How Mepsy Can Transform Your Energy Efficiency Policy Development – Transcript

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For the full captioned presentation, please view the video here.

Matt: Good morning, good day, good evening. Welcome to CLASP's webinar on how Mepsy can transform your energy efficiency policy development. My name is Matt Malinowski, and I'm a director at CLASP's Washington, DC office. If you're joining us here for the first time, if you're not familiar to Mepsy, then welcome. We are excited to share this great tool with you. If you joined us last year for our launch webinar or maybe any of our other webinars, well, we're going to have some exciting updates for you today. So, thank you for your continued interest, and well, there'll be some exciting new things for you to learn today.

Either way, we are excited to for you to join the Mepsy community of users and also want to share that CLASP's, you know, our mission is to improve the energy and environmental performance of the appliances and equipment we use every day, and through that mission, we look forward to supporting you in whatever way we can as you develop energy efficiency policies, whether it's using Mepsy or anything else. So, we hope that you will use this webinar as an opportunity to reach out, share about your progress, and I'm happy to follow up with you after the webinar to continue supporting you. So, please don't be shy, use the chat, use the Q&A feature, especially at the end of the webinar, and look forward to following up with you to solve any problems that you may have to improve the efficiency of products.

So, CLASP, again, this is. our mission. We work both... we use efficiency both to mitigate climate change, that's on-grid appliances mainly, as well as to improve energy access for folks without grid connections through renewable electrification.

Here's a map of all the countries where we're active. But as you can see, we work on climate, clean energy access, and then in many places, we work on both as well. So, if we're not working in a country near you, then again, looking forward to being in touch and helping you out there. Since CLASP's founding, we've worked in over 100 countries. So yeah, look forward to working with you.

And we do our work through a variety of strategies, you know, standards and labeling is just two of them, as well as either procurement policies, consumer education, and global collaboration and knowledge sharing, which is the theme of this webinar and of Mepsy as well: to get this information to you, the practitioners.

So just a quick agenda here. I'll begin by laying out, you know, introducing Mepsy to folks who haven't seen it before and the new features that we just released in February, and then I'll hand it over to my colleague, Jiayi Zhang, who'll be presenting two case studies: one on refrigerators in Brazil and another on analyzing multiple policy tiers, which is something that a lot of folks have requested to be able to do using Mepsy, and she'll be showing how to do that. And then lastly, we'll wrap up and do a Q&A. As I go through the slides, please don't hesitate to ask a question. If it's a clarifying question, I'm happy to stop and pause and answer it right then and there. If it's something that is a, you know, another case study or a more general question, I ask you to leave it 'til the Q&A.

And then finally, if you'd like to follow along, our colleague, Maggie, will put the link to Mepsy in the chat. So, feel free to start it up and follow along and try some of these features out as we present them

Great. So, let's begin just by talking about Mepsy.

Mepsy is a tool that allows policymakers, researchers, and others to do analysis of energy savings of currently seven appliances. You can see there in orange at the bottom of the screen. And we have plans to add at least three

more. We've also been able to work with individual policymakers to add particular data or appliances for their situation, so that is also an option. But either way, right, you know, it's a free tool available online. It covers 162 countries, you know, over 75% of global residential and commercial energy use and most of industrial electricity use through motors.

So, what does it do? Right, why do we need this tool? What we found is there are maybe two or three kind of levels of analysis that we and policymakers that we support would do at CLASP. You know, there's a broad analysis of identifying countries, scoping opportunities, and then the narrow analysis of really trying out individual policy levels. And there just wasn't a single tool that could do that and then be used to communicate these results to stakeholders or to try to do it in a public meeting. So, Mepsy addresses this gap between these broad and narrow analytical tools. It provides, you know, that integration, some flexibility, usability, and transparency, just again, allowing stakeholders to see the process all in real time, and lastly, you know, it uses some up-to-date data, and it’s ready to go. Right, you can just use it from wherever you are and start doing policy analysis on appliances right now with some of the pre-loaded data sets. But again, it's flexible enough that you can customize it with some of yours, and we'll look forward to showing you some of those customizations today.

