

## Accessing Private Capital for Clean Energy Investments In Developing Countries

—Transcript of a webinar offered by the Clean Energy Solutions Center on 19 November 2012—  
For more information, see the [clean energy policy trainings](#) offered by the Solutions Center.

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**Elmer Holt** CTI PFAN Manager, Chair of CTI Executive Committee  
**Taiki Kuroda** CTI-PFAN Secretariat, Chief of Programme Secretariat  
**Peter Storey** Global Coordinator

Vickie: Good day. Before we begin our Webinar I'd like to do a very quick sound check. Heather, are you able to hear me?

Heather: Yes, welcome.

Vickie: Okay, great. Thank you so much. I'll go ahead and begin the Webinar. Thank you.

Hello everyone. I'm Vickie Healey with the National Renewable Energy Laboratory. I'd like to welcome you to today's Webinar hosted by The Clean Energy Solutions Center. Our discussions today are focused on assessing private capital for clean energy investment in developing countries.

We are very fortunate to have a great panel representing the Climate Technology Initiative Private Financing Advisory Network, otherwise known as CTI PFAN, presenting today.

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One important note of mention I'd like to make before we begin our presentation is that The Clean Energy Solutions Center does not endorse or recommend specific products or services. The information provided in this Webinar is featured in the Solution Center's resource library as one of many best practices resources reviewed and selected by a range of technical experts.

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Before we begin, I'll quickly go over some of the Webinar features and a few housekeeping items. For audio, you have two options. You may either listen through your computer or you may listen over your telephone. Now if you choose to listen through your computer, please select the "mic and speakers" option which is located in the audio pane to the right hand side

of your screen. By doing so, we will eliminate the possibility of feedback and echo.

If you select the telephone option, a box on the right side will display the telephone number and your unique audio PIN that you should use to dial in. We, again, we ask that you please mute your audio device before the presentations begin. One important note, if you have technical difficulties with the Webinar, you may contact the GoToWebinars help desk at this phone number, which is 888-259-3826. They will be happy to provide assistance to you.

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We welcome — we have a couple of features on this Webinar platform. We welcome you to introduce yourself. You may do so by typing it into the chat pane which is located on the screen, again, on the right hand pane of your screen. I've actually typed in a little note already that you may see within the chat bar. If you would like to ask a question, rather than using the chat function, we ask that you use the Questions pane where you may type in your questions.

If you're having difficulty viewing — this is one important note. If you're having difficulty viewing the materials through the Webinar portal, you may find PDF copies of the presentation at [cleanenergysolutions.org/training](http://cleanenergysolutions.org/training). We have PDF copies of presentations at that particular URL where you may follow along as our speakers present.

Also, I'd like to note that an audio recording of the presentations will be posted to the Solution Center training page within a few weeks.

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We have a very exciting agenda prepared for you today that is focused on dispelling the myth that clean energy projects in developing countries cannot be implemented with private debt and equity. Our panel will highlight their achievements working with project developers and other project proponents to help structure the clean energy project and the associated business plan to attract investors and reach financial closure.

We are fortunate to have Elmer Holt, CTI PFAN Manager and Chair of the CTI Executive Committee. We also have Peter Storey who is PFAN's Global Coordinator. We have Taiki Kuroda at CTI PFAN Secretariat and also Chief of Programme Secretariat. Before our speakers begin their presentations, I will provide a short informative overview of the Clean Energy Solutions Center initiative. Following the presentations, we will have a Question and Answer session, and wrap up this discussion, and closing remarks.

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This next slide provides a bit of background in terms of how the Solutions Center came to be. The Clean Energy Solutions Center is an initiative of the Clean Energy Ministerial and is supported through a partnership with UN-Energy. This initiative was launched in April of 2011 and is primarily led by Australia, United States, and other CEM partners.

Some of the outcomes of this unique partnership includes support of developing countries through enhancement of resources on policies relating to energy access, no cost expert policy assistance, which I'll discuss in just a few moments, and peer to peer training and learning tools such as the Webinar you are attending today.

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The Solutions Center has four primary goals. First is, serves as a clearinghouse of clean energy policy resources. It also serves to share policy best practices, data, and analysis tools specific to clean energy policies and programs. The Solutions Center delivers dynamic services that enable expert assistance, learning, and peer to peer sharing of experiences. Lastly, the Center fosters dialogues on emerging policy issues and innovation occurring around the globe.

Our primary audience is energy policy makers and analysts from government and technical organizations in all countries. We also strive to engage with the private sector, NGOs, and civil society.

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A [inaudible] [00:06:45] feature, this is something I mentioned that I will talk about. [inaudible] [00:06:49] feature that the Solutions Center provides is expert policy assistance. We have a section, we named it "Ask an Expert" which is a valuable service offered through the Solutions Center. We have established a broad team of over 30 experts from around the globe who are available to provide remote policy advice and analysis to all countries at no cost.

If you have a need for clean energy policy assistance, we welcome and encourage you to use this very useful service. Again, this assistance is provided free of charge. It is available to all countries on both national and sub-national levels. It's very easy to request assistance. All you really need to do is submit your request by registering through our Ask an Expert feature at [cleanenergysolutions.org/expert](http://cleanenergysolutions.org/expert). We also invite you to spread the word about this valuable service to those on your networks and organizations.

Some of the broad sectors covered by our experts include energy access, energy efficiency, renewable energy, smart grid and micro grid, clean transportation, and also regulation and utilities, policies for them.

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Some of the ways that you can become involved and learn more about the Solutions Center's services and resources are, we encourage you to explore, first of all, and take advantage of the Solutions Center resources and services including the expert policy assistance. You can subscribe to our newsletter and participate in our Webinars. We also welcome your suggestions and recommendations on what you would like to see included on the Solutions Center that will enhance our value to the clean energy policy area. Your feedback is always welcome. We're looking, always, for ways to improve and add value to the Solutions Center services that we provide.

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One other feature that we have is — that the Solutions Center has is a Policy Forum that is very informative. We encourage you to go to the Policy Forum page and read and comment on blogs and articles that are located on that particular page. On our Policy Forum, you'll find many interesting and informative articles discussing progress of clean energy policy development and implementation occurring in countries around the world.

We also follow similar blogs that are posted by our partners at the Renewable Energy and Energy Efficiency Partnership, Leonardo Energy. We also feature podcasts that are developed by Bloomberg New Energy Finance. They're very dynamic and informative. I encourage you to explore those.

