

Presenter

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Sean Esterly

I'm Sean Esterly with the National Renewable Energy Laboratory, and welcome to today's webinar hosted by The Clean Energy Solution Center. We are very fortunate to have David Leipziger speaking on the Transport Readiness for and Access to Climate Finance. One of the point note, I've mentioned before we begin our consultation in that The Clean Energy Solution Center does not endorse or recommend specific products or services. Information provided in this webinar is featured Solution Center's resource library as one of many best practices resources reviewed, and selected by technical experts.

Now, before we begin, I'll quickly go over some of the webinar's features. For audio, you have two options; you may either listen through your computer, or over your telephone. If you would choose the, "Listen to your computer," please select the "Mic and speakers," option in the audio pane, and by doing so, you 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 in audio pane, you should use to dial in. Panelists we add that you please mute your audio device while you are not presenting. If you have any technical difficulties with the webinar you may contact to go through webinar's helpdesk at (888) 259-3826 for assistance.

Now, if you like to ask some questions here on the webinar, which we encourage for all the attendees, we have to use the question pane where you may type in your question. If you have any difficulty viewing the materials through the webinar portal, you can find copies of the presentation at cleanenergysolutions.org/training, and you may follow along as our speakers present and then also within the next week or two, we will post an audio recording of the presentation on the solution center training page.

Now the great agenda prepared for you today and that's focused on Transport Readiness for and Access to Climate Finance. Before our speakers begin their presentations, I just want to 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, and wrap up with the discussions and closing remarks.

Now, this slide provides a bit of background in terms of how the solution center came to be. The Solution Center is an initiative of the Clean Energy Ministerial and it's supported through a partnership with the UN energy and was launched in April 2011. It's primarily led by Australia, United States, and other CEM partners. All kinds of this unique partnership include supporting of developing countries to enhance free resources on policies relating to energy access then no cost expert policy assistance, and peer-to-peer learning and training tools such as this webinar.

The Solution Center's four primary goals that serves as a clearinghouse of clean energy policy resources also serves the share of policy best practices, data, and analysis tools specific to clean energy policy and programs. The Solution Center delivers dynamic services that enables expert assistance, learning, and peer-to-peer sharing of the experiences and lastly, the center provides dialog on emerging policy issue and innovation around the globe.

Now, primarily 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. Now, another key feature we are very proud of you at the Solution Center is the expert policy assistance, Ask an Expert is a valuable service offer through the Solution Center. We've established a broad team of over 30 experts from all over the globe who are available to provide remote policy advice, and analysis to countries at no cost.

So, in the area of transport, we're very pleased to have Ted Sears, Senior Project Leader at the US National Renewable Energy Laboratory, serving as our expert. If you have a need for policy assistance on clean transportation or any other clean energy sector, we encourage you to use this useful service. Again, this assistance is provided free of charge, and if you require assistance, you may submit your request by registering to our, "Ask an Expert," feature at cleanenergysolutions.org/expert. We also invite you to spread the word about this service through those in your network and organizations.

We encourage you to let everyone know about the Clean Energy Solution Center encourage you to take advantage of our resources and services including expert policy assistance, subscribe to our newsletter and participate in webinars like this. Now, to provide a brief introduction -- sorry, first give an overview of the Low Emission Development Strategies. So, the Low Emission Development Strategies better as known as the LEADS global partnership is a partnership of more than 100 countries and international programs enhances coordination, information exchange, and cooperation to advance climate resilient low-emission growth. You can go ahead and visit <http://ledsgp.org/> to learn more about the partnership or to become a member.

Now, as I've said, just provide a brief overview or introduction of our panelist David Leipziger a Transport and Climate Fellow with the EMBARQ and CEP programs at the World Resources Institute. David will discuss the appropriate framework for preparing climate finance in the transport sector, and how to access climate finance opportunities and also how to reject challenges. Well David, I know you're excited. Welcome here to the webinar.