At its base, it's a bottom-up stock accounting model. You may have seen similar tools in the past. But it’s basically standard practice across a number of policy standards programs, appliance standards programs. We accumulate sales over the lifetime of products, multiply them by the unit energy consumption, or UEC, under business as usual scenario (BAU) and perhaps a MEPS scenario to see how much energy would be saved or reduced. And then we factor in grid losses, power plant emissions, and electricity rates to calculate the costs to the consumers as well as the national carbon dioxide reductions.

And here's just a table of where some of the data in Mepsy comes from. This was updated last in 2020, and we are planning to update it on a regular basis with new shipments and stock data, grid emission factors, electricity costs, and then lifetimes. We typically do research for several key countries. Usually either larger regional trading hubs or countries where there is good data through energy efficiency programs and then extrapolate to other countries in the region. But in places where we support programs and do research or other research is available, we do have more detailed data for individual countries. And then some of the data sets, say from the World Bank or IEA, are global in nature, so we should have pretty good coverage there. But either way, you know, right, you can do analysis for 162 countries with all data present.

And then here's another map, this time of where Mepsy has been used to evaluate policies. We've done detailed work in Botswana, China, Brazil, Thailand. Some policymakers in Ghana are using it for policy evaluation. And then it supported the Call to Action doubling energy efficiency associated with COP26, so that was... Mepsy was used to evaluate the impacts of that effort. And then we've also done trainings in eastern & southern Africa and Mercosur in South America to help policymakers get familiar with Mepsy and use it in their analysis.

So, next I'll move on to the new features unless there are any general questions.

Excellent. So, as you may have seen, we released in February two new features, two new modules from Mepsy: lighting and compliance.

And lighting allows for modeling the policy transition to LED, light-emitting diode lamps, and supports the effort to remove mercury-based lighting through the Minamata Convention on Mercury.

As you'll see in a minute, in contrast to some of the other modules, you cannot modify the shipments and stocks directly in the Mepsy tool online due to the

complexity of the lighting module. There are just several sectors, multiple lamp types… Right now, it has been just too challenging, too computationally intensive, actually, to adjust those stocks in real time. So, we have several hopefully common policy scenarios that are pre-loaded that you can use right off the bat. And again, I'll show that in a minute. And then for compliance, Mepsy now shows the impacts of compliance, or what percentage of lamps shipped will actually meet the MEPS. Even though the MEPS may be on there on paper, if there isn't enforcement of them or if there's circumvention, you will not get those reductions. And so, there are several compliance scenarios so you can kind of evaluate your country's compliance regime, and then make adjustments.

So, I'll just show a quick video of using these modules as well as to provide introduction to Mepsy. This the first screen of Mepsy to do more detailed analysis, you click on run detailed analysis, and then that opens up this input screen, which allows you to select country of analysis and the appliance type, adjust the analysis period, and then, you know, that that's basically all you need to start. But then you have the option of doing additional… selecting additional parameters to further customize the analysis.

So, I'll just quickly step through a couple of those now and then show how that differs for lighting and compliance.

So, again, starting with refrigerators/freezers, most of the other modules, or appliance modules, are similar. There's an option to add shipment data, so you can paste your own shipment data and overwrite the default values that are already pre-loaded into Mepsy.

So, that's number two. Number three: you can also put in equipment data. So, I mentioned lifetime is preloaded in there, as our unit energy consumption values, and you can overwrite those with values that are, you know, based on your own research or perhaps more appropriate to your situation.

You know, we have parameters for each country's energy sector or electric grid, and so you can adjust those as needed.

There's one more, which is the consumer discount rate, which is used for calculating the lifecycle cost and then the compliance rate, which I mentioned earlier, and I'll also show another place where you can adjust it. So, you can either adjust it up front here if you already know it, or there's a way to adjust it down the line.