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Now, I would like to take this opportunity to introduce our distinguished panelists. First, I'm pleased to introduce Elmer Holt who is CTI PFAN Manager and Chair of the CTI Executive Committee.

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We are also joined by Taiki Kurada — Kuroda. I am sorry, I mispronounced that, Kuroda. He is CTI-PFAN Secretariat and Chief of Programme Secretariat.

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I am very happy to have Peter Storey, the PFAN Global Coordinator, with us today. So without further delay, I will now turn the Webinar over to Elmer Holt. Elmer welcome.

Elmer:

Thank you Vickie, thank you very much. Thanks for those who've already logged in to this Webinar. We're very pleased to be here to tell you a little bit about the CTI and the CTI Private Financing Advisory Network, and some of the strategies we've made so far, and where we're headed in the future.

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Our presentation is basically structured in 3 parts. First part, I'll give a little background on CTI and some of the evolution of CTI PFAN. Mr. Peter Storey will talk about some of the specific services that CTI PFAN offers, some of the projects we've had, and some of our efforts into the rural adaptation, along with some of the lessons learned. The third part of our presentation will be Mr. Taiki Kuroda who will be talking about some of our financing forums, how that process works, and how it goes to identify effective projects.

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To give you a little background on the CTI and CTI PFAN, the origin of the Climate Technology Initiative actually goes back to 1995 when it was launched at the First Conference of the Parties in Berlin as a voluntary initiative by 23 OECD countries and the European Commission. Our objective at that time, being, to support the UN Framework Convention on Climate Change by facilitating the more rapid development, adoption, and diffusion of climate friendly technologies and practices.

In 2003, the CTI reorganized as Implementing Agreement under the International Energy Agency. Currently CTI has 11 member countries which include Austria, Australia, Canada, Finland, Germany, Japan, Norway, Republic of Korea, Sweden, the UK, and the US. Since this reorganization, the CTI continues to have its major focus being technology issues and activities related to the UN Framework Convention on Climate Change. Its overall objective also continues to be, to promote the more rapid development and diffusion of climate friendly and environmentally sound technologies through multilateral cooperation among the private and public sectors.

Since its founding through the present, one of CTI's comparative advantages has been the effective engagement of the private sector into the international climate change process. You will see shortly the participation of various financing and business communities has been a key factor in

forming, building CTI's Private Financing Advisory Network, known as CTI PFAN.

But it's not just the private business and finance sectors with whom we work. We work with a broad range of government, non-government, multilateral organizations and others in the course of our work. Two of the strongest and longest relationships had been through CTF and UN Framework on Climate Change Secretariat along with the UN Environment Program. [inaudible] [00:14:01] some of the other groups are listed at the end of this slide.

Additionally, we work with individual businesses and business associations to ensure full understanding of the private sector perspective.

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In the course of the CTI conducting its various trainings, capacity building, joint industry seminars, and related activities, we heard a consistent message from those with whom we work that was that the impediment of technology transfer was the lack of money for project implementation. Further, it was clear that were insufficient public resources to adequately address the clean energy needs of developing countries. In any event, there was a need for expanded public sector engagement.

These and other considerations moved the CTI, in cooperation with the UN Framework Convention Secretariat and the expert group on technology transfer, to convene a workshop in 2004 in Montreal to explore innovative ways to finance technology transfer. This was truly a watershed event that brought together a diverse group of interest including government, non-government, private business, finance, and other representatives.

That group discussed the issues of what inside, the private side, the public side, and the project side, what they expected from one another. It gave us a thought that possibly something that was needed was something a little different. We reached the conclusion at that workshop that it wasn't shortage of money and it wasn't a shortage of good projects. It was a shortage of good finance-supported — good project proposals that were able to articulate the positive aspects of the project to the investment community and meet the international finance standards.

From that point, we worked for a year with some projects to see whether or not this idea of coaching project developers, structuring, and fine tuning their project proposals was beneficial. In Bonn in 2005 we met again. It was at that session that we concluded that there was merit to this process and the CTI PFAN was born.

Basically what it does is it brings the project side, matches them up with investment side. Of course, we bridge the gap between the money and the project, as we say.

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From a diagram standpoint, you can see on the left hand side coaching and mentoring of the project to developers and other project proponents who are seeking financing. On the right hand side are the groups that are seeking investments. Getting those together and be able to shape those project proposals so they adequately communicate the positive aspects in the project are important.

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Now as far as the basic elements that the CTI PFAN consists of is it's a multilateral activity involving the CTI countries, the ICETT which stands for the International Center for Environmental Technology Transfer, REEEP which is the Renewable Energy and Energy Efficiency Partnership, and another major player is the US Agency for International Development in the US.

The network consists of actual practicing financial professionals that understand the markets, the technologies, and the regulatory environments. The whole idea, again, is fully consistent with that of the CTI in that it accelerates the technology transfer and diffusion under the Framework Convention process.

Again, the type of investors and participants we like to attract are those that we refer to as a triple bottom line. They not only look at the financial returns but the environmental and social returns as well.

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To impress you with the breadth and depth, along the top line there are the CTI funding partners which I mentioned just a few minutes ago. Followed by, down below, is the CTI network of members, again, which are practicing financing professionals who understand just about every region and technology around the world.

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I'm not going to go through these in depth but in addition, we have a group we refer to as our resource partners which we engage with in a variety of ways, sometimes as excellent investors in some of the projects.

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As far as our track record, so far, we're very proud of the fact that 34 projects have reached financial closure with about 412 million in investments raised. These projects basically have the ability, when they're fully implemented, to reduce greenhouse gases in the form of CO2 equivalent by about 1.8 million tons per year.

In addition, we have a project pipeline where we're, on an ongoing basis, working with these projects to move them closer to financial closure. Currently, that pipeline has about 164 projects in it representing about USD 4.9 billion of investment, again, with significant CO2 equivalent reduction of about 7 million tons per year.

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To give you a little perspective as far as technology and region in the pipeline, on the left hand side you can see the percentages broken up by region. We're a little heavy on the Asian side but that's just been the way some of our resources have been applied so far. We have additional resources that we're going to be more widening the participation in Africa and Latin America.

From the technology standpoint, over on the right hand corner there you can see a diverse group of clean energy technologies have been identified. Of course, on the biomass, biogas, bio fuels, they're a significant share of the total.