David Leipziger

Thanks very much. So, I'm going to try and breeze through this presentation like 40 minutes or so, and then I'm using time again for questions and discussion. If anyone has questions midway through feel free to just ask. So, this webinar as you have heard several times is about readiness for climate financial transport, and essentially looking at the conditions that are needed to access and operationalize financing for a sustainable transport.

You heard a bit about LEDS already, so move right along. So, the first section, I'm going to talk about the basics of climate finance in general. So, transport is a leading cause CO2 emission. This is one of the reasons why we care most about it. It's also the fastest growing segment of CO2 emissions, and as you can see by this graph by the 2020s or 2030s, it would be the most significant emitter. It's particularly an intensive user of oil consumption obviously fuel oil is prevalent an especially in cities around the world.

Increased investment is needed in the transport sector in order to mitigate this consequences that share about a quarter of emissions globally is going to increase by more than double by 2050, and any investment is currently estimated about a trillion, but IEA estimates indicate that we're going to need three times that to mitigate the emissions growth that were projected for the sector. So, when we talk about readiness, it is quite simply put the conditions on the ground that are amenable to or that attract finance or low-carbon or sustainable projects, so that in this illustration the contours of the local economy political environment and another factors are attracted to climate financiers.

The major sources of funding.

So, this is based on an analysis that WRI has done combining several sources, which are listed at the top. That funding for transport worldwide is split relatively evenly between public and private sectors, but as you can see, there are several different channels through which this money flows. So, I'm going to talk first about domestic projects, which makes up the lion's share of public sector investment.

So, domestic budget with encapsulate government spending at the national state and local level. There are some [Indiscernible][0:09:28] transport programs that are focusing especially on urban transport and sustainable transport. Two examples of those are JnNurm in India which is a large trunk of money in a program created by the federal government to provide

financing and technical assistance for 63 cities in India on urban infrastructure including transport. There's also an initiative at the federal level in Mexico called PROTRAM which is an even larger pot of money that is going into mass transport specifically in any city over 500,000.

So, the next section that I'm going to talk about is multilateral and bilateral Official Development Assistance which is significantly smaller, and one of the issues that ODA is that it's not usually focus on sustainable modes. So, you can see on the graph at the right that historically the data from the Asian Development Bank private sector or Official Development Assistance has focused on road transport or there anything else. Road transport is prone to promote all motorized transport, generally private motorized transport which is less clean than urban transport which is characteristically mass transit or public transport that's going to low emissions per passenger mile.

So, it's moving based on the plans and the direction there's also a commitment of \$175 billion made by the multi-lateral development banks that we have mentioned recently to invest that amount of money in sustainable transport in the next several years, and this STAR framework which is listed at the bottom is a methodology that's being used by the ADB to assess how sustainable their transport investments are. So, in example of how LGA who are not particularly fruitful for sustainable transport at present is moving in the right direction.

So, the next section is quite specifically catered to sustainable transport, and those are environmental climate funds. It's an even smaller portion of public sector money, but it's a great place to turn for resources because these funds are specifically geared towards sustainable investments. There are lots of different funds in play as you can see by this graph, and some of them are focus generally on the environment like GEF, and many of them are focus specifically on climate change mitigation or adaptation. This is the list of those which had been identified by [Indiscernible][0:12:36] and other researchers as being most amenable to the transport sector.

You can see from this graph that they are relatively new with the exception of one or two, these funding sources have come about in the past five years or. You can also see that the proportion that they are lending to the transport sectors are relatively small with the exception of one, they're all in single digits, but these funds are likely to grow as far as becoming an increasingly a relevant sector and attracting increase attention and some of those new funding channels include Fast-Start Finance which is essentially a description of funds that have been pledge based on the UNFCCC Copenhagen Accords that constitute new funding sources put towards [Indiscernible][] mitigation/adaptation around the world. One of the most significant ones is that Fast-Start Fund from Japan which has, I think about more than \$10 billion, or has goal of raising more than \$10 billion.