Alright, now I'll get into lighting. Lighting is a little different.

You can see that there is no shipment tab, again, due to the complexity of the module, model. The equipment tab is also a little different. You have domestic and professional, the different lighting types, and here's a new policy drop down that allows you to apply policies eliminating different lamp types. So, African Lighting Amendment eliminating all mercury-based lighting under the Minamata Convention, domestic, professional, or just CFLs, and then you can adjust the policy effective year as well. And you can see that changes up there. You can still adjust the prices of lamps for lifecycle cost analysis purposes, but you cannot adjust the efficacy. Again, it was just a little too complex. Happy to work with individual policymakers or others on making that happen, but for now, we use kind of global average efficacies for LEDs, compact fluorescents, and incandescents.

I'll just leave that up here for a minute. Hopefully, again, if you're using Mepsy right now, you can see those differences, play around with it. But yeah, it should allow you to model most of the policies banning particular types of lamps, whether it's mercury-based lighting, like through the Minamata Convention or say something more targeted in the domestic or professional sector.

And then, I'll just show really quickly what that looks like. So, let's do all LEDs phased out in 2023 and just click the calculate button at the end. So, here you

have the lifecycle cost analysis, and then at the bottom you can see the different stocks. In brown is the linear fluorescents, or LFL, and you can see how that is being replaced by the gray, or LED, tubes once the policy takes effect, and something similar happens for the LED bulbs in purple. And then you can see the energy reduction and the CO_2 reductions. And here again is the compliance drop-down, or compliance scenario. Again, ranging from excellent to low. And you can see the lines get closer together at low compliance. There just are fewer of the more efficient compliant bulbs. And lastly, you can download the results there, by pressing the gray button, and you can see that that will download a ZIP file with a summary of the scenario run as well as the actual results over the years for that country. And you can do downstream analysis with that, and, again, my colleague, Jiayi, will talk about that next.

So, unless there are any questions, I'll pass it on to Jiayi.

Jiayi: Thank you, Matt, for guiding us through what the inputs can change and the new features look like in Mepsy. Next, I want to briefly introduce how we use the customized data to run analysis, and the example I want to use is the refrigerators in Brazil.

So, in Brazil, CLASP passed down a lot of data collection of the refrigerators. And this chart shows different type of refrigerators' current energy efficiency level. And as you can see, like the smaller number here means a higher efficiency level, and as can be seen, the majority of the refrigerators, which are represented by the dark blue bars, are already higher than its label program, which means that the program has already become more efficient than its label program requirement, and the label is no longer differentiating more efficient product from the less efficient product on the market.

To improve the refrigerator's efficiency level, starting from 2026, the Brazil government want to revise the minimum energy performance standard, also called the MEPS level, and analyze the impact of these new assumptions. So,

there were three MEPs options. First one is setting the threshold of efficiency index at one.

Which means after applying the MEPs assumption, it will eliminate DEF class products from the market. Second option is to set the threshold at 0.9, which will eliminate part of C and the DEF classes of product. The last option is set at 0.83. Then the entire CDEF four classes of product will be retired. To compare the impact of these three assumptions, we use a Mepsy to do analysis to see their impact on total energy consumption and the consumers.

So, after some desktop research, CLASP prepared those parameters to run the custom analysis in MEPSY. And I come up with a data table to show you how those parameters look like, and then they can be filled into different optional parameters area Matt mentioned before; there were five areas in total. So, most of the data coming from national report or market research. For example, the shipment data, we collected from the market research company, and we calculate each scenario's price and energy consumption based on our product market research results.

So, after filling all the inputs into these five related areas and selecting "Calculate," Mepsy will show the results page.

On the page, we can see the results, including impact on consumers and also the national impact.

I screenshot the consumer impact here. And one more thing needed to be noticed: because Mepsy does three scenario analysis one time, so I copy and paste the scenario's three results here so that we can do the comparison.

Besides the results listed on the left Mepsy also provides bar charts to visualize the value.