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As far as the closed projects on technology, you can see there, again, an equally diverse group

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Again, on a regional basis, as you can see, Asia and China, they've got more than half. Latin America and Africa will be growing.

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Prior to 2012, our principal focus was on mitigation related projects. With a growing interest on adaptation, we determined that we should see whether or not the CTI PFAN paradigm, the approach, the methodology could be applied to adaptation related projects. So to explore that, we convened a workshop in Nairobi earlier this year. It was quite successful. In which we explored the issues associated with applying the CTI PFAN methodology to adaptation related projects, bringing together folks from mostly the African region, other places as well, multilateral banks, various key players in the world of climate change.



We found that, many times, there's the opportunity for adaptation related products associated with some of these projects. There is a cash flow stream that provides some investment opportunities. So far the results are encouraging. We're working with a set of projects. We're going to report by mid next year in terms of our success.

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At this point I'm going to turn it over to our Global Coordinator Peter Storey to pick up now on some of the specifics on what the services are offered by the CTI PFAN. Peter.

Peter: Thank you, Elmer. Good morning or good evening to everybody, depending on where you're listening in from. As Elmer mentioned, I'm now going to walk through some of the more detailed services that we provide.

What you've got on this slide is a representation of the main 2 services which is the sourcing of equity and debt, and the financing facilitation approach. Firstly, what we developed is a methodology that walks through project identification starting here on the left. We go through quite some efforts to identify the projects and to make sure the projects are complying with our own criteria, which I'll come back to in a second.

Having identified the assigned approach from one of our consultant network members to work with the project, the coach then helps the project, holds its hand if you like, to develop a bankable business plan, an investor presentation, and what we call the project data sheet. That's very important because that, essentially, is one of the key interfaces with the investor. It's actually interacting with the key innovator of the project. It enables us to start a dialogue with projects.

When that's ready, we start introducing the project to the investor. We have 3 methods of introduction; either an individual introduction to investors that can happen at any time; or we go through an investor forum, a clean energy financing forum in which case we showcase a number of projects to a group of investors all at one go. The only 2 differences between those approaches are that one is an open time cycle. It can happen at any time. The other one goes through a compressed time cycle where we work through a group of proposals, identify a group of projects all at one time. Then showcase to investors in a room in an investor forum environment. The main goal remains actually, to move the project towards financial close and actually achieve financial close, to get the money flowing into the project and investments happening.

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These are the criteria that we work with. We're essentially looking for projects that are commercially viable. Obviously we need technical viability as well. As Elmer mentioned, we're looking for a GHG reduction potential. The projects need to have a very strong management and competent management team. If we can also fit other development benefits in terms of MDGs then that's something that is rated positively as well. Generally we look at a project within a USD 1 to 50 million total investment range. We can put smaller projects, indeed about 10, 15% of our portfolio is dedicated towards micro projects that are under USD 1 million in size.

As you saw from the slides that Elmer showed in terms of what our pipeline is made up of, we work with a wide variety of commercialized technologies. I suppose the important thing to say there is that we're technology neutral. It doesn't matter where the technology comes from, whether its north, south, east, west, as long as it works, we're able to work with it and generate financing for it.

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This is just a picture of where we're active at the present time. The red shows countries and regions where we have existing networks and operations. The blue are those countries and areas where we're expanding into at the moment. Essentially we've divided the world up into 5 regions. We say that we operate through 5 regional networks, in Central America and the Caribbean, Latin America, Asia. Then in Africa we have West Africa, East Africa, and Southern Africa are sub-regional networks. Finally, the US network at the present time is Central Asia and the CIS countries.

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Now what we mean when we say we've got a network, it means that we've actually got dedicated resource on the ground. We have identified network members, either consultants or investors that are working and active in those countries. Those were the logos that Elmer showed you earlier.

We have a coordinator for each of the country networks. Then above the coordinator is a regional coordinator which supports the network operations. Overall, in those networks, we have 60 network members at the present time. There are network members that we signed into MOUs. It's a little bit more than a tacit understanding. It's a specific agreement between us that we will work together on projects. We also have a number of affiliate members that we work through and with. They, for whatever reason, don't sign into the MOU. We know they're active in this phase.

They tend to be the larger corporations and banks which have difficulty, for corporate reasons perhaps, signing into MOUs.

We also work through resource partners. These are important. They tend to be development banks. They tend to be government agencies such as rural electrification agencies. The ones I've given you there are The Energy for All Partnership of the Asian Development Bank, the Confederation of Indian Industry, the Indian Wind Energy Association, and the Development Bank of the Philippines. These institutions and agencies really help us to align ourselves with government policy on the one hand, a [inaudible] [00:29:08] to local markets and local networks. In some cases, also provide resources and investment for us as Elmer mentioned.

The areas that we're expanding into currently are Southern and West Africa, also Central

America and Caribbean, to a lesser extent as you've seen, we're already very well-covered in Asia and Southeast Asia.

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Just to mention the expansion in Asia, we have re-launched a dedicated network in the Philippines. The work on that started in September earlier this year which gives us expansion of a dedicated project development capacity. There are also going to be country events coming up in the Philippines including a financing forum, capacity building and technology transfer workshops.

Later this year, early next year, we'll be starting a major scale-up of the regional network, reinforcing the existing country networks in India, Indonesia, and Thailand. Also, then going into new countries in Cambodia, Laos, Malaysia, Vietnam, also in due course into Southern Asia, Bangladesh, Nepal, and Sri Lanka. The aim of that particular activity is to leverage somewhere in the range of about \$1 billion of investment over the next 5 years or so.

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I thought it would be useful to give you some idea of the sort of projects we work with. Here are 2 projects that we worked with in the past and raised money for. The first one is a biomass power plant in the Philippines using rice husk as its feedstock. It was a 4-stage project. We helped raise \$30 million financing for the first stage of development to develop the first 12 megawatts of capacity. PFAN helped with the whole development of the business plan and the financing structure. In particular, here, we helped develop an innovative project structure to involve the farmers and the

agricultural companies that will be supplying the feedstock, to participate in the equity of the project thereby actually securing the feedstock supply. Ensuring the success of the project going forward because as you know, one of the key to biomass type projects is feedstock supply, it's one of the biggest concerns that investors have in that particular structure. They pay great comfort to the investors.

