

Bringing Energy Efficiency to COP21: Lessons from G20 Achievements

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Sean Esterly

Hello everyone. I'm Sean Esterly with the National Renewable Energy Laboratory. And welcome to today's webinar, hosted by the Clean Energy Solutions Center, in coordination with the International Partnership for Energy Efficiency Cooperation, also known as IPEEC. Today's webinar will highlight the energy efficiency achievements that have resulted from international cooperation under the G20, and how these offer solutions to the COP21 discussions.

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

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GoToWebinar help desk at (888) 259-3826. They can help you out there. And if anyone from the audience would like to ask a question during the webinar, and we do encourage everyone to do that, you can simply type it into the questions pane, and we'll receive it through that. If you're having difficulty viewing the materials through the webinar portal, we'll be posting PDF copies of the presentations at cleanenergysolutions.org/training. Also, we'll be posting an audio recording of today's webinar to the Solutions Center's training page within a few days of today's broadcast.

And just a reminder. We're also now adding videos to the Solutions Center's YouTube channel, where you will find other informative webinars, as well as some video interviews with thought leaders on clean energy policy topics. So we have an exciting agenda prepared for you today that is centered around the presentations from our guest panelists: Makooly Cochek, Benoit Lebot, Shelia Watson, and Melanie Slade. These expert panelists have been kind enough to join us to share with you the significant achievements scored in each area of the G20 Energy Efficiency Action Plan, along with plans for 2016.

And, sorry, I'm getting a little background noise through some of the microphones. Could everyone make sure you are muted? And before our main speakers begin their presentations, I want to provide a short, informative overview of the Clean Energy Solutions Center Initiative. Then following the presentations we'll have the question and answer session, where Zoe Lagarde will be joining us to help address some of the questions submitted by the audience. Finally, we'll close with a brief survey.

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

Then there's four main goals for the Solutions Center. First one is to serve as a clearing house of clean energy policy resources. Second is to share policy best practices, data, and analysis tools specific to clean energy policies and programs. Third is to deliver dynamic services that enable expert assistance, learning, and peer to peer sharing of experiences. And then finally the center strives to foster dialog on emerging policy issues and innovation around the globe.

The primary audience for the Solutions Center is typically energy policymakers and analysts from governments and technical organizations in all countries, but then we also strive to engage with the private sector, NGOs, and also civil society. So this slide provides some information on one of the marquee features the Solutions Center offers, which is its no-cost expert policy assistance, known as Ask An Expert. The Ask an Expert program has established a broad team of over 30 experts from around the globe who are

each available to provide remote policy advice and analysis to all countries at no cost.

So, for example, in the area of energy efficiency policy, we're very pleased to have Jeff Ethan, senior analyst at the Climate Policy Initiative, serving as one of our experts. So if you have any need for policy assistance in energy efficiency policy, or any other clean energy sector, we do encourage you to utilize this valuable service. And, again, it would be provided to you free of charge. If you have a question for our experts, please submit it through our simple online form at cleanenergysolutions.org/expert. Or, to find out how the Ask an Expert service can benefit your work, please contact me directly at Sean.Esterly@NRL.gov. Or feel free to give me a call at (303) 384-7436.

And we also invite you to spread the word about this service for those in your network and organizations. So now I'd like to briefly introduce today's speakers. We'll be starting with a few words for Makooly Cochek, who currently she is the head of the department with the deputy directorate general for energy and water affairs with the ministry of foreign affairs in Turkey. And then following Makooly we will then be joined by Mr. Benoit Lebot. Benoit is the executive director of IPEEC. And during his extensive career he has worked with the French National Energy and Environmental Agency, the International Energy Agency, and the United Nations Development Program.

And Mr. Lebot _____ IPEEC member states and further elevating energy efficiency on the international policy agenda, and support the member states in the implementation of their work streams. And then after Benoit, we will be joined by Shelia Watson, the executive secretary of the Global Fuel Economy Initiative, which seeks to support the development of fuel economy policies across the world. She is also the director of environment at the FIA Foundation, a UK based charity, which is committed to promoting _____ sustainable mobility across the world.

And then our fourth speaker. We'll be hearing briefly from Melanie Slade, senior program manager in energy efficiency in emerging economies, with the International Energy Agency. And Melanie has spent 25 years in energy efficiency policy development and implementation in many parts of the world. And then finally Zoe Lagarde will be joining us to assist with the question and answer session at the end, to address some of the questions submitted by the audience. Zoe is a G20 advisor and project manager with IPEEC, and was detached from the Australian government to IPEEC to assist in implementing the G20 Energy Efficiency Action Plan.

So, with those introductions, I'd now like to turn things over to Makooly for a few words.

Makooly Cochek

Thank you very much for giving me to address this panel. And as you know, Turkey has been the G20 president—holds the presidency in 2015. And taking into consideration 2015, will be and is a very important years for tackling the climate change negotiations in COP21. We put high in the energy agenda of G20 the renewable energy and energy efficiency. In fact Energy Efficiency Action Plan was adopted last year during the Australian

presidency, and this year has been the first year of implementation of the G20 Energy Efficiency Action Plan.