When comparing the scenario 1 to scenario 3, we can see that the purchaser price in light brown colors slightly increases, and at the same time, there are more optional savings.

Here is the result of the national impact analysis. Mepsy used three charts to visualize those results, including each year's CO_2 reduction energy savings and appliances in use.

So, I used this table to conclude all the analysis results of the three scenarios in Brazil case. As you can see, there is a main trend here. When the energy efficiency index becomes smaller, which means the standard becomes more strict, and the more unqualified product will be retired from the market. And then, it will bring more lifecycle cost saving and more significant energy impact. So, for scenario one, implement the new MEPS, which aims at eliminating class of DEF. It will benefit consumers by reducing the lifecycle at R$580 BRL, as well as reducing national energy consumption by 6.11 TWh through 2030. And for scenario two, if we implement the new MEPS to eliminate a part of C and the DF product, it will provide more substantial benefits to consumers and reducing national energy consumption by 8.67 TWh. Lastly, for the third scenario, implement a new MEPS equivalent to eliminate class CDEF, four classes of product, will bring even more substantial cost of saving to consumer and have more impact on the national level.

So, based on the results of these three scenarios, CLASP provides Brazilian policymakers a clear view of different policy assumptions' impact and help them to step further to decide which policy will be better to be implemented for short term or for long term. So, currently, the Brazil government is using Mepsy’s results in their policy recommended report, and then the final MEPS decision will be voted in the next few weeks.

So, this basically about the Brazil case. I want to take a pause a little bit here to see if people have any questions here.

Maggie: Are the national impacts, on the prior slide, are those cumulative savings or only in 2030? It's the next one.

So, the results on this page, Mepsy calculated including cumulative national saving and also annual national saving.

M2: Thank you.

J: From the policy effective year to 2030. So, in the Brazil case, the policy effective year is 2026.

M2: So, on the next slide, on the chart, the national energy savings through 2030, are those scenario numbers cumulative or that's throughout the policy?

J: So, including the time period from 2026 to 2030, it's the cumulative energy saving.

M2: Okay, thank you.

J: So, I think here is another question. “Where we enter the MEPs level?”

So, let's back to the page. So, if you look at the scenario assumption here, the MEPS level is the scenario one, which represents the first MEPS assumption. Scenario two represents the second MEPs assumption. And also, there should be the third, scenario three, because Mepsy only do three scenario assumptions one time, so it's not included here, but I listed the results here. So, scenario one, scenario two, scenario three represent the three MEPS level assumptions.

So, in the next section, I would like to share with you how to do analysis for multiple tier policy. So, multiple tier policy refers to implementing sequential policies with improving policy goal over several time tier period. As you may recall, in the Brazil case, we compare different policy assumptions with the

same timeframe. However, for multi-policy scenarios, each tier will have its own time period. So, for Mepsy, it does not directly do analysis for multi-tier policies, so the team developed an Excel tool to extend the feature.

The analysis process including three steps. First, use Mepsy to build a model for each tier. Secondly, download the model results and paste it to the Excel sheet we developed. Then, the tool will generate the final result. We have already used this method to help policymakers from Africa and Thailand with some real cases. Today, I'd like to share the Thailand AC case as an example.

So in Thailand, there are mainly two types of air conditioners: fixed speed and inverter AC. These two products have two separate label system under EGAT No.5 label program. And the inverter AC has a more strict criteria. So, after we collected data from the current market, we notice that the inverter AC, which were represented by those blue spots in the chart, are already more efficient than the fixed speed AC, which is the orange spot. So, to improve the performance of the fixed speed AC and expect to use the same criteria for the AC product, CLASP recommend a middle- to long-term policy roadmap to revise the AC label step by step.

As you can see, this the proposed policy roadmap. The current energy efficiency level is at 13.38. So, the first step starting from 2023 to 2024 is to set the goal at 15, and then for the second tier from 2025 to 2027, we'll aim higher to set the goal at 19.45. And for the third tier starting from 2028, we'll take further steps to achieve the goal at 22.52. Again, different from the Brazil case, in multiple tier policy, each tier has their own policy effective year and their own policy goal, which means we will need to first build each tier's model in Mepsy.