The other project I've mentioned here is waste to energy project in Thailand. Working on the processing of municipal solid waste via anaerobic bio digestion to produce biogas and then generate electricity. Here we raised \$5 million of expansion capital to expand the anaerobic digestion facilities and also to set up a gasification line for the processing of solid waste and the non-organic component of the waste stream.

I think the great thing about this project is that it has and demonstrates 4 revenue streams making it a very strong proposition for the investor. Based on the success of that first launch, we're now working with the developer to replicate the project across Thailand, looking at 5 sites currently, all about the same sort of size that you see there. A further 5 sites in Thailand from about 2 years, 3 years out, and potential sites in Laos as we go forward as well.

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Here are some other project samples that I thought would be useful to show you, showing you some of the extent and the scope of the sort of projects that we tend to get involved with. We're seeing a lot of rural electrification projects at the moment, or rural lighting projects, for the distribution of solar panels and solar lighting kits.

Here, the interesting thing is the business model that attacks the puzzle of the pyramids, looking at very poor rural communities that are obviously off grid and suffering from energy poverty. Working with very innovative distribution models to get to those communities and get to those markets. It's a huge market. Some estimates put the value of that market at about \$20 billion a year on current analysis.

We also see projects in the agriculture sectors, in productive use of energy to support farming activities. We're seeing a lot of clean transport projects come through in the development of urban transport systems particularly in Southeast Asia at the moment for using E-trikes to replace existing taxi and informal transport services.

Most recently we've seen a very interesting innovative model for the bundling of small hydro projects in Indonesia. It's interesting, now, to see that these sort of bundling efforts are coming through to build on the development work that smaller developers have already performed in

markets to bring projects together and importantly to give them the investment scale the investors are looking at. Scale is one of the things that is a key criteria in looking at these things because investors tend not to be interested in investing in small one off projects for obvious reasons, the transaction cost and return.

We also, but to a lesser extent, looked at technology development projects. Some of the more interesting ones that we're seeing at the moment are in the space of wave energy. We're working with projects from Finland, looking at opportunities in Africa, also with the technology development in Singapore at the moment, which are developing wave energy.

We've seen a roadway power generation system which is essentially optimizing compression technology used in road surfaces to generate electricity. Another area that we've had some success in raising money for is new technology, new milling technology, new pelletisation technology for biomass. So, quite a large range of projects that we get involve with.

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Some of the lessons that we've learned from looking at these projects, Elmer mentioned that we've got some 164 projects in the pipeline at the moment. To give you an idea, to get to those 164 projects we're actually working or have worked with, we've probably looked in or seen, and analyzed, and scoped somewhere in the region of, I would guess, getting on for 700 or 800 projects worldwide in the meantime. We are quite choosy in the sort of projects that we look at.

That has given us a very good insight into what works and what doesn't work. Some of the things, conclusions that we've drawn from that is that the thing that drives these things are not so much the technologies but the business model that unite these greater technologies to deliver service or product which is needed by a particular community and whether its affordable by its targeted customers. It's affordable in a way that replicates the initial and existing cash flows.

That was the reason I gave you the example of the lighting models just a minute ago on the previous slide because what these models have done is to replicate existing expenditure on things like, kerosene, or candles, and batteries. So instead of trying to sell hardware or technology per se, what they're trying to sell is a service or a unit of electricity, a unit of lighting in the same way that a utility sells kilowatt hours to us in the more developed world. Those models are proving very, very successful.

I think the other thing that we've seen is a great need for capacity building with investors. Investors, by their nature, are risk-averse and conservative

institutions. One of the things that we've been working on is to push them towards the understanding of new technologies to help them understand the risk of those technologies and models, feel more comfortable with them, to help drive investment into the new areas.

Against that background, we also see the emergence of what we've deemed or termed as the specialist impact investor. These are the triple bottom line investors that Elmer mentioned earlier. They're looking for not just the financial return, although that remains important and paramount, but they're looking for other social and environmental benefits as well.

Past the problem in this area, is actually trying to quantify and validate those accruing impacts. What we're seeing as a result of that, the establishment of specialist exchanges and intermediaries such as IIX in Asia and NEXII in Africa to establish platforms and exchanges to help that validation process, and to facilitate investment flowing through to the project, facilitate investors' involvement in these markets.

Of course, the PFAN Consultants themselves getting off in that process in helping validate and confirm the benefits projects.

Finally, a very important to note that the [Indiscernible] [00:40:14] environment in all of these is key. We see a very strong correlation between jurisdictions and countries that have pro-enabling environment and regulation and the projects that we close. A couple of examples of that in Mozambique where we signed the guild the day after, biofuel mandates legislation is enacted and in the Philippines where we worked with the energy ministry to tweak some regulation. It was being enforced fully and which was holding up a number of projects to preventing them actually going through to a chief financial proposal. So regulation is key, and we can't stress that enough.

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Elmer mentioned that we are increasing, we're starting looking at adaptation and this is something I just like to walk you through. Most of the work a few have seen really concentrates on mitigation. But since earlier this year or late 2011, we started looking at adaptation whether the methodology that we've developed. It can also be used for adaptation-related projects. We started with a background paper. That paper is available at the link you see there on our website. We brought together various stakeholders from the public to private project developers and of the stakeholders in a workshop in June 2012 to help frame the issues and help us understand better what challenges adaptation process and to solve the process of project identification and development. And that workshop led to us being able to identify five projects, five adaptation related

projects. We're now working with in a pilot program that we hope is going to throw some light on this process and help us bend in due course, put together a large of mainstream activity for being able to support and facilitate finance flowing into adaptation-related project.

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I think, sort of based on the work that we've done so far and what see, and this barely days to that adaptation. What we're seeing is that there is a general lack of understanding and experience in the adaptation space both from the public and the private sector side of that is making project identification difficult. People just don't understands yet what adaptation readily entails and how it can be used to generate investing project opportunities. That's particularly true for the investors. One important thing that came as the workshop was the realization already the statement from the investment community that they are not so focused on the definition between adaptation mitigation that they really don't care what we call it. They will invest in to projects if they can meet their [Indiscernible] [00:43:56] criteria and that extends its various [Indiscernible] [00:44:01] for us altogether to understand manage and price those risks. And if they can hit and meet the other benefits and targets that they want that are driving their particular investment profile. And this again underlines the importance of the role of impact investors particularly in their adaptation and thing.