The Green Climate Fund is hoped to be operational this year. It's a relatively new fund with an expected budget of \$100 billion, and it should -- it plans to focus on both public and private sector initiatives. Then, NAMA's also a relatively recent channel Nationally Appropriate Mitigation Actions which were created to make it easier for developing countries to incorporate low-carbon strategies into their policies and actions.

It's a particularly flexible mechanism, and most designed that way, and NAMA's can be either unilateral and that they're done without any external involvement. It can be supported through some external support, and they can also be credited meaning verified through some sort of interview process, and to have their emissions be quantified there on low-carbon market. There are certain investments that are facilitating the development of NAMA's domestically like the NAMA facility which is the cooperation of UK and Germany governments.

A little plug about where to find more information about the specific requirements of eligibility and accessing these funds. There are these web sites, which can give specific instructions also these instructions for each individual funding source will have the kinds of criteria, and step-by-step process. Then, this publication by GIZ which is an overview of how to access climate finance for transport has step-by-step instructions for all of the funds listed in the previous slide specifically for transport.

So, the next source of funding is partially public and partially private; it's the carbon market. The carbon market operates through the Clean Development Mechanism as well as Joint Implementation, as well as voluntary trading programs and CDM was recently expanded with the Program of Activities stipulation to essentially reduce the transaction cost and difficulty of putting together single projects to be bundled, so that could be cheaper per project than CDM and Joint Implementation have barely touch on the transport sector, so we're not going to spend too much time talking about them suppose we say that they're not particularly strong source.

Finally, there's purely private sector money, and that's quite a significant chunk. The statistic from the World Bank another source is indicated just how much involvement there is that the private sector in developing countries, and through PPPs and other concessional contracts in developing countries the quantity invested by the private sector is quite high. Private investment in general can come through debt or equity, and that's coming from other banks upon some things like investment funds, venture capital, or institutional investors which are one of the largest pots of money available. There are also other sources of private investment like insurance companies who had an interest in preserving assets and might be affected adversely by climate change impacts and then you have transit users that are also a source of private investment, but those are not necessarily financing so much as funding, and security.

There's variation in these private sector investment vehicles and they are quite different in many different ways, but the investor from the private sectors is constrained by less complicated concerns than any of the climate environment funds that have particular eligibility requirements and goals in mind, private sector investors are pretty squarely looking to minimize cost, and maximize return. So, we broken down components of readiness for this proceeding next to financing sources, and we have these seven components.

The first that I'm going to talk about is enabling environment which is probably the most foundation of all. So, enabling environment is the term that's been use by the [Indiscernible][0:18:54] and others to describe the local market and policy conditions broadly speaking in the country. So, these are things like local laws and policies that are going to stipulate whether or not they are emissions target, whether or not they are plans to reduce emissions, whether or not they are policies emplaced to incentivize that.

It also constitutes regulation over efficiency standard, safety standards, financial protections which are especially important for foreign investment. It also constitutes economic policy whether or not there is a stable exchange rate what the subsidization looks like for fossil fuels and eco fuels specifically, and also capacity, and institutional market capacity has to do with the means and resources of the public and private sectors to be able to deal with the influx of funding, so are there technical skills in the fields of finance, or engineering in order to translate investment into actual operationalized projects.

So, that's quite complex and broad but foundational tenant. A quick example about enabling environment has to do with policy if you look at annual fuel subsidies in different countries. This is going to provide a disincentive for investment in sustainable transport, and by [Indiscernible][0:20:44] using IA data, we can estimate that \$300 billion dollars of fuel subsidies have prevented 6% global GHG reduction. So, that's a pretty clear barrier.

Next is the financial strategy that's been taken to attract kind of finances. So, looking at the different sources of financing out there is important, because it enables projects to maximize the amount of resources that are being put towards sustainable transport. It also distributed risk which is helpful to both the domestic recipient as well as the domestic or international provider of financing.