So, on the custom analysis page, after selecting the country and the product as well as customize all the other parameters, I want to draw attention to the policy date and the scenario assumption. Because each tier has different

inputs, in another word we need to customize one model for each tier separately. So, in total, you will have three models built and analyzed in Mepsy.

Starting from the policy date, so each tier has its own policy effective year. For Tier 1 is 2023, Tier 2: 2025, Tier 3: 2028. For scenario assumption for Tier 1, users can fill the BAU, which is the current market product performance through market research. And then, each tier's target policy goal should align with the recommended policy. And in our Thailand case, the Tier 1 is going to use the inverter AC label because we aim to harmonize the two product labels together. And the Tier 2 uses U4E low efficiency level. Tier 3 is the intermediate efficiency level.

Then, the confusing part is usually how to fill in the data for the BAU in Tier 2 and the BAU for Tier 3. So, to help the user, think it like... to understand this, we would suggest you just imagine that you were already currently in 2025. And then the step one policy recommendation, Tier 1 goal, has already been implemented, and it works quite well, and the 2025 market has already achieved the Tier 1 goal. In this case, the BAU of 2025 should be the same as the 2023 target. Use the same way, we will fill the Tier 3 BAU with the Tier 2 goal.

Again, let me highlight the tips when we customize the input. First make sure BAU reflects your current market performance. Secondly, start the analysis year as early as possible. So, Mepsy can do the earliest year 2005. So, I put the 2005 here. So, it will allow Mepsy a long enough year to back-casting the product, the stock number, and improve the analysis accuracy. Lastly, do not limit the end year, as the 2030 is the maximum year Mepsy can do analysis. We just do not change the end year so that Mepsy can calculate the remaining stock of the product energy saving as much as possible.

So, we already have all the inputs for each tier ready. I also listed model scenario assumption we just discussed it here so that I can throw them into the Mepsy quickly. Starting from Tier 1, directly copy and paste the data into

the table. Make sure we use the 2023 as the effective year, download the results, and then back to the inputs page, copy/paste the Tier 2 number, the value, into the scenario assumption. Make sure to change the effective year, download the results, and then do the same process again for the Tier 3.

So now, after click the download button for three times, we have the three-tier analysis results saved locally.

The next step is to compare the model results we just downloaded. I will take the energy consumption as an example. First we need a new empty Excel sheet. Then open the first tier result report.

The first three columns is the energy consumption of the BAU and the Tier 1 Mepsy calculated from 2005 through 2030. Copy/paste into the new sheet, and then repeat this process again to copy and paste the energy consumption results for Tier 2 and the Tier 3. After this, this is the compare data results set, how it looked like. I round up the data a little bit to make it clear. So, the next step is copy those numbers into the extended Excel sheet that we developed to let the tool do the conversion and renormalize the final results.

So, you might want to ask why we need that tool to do the extra step. So, if you still recall this chart I showed before, we use the Tier 1 goal to the Tier 2 BAU, which means they share the same unit energy consumption and the price assumption.

If all the indicators are the same, that means the two scenarios' final energy consumption results should also be the same. But if we compare results, the two columns in orange, which refers to the energy consumption result of Tier 1 goal, and the Tier 2 BAU are actually different. Same happen to the two columns in green. The reason can be explained by the UEC, which refer to unit energy consumption, MEPSY selected for calculation for each scenario. So, as I mentioned before, final energy consumption is closely calculated related to UEC, which means when UEC is different, total energy consumption will be

different. So, this chart shows the UEC Mepsy used for each tier. So, when we fill the Tier 1 model, we set the effective year at 2023, and we inputs UEC number for the BAU in the Tier 1 goal. Also, it will apply this number until 2030. In the meantime, Mepsy automatically applied the BAU UEC to the Tier 1 goal, as you can see in the gray area.

And the same thing happened to the Tier 2 and the Tier 3. So, if you look at these two lines covered by the orange pillar and compare them again, you will see that even though the UEC starting from 2023 are the same number which is 1752, but before 2023, the numbers of UEC are actually different, which can explain why the final energy consumption results are different in these two scenarios. The same thing can explain these two lines, why the results are different.

So, aware of this, the team developed the extension tool, which is an Excel sheet, to normalize our analysis result. If you are on the Mepsy launch page, scroll down, you will see an area talking about the multiple tier analysis. How-to guide will explain the methodology I just mentioned, and if you click on the template, you will have access to the tool.

You can also click 'Save' to use a tool on your own laptop. So far, the tool can do energy consumption, it can do the conversion for energy consumption, and the CO_2 emission. Users just need to simply copy/paste the compare data set downloaded from Mepsy, and then the tool will do the conversion by itself.

In the meantime, there will be some chart to visualize the analysis results.

So, this what we do in our own case. On the right is the compare data that I just showed. We directly copy/paste into the tool on the left. So, this how it looks like after we fill in with the compare dataset. Please notice that the third column of each tier, which is half green, half gray color area, is automatically calculated by the tool to estimate the energy reduction after each policy got implemented.

So, to do the conversion, the tool copy Tier 1 goal result to Tier 2 BAU, and at the end, it will renormalize the Tier 2 goal's energy consumption, which is circled in yellow. The calculation will use the new BAU value to minus the energy reduction of each year because the half gray, half green area is calculated at the beginning, which refers to each tier policy impact. The tool do the renormalization for the value, which is supposed to be the same, but so that we can visualize the result. But the tool will not change the final results, which means the reduction here should always be the same.

I take the 2026-year data as an example. So, the new data should be calculated through new BAU minus the energy reduction of this year. And there is the new results.

So, once the conversion part is done, we can check the cumulative energy saving of each tier and then the charts. So, the chart shows impact of each tier impact in the policy roadmap. Because of the space limitation, I only showed the energy consumption chart here, and the green area showed after implementing the first tier policy how much energy saving will be like. And then the saving result is starting from 2023 to 2030, including all the products in the current market and the remaining products after 2025. The yellow area shows the saving after implementing the second tier policy, and then the blue area shows the Tier 3 energy saving. So, currently the roadmap recommendation as well as the analysis result has already been presented to EGAT, which is the Thailand authority, for the staff to be discussed the next month.

So, this basically everything I want to share today. Since we still have some time left here, I would like to answer some of the questions about my part or if you have other general questions about Mepsy.

M2: So, we have a question in the Q&A. “In the Thailand example, does the analysis indicate whether fixed speed ACs drop out of the market at one of the tiers?”

J: So in the Tier 1, I mean the whole policy roadmap was designed to retire the less efficient product. Since the fixed speed AC or most of the products are less efficient, so after the Tier 1, which is aimed at retire most of the fixed speed ACs to improve the product efficiency.

M2: Can the date be extended beyond 2030, the end date?
So far, the team is working on the extension model to 2050, and we plan to publish the extension model very soon, so stay tuned to our newsletter. You will get updated as soon as possible.

M2: How can Mepsy be used to verify policies in the policy design phase?

M: Would you mind rephrasing that question? I'm not quite sure I understand. Jiayi, do you understand the question?

J: Might need more information about this question.

M: I'll try to guess at perhaps some of the questions. But, you know, I think as Jiayi showed, it's very quick... Okay great, thank you for the clarification there, Shereen. The updated question reads, "When we design the policy, can we use Mepsy to differentiate between different policies?"