But again, they're still having this difficulty in quantifying validating the improving development and social benefits that they're needing to see. Generally in the adaptation's phase we see that there is an even greater shortage to seed capital than there is mitigation. The lack of collateral and guarantee use is a problem for project developers and they're having to deal with creating passive investment structures to get realms. The fact that they're often working in spaces on the areas with the underlying assets and services are really taking place and situated in a public set of space so in a public good space which has been previously dominated by the public sector and that is presenting challenges in putting investment structures together where the private sector is involved. So you're with having to put processes and together for ownership of assets to prevent outright private sector ownership where this sensitivity around those sort of issues and things like that. That leads to the need and requirement for blended finance where we're using both donor financing and private sector financing and also innovative public-private partnership type models that we think will be key to supporting adaptation-related investment as we go on.

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In terms of the target sectors that we're looking at in the adaptations sector, I just like to give you the overview here because it sort of goes beyond the purer energy sector that we look at in mitigation. So of course access to energy is an important area. We're also looking at projects in the agriculture and agri-business sectors, often the sanitation forestry and ecosystems. And we've identified some cross-cutting sectors in hoping that [Indiscernible] [00:46:42] particularly via in the development area microfinance, microinsurance where we see, what we're going to be seeing a lots of project activity that will be available for private sector finance.

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Elmer mentioned some of the other institutions that we worked with. I just like to focus on a few here to give you an idea of the scope of the corporations that we are currently engaging. We're watching with UNEP on TNA's looking at how projects can be bought out of the technology needs assessment, the net, the numbers and feed them into the CTI PFAN process. We're working with the UNDP activity called SS Gate, also the project source with the 200 innovation centers of the World Bank and InfoDev. Of course we cooperate very closely with the IAE technology platform and more recently we're also working with a partnership in Africa and the Caribbean called the Energy and Environment partnership which is initiative of the Finnish-Austrian and UK government. Most specifically going forward, we are looking at how we can support the UNFCCC now that the architecture is becoming clearer as to the way forward and specifically we are looking at how we can interface with the climate technology span for networks on the basis that CTRP Fund has been endorsed as a useful mechanism for financing technology transfer by the cook in the past.

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What I'd like to show you in this slide is how we invented that corporation potentially working. There you see in our projects coming out of the CTC or the UNFCCC process. They could be coming to us for tech-launching, lead assessments through numbers or net. It doesn't really matter, we would then subject them to an initial early stage analysis whether those initiatives can be financed where they do have potential in the private sector. If so then we would start working with them in CTI PFAN to help them in development, to help their development and movement towards financing in the private sector. Those projects that are not capable of raising private sector finance for whatever reason but a strong projects in meeting other development in environment's criteria. They would remained in the donor and the public-driven sector in the middle with obviously potentially have its error of public partnerships with mandate finance where we got both aspects. And this we feel it tends to be very strong model for optimizing results as we go forward and to make sure



that we really do maximize the potential of both groups and both sector financing and to speak to their strengths in being trust of really optimizing the various sketch of public sector as office but we're all confronted with at the moment.

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I think we'll be having a strong ideal in the meantime is to what the opportunity for interaction from business is, is essentially we're open to project proposals from project developer making be submitted in the meantime. Walk through one of our goal's proposal. I think PFAN is a strong business development and support of technology suppliers wanting to get into new markets in developing countries as they look to sell and propagate new technologies coming through.

Obviously, it's also so very strong tool for consultants and investors that are working in these areas and regions. So the investors whereas deal pipeline which is crucial to their business development as they look to expand their activities. I think PFAN helps provide a span of credibility. But it's a number that enables congressional, technical and also environmental sustainability. That's something that is reinforced with all the interactions that we have with various stakeholders and most importantly we provide the service free and we're able to do that through the very generous support of our funding partners. Those are the partners that Elmer mentioned at the beginning, the CTI countries, ICETT, the USAID, REEEP and so on.

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In terms of the benefits for donors, we get a very high rate of return for every dollar that our funding partners provide to us, to help us perform our services. We generate and I emphasize that it's at least a hundred dollars of financing. I'm giving you the example there of one of the REEEP activities of a \$140,000.00 of financing leading to about \$18 million of investment. In addition, we've got automatic leverage built in to the PFAN business model in the sense that's the consultants contribute their services as it discounts to their normal market rate. I think PFAN is a successful and a functioning public-private partnership model. It's producing tangible impacts on the ground and particularly through the clean energy financing forum that type you're going to be talking about and a little bit detail in a minute. We generate quite a lot of visibility in the markets that we work in and it's proven to be popular with all the communities that we have contact with.

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Just to summarize, this is where we see the added value of CTI PFAN in summary. You know, I think it's obvious to us all these early stage development and support towards a crucial helping projects raise and access private sector capital. CTI PFAN helps to accelerate that process. We're reducing the risk and the cost of the transaction for all parties something that we're very proud of and we're essentially I think helping more projects to happen in a faster timeline and in a more accelerated timeline and otherwise would be the case. And I think with that I'm going to turn over to Taiki. Thank you very much.

Taiki Kuroda: Thank you, Peter.

*Next slide please.*

Peter mentioned of the ICETT. There are two entry point to receive CTI PFAN hosted. One is [Indiscernible] [00:54:33] proposal submission for Development Pipeline Induction which can come in any time from any source and the other is regional and country-based Clean Energy Financing Forum. I'd like to walk you through, it's called Clean Energy Financing Forum process which starts with the Call for Proposals issued through the CTI PFAN network and the CTI PFAN founder site.

After checking selection process, CTI PFAN consultant will be assigned to each and all shortlisted project and in terms of one-on-one coaching will start. After being engulf the one-on-one coaching project development and financing workshops that help to provide expert data through the selected project developments on that development and structuring of their project and the preparation of bankable business plans and investment features from professional outsiders, Clean Energy investors and commercial bank. At the same time, there is outreach activity to target project and professional investors that are conducted to increase the possibility of matching projects with necessary finance. The one-on-one coaching will culminate in the financing forum to be held in business plan competition format. This forum process has proved to be a very successful tool for identifying promising projects and at the same expands the PFAN network.