So, this is an example of possible funding stream indicating how ay stage of the projects and increase level of funding which can be achieve by strategizing and blending different funding sources can really augment the total resources available for a project, and in fact have a snowball effect in terms of attracting more.

Next, I'm going to talk about the institutional arrangement which has to do with the way that public institutions and recipient countries are organized and how they interact. It's important for national ministries, and their regional -- I mean for counterparts to be in touch in order to share resources, to share strategies, to not be duplicative, to remove barriers to private investment; for example, not having the same or repeated levels of regulation at each jurisdictional level, and there should be coordination across these institutions as well, so between ministries of finance, environments, and economics, as well as for example, between municipal agencies of transport, planning, and finance. So, a quick example of the benefit or barrier of institutional arrangement for transport investment is with the Transmilenio BRT system Bogota and Transmilenio is a very successful system, and didn't receive climate financing of several types.

But, it took several years for data to be transmitted between the federal government, and local government, and that was important in order to, as you will see later, to estimate the emissions impacts, and the potential emission savings from the system. It wasn't an issue of having the data, or even knowing where to find it. It was purely the way the institutions interacted, and it took several years to physically transmit data between different institutional levels, and that kind of thing can hold up the projects, and potentially end the project.

So, data needs specifically, there are certain data that's going to be essential in order to actually operationalize a transport project, especially a sustainable project or a low-carbon project that's reliant on reducing emissions. So, the data approximately taking via top-down approach, looking at total consumption of fuel cost an entire jurisdiction, or entire boundary, and then extrapolating down to the actual ground level is one approach, the other would be should be going from the bottom up looking at the vehicle stock by making up and fuel-type efficiency and then multiplying through to determine what the Consumption and emissions levels are. But, these are the types of data that you would need in order to be able to illustrate and develop and track emission
[Indiscernible][0:25:16]

Next, I'm going to talk about attracting the private sector and this is important because although transport in general is probably considered a public good and public transport is probably considered to be in that public domain. It's also true that it's difficult for governments to finance independently their transport progress, and the involvement of the private sector can prove it very effective at everything. Resources in providing expertise and also as a measure of accountability provided it's structured correctly.

So, the most important thing to understand about attracting the private sector is that they are risk averse. Any company that is going to invest in its next project its next initiative is going to evaluate what the risks are. The transport risks are quite diverse here and categorized in six different

varieties. So, you can have technological risks that would be the fear that whatever technologies being used would become obsolete too soon and therefore throughout the project.

Financial risk, the fear that some kind of macroeconomic disruption would devalue the investment in the project. Operational risks having to deal with the actual implementation of a project if something goes wrong in operations if something malfunctions both with some sort of external factors imposed. Construction risk, I expected delays and cost increases from variety of things [Indiscernible][0:27:10] government imposed. Commercial risk can arise from making errors in the commercial viability of the project if the demand is underestimated or overestimated that can have consequences for bottom line of the private investor. Then political risk which has to do with the business [Indiscernible][0:27:32] local politics or with the national politics and if the preferences of the old and new regime are different that may disrupt the investment that's made by the private sector.

So, a quick example of minimizing risk is a way to attract the private sector is something called non-financial guarantees so, in some projects that are concessions or public or private partnerships, a private operator will operate and maintain a transit system, this is common with toll roads with metros with, BRTs sometimes, and there is a possibility that a government can provide a guarantee on either a minimum demand or a minimum revenue for example. There are a couple of different ways it could be structured, for example if it's a toll road, the government can guarantee a certain level of demand which would imply a certain level of funding which should be incurred from tolls and if demand falls below that level, the government would pay the difference or guarantee the difference and if it's above that level, the concession could be negotiated or halted or otherwise altered. So, this is a measure of minimizing risk that can be provided by the public sector to a private operator in order to attract them to the project or to incur more favorable returns.