And I think as Jiayi showed in the Brazil case, she was able to very quickly put in several different scenarios of efficiency levels and the, you know, the resultant average unit energy consumption under each level and compare the differences. And you saw that in the line chart, which shows, okay, here's the energy reductions, in the BAU case, in the MEPs case, or Scenario 1 and then Scenario 2, and then again, you know, she was able to overwrite the Scenario 2 with a new Scenario 3, just to see how that one would compare. So, yes, you can do that very quickly. And, you know, as long as you know or can estimate the resultant average unit energy consumption from the policy. The way we typically do it is we have a data set of products and we have their efficiency level and their unit energy consumption according to, you know, a test method

and a usage profile. And so, once you try out different levels, you can see which products get eliminated and what is the resultant energy consumption of the remaining models.

Hope that answers the question.

J: Thank you, Jane. We also find that this case is quite useful because we have received a lot of requests from policymakers from different countries and CLASP is always willing to help policymakers from different countries to deal with the real case. So, please let us know your feedback and download our tools to use in your own case to help us improve.

M: Ashwin writes about "Can Mepsy be used to evaluate the savings from comparative energy efficiency standards?" And by that I'm imagining comparative labels, is that right? Say, you know, A B C D E existing at once and allowing users to compare.

I think you may, but I think it will require an intermediate step. Perhaps, you know, visualizing the progression of how the labels will inform consumer choices and how the average UEC will change as users maybe preference the more efficient label levels. And for that, then I think this multiple tier tool that Jiayi presented would be helpful. Because you could say, okay, maybe in year one, the products are evenly distributed between the label categories, right. And so, you have an average UEC, which is somewhere in the middle there, and that's your Tier 1 per Jiayi's methodology. And then in year two, maybe, you know, the products kind of fall off the bottom label, right. There are no more products here, and so your average UEC moves up. And so now, that's your second UEC and your Tier 2. And maybe in, you know, year three, you know, the bottom two categories fall out. And so, that's your year three and your Tier 3 in Jiayi's example. So, I think that tool could be used to model this case.

Jiayi what do you think?

J: Yeah, agree with your explanation. If the users want to, you know, take a deeper look about how to apply the tool in your reality case, we would recommend you to check this recording video and follow the steps. I believe the videos included in the presentation already show quite clear steps of how to use the tool in your case.

M: Great. If we could maybe move to the next slide, there's a link as well, in case folks, you know, missed it the first time. They can find all the materials on the CLASP website there.

Oh, that's right, and we have an email address from which you hopefully receive the invitation to this webinar, but if you didn't, please don't hesitate to email us at mepsy@clasp.ngo with any questions on how to use the tool and also to keep us up-to-date on how that's going, you know. If you are using Mepsy, please let us know. We'd love to hear about it and support you in any way we can.

Great. Good question from Irene: “Do you provide guidance on how to undertake the market assessment to know the average UEC?”

You know, that's not on the Mepsy website. We do have in the Tools section of the CLASP website, if it's not there right yet or right currently, a CLASP guidebook on energy efficiency and analysis, and that should have instructions on how to conduct that analysis. So, happy to share an older version of that, and there will be a new version coming up shortly.

Alright, well if... I know there's still a couple more questions coming in, but in in the meantime, I wanted to let folks know that we will have an upcoming paper and another webinar. The paper will launch on March 23rd, with the webinar to follow, on integrating appliance efficiency in your country's nationally determined contributions, or NDCs, and it includes an analysis of appliance efficiency in NDCs and provides recommendations to governments on how to

further raise the profile of appliance energy efficiency by using the NDCs. So, we hope that you will read through the paper, as well as join us for the webinar. To stay updated, you can go to clasp.ngo/updates to sign up for email updates about both the paper launch and the webinar.

Alrighty, well, thank you so much for your time. If there are no more questions, you can see here some social media as well as our website again, clasp.ngo to stay updated on our efforts on Mepsy, on some of these other new tools that will be coming out. And yeah, thank you so much for joining, whether, you know, this morning, during the day, or in the evening. We really appreciate your attendance, and we hope it was informative. You got to learn about Mepsy, or if you already knew Mepsy, about some of the new features and tools that we've released to make it easier to use. So, again, please don't hesitate to reach out if you have any questions or to let us know how using Mepsy is going. Thank you so much for your time.