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Currently, we have the South Rwanda Regional Clean Energy Financing Forum in Asia which we call Asia Forum for Clean Energy Financing or AFCEF-3 for short. In response to the call of proposal issued in January this year, 40 project proposal was submitted from 12 countries, India, Myanmar, Indonesia, the Philippines, Vietnam, Tonga, Bangladesh, Nepal, Mongolia, Thailand, Cambodia, Hong Kong. Either of those 40 project, 18 has been shortlisted which are mature enough to receive intensive coaching and have high probability of being ready to be

presented to investors within a short period of time. These projects come from India, Philippines, Indonesia, Thailand, Tonga, Bangladesh and Cambodia. In addition to the shortlisted project, 12 projects which are left mature [Phonetic] [00:57:27] but have potential of being ready in longer time have been identified for possible induction CTI PFAN Development Pipeline. The project selection has been conducted by three experts using the criteria on the next slide please.

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At this stage, the value proposition and business model and the financials rate it more than other element for project proposal as you can see on the slide.

*Next please.*

We have just held the project development and financing workshop for AFCEF-3 in Singapore on 9th of November. The workshop marked the beginning offering hence this coaching process and also provided an opportunity for project developers to meet their up find coaching face to face for the first time. Appearing the workshop, the project developers was seeing as a good setting expert input and the advise is long how long to prepare and present in investor [Indiscernible] [00:58:41] and expectation and requirement of investors and bankers and also the key element of a successful business plan. We interactive nature of the workshop was very contusive in sharing all the experience and it provided a useful forum for the developer to interact and benefit from the views of the other assessments from many countries in the region who are working on different but related technology. The direct interaction between CTI PFAN coaches and projects also participated for understanding of shall meet the project.

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[Indiscernible] [00:59:34] input received at the workshop, the associated project developers will work on that first draft of business plan which is too long 10thb of December this year. Base on the criteria shown and primary project will be selected.

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There will be a couple of more round of review process leading up to the forum event on 2nd of February next year which will take place at Concorde Hotel in Singapore. But two days before the forum, we'll have prepare for the workshop to give the finding and opportunity to build mock presentations in front of experts and receive feedback in order to refine their investor pitch. At the forum event itself, which will be held in business direct [Indiscernible] [01:00:31] format, each fine will make a

15-minute investor pitch which will be a fit by an expert panel of judges. Within 10 parameters to select the award winners. The panel of judges will be provided with a copy of business plan some days before the forum for our panel review and preparation. The judges leading the competition will be based largely on the presentation and the immediate impact however. After each presentation, there will be a round of Q&A from the judges.

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At the end of — after three processes, the coaching outputs will include with business plan which is already to be presented to investors and the expected summary of the business plan, the project data sheet which is the essential part of preventing through the time that is, and the investor pitch [Indiscernible] [01:01:35] so I think there is such why summarizes the business plan.

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For both projects that did not make the after being shortlist but is still of interest to the CTI PFAN program. If project induction workshop will held on 21st of February where they receive orientation and comparison in relation to the submitted project. Once inducted to the Development Pipeline that this projects would be allocated CTI PFAN coaches staff receive same support in project development in the long, competitive, more time-constraint manners. Next these projects reach a phase where their business plans already to be presented to potential investors. Introductions will be made on an individual basis.

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In summary, CTI PFAN experience in a very strong world being dedicated. There is no and country covers. We are well focusing to technology chart for inside and outside of the UNF [Indiscernible] [01:02:53]. CTI PFAN private to both investors and developers by these projects which in finance are closing. CTI PFAN has a very high financial leverage that are raging hundred dollars of private finance for every dollar of grown up funding for program at [Indiscernible] [01:03:13]. We are open for business and look forward to working with you as we make further progress in facilitating private finance in Clean Energies.

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To this you see a contact address. If you have questions or inquiries please contact us directly or I'll let you ask questions after this presentation. Thank you.

Vickie Healey: Great. Elmer, Peter and Taiki, thank you so much for the outstanding presentation. We do have some really good questions that came in from the audience while you're speaking. So we'll use the remaining time to answer those questions and maybe have a little bit of discussion around those. Okay, first question and let me apologize upfront if I mispronounce anyone's name. I am sorry for doing so. But the first question comes in from Benedict Neeya [Phonetic] [01:04:41]. He's in Kenya and it's actually a two-part question. The first part is, "In Kenya, which project have you worked on?" And the second part to that question is he's asking that as an environmental consultant in Kenya, how could he be engaged in your projects in the East Africa region? Can everyone hear me?

Peter Storey: I was just muting my mic set to be able to respond at time to speak without —

Vickie Healey: I've been there as well. [Chuckle] [01:05:31]

Peter Storey: Let me see if I can respond to that. I mean, I think - is it Benedict? Is that right?

Vickie Healey: That's correct.

Peter Storey: I'll start with the perhaps the perhaps the end part of the question first and respond to Benedict's inquiry about becoming involved in the network. What I will suggest is that he makes contact with our country code and agent's name is Patrick Thimba, is the CEO of Africa Bioenergy, if I remember correctly the name of the company. He's based in Naorobi. We can exchange contact details through between energy solution center after the webinar. I think that's the first entry in and we can discuss as to whether Benedict's company is suitable for joining the network. And essentially we're open to all companies, investors or consultants never active in the space for coming in and joining the networking and getting involved. There's a little bit of a bureaucratic process to go through which is not too painful but doesn't go putting some documentation in place and finding into the memorandum of understanding I mentioned and Patrick is the sort of entry point into that process. We'll put Benedict in touch accordingly.

In terms of the project that we're currently working with in Kenya, I think that's probably - one because I can't remember would've been immediate the offhand. We were working with a large number. I think the number of Kenyan projects somewhere and the reason instead of 15 or 20 projects that we're currently working within in Kenya. So obviously, a ton, we have available dozens in hours to talk to all of them in detail. But it covers small hydro biomass waste to energy biogas projects. They fall very much into the \$1 to \$50 million range that I mentioned. It is as being one of our key criteria and they're being developed by mostly private entrepreneurs and renewable energy company and developers of which there are a great

many in Kenya or in East Africa just the person sign which is very encouraging them. I think we'll be pleased to speak with Benedict offline something that Patrick can also help with to give some insight into the sort of projects that we're working with.