So, the next two components are almost by products of the previous ones but very essential to attract the full range of interests and transport projects and are essential for certain types of financing. First is assessing co-benefits. A lot of times, the co-benefits is in the transferred understood but not actually quantified in at the project level and taking the time and having the capacity that leads to assess the benefits to economic development through energy security to environmental degradation to health and safety of local residents can be very important in convincing local policy makers to implement a project. So, if there's a sustainable transport project that could potentially be funded but doesn't have that political will, so it get through whatever policy making process the ability to have clear co-benefits alongside the transport project makes it much easier to push it through and to realize.

Finally, being able to calculate emissions and the capacity to do so is extremely important. Any project that I'm alluding to in this presentation as a sustainable, or low-carbon is such only as proven by its calculated emissions performance. So we'll talk and just a few short seconds about the MRV process, but it's an important component of attracting climate finance especially for more strict MRV processes derive from the carbon market, or from [Indiscernible][0:31:15] authorities to be able to calculate your emissions at least in a scope 1 level.

So then, I'm going to talk briefly about evaluating performance which is incredibly important to actually operationalized, and to culminate transport projects. It's important to have an MRV plan that establishes their goals that has a clear perimeters in terms of time, in terms of space, in terms of data sources of what is measured of MRV standing of course the Measure, Report, and Verify. It's important to measure things Ex-ante, and Ex-post, so a performance metric before the project, and one afterwards in order to share performance over time is critical, in order to demonstrate the effectiveness of the project.

It's also helpful to have direct indicators or outcomes, and if that is not possible, or if in addition there can be indirect indicators, that's great. If that's not possible, or in addition there could be process indicators, this is the progression of types of things that should be measured, so actual CO2 gas abated is ideal, and then on top of that, if it's possible to get major changes, and equal registrations that's good, that can be backup proxy and even the process indicators are better which can be our secondary backup which is just policy regulatory changes, surveys or protect the people trained using the system.

Then, with MRV methodology, what processes were expecting is important with methodology they actually following could be related to your funding mechanism that was with CDM or you could be choosing something much than that. There is a GHG measuring protocols, and WRI, or to use some other measurement. It's important to know that whatever methodology using aligns with the funding sources or the financing source.

The transport -- the general rule of thumb for GHG emissions calculation is that ASIF model which stands for activity in terms of actual transport activity and then share of modes and then intensity of the fuel that's used, and with the carbon content is of those fuels. The V in MRV is often forgotten. The verification portion is extremely important, and assessing the process as well as the outcomes is often [Indiscernible][0:34:27] that having a third party look at the process itself and verifying conclusions, and verifying that which can be verified is important to ensure the impartiality of a project, and to demonstrate that it really has validity to external audiences.

So, a few conclusions; in general, they're into this insufficient investment by means of domestic funding ODA and private sector. The way to promote greater investment and more sustainable investment is to utilize the full spectrum of funding that is currently available and that will be soon available. That's why these various components are so important as needed to take advantage of the current and perspective resources.

The conclusion of this research we distilled our findings into the five most important or the five primary actions to take for readiness conditions. These would be attracting the private market, focusing on institutional capacity, planning early and upstream, developing the financial strategy, and gathering good data.

This reference specifically particularized conditions and also cut across multiple conditions that in terms of actual actionable steps. These are the most important places to start first within transition.

Finally, I want to note that two sides to investing readiness conditions, and just to use the five actions as examples. There are benefits both to the donor or lender the surviving climate finance, in each of these areas, but there also benefits to local objectives that have broader externalities in the market, and institutions, and in developing policy more generally. As you can see many of these advantages are actually intersections of the two.

I'm not going to go through each of these but they are here for your reference, and here with the other three developing the financial strategy, planning early and upstream, and gathering good data, can really have to maximize investment impacts particularly, and ensure that your investments are strengthened.

So, thank you very much, and if you're having questions please ask now. If you have questions later, and think about then, feel free to send them to me. I can also keep you abreast of this research when it's published presently. Thank you very much for your attention.

Sean Esterly

Thank you very much David for your presentation. If you have a couple questions, comment from the audience, and I do want to remind them if they have a question, they can go ahead and do so through the questions pane, or you go to webinar panel. The first question of that how you see why in the urban transport project in Colombia, did you have any climate finance, any that you would recommend any climate finance tools?

David Leipziger

For a project in Colombia?

Sean Esterly

Yes.

David Leipziger

Well, Colombia was very successful with Transmilenio getting funding from [Indiscernible][0:38:36] and other sources. So, they have a pretty good track record of getting these pretty traditional sources that [Indiscernible][0:38:46] pointed out. I know that they're also becoming

more active with NAMA's specifically, and partnership with [Indiscernible][0:38:54] as viable as the NAMA course of action seems, I think that would also be a good place to turn.

Sean Esterly All right, and the next question is what is the most promising finance tool, or channel on the horizon that you see?

David Leipziger I think its GCF the Green Climate Fund that I mentioned. There's a lot of buzz about that. It's potential focus on the private sector, I think is important to some funds that are coming along have to opportunity to learn from the past funding opportunities. NAMA's are also regarded having a high potential, and I think that's true. They're not as many have been funded as of yet but with the economic facility, and now there's coming forward to help. I think the background represent a quite positive way for it.

Sean Esterly Okay, the next question was how important our domestic climate funds?

David Leipziger Good question. They are definitely important. I think they are few and far between that they serve a very important role in fueling funded gas. Now, there is one in Indonesia that is particularly impactful and as much as local, or national governments, and investments kinds of things, I think it will go a long way to not only providing financing, but sending a message as sort of enabling environments that those governments are quite dedicated to a low-carbon development strategy, and would serve to attract more investment of all types.

Sean Esterly In what way have private finance advance system would transport?

David Leipziger Well, there are many instances that there are many particular projects that had used private investment. I think, private investment has been skewed toward especially in developing countries has been skewed towards motorized transport particularly private motorized transport historically. There are many more recent examples of private investment, and public transit, mass transit that I think would be good examples of the way things are going that could be going.

I know that the Line four Metro, for example in Sao Paulo was very successful at courting private investment via a concession, and a non-financial guarantee structure. That project is deemed very successful in terms of its transport outcomes. So, it's difficult calculation about how the private sector should be involved in this kinds of projects, and the procurement processes in particular but, I think there's going to promise in many large but select transit projects that bode well and I think it's important resource that are shown by that local transport finance graph is a wealthy resource to tap.

Sean Esterly Right, thank you David. Well, that's all of the question guys received from audience. Please, before we go to the brief survey, I want to give you the chance to provide any closing remarks.

David Leipziger

Only if anyone is interested in learning more, feel free to be in contact with me. I can keep you up-to-date on where this research has headed, and even new developments in the field, so thanks for your attention.

Sean Esterly

Thank you David for the presentation. Now I'd like to take a minute to ask the audience to take a minute to answer a quick survey on the webinar with you today. We have three short questions for you to answer. Your feedback could help us improve for future webinars as well. Heather? The first question, "The Webinar content provided me with useful information and insight." The next question, "The Webinar's presenters were effective." The last question, "Overall the Webinar met my expectations."

Thank you for answering the survey, and on behalf of the Clean Energy Solutions Center, I just want to extend a hearty thank you to David, and to our attendees who are participating in today's webinar. We had a great presentation. We very much appreciate your time and I invite the attendees to check the Solution Center's website over the next two weeks if you'd like to view the slide and if you do a recording of today's presentation as well as any of the previously held Solution Center webinars.

Additionally you will find information upcoming webinars and other training events, and we also invite you to inform your colleagues all over your networks. We got the solution center resources and services including the no-cost policy support. So, I hope you have a great rest of the day and we hope to see you again on future Clean Energy Solution events and that concludes our webinar.