And IPEEC, as coordinator of this plan, worked very closely with our presidency, and produced concrete results in the first year of implementation. And taking into consideration the good results in the implementation of the Energy Efficiency Action Plan, we put high this issue also in the agenda of the G20 energy ministers meeting. And this is the first G20 energy ministers meeting. And our ministers discussed energy efficiency and renewables in addition to some other subjects, like energy access, and energy markets, etcetera.

And ministers were really pleased with the first year of implementation of the plan. They encouraged G20 and IPEEC to continue to work on the outcomes and improve the outcomes. And of course the benefits of energy efficiency count this like improving growth, lower costs for the consumers, and also energy security, and, most importantly, tackling the effects of climate change. If we want to achieve the below two degrees goal, we have to increase both renewables and double energy efficiency, and now with one of the STGs also measuring that energy efficiency has to be doubled.

And all countries, including my country, Turkey, we have plans for decreasing energy intensity. For example, Turkey aspires to reduce its energy consumption per unit of GDP by 20 percent, compared to 2011's levels, until 2023. But for that, we need to exchange information. We need to share best practices. And we should cooperate more internationally to achieve this goal for the rest of humanity for managing and tackling the climate change and its effects.

And I don't want to go into details of the G20 Energy Efficiency Action Plan and what were the concrete outcomes, because I know that Benoit will do it in a most better manner than me. But I would like to mention one last thing. That the leaders summit gathered in Antalya just a few days ago, 15th and 16th of November, and all the leaders emphasized the importance of energy efficiency again. And energy efficiency and supporting energy efficiency. And the good results of the work streams has found its place also in the G20 leaders communique about just a few days ago. And I would like to end my iteration in here. Thank you very much.

Sean Esterly

Thank you very much, Makooly. We will go ahead now, turn things over to Benoit for his presentation.

Benoit Lebot

Good afternoon, and good morning everyone. My name is Benoit Lebot. I heard you can hear me well. I can hear some echo. I hope we can be mute some mike if possible. The title of this presentation is Bringing Energy Efficiency to COP21: Lessons from the G20 Achievements. As Makooly just explained, the G20 leaders just met in Antalya last Monday and last Sunday. And they have on their agenda, energy efficiency and climate change. And as we are just a few weeks ahead of the COP21. We had in mind to maybe bring to your attention the proposal, the work done by the G20 this year.

First of all, few words about the IPEEC—International Partnership for Energy Efficiency Cooperation. Then I'll go over the G20 and G20 Achievements Action Plan. At present, we view the outcome achievement in 2015. Highlights on possible contribution to COP21. _____ on the outlook for next year's G20 in China. For those who are not familiar, IPEEC is the International Partnership for Energy Efficiency Cooperation. Was created in 2009 by the G8. But with the objective to bring together the big economies, typically the G20.

Today, IPEEC members of major economies. We had 16 of them. With Turkey soon to join. All those countries are part of the G20. IPEEC member countries with more than 75 percent of the world energy consumption. As soon as you have the G20, you have roughly 80 percent of the world GDP, of the world energy consumption, of the world greenhouse gas emission. The idea, by bringing those countries together to engage some collaboration, typically on energy efficiency.

Some positive move, a little move at the G20, can affect 80 percent of the world economic development. This is why IPEEC has been created by the G8 to serve the G20. The vision of IPEEC is very simple. It's a world where key national policymakers view energy efficiency as a resource, and implement cost effective policies to promote.

Quickly, why do we care about energy efficiency? And many reasons why energy efficiency has become attention of the leaders all the G20, and in many international forum. Energy efficiency means much more than just energy. And energy efficiency can bring some very interesting benefits, not only cost saving benefits. Energy efficiency, as fully explained by the IEA Com we see many benefits. What we call multiple benefits. Yes, we can save energy. We can reduce greenhouse gas emission. We can also enhance _____. Even more energy when needed. Maintain price of energy at a reasonable level. Have some positive impact on micro economy. On the industry of productivity. On poverty alleviation. On health and wellbeing. Unemployment. On local air pollution. Energy _____ and so on.

Energy efficiency comes with many multiple benefits. And should we one day be positioned to assess the economic benefits of this multidimensional energy efficiency, energy efficiency would become a much more obvious policy to implement. In many countries, energy efficiency is already the form of the first fuel. And the intention is indeed to make energy efficiency of fuel, and maybe the first fuel for investment for the benefits of climate change, and for all these multiple benefits.

Why do we bother about international collaboration? All countries have a potential to engage energy efficiency. They have a potential to reduce their own energy consumption. And by just sharing best practices and technical collaboration, we can accelerate the implementation of energy efficiency. By working together, we can have a greater impact domestically and globally, especially as we address the big economies in the world.

Why the G20? The G20 is this recent but very important new forum. As I said, by bringing the 20 largest economies around the table, you can impact 80 percent of the world problem. Sometimes 90 percent in some sectors. The G20 is slowly becoming the political, economic, and democratic ways of the world. Interesting, we have been observing that the G20 is a good logo. Is a very attractive logo to engage a collaboration. And that's exactly what energy efficiency needs. Because it's hidden fuel, and working under the G20 has opened definitely some opportunities.

Last year, the G20 was hosted by Australia. And in November 2014, the G20 head of state concluded the G20 Energy Efficiency Action Plan. A voluntary collaboration on energy efficiency. Calling for a series of collaboration to explore opportunities for G20 action, the foundation is to engage voluntary collaboration, and the action plan is articulated around six individual work streams. Throughout the year, IPEEC has been mandated to coordinate the implementation of the Energy Efficiency Action Plan. In October, we have presented this report on the G20 Energy Efficiency Action Plan to the energy ministers who met for the very first time on October 1st and 2nd in Istanbul. I will now present to you the essence of this work.

As I explained, the G20 action plan is articulated around six work streams. In the first work stream is on finance. There is a need to scale up investment in energy efficiency. But this is not happening to the scale of _____ that we know. So it has been accepted that under the G20 will try to bring closer the energy efficiency community with a financial institution. The second work stream concern—network devices. The internet of things. All the systems that we use are getting connected somehow. There is benefit for energy efficiency. There is also some concerns.

Every single device and appliance be used smart, we maybe consume energy typically on standby power. And if we don't pay attention, we may lose on one hand what we can get on the other hand. So special working group has been put in place. The third work stream was on vehicles. First it was on heavy duty vehicles, then the work stream expanded to light vehicles, through the Global Fuel Efficiency Initiative. Buildings have been also addressed as the fourth work stream, as well as energy efficiency management in industry. And the last work stream is on the power sector. Especially the coal power plant. There is a need to enhance energy efficiency in coal power plants.

Let me run you through the different outcome findings, so recommendations from each of the individual work streams. The first one, on finance, had the objective to enhance capital flows to energy efficiency investments. We know that to maintain the world under two degrees _____, we need massive investment on clean energy solution _____ between now and 2030, 2040, we have to double investment in renewable energy. But over the same period we have to multiply by five to eight the amount of investment in energy efficiency.

We need to really scale up the current level of energy efficiency by a factor of five to eight in the next 20 to 30 years to not only deliver the greenhouse gas emission for the two degrees in a year, but also to deliver on the multiple

benefits and policy _____. So the task group brought together a handle on wide implementation. With on one hand the energy efficiency community, on the other the financial institution. Financial institution are not only the ministry of finance but also the investors, private and public investors, and all the bank private public, the banking sectors.

Typically, throughout 2016, a wide consultation with more than 180 experts in five different workshop across the world have been put in place, and discussion have been led to identify solution on key issues. The work stream has published a report that includes some policy option that are now backed by _____ participating countries. The greatest achievement, greatest proposal from this work stream, is to propose a series of energy efficiency investment principles that provide voluntary guidance to head G20 countries to deliver greater benefit from energy efficiency investment in their economies.

These are the five proposed energy efficiency investment principles. The first one can be summarized as let's recognize the importance of energy efficiency as an economic and development priority. In many decisions involving investment, energy efficiency is not considered. So the first principle being proposed is to recognize energy efficiency as an economic and development priority. We propose to make this the first principle to the G20 participating countries.

The second principle is to encourage countries to consider both supply and demand side investment in a balanced way. Today, in the world, many energy efficient opportunities are not being captured, because all the attention goes always on the supply side. Building more power plants to respond to the increased demand in energy. While if we just in a balanced way consider the demand side option, we are likely to open up opportunities for energy efficiency. So we propose to make it a principle.

The third principle is to engage some country led review of measures and policy to stimulate the demand for energy efficient investment, a specific action. This principle comes with a list of very specific proposals to stimulate the demand for energy efficiency investment. Not only we have to recognize that energy efficiency is lacking in the decision process, but there is a need also to make sure there is a demand for energy efficiency investment.

The fourth is to unlock buyers to prevent the supply of finance for energy efficiency investment. This is a balance between supply and demand of the finance for energy efficiency. And the last principle comprises a series of proposal to build capacity at public and private level within the financial institution for energy efficiency investment in _____ proposal for establishing some standards, some special tools, specific instruments. Because energy efficiency deserves special attention. The fact that the kilowatt hour that we save—that is not visible. This is in short what we call in climate change the MRV—monitoring, reporting, and verification. Without a robust, solid MRV tool in the financial institution, fully understand the partners, we are not likely to see the level of investment we need to see.

This is a proposed way forward, because the work will continue. It is proposed to create the policy framework that enables energy efficiency investment. It is proposed in the next year to promote the G20 energy efficiency principle, and to also engage some specific partner, like the investors, the banks, and also the non-governmental organizations to continue to work closely with financial institutions and countries, and to showcase best practices and innovative case studies.

On networked devices, the intention was to bring together the international industry, the private and public organizations that are dealing with the implementation of this beautiful technology that establish the connection with many different product. And this work stream has engaged a very solid dialog with the private sector, and they have developed a series of proposals through very detailed workshops, and all the way to 26 conference calls to set the dialog to make sure that the G20 can propose a solution for countries to address energy efficiency in networked devices.

The recommendations—several. The first one is to initiate seven key projects to support one common goal. To recognize a need to take globally coordinated action to maximize network enabled energy savings and minimize the energy consumption from all networks and network connected devices.

The second recommendation is to encourage further work with the connected device alliances, CDA, to expand and build upon the progress made for the task group in 2016, 2015. So the way forward is to develop specific voluntary targets for participating countries. To develop common methodology to measure savings, to agree on the metrics. To promote principles for energy efficiency devices. To promote and populate a center of excellence. To launch recognition awards for the most advanced technology that we need to scale it. To encourage voluntary protocols and standards. And to identify policy options to stimulate intelligent efficiency.

On vehicles, as I explained, we initially—the G20 Energy Efficiency Action Plan initially focused on the heavy duty vehicle. The reason for that is if you take 10 percent—the heavy duty vehicle price, then 11 percent of the fleet of vehicles on the road, but they account for up to 46 percent of the energy consumption of road transport. And progressively, as the activity develop, the focus was also made on light vehicles, through the Global Fuel Efficiency Initiative.

The achievement in 2015—two reports on energy efficiency opportunities on heavy duty vehicle and light duty vehicle was produced. And a series of actions of best practice on relevant national standard has been proposed. And there is an effort to outreach to all the G20 companies. The recommendation number one is to acknowledge and endorse a proposed policy option that aim to improve G20 countries' vehicle energy efficiency and emission performance.

The recommendation number two is to encourage countries to develop policy roadmaps for heavy duty vehicles through the coming years. The way

forward is to engage a survey in G20 countries to better understand how the policy roadmap has been developed. Proper training and shared experience on the policy design and implementation. Engage actors from the global financial community to understand what energy efficiency can be achieved in transport and vehicles.

On buildings, two reports have been produced. The first one is to recognize the metrics behind energy efficiency in buildings. The title of which is Building Energy Performance Metrics. The delivery of energy saving in buildings through an international collaboration on building codes is the topic of the second collaboration. We have also engaged a portal that summarizes all the latest information on building codes in G20 countries. This is the web portal. The recommendation is to commit to improving the way countries implement building energy codes, and try building sector energy metrics.

The second recommendation is to accelerate improvement in energy performance by exchanging buildings' energy code practices and experience through the new bit code portal. The proposed way forward is to identify areas where system and tool for compliance checking performance measurement are addressed through international collaboration. And we recognize there's more to be done on metrics. We have to improve that _____ develop and track additional metrics, and model future energy use. This is what's being proposed for the building sector.

On the (0:32:55) _____, the key is to promote management certification tools. There is a series of tools that exist, and most advanced, most known is the ISO 50001 collaboration. And the work stream proposed to engage a global certification scheme to make sure that energy management standards are better understood and more widely used. There is also need to exchange policy and case studies. Special collaboration is being proposed to promote the ISO 50001 as a universal tool to engage energy efficiency in the industry as a management tool.

And the activity comprised a series of workshops on energy efficiency in small and medium enterprise, and also towards energy service company, ESCO. So the recommendation is to encourage an industry of the G20 countries to better understand why energy management tools can help and are designed to deliver energy efficiency. There is a need to exchange standards for energy management system, and it is proposed to _____ a new policy exchange to overcome bias for energy management practices.

The way forward is once again to promote the collaboration around ISO 50001, and to measure progress of development of standards globally, and to facilitate cooperation between industry, energy management, technical experts, and policy makers. The last work stream was on high efficiency and low emission coal power plant. This achievement, the series of workshops was done on cleaner coal technology, with some site visits. Their recommendation is to encourage high efficiency, low emission, where fossil fuel continue to be a major source of electricity generation.

It is proposed to engage more support on research, development, and demonstration of this HELE technologies. And collaboration on technical and financial buyers and solution are being proposed by this work stream. The way forward is to engage everywhere the best available HELE technology, and do some effort to expand new research and study project for developing _____ common basis to measure CO2 emission reduction, and improve cooperation and maintenance practices.

This concludes the presentation of the work stream. Now the way forward is the G20 that can feed the COP21. Most of what has been agreed and discussed and recommended by the G20 can now be spread globally, because they contribute to greenhouse gas reduction. Countries can contribute to—can continue to work together at the political level to make a difference. And this is what we have in mind. This is an extract of the G20 energy ministers communique. After they met on October 2nd in Istanbul.

And there is a recognition of the role and benefits of energy efficiency, a recognition of the work done this year. This is the very first time the mandate was given by the G20 on energy efficiency, and energy ministers have clearly indicated their support, and welcome the recognition proposed for the participating countries. We have also an extract from the G20 summit communique. This is what happened last weekend in Antalya. And there is once again by the head of states recognition of the collaboration on energy efficiency. Energy efficiency is on the agenda of the G20, not only on the energy ministers, for the very first time, but also the head of states.

And the communique specified the collaboration will continue. On climate change, the summit also recognized that the climate change is the greatest challenge of our time, and that energy efficiency is one of the most immediate and cost effective responses to climate change issues. G20 will be now under the presidency of China in December 1st. and China has already committed to maintain energy efficiency on the agenda. China is proposing to expand, to build from the first year of implementation of the G20 Energy Efficiency Action Plan.

We, at IPEEC, are currently working closely with the government of China, like we worked closely with the government of Turkey, to discuss how we can build from the dynamics of 2015 to engage 2016 using the achievements of 2016, and expanding the work on energy efficiency very much needed by the G20 countries themselves.

This concludes my presentation. And I will—I propose now to call for Shelia Watson, who has been very much involved in the transport task group on vehicle, to maybe share a few words on what happened this year, and how is this work under the G20 translates for fitting the COP21. And then we give the floor to Melanie Slade from the International Energy Agency, who not only has been involved in some of the task group of the G20 Energy Efficiency Action Plan, but to also preparing some follow-up activity for COP21. Shelia, over to you.

Shelia Watson

Hello. Thank you very much for that, Benoit. I don't want to speak for too long. Just want to share with you a few words about the Global Fuel Economy Initiative itself, and what it is we try to do. I think that might be helpful in terms of the wider role we're trying to play here. And also perhaps talk a little about how we feel activities such as the G20 commitment can really help move us forward on this agenda of efficiency.

As Benoit said, my focus is very much on light duty vehicles. So that's cars and vans, as they'd commonly be recognized. And the partnership which is the Global Fuel Economy Initiative really is made up of some seriously hard hitting and influential organizations. The International Energy Agency, the International Council on Clean Transportation, and they are the groups that did the research the exposed Volkswagen's recent activities. The International Transport Forum, which is a ministerial grouping through the OECD, and beyond. University of California, Davis. Their sustainable transport program. And the United Nations Environment Program are all partners, and very active partners, in addition to my own organization, the FIA Foundation, which is a UK based charity, and which hosts the secretariat.

And GFEI—there are two key things to say. One, our target, which is based on evidence from IEA and others, that we believe a huge saving could be made in the CO₂ emissions of even a very largely increased global fleet, which is predicted, simply by using existing cost effective technologies. So this is pretty *de minimus*. And we still have indicated it is shown that up to 33 gigatons of CO₂ could be saved by 2050, simply by using cost effective technologies, alongside a huge amount of fuel savings, worth potentially over \$8 trillion net by that period, too.

So just figures which I think emphasize the points Benoit started to make, started by making about the potential benefits of improved efficiency, and that's just cars and vans contribution. So that's the first thing to say. And the second thing is the work we do falls into three main areas. We do a great deal of research. We believe in evidence based policy. We do a great deal of advocacy. 2015 has been a key year. We've worked hard not only through the G20 to raise the profile of these issues, but also as key contributors into the SDG process, where energy efficiency is firmly reflected in goal seven and energy efficiency in target 7.3, and also of course ultimately through the COP, which is the focus of this conversation this afternoon.

And finally in the last element of what GFEI does is probably our most important element—our in-country capacity building work. So we don't just raise the profile of the issue, we offer active support to countries to enable them to frame baseline studies of their current fleet to look at policy options and best practices from other countries. And then to consider which in line with and in discussion with their stakeholders would fit best into their policy and domestic contexts. So we don't advocate one size fits all solutions. We very much work within the state, the circumstances of the country we engage with.

And we're currently working in 25 plus countries. And we hope very soon to be announcing a huge increase in that number. So the COP and G20 I think

are inherently linked, and crucially linked, in a sense, in those three key ways I described. So I think for the G20 to commit to energy efficiency in the level and extent it has, gives a huge political profile to the issue, which is perhaps not always considered to be the most sexy of the CO2 action areas. Very often the preference can be to consider new technologies as being more exciting and more impactful, and as we all know that's not the case.

We need to get the efficiency piece in there. I think the G20's commitment is hugely significant in that respect. Secondly, I think the reason the G20's commitment works very well for us, and why we've been so heavily engaged, is because it is about individual countries taking their own actions. As Benoit indicated, this roadmap process for HGVs, but also the support which we all in GFEI side are happy to give on LDVs, is all about working with individual countries, whether they have a policy in place, which some G20 countries do, or whether they've yet to address it directly, which some G20 countries haven't.

So that's very important, too. And then I think the other reason instance why the G20 countries matter so much, and perhaps this was the place to start really is that they are clearly significant markets for the products which were under consideration in the energy efficiency work stream, particularly on the transport side, and obviously to have impacts in those sorts of markets will have wider impacts elsewhere.

And then perhaps just to say very briefly that in terms of our own presence at COP21, and building very much out of the hugely beneficial process we feel we've been engaged in with G20 this year and part of last year, I think the structure of much of the program of the LPAA, which is the quartet, the action agenda, the side of the COP which is about really doing things, as well as negotiating, the fact that that agenda has fuel economy firmly embedded in the half day on transport, and again in the half day on energy efficiency, where we are represented in both, I think is very significant. I think that means it's right at the heart of considerations, as well as of course in many other aspects of the agenda where we are hosting our own meetings or speaking with others such as IPECA and ITF and Sustainable Energy For All about these issues, too.

So I suppose my conclusion would be that the G20 commitment is hugely welcome, that there is potential there for some real work, not just words, and that's I think where initiatives such as my own come in, and that the ability of G20 countries and others to really make a difference on this issue has kind of never been more important, clearly, but also more possible. And I think that's really important. So it's sort of action sitting alongside words. And I hope that gives you a sense of how we see this year having impacted more broadly.

Benoit Lebot

Thank you very much, Shelia. May I ask Melanie Slade, from the IEA, to say a few words about how the IEA is currently maybe absorbing some of this international work on energy efficiency to maybe inform the COP21?
Melanie?

Sean Esterly

Benoit, I don't know if Melanie was actually able to join us. We didn't get any confirmation she was able to call in.

Benoit Lebot

Okay. Then I guess we can take some questions, if there is any question. I'm sure we'd be happy to answer. Zoe Lagarde, from the IPEEC secretariat is also online and available to answer your question. And Shelia, stay on the line, if we have some questions on the initiative on transport. So, Sean, over to you, to maybe tell us the question.

Sean Esterly

Thanks, Benoit. And we'll leave Benoit's last slide up as well during the Q&A question so you have that contact information, and also the information for IPEEC, where you can find some additional energy efficiency info. So we did receive a few questions, and I do want to remind our attendees if you have any questions for the panelists, you may go ahead and submit those through the question pane, and we can present those and discuss them now. So we'll move right along to the first question. This is for everybody. Are energy efficiency policies sufficiently heard in the international dialog?

Benoit Lebot

Wow. What a question. I don't know if energy efficiency is sufficiently heard. What I know and what is new is energy efficiency is on the agenda. And that is the very first step. The objective typically of our organization, the International Energy Efficiency Cooperation, is to maintain the focus on energy efficiency. Energy efficiency is very much needed in every single economy, but it's a long process. It's not the easiest energy fuel to engage. And this is why we can applaud and welcome that energy efficiency is on the agenda of the G20, of the G7, of the UN agencies, of the Clean Energy Ministerial, of the major economies forum for energy and climate change.

Do we do enough? In my view, much more is needed. But let's make sure that typically because the G20 has now a mandate, an action plan on energy, let's make sure we deliver on the key sectors that we are currently addressing. As you can see, we are not covering through the G20 every single dimension of energy efficiency, only some of it. Some sector are so topical like finance. And we're not going to replace country, but an energy efficiency above all is very domestic, and sometimes very local.

So what is important in the process here is to engage the collaboration at international level, only for the layer of energy efficiency advocacy that can make a difference. We are not going to solve every bit of energy efficiency institution policy framework from the international perspective. But we can have this dialog among policymakers to reinforce their interests. Learn from each other's experience. Share maybe some common practices. And why not push for recommendation to go all the way for some harmonization whenever appropriate on key sectors, on vehicles, on network devices? Why not on buildings?

So, anyway. Certainly much more needs to be done. And can be done for the international perspective. But this is my simple answer. Maybe Zoe or maybe Shelia you want to add something? Zoe?

Zoe Lagarde Nothing from my side, Benoit. I was actually just trying to unmute Melanie. I do have an opportunity to present some of the work of the IEA that goes in the sense of what we're trying to achieve here at IPEEC. So I'd be happy to talk more about that, unless Melanie is able to speak again?

Benoit Lebot Sounds good. Melanie, you online? Zoe, you can present what Melanie had in mind.

Sean Esterly Zoe, I think Melanie is having some technical difficulties, so perhaps if there is something you can present on IEA, that might be the best solution.

Zoe Lagarde Yeah, sure. So been working quite closely with the IEA on the G20 Energy Efficiency Action Plan. And we tend to—the IEA and IPEEC intend to carry out this cooperation next year in support of China's presidency. So both the Sustainable Energy for All objectives to double the rate of energy efficiency, and the UNEF triple C commitment to limit global temperature rises to two degrees, require significant increasing in energy efficiency activity from the current levels. And many people in the energy efficiency community are wondering why this is even happening.

So the development banks would all say that they would loan more money for energy efficiency, but that the governments do not want to borrow it. And one of the reasons for this is that senior decision makers don't prioritize energy efficiency. So, as Benoit said, we, the IEA, have been searching ways to change this and provide evidence for why energy efficiency should be an economic development priority. And building on the IEA's multiple benefits work that's been touched upon—and, by the way, the book is free on the IEA website—we're investigating—Sorry.

The IEA is investigating the concept of energy efficient prosperity. So their hope is to develop metrics that would show how energy efficiency can contribute to improving standards of living. And the first steps in that work is to hold an event at COP. It'll be called the Energy Efficient Prosperity (0:54:26) _____ civil society zone. There will be people coming from many emerging and developing economies. And the idea is to describe how energy efficiency contributes to their economic and social development. So the idea will be to pull stories together and share them with policy makers present to help them get funding for energy efficiency programs in the future.

And the IEA would like to warmly invite anyone who is going to COP to attend the event and share their experience. Benoit, if you would like to continue taking questions either on this event or your presentation in the G20 action plan, over to you.

Sean Esterly Thank you, Zoe, for presenting the IEA information in light of the technical difficulties Melanie is having. But we will continue now with the Q&A session. Benoit, for the next question, and, again, this is for all the panelists, is—is the top down approach, does that seem to be working, or do you think we should be focusing on having an impact through bottom up approaches?

Shelia Watson Hello. This is Shelia.

Sean Esterly

Go ahead, Shelia.

Shelia Watson

Yeah. On that one I would say you need both. The way that our work is being conducted has been very much I think as I tried to describe earlier. We work with countries at as local a level as possible. And on vehicle fuel economy, that tends to be national rather than very local. But at the same time we try to bring the issue's profile up in as many global forums as we possibly can. And I think because I think the two are so interdependent I'd be loath to pick one over the other.

And I wanted to add one quick thought as well to the question we had earlier that came just before Zoe's presentation, which is I also think it's very important when we talk about energy efficiency—I'm very interested to hear the IEA approach about prosperity, but I think also to consider it as an enabling activity, the resources which can be freed up by energy efficient activity are often the very resources that are often very much needed elsewhere, be it in some very basic provision, but also in alternate fuels.

So we did some research on our side of matters, which showed that the sort of resource you could save by 2025 with this basic cost effective LDV technology would pay for the IEA's roadmap on electric vehicles five times over what was needed there in terms of investment. So, yeah, I see energy efficiency as a bit of an enabler as well.

Sean Esterly

Thank you, Shelia. Benoit, I don't know if you were trying to add anything, but I wanted to let you know you are still muted, in case you were.

Zoe Lagarde

So just on behalf of Benoit, I completely agree with Shelia. Yes, both the top down and bottom up approaches are critical. And we saw for example in the case of buildings there was the G20 impulse actually provided a useful momentum to invest more time and gain the attention of the G20 on work that was already underway. So G20 is not an end in itself. It is highly useful complementary process to existing initiatives already underway, whether they be domestically or international.

Sean Esterly

Thank you both. And moving onto the next question. How do the speakers—what do the speakers see as the next step? How can we add value to this work?

Zoe Lagarde

The next steps for IPEEC are very concrete. We will be traveling to China to meet with the Chinese authorities and see how we can best support China in the delivery of successes for energy efficiency next year. What we know, what is great, is that energy efficiency is a priority for China. It's highly an important domestic problem for them. And we've always established a great dialog. We know the collaboration will be close.

I think what is now in the hands of policymakers is to become familiar with this work, continue to support it, and see how it applies to their own domestic priorities. From what I understand, we've already seen successful work, mainly in finance area, translate to some changes in the way policy is being drafted. Can't say more on that at this point, but that's actually showed this is

useful. And so what is greatly needed, I'd say, is two things. Continued support and simply paying attention to what the G20 is saying on the matter.

Sean Esterly Thank you, Zoe. Benoit or Shelia, anything to add to that response?

Zoe Lagarde Benoit's connection has just cut off, unfortunately.

Sean Esterly Oh, all right. Okay, well, we'll move on. Hopefully he'll be able to reconnect. Next question is asking what is missing still for energy efficiency policies for them to be impactful or more impactful?

Zoe Lagarde So funding is the primary ingredient, and having enough money, whether it be to support the institutions, so they can carry out their work, to conduct the research needed to develop the enforcement policies that are required, funding really is key. And Benoit cited the figure five to eight times more investment in energy efficiency, and to the IEA's _____ scenario. Now that figure is not meaningless. I'll take the example of China, for example. China's _____ to energy efficiency policy is extremely limited. And this has an impact on how ambitious one country can be.

Sean Esterly Thank you, Zoe. We did have another question coming from the audience, similar to the question I previously asked. Given the recent discussions at G20 on energy efficiency, what new items do you expect this year at COP21? Any new value added discussions?

Zoe Lagarde Any new value added discussion?

Sean Esterly At the COP21 this year.

Zoe Lagarde On specifically energy efficiency?

Sean Esterly Yes.

Zoe Lagarde So there is a half day being organized as part of the Lima Paris Action Plan that is currently being organized by UNFC for all, the United Nations Sustainable for Energy All. And during that day, there will be a series of discussions on how energy efficiency can make a contribution to the very much needed energy efficiency—sorry, greenhouse gas cuts. As I mentioned, Shelia, as mentioned, by Shelia, and both Melanie—they are hosting events. And I think that the IEA event, for example, provides a really interesting and new topic.

It's the first time that we're starting to talk about metrics to measure the multiple benefits of energy efficiency. And we hope that this will open a new area of work that will be of great use to the energy efficiency community, and to policy makers. And I'm very confident that the event will be a success, and that the key message that energy efficiency not only reduces greenhouse gas emissions, but also helps on social and economic levels, will come across strongly.

Sean Esterly

Thank you, Zoe. Benoit is still connected with us. He's trying to unmute. Benoit, if you hit that green box with the white microphone icon, you should be able to unmute yourself. We'll move along and hopefully Benoit can get his audio worked out. For this question, again, for everybody—in which work stream did you get the most progress over the past year?

Zoe Lagarde

Well, that's an interesting question. There are six areas that were identified as priority areas. And out of those six, we already had some existing work streams. And then three new work streams. So the new ones were transport, network devices, to a certain extent, and finance. Now. Because of this the task groups started at different starting points, and their nature and their scope of objective were very different. So it's extremely impossible if not counterproductive to benchmark the initiatives in their progress.

However, for example, a recognition of G20 energy efficiency finance principles by G20 energy ministers was really a great accomplishment. Especially given the short timeframe that the task group had to deliver that outcome and get the buy in from all the governments around the table. A commitment by the 13 members of the transport task group to develop quality roadmaps by September 2016 for policy action in heavy duty vehicles was also very remarkable. And if I talk about the network devices task group, so the task group that aims to improve the efficiency of all _____ smart appliances, then their work was significant.

They brought together 300 organizations from the private and public sector, and negotiated some very hard questions, such as design principles for the industry, but also policy principles for government, and a target from the vision. So very difficult to say that one progressed more than another. Rather, I think that it's worth pointing to those achievements that I just referred to, and I could go on for many hours about bulk and the quality of work achieved by the different task groups.

Sean Esterly

Thank you, Zoe. Next question that we received, it asks—how far could the G20 Energy Efficiency Action Plan go under the Chinese presidency?

Zoe Lagarde

Again, in Benoit's absence, or ability to not speak, I'll take that question. So China, as I mentioned, still has _____ called a great deal of attention to energy efficiency domestically, and energy efficiency is listed as one of their priorities, and to the G20. We hope for great achievements. And while it's impossible to predict in advance how far we will get, we'll certainly aim for excellent outcome. Presently speaking, if we've got finance, for example, what would be wonderful is to see a framework established that would specially help the guiding principles be implemented.

Even better would be an induction of those principles in a country. If we look for example at transport, what would be fantastic is if countries were able to deliver against what they have committed to, and put forward even some draft policy of roadmaps. So as I said, the G20 process cannot—the outcomes of this year cannot be predicted in advance. It really is a _____ in itself. And it requires a lot of time to get a consensus amongst members, but _____ when such consensus is reached.

So a little bit too soon to predict how far we can get, but I guess that's a very interesting question.

Benoit Lebot

Sean and everyone, Benoit is back online. I don't know what happened. I was not able to speak. I just want to expand on what Zoe was explaining. We have enough contact with China to confirm there will be some expansion of the action plan. Maybe China will propose some new work stream, but we don't know the details, but we expect both that there will be a continuation of existing work stream, as we have to continue this international collaboration. But China is keen to maybe propose to the G20 partners some new topic on energy efficiency. And we don't know.

But we will do more webinar to keep the audience informed. We'd be more than happy to keep you abreast of the latest development of the G20, because we have the firm intention to continue and encourage this type of international collaboration, because it is very much needed. Once again, it's voluntary. It's high level. But it can make a difference. We can bring from the international perspective some interesting dynamics that would be welcome in every economy.

Sean Esterly

Thank you, Benoit and Zoe, and good to have you back on the line. This next question I think you just answered it right there, stating that they're voluntary. But are any of the recommendations mandatory for the G20 countries?

Benoit Lebot

The G20 is itself a voluntary forum. There is no treaty that organizes the G20. It's not an organization, it's a forum. There is not a permanent secretariat. There is a secretariat where the country is hosting the G20. So it will take a while until the G20 becomes such an international organization where we could see some certain role of governance. What I personally believe is when there is some proposal, some generic, universal principle on a given topic of energy efficiency, there is no reason why countries can't all implement the actions.

So this is where we—the fine line we are trying to explore. How much the international dialog can lead to some recommendation that can be absorbed and heard and implemented in the largest number of economies. We cannot yet—we don't have an international governance on energy efficiency. Maybe one day, but soon not within close—soon. But there is enough important ideas that we can shape. Like recommendations for harmonizing this type of standard for using the common metrics for setting some common principle to engage in energy efficiency, in appliance, on buildings.

And the biggest effort that we have to do on our side is to hear—absorb the proposal, and to shape it in the international language that is the most universal, so that country _____ can intercede to engage and implement. So we are not yet in a world where there is an international governance on climate change, on environmental issues, _____ issues. At best, there is a high level, high quality dialog, and hopefully this is what we are setting for the G20.

Sean Esterly

Great. Thank you, Benoit. At this point, I haven't received any additional questions. So before we go onto the attendee survey, I'd just like to give you, Benoit, and also Zoe, a chance for any last statements or comments you might have.

Benoit Lebot

From my side, I can just encourage the audience, should you have some interest to access information, everything is online. And other IP.org. Also you can find the most important communique on the G20.org under the Turkish presidency. The comments are value. And your comments are welcome. Don't hesitate to contact us should you want more information on some specific topic. And just stay—keep us in your mind. Because the work we continue hopefully will expand, and we very much need also your feedback, your support. Once again, energy efficiency is very domestic, very local. But there is this international dimension, international dynamics that through a high quality dialog around the G20, we can believe make a difference. So stay tuned. Thank you for your attention. Unless, Zoe, you want to comment. But this is my last word.

Zoe Lagarde

Thanks, Benoit. Thank you to all who have dialed in today. Just to add that maybe we are in the process of planning a dedicated webinar focusing on the finance G20 work. So more on that in the weeks to come.

Sean Esterly

Great. Thanks again to both of you. And Melanie and Shelia as well that joined us, or tried to join us. So we'll move ahead now to the attendee survey. So for our audience, we have a few questions lined up. I will put up the first one. That is the webinar content provided me with useful information and insights. You can answer directly in the window there. And the next question. The webinar's presenters were effective. Overall, the webinar met my expectations. Then just two more questions. Do you anticipate using the information presented in this webinar directly in your work and/or organization?

And then the last one is—do you anticipate applying the information presented to develop or revise policies or programs in your country of focus? Great. Thank you guys so much for that feedback. We do appreciate it. On behalf of the Clean Energy Solutions Center I would like to once again thank our expert panelists for joining us today, and also our attendees. We do appreciate everyone's time. And thank you for listening in. and I do invite the attendees to check the Solutions Center website. If you would like to view the slides and listening to a recording of today's presentation, those items should be posted within the next day or so.

Additionally, you'll find information on upcoming webinars and other training events. Just a reminder, we are now posting webinar recordings to the Clean Energy Solutions Center YouTube channel. We also invite you to inform your colleagues and those in your network about Solutions Center resources and services, including no cost policy support. With that, I hope everyone has a great rest of your day, and we hope to see you again at future Clean Energy Solutions Center events. This concludes our webinar.