Vickie Healey:

Okay, thanks Peter. And I'll be happy to provide each of you with contact information subsequent to the webinar for further details or discussion on that. So thank you for that. Our second question, received - again, forgive me if I'm mispronouncing your name, but Dionne Fischer [Phonetic] [01:09:03] at [Indiscernible] [01:09:05] has a question and it is, "In order to invest in renewable energy projects, is it generally required to provide co-financing by the industrial host/project owner to reduce risk for the CTI PFAN investor consortium?" And then again, this is a two-part question and related as multiple revenue - I'm sorry [Indiscernible] [01:09:37]. So and related as multiple revenue between help to lower risk, what will this carbon financing such CBM, specifically POA playing the overall viability of project finance? And if you need me to repeat that question I'll be happy to do so. But the next is — that's the entirety of the question.

Peter Storey:

Okay, I'm not a 100% sure I've understood the pro financing part of the question, the first part. But I'll try and talk though to it and if Dionne wants to clarify while I'm speaking then please do so. I think the response there is that we have very different from other doing finance programs where a criteria or condition of acceptance is a co-financing element. It's not a requirement in the same way for us because we're dealing and acting the different space. What I would say however is that project developers need to have invested significant, time, effort and in most cases money in the development of their project for it to be of interest to us and for it to be applicable and suitable for the program. We're looking at a project that for instance has a total of investment in \$10 million.

The project promoter needs to have spent significant time and probably money in working on the development of that before bringing it to us. And ideally, either in self or through co-investors needs to be able to put some level of equity contribution on the table. Otherwise essentially, they're not going to be involved in the project going forward. We can and we have done in the past essentially sold projects on what does appear broker or projects to other investor groups but most of the time that's not meaning for us to be developer or the project promoter or has no idea who spent some time without looking at it and wants to remain involved in project as it goes through implementation and participate in the outside and the revenue streams of that project. But realistically, you're all going to be able to do that if you have either invested in or are able to invest in at this some level in the equity of that project going forward. The correct level of equity contribution depends from project to project and from situation to situation and you can't make generalizations about that unfortunately. So I think that's all I can really say about that and I hope I answered Dionne's

question. The other question was the aspect to see the end financing inhabit contributed, is that right?

Vickie Healey: That's right. And that's basically its how does that play into the overall liability of project finance.

Peter Storey: We do look at projects that are looking either through the certified or the balancing markets that's carbon finance. Generally we find carbon finance place a relatively small role in the overall financing packaging structure or it can be an important one. We have had a couple of projects that's have been able to leverage in free finance carbon revenues to support project development and completion of the project between financial clause if you like although it's a very difficult and quite grand. And we are now seeing a lot of projects under program of activities, POA, such structures particularly in rural nitrification biogas off-bridge areas for distribution of the efficient cook stove soda lighting kits and so and so forth.

But again, the CBN or the carbon finance component is relatively small. Typically it's sort of 3% to 5% of the total financing structure. There are some exceptions but they tend to be in the biogas waste to energy and methane-producing or treatment areas. So it's important. It certainly helps everybody investors that we work with tend to like to look at project strict of the CBN benefits and treat CBN or the volunteer markets, in voluntary carbon finance as icing on the cake if you like additional revenue rather than core components of the project financing structure. And that's particular case just at the moment with the value of CERS very much. We have this at the bottom of their cycle. I think there are about \$2 a ton at the moment which of course doesn't make much impact at all.

Vickie Healey: Thank you again, Peter. We'll see, next question is from Prim [Indiscernible] [01:16:07]. This is basically the question is basically describing a project and leading that to a question to ask if it's a type of project that would be of interest to CTI PFAN. So I'll go ahead with the description and what the question and let you take it from there. And this one - my screen keeps jumping around. There's so many questions coming in. Okay, here we go. Tameer Microfinancing, which is one of the leading microfinance institute in Pakistan. It's now on a process to set up a renewable energy costing. The company plan should reach half a million households in the next five years where small scale renewable energy technology such as solar hang system, solar water pumping, biogas plant and improved cook stove. They're looking for the investors for this initiative and the level of investment that they are looking for is - again, my screen is jumping around, I apologize. One second I — [Indiscernible] [01:17:25]. This is the initial in a level of investment they are working toward around at between million US dollar. Then that description leads up to the question of would this be an interesting project for CTI PFAN and if so how could they move forward with this project.

Peter Storey: [Crosstalk] [01:17:59] I think I've got it. I'm going to ask also perhaps Elmer supporting this one because I'm not social capacity specifically in Pakistan at the moment. But essentially from that brief description that's certainly a project that we would normally be able to look at. We haven't done work that they get in Pakistan and we would need to check our capacity there. So that might be an issue for us. But we have never previously had to decline a project for particular political reasons. So I would hope it would be something we could look at. In terms of the next steps, what we require is a project proposal. We have sort of a template submission format which we can send to — I didn't hear the name of the questionnaire in this case. You said Prim, I think.

Vickie Healey: I'll send to Debby and again I am happy to share the contact information.

Peter Storey: We can get that process started after the webinar. So we have the documents and you can submit accordingly. But Elmer can you perhaps just shed any light on Pakistan for us?

Elmer Holt: I think that's a very good next step is basically getting some submission on paper so we can get a little better feel for this and we can address the country issue at the same time.

Vickie Healey: Terrific. Well, great. We'll be happy to share our contact information and help move things forward within my own capability. So thank you for answering that question. Once again, just doing a quick time check. I think we have time for a couple of more questions before we end. The next question comes in from the Denativ Kanwal [Phonetic] [01:20:10] in India. Her question is, "An India for financing energy efficiency projects has these problems regarding the collateral or security deposit. How can that be resolved if financing has to be done from financial institution? And the Bureau of Energy Efficiency will be giving guarantee to this project but still what should be the financial IRR on the basis of whom the project it should be selected?"

Peter Storey: I got a horrible feeling that this is for me as well. [Laughter] [01:20:56] Without knowing some more details, it's very difficult to speak to that level of detail. I think we fully appreciate the difficulty of collateral. We know it's an issue in many projects and particularly in smaller projects in rural areas in India. I'm not sure that we've got unfortunately a silver bullet solution for you or for anybody else. But again, what we can offer to do is to have and look at the proposal and see if it's something that we can help with and help structure in any way. And I would also just mention that the BEE is institution or an agency that we know very well and the work within the past successfully. So we do have some experience in that area but did they see is a cranial issue. The problem with collateral and it could be wrongly to say that we've got a magic wand or an automatic solution



for you. But we can look at the project and see if there's anything that we can help or do.

Vickie Healey: Okay, it's great. Okay, we've got one more question from Joseph Fernandez asking, "What is the expected return CTI PFAN investors look for and ever what timeframe?" And second part of this question, "What would be the customary exit strategy?" And there's a couple of follow up and I'll just go through this real quick while you ponder that question. He mentioned trades without border and what is the floor and/or ceiling for investment amount CTI PFAN will consider?

Peter Storey: Okay, I'll try and talk to that. The first was what's the return criteria. As much as I dislike saying this, there's no answer to that question. It depends from project to project and part of the value that we add to the process is being able to look at the project and with the developer to actually assess the return potential of the project. And then select that return potential with the right investor and that's a core part of the process. Because of that or sort of as the other side of that coin, we work with a huge range of investors. We work with investors that I would characterize from these philanthropic investors, the impact investor if I mentioned in the presentation, through to sort of extremely commercial private equity hedge funds and venture capital type investment and pretty much everything in between. So we can really very wide range of projects and return the criteria next the potential project or the project to the right investor. And that really is one of the, I think big value adds for PFAN brings being able to do that.

We know what particular investors are looking for in terms of return. We know the sort of project that they're looking for and we take a lot of the pain after the investor searched for the project promoter. And we find it's one of the areas that the project developer and promoter is least comfortable with rather quick to do on his own or her own. And where they most require help and it can be one of the most damaging things to go to the wrong investor sort of thing. So if you go to a very low return project, you go to a venture capitalist or vice versa. If you go to - you put a very high returning project, you go to a philanthropic invest for it because not interested in you. You very quickly one get be motivated into find yourself having go through the wrong groups. So I think that's where I would like to say to that. There is no one return criteria. It does depend on the project and we work with the project developer to understand return dynamics and then match them to investment accordingly. So that was the one aspect. The other one was the size of investments, Vickie, was that right?

Vickie Healey: Yes. Clarify that real quick.

Joseph Fernandez: Yes, it was.

Vickie Healey: Yes, it was. I found it. Okay.

Peter Storey: We don't really have a hard sit in lower and upper and in between. As I mentioned in the presentation, we tend to work with projects that have a total investment volume of between of \$1 million and \$50 million or any currency equivalent. We do work with small and micro projects under the million dollar mark. And I think the smallest amount of money that we were use actually successfully raise for project is about \$85,000.00. We don't do so many of those more projects. That's obvious reasons. We have worked with bigger projects. I think the biggest project in the [Indiscernible] [01:27:09] the moment where in the development pipeline is somewhere in rate of \$600 million for large wind project in Kenya. But I think where we see almost comfortable and where we feel we had the most value is in that bracket between \$1 and \$50 million or currency equivalent. I think there was another part of the question which I've missed. So if you could repeat that Vickie? I'd be happy to [Crosstalk] [01:27:35] —

Vickie Healey: What should be the financial IRR on the basis of kind of project should be selected? It looks like you covered that question on full now that I'm up reading through it.

Peter Storey: Okay.

Vickie Healey: Elmer, Peter and Taiki, I have several more questions but I do want to be mindful of the time we have scheduled for this webinar. So would you be willing — would it be okay for me to email you this remaining question with contact information from the requestor?

Elmer Holt: Sure.

Peter Storey: That's fine.

Taiki Kuroda: That's fine.

Elmer Holt: Now, that we sort of put it in contacts. It's important they sort of get some basic information through its project related questions. You might want to sort of follow the template on our website.

Heather Stafford: Thank you so much. It sounds like we lost Vickie just at the very end here. So thank you all. I'll step in here, this is Heather Stafford from [Indiscernible] [01:29:22] Communication. I'd like to on the behalf of the Clean Energy Solution Center, I'd like to thank you all for participating in today's webinar. We've had a great audience and very much appreciate your time.

Peter Storey: Thank you audience for —

Heather Stafford: Thank you.

Vickie Healey: Hello? Can you still hear me? I'm sorry.

Heather Stafford: You're back.

Vickie Healey: I lost audio for just a moment but — I apologize.

Heather Stafford: We're closing. So go on ahead, Vickie.

Vickie Healey: Yes. I just wanted to ask Peter and Elmer and Taiki. There's still several questions left in the chill and would you be okay with me emailing you those questions so that you can respond to the requester by email?

Elmer Holt: Yes, when you asked that question the first time we answer in an affirmative that we certainly be pleased to receive those. My one qualifier was that if in fact that their project related questions that we refer to this template on our website, it might be helpful give them more structure to the question.

Vickie Healey: Absolutely. I will be happy to do that. So I will send you a few questions and follow that instruction and thank you for doing that. Where you starting closing remarks, Heather?

Heather Stafford: Yes, but you should go right ahead.

Vickie Healey: Okay, fantastic.

Heather Stafford: I didn't get very far into it so go ahead —

Vickie Healey: All right, well. I just really want to thank our panelist today for this terrific webinar. You provided some terrific information as obviously from my question panel generated quite a bit of interest. So I want to thank all three of you and if you have any final or closing remarks you'd like to make, feel free to do so now?

Elmer Holt: Thanks to those who signed up for the webinar. We hope that we've provided some useful information.

Vickie Healey: And I would say that you have. So just real quickly, I'd like to stay fit on behalf of the Clean Energy Solution Center, I really want to thank everyone in our audience for participating in today's webinar. You've been a great audience with great questions and we very much appreciate your time. And I invite all of you in the audience to check the solution center website frequently. Over the next few weeks if you'd like to view the slide and listen to a recording of today's presentation, if you missed anything or would just like to go back and refresh what you've heard. We already have the slides posted but we've also included an audio to accompany the slides

and that will be included over the next few weeks. And also you can go through and view webinars that we've held previously on other Clean Energy topics. So additionally, you will find information on upcoming webinar, another training event, and we also invite you to inform your colleagues and those in your networks about Solution Center Resources and Services including the no cost policy support. You've heard of that two, there features both the CTI PFAN and through the Clean Energy Solution Center today on no cost support that can be provided to you. So with that, we'll bring this webinar to a close and I hope that you have a great rest of your day and we have to see you again at future Clean Energy Solution Center event. Thank you.

Elmer Holt: Thanks to you.

Vickie Healey: Good night everyone.

Elmer Holt: Good night, good day.

Vickie Healey: Good day, good morning.