good question. Sharing what works and letting it be known what has worked under certain conditions. That's really one of the ways to scale up.

Sean Esterly

Thank you Annie. At this point that is the last question that we received. And we are running low on time so we'll proceed now to the survey for the attendees before we wrap up. Attendees we did put together a couple of brief questions that help us evaluate how we did on the webinar and improve for future webinars. So if we and go ahead and display the first question.

That is: the webinar content provided me with useful information and insight. And the next question is: the webinar's presenters were effective. The third question is: overall the webinar met my expectations. And then we have just a couple of yes or no questions for you. The first one: do you anticipate using the information presented in this webinar directly in your work and/or organization? And then the final question is: do you anticipate applying the information presented to develop or advise policies or programs in your country of focus?

Great and I think we just wanted to have a brief closing remark from Stephan before we close out the webinar. Stephan if you wanted to make a comment

co ahead and unmute. That's all right. I'll go ahead. He just wanted to add that they will make the final G20 Task Group Report containing detail and case studies available on the events page. So again you can go out to the IPEEC G20 Task Group for that final report.

And so with that on behalf of the Clean Energy Solutions Center I would just like to extend a thank you to all of our expert panelists for joining us today and also to our attendees. We do appreciate everyone's time and thank you for joining us. We also would like to mention that the PDF copies of the presentations will be posted at <https://cleanenergysolutions.org/training>. Additionally a recording of today's broadcast will be posted to the training page. And we also posting recordings to the Clean Energy Solutions Center YouTube page.

Please allow a few days for the recording to be posted. Additionally we do encourage you to spread the word about the Clean Energy Solutions Center Ask-an-Expert program and also the new Finance Solutions Center in their Finance Ask-an-Expert program. That is also available as well for your finance related questions.

And with that I hope everyone has a great rest of your day and we hope to see you again at future Clean Energy Solutions Center events. This concludes our webinar.