The Ins and Outs of On-Bill Financing

Webinar Transcript

September 25, 2019

Contents

This transcript reflects the statements made during a live webinar on September 25, 2019. The transcript has been reviewed for accuracy. Any grammatical errors or otherwise unclear passages are true to the statements of the presenters.

State and Local
Energy and Environment Program

I. The Ins and Outs of On-Bill Financing

Slide 1. U.S. EPA’s State and Local Energy and Environment Webinar Series

Operator: Good afternoon. My name is Fatie and I will be your conference operator today. At this time, I would like to welcome everyone to the Ins and Outs of On-Bill Financing conference call. All lines have been placed on mute to prevent any background noise. After the speaker's remarks, there will be a question and answer (Q&A) session. Thank you.

It is now my pleasure to turn the conference to our first presenter, Ms. Andrea Denny. The floor is yours ma'am.

Slide 2. The Ins and Outs of On-Bill Financing

Andrea Denny: Thank you. Welcome everyone to the call today. We're going to be talking about on-bill financing, hopefully answering all your questions.

Slide 3. How to Participate

Andrea Denny: We're going to be hearing from three great speakers from the American Council for an Energy-Efficient Environment (ACEEE), from the City of Tallahassee, and from Hawaii.

I'm going to be doing a more thorough introduction of them later. But first, I want to turn it over to Alexis St. Juliana who is going to explain a little bit about the software that we're using and how to ask questions during the webinar. Alexis?

Alexis St. Juliana: Thank you, Andrea, and thank you for joining today, everyone. Those of you that have had attended past webinars might be familiar with the software. There are a few different ways for you to participate today.

First is using the question and answer box on the right-hand side of your screen. Please let us know who your question is for and we will save all of those questions for the session at the end.

Another way to participate today is by clicking on the hyperlinks that you see on your screen. Anything that's hyperlinked should be active for you to follow and explore that content.

Slide 4. How to Participate

Alexis St. Juliana: We will also use the polling feature in the software today to ask several questions during the webinar. It should be fairly simple to participate. There is no submit button. So, as soon as you select your response it has been received.

If you're on a mobile device or tablet, you might need to exit full screen mode and tap on the poll icon which looks like a slip of paper dropping into a ballot box.

Slide 5. Today’s Agenda

Alexis St. Juliana: And then the third and final way to participate today is by completing the feedback form. You'll see the link to it in the Q&A box. And it will also appear when we close today's meeting.

Andrea Denny: All right. Thank you, Alexis. So, as the operator indicated, my name is Andrea Denny. I'm with U.S. Environmental Protection Agency (EPA) State and Local Energy and Environment Program.

Today, we're going to be hearing from Nick Henner at ACEEE, Robert Seaton and Julian Ganoudis with the City of Tallahassee, Florida, and Gwen Yamamoto Lau with the Hawaii Green Infrastructure Authority.

II. Introduction of EPA's State and Local Energy and Environment Program

Slide 6. Introduction

Andrea Denny: I just wanted to start by telling you a little bit about the program I'm with at EPA and some of the resources we have related to on-bill financing and clean energy financing more broadly.

Slide 7. U.S. EPA's State and Local Energy and Environment Program

Andrea Denny: So, our program has been around for many years. And finance is just one of many topics that we cover to try and support state, local, and tribal energy and environmental officials with advancing their goals. We have a lot of free tools, resources, data, and technical expertise that we can offer to you all. We encourage you to visit our website through the link that is here on your screen.

Slide 8. Clean Energy Finance: On-bill Programs

Andrea Denny: Specifically related to on-bill programs, we recently published a primer. It's about a few-page document that just runs through the basics on different kinds of on-bill financing programs, runs through a couple of case studies. It's a good complement to today's webinar.

Slide 9. Clean Energy Financing Programs: A Decision Guide for States and Communities

Andrea Denny: We also have a Clean Energy Financing Decision Guide aimed at states and communities. So, this covers more options than just on-bill financing and goes into a little bit of depth about some of the different financing options states and cities can pursue. We're actually in a process of updating this and we'll be releasing that new version and a companion tool next year. So, I encourage you to check back for those if those are things that you're interested in.

Slide 10. U.S. Department of Energy (DOE) Efficiency Financing Resources

Andrea Denny: I also wanted to highlight that the Department of Energy has also been covering this topic and has put together a number of resources that would be helpful to you if this is something you're interested in pursuing or promoting in your community or in your state.

So, all of these links, as Alexis mentioned, are active. You can click on them now or at a later time. But they really do have a nice set of resources that can help you with putting together an on-bill finance program.

Slide 11. Contact Information

Andrea Denny: And then finally, this is my contact information. Please feel free to reach out to me. I also encourage you to visit our website or sign up for our newsletter or our LinkedIn group. That's a great way to stay informed about some of the resources I mentioned like the updated Financing Guide and tool. If you're not already getting our newsletter, this is a good way to find out more information when we have new resources.

III. Poll 1

Slide 12. Poll 1

Andrea Denny: And with that, we are going to do our first poll. So, you should be seeing this coming up on your screen. But basically, we just wanted to do a quick poll to get a little bit more of a feel for the audience that's on the call today. So, if – we have a lot of different options. We have – you're with a public utility that offers on-bill financing, a public utility that doesn't offer on-bill financing, a private utility with on-bill financing, private utility without on-bill financing.

I know it says “state” but please read that as “state or local” agency that promotes on-bill financing or doesn’t promote on-bill financing or you really just aren't sure or you don't kind of fit into one of these categories.

So, we'll give you a minute or so to respond to that survey or that poll. OK. Great. It looks like things are – things have slowed down. So, we'll go ahead. And as we expected, we kind of have a smattering of different options although it looks like there's a pretty good representation of public utilities split pretty equally between those that offer on-bill financing and those that don't.

And then, about 4 percent for private utilities with on-bill financing, 10 percent private utilities without on-bill financing, and 8 percent from state or local agencies with on-bill financing, 2 percent from state and local agencies without on-bill financing, and quite a large percentage, 27 percent, of people who don't really fit into one of those categories. So maybe we'll find out more about you throughout the call. So, with that, we are going to move on and introduce our first speaker, Nick Henner.

IV. On-Bill Financing 101

Slide 13. On-Bill Financing 101

Andrea Denny: Nick is with – conducts research and analysis on clean energy finance strategies at ACEEE's State Policy Program and collaborates with teams across the organization. He also leads the content development and promotion of ACEEE's 2020 Energy Efficiency Finance Forum. He joined ACEEE in 2019. But before that, he worked at the City and County of Honolulu Office of Climate Change, Sustainability, and Resiliency focusing on energy efficiency and equity projects. He has a Master of Science and Sustainability of Management from American University and a Bachelor of Science and Finance from the University of Arizona. So, Nick, please go ahead.

Nick Henner: Thanks, Andrea. Thanks for the intro and the opportunity share a little bit on-bill.

Slide 14. The Ins and Outs of On-Bill Financing On-Bill Financing 101: Strategies to Deliver Energy Savings

Nick Henner: So, I'm going to quickly just go over a basic on-bill finance 101 to give everyone who's new to this mechanism an overview of how they work, what they're used for, and how they can deliver energy savings.

Slide 15. On-Bill Financing 101: Strategies to Deliver Energy Savings

Nick Henner: Here's a quick agenda of what I'll be doing.

Slide 16. What is an On-Bill Payment Program?

Nick Henner: But first most importantly, what is an on-bill program? So, it's a method of financing energy-related improvements that use the utility bill as the repayment vehicle. And on-bill finance programs are very complementary to different utility rebate incentives because they can often bring the upfront cost to zero to – for energy improvement projects.

And there are three main types of on-bill payment programs. And oftentimes, they're all under the umbrella term on-bill financing but for the sake of at least the next few slides, I'll be presenting - on-bill payment program will be the umbrella term.

And the first being on-bill financing. And here, the utility is the lender for the on-bill program. Ratepayer funds are often collected for energy efficiency programs. Ratepayer funds collected for energy efficiency programs are often the most common funding source. But utility shareholder funds can also be used.

Next is on-bill repayment. And the difference between this and on-bill financing is under on-bill repayment, the capital provider is not the utility but a third party. And the utility operates as a repayment conduit for that third party capital provider.

And lastly is tariffed on-bill. And what really differentiates the tariffed on-bill is that the payment is tied to the meter and not the actual residency or customer. And efficiency upgrades are financed not through a loan but rather through utility offered that pays for upgrades under terms of the new, additional tariff.

This tariff includes a cost recovery charge on the bill that is often less than the estimated savings of the given efficiency initiative. But again, what all three of these have in common is that the utility bill acts as mechanisms for repayments for whichever efficiency or energy improvement initiative is done.

Slide 17. Current On-Bill Landscape

Nick Henner: And that's just a quick overview of the on-bill landscape across the country. And there's currently 110 programs. Most of them are either made up of rural co-ops or municipal utilities. But as you can see from the map, there are quite a few investor-owned utilities that offer on-bill programming. We'll be hearing from one of them shortly.

And in 2014, there is nearly $180 million of lending that – lending that – for energy efficiency improvement projects via the on-bill programs. And that number has definitely increased since then. But that was the last – 2016 was the last time a major study was put into that by Lawrence Berkeley National Laboratory (LBNL) so that might change soon.

Slide 18. Potentially Better Loan Performance and Terms than Conventional Loans

Nick Henner: Moving on. We'll go over some of the benefits of an on-bill program. First is that they can potentially offer better loan performance in terms of a conventional loan. In on-bills – because of the on-bill's plays on the utility bill, it's oftentimes more reliable repayment source than other traditional financing products such as an unsecured loan or lease agreement.

Default rates for on-bill programs are generally very low - between zero and 3 percent. Another benefit is they can often offer longer duration, sometimes 10-plus years than conventional loans which make more expensive upfront projects that have a shorter payback period much more attainable and accessible.

Slide 19. Alternative Underwriting Practices

Nick Henner: Another benefit is the alternative underwriting practices involved with an on-bill program. Because of this, it often makes it more equitable and – more equitable with participants. On-bill programs can go outside traditional underwriting standards to offer the program to a more diverse audience. Generally, more relaxed credit standards than traditional loan standards from a bank.

For example, in Holland, Michigan, customers just have to pay 12 consecutive months of their utility bill on time and can't have any delinquent taxes, bankruptcies or foreclosures in the past three years regardless of what their conventional credit score is.

So, it can be very powerful to open doors for folks that might not have access to capital because of lack of credit score.

Slide 20. Operating Within Existing Utility Programs

Nick Henner: Next. Another benefit is because it operates within the exiting utility program. Because just like this puppy in pajamas (P.J.s) customers are comfortable paying their utility bills. Most often after their housing payment, utilities is what people pay next.

Because of that, it doesn't require applying for additional loans or a new third party. It's through the utility. And people are very comfortable doing that. And some of them have been doing for decades and decades and something that's done every month and it's very easy.

Slide 21. Off-Balance Sheet

Nick Henner: Next is that – the on-bill repayment is classified as an off-balance sheet expense. This is very – this can be very great for – open doors for organizations that cannot take on more debt or need to go through some form of approval process to take on more debt.

Slide 22. Transferability

Nick Henner: Next is transferability. So, what's unique about an on-bill program and this is unique actually to tariffed on-bill and some on-bill repayment programs is that the loan could be potentially transferable. There are not too many examples of this in practice. But because in tariffed on-bill, the loan or repayment is tied to the meter and not the customer if someone moves out, the next tenant would take on the responsibility of repayment of the efficiency initiative through their utility bill.

But in many situations when they're not transferable and if you move out prior to duration of the loan term, oftentimes, the payoff that's necessary for that loan is negated due to the increased value in the sale price of the property because of the efficiency asset that was put in place.

Slide 23. Bill Neutrality

Nick Henner: And last and this is probably the most important or powerful piece to benefits of on-bill is bill neutrality. And for tariffed on-bill programs and some on-bill repayment programs, bill neutrality is a requirement.

And what that means is that in order for – in order for one of the funding to be approved, the efficiency initiative has to have decreased the utility bill. But even without a neutrality requirement, the idea is for all the on-bill programs that the utility bill will decrease due to efficiency savings despite the extra repayment charges associated with the energy improvement project.

Slide 24. Barriers to On-Bill Financing

Nick Henner: Next, a few barriers to building an on-bill financing program. The three main ones are utility burden, administrative burden, and consumer protection concerns. And with the utility burden, oftentimes, utilities can be reluctant to operate outside their core business as well as some jurisdictions require legislation to be passed to allow a utility to offer on-bill payment.

And same with that, some on-bill programs – excuse me – sometimes, the utilities have to – are in jurisdictions that do not allow them to offer interest for repayment of energy improvement projects. But some ways around that is to offer either go through a tariffed on-bill program or an on-bill repayment program where the utility is not the actual capital provider.

And also – and of course, all on-bill programs have to comply with the given consumer protection laws within the state or municipality.

Slide 25. How Can Local Governments Support On-Bill Programs?

Nick Henner: Next. We're getting to ways that your local government can support an on-bill program. So, ways for indirect support can be to raise awareness. And an example of – and this is probably the reason this is on top is because of how powerful this can be.

For example in Arkansas, the Ouachita Electric Cooperative recently reported that in the first nine months after watching their on-bill program, more than 90 percent of customers who are offered the option to sign up actually signed up. So, it's really getting the word out to customers that this is an option to decrease their utility payments by investing in an energy efficiency improvement project.

Some other ways they can support is to capitalize or back an o-bill program. An example of this is the statewide Michigan Saves program used $3 million from the American Recovery and Reinvestment Act grant funds to establish a 5 percent loan loss reserve with the program which is a paying credit union lender which provides a capital for the energy improvement loans which obviously makes this much more attractive for third-party lenders when most of the loan portfolio lent out is guaranteed to be repaid.

Some other indirect ways of support is create policy through legislative incentives when necessary. Example, stakeholders collaborate with state governments, work with the local utility as well as participate in the on-bill program offered by utility themselves.

Slide 26. How Can Local Governments Support On-Bill Programs?

Nick Henner: Next. Some direct ways where municipalities can support the on-bill program is to engage with partners to kind of back with the state outreach is to engage a partner's support municipality owned utilities.

And next – and this one is – cannot be understated is the education and training of contract – of local contractors and service technicians. And I was actually recently at a Property Assessed Clean Energy Program (PACE) conference where this was just – this idea was just echoed out as many times that if the service providers and technicians don't know about these programs, oftentimes, the end customers are not going to find out about them either.

So, local contractors are really on the first lines for energy improvement projects. They can be ambassadors and real advocates for these programs and offer a true win-win-win scenario where the contractor can often end up selling a more expensive piece of equipment that is more – takes a longer – takes longer to install the service. The customer end up saving money in the long term because of the energy efficiency gains and less energy is consumed.

Slide 27. Steps for Local Governments to Launch an On-bill Program

Nick Henner: And finally, here's some steps for local governments to launch an on-bill program. And these five steps are taken from the Environmental Energy Institute’s How-to Guide: Launching an On-bill Program which I definitely recommend checking out if you want further information on on-bill programs.

They offer a lot of great support on starting an On-bill programs as well as ACEEE's own Energy Efficiency Finance Toolkit. And of course, the aforementioned EPA's Clean Energy Finance On-bill Program Primer that just came out last week.

Slide 28. Thank You for Listening!

Nick Henner: That's it for me. Thanks for listening. And I will – as Andrea said earlier, I will remind everyone that ACEEE has an Energy Efficiency Finance Forum in June that I hope to see all of you at.

Andrea Denny: Great. Thanks so much, Nick. And just a reminder, if people have questions for Nick, you can go ahead and type those in the Q&A box. It's helpful to us if you indicate who that question is for but we'll probably figure it out either way.

Slide 29. ACEEE

Andrea Denny: Next, we're going to go ahead and do another quick poll.

V. Poll 2

Slide 30. Poll 2

Andrea Denny: Nick covered a lot of the benefits of on-bill programs. And so we're just going to do a quick poll to get a feel from you of what you feel like the most important or which benefits appeal to you the most.

You can choose more than one. But we ask that you do kind of narrow it down to the ones that you feel are the most important and not just pick all five of them even if they might all be important.

So, we have reduced home energy costs, reduced risk for investors and underwriters, expanded access to clean energy, reduced pollution, and avoided energy system costs.

All right. We're going to go ahead and close that. So, it looks like the most popular with 37 votes was reduced home energy costs, so helping people out by saving them money, followed by expanded access to clean energy with 28 votes, then avoided energy system costs with 17 votes, reduced risk for investors and underwriters with 13, and wrapping it up with reduced pollution with nine votes. So, thanks very much. That's very informative.

VI. City of Tallahassee Energy Efficiency Loan Program

Slide 31. City of Tallahassee Energy Efficiency Loan Program

Andrea Denny: Next, I'm going to introduce our two speakers from the city of Tallahassee, Robert Seaton and Julian Ganoudis. Bob is the Customer Resolutions Manager in the City of Tallahassee Office of Customer Operations. He's worked for the city for 37 years in energy conservation, demand side management, and customer services roles including energy auditing, program administration, key accounts, marketing, and training. He has a Masters from the Florida Atlantic University.

Julian is the Key Accounts Representative for the City of Tallahassee Office of Customer Operations. Julian has worked for the city for 26 years in energy conservation, demand side management, and customer service roles including energy auditing, key accounts, information systems, database administration, as a loan officer, training, and solar net meter and coordination. He holds a Bachelor’s of Arts (BA) from Florida State University. Bob and Julian, please take it away.

Robert Seaton: Hey. Thanks. This is Bob. I just like to say, first off, thanks to Andrea, Alexis, Sarah, Victoria and others with EPA who coordinated this good webinar.

Slide 32. City of Tallahassee Energy Efficiency Loan Program

Robert Seaton: I'll mention that city of Tallahassee is a moderate-sized municipal utility with about 100,000 residential customers or really residential service points and about 15,000 commercial. We also have a natural gas utility with about 30,000 service points.

Slide 33. Creating our Program – Loan Measures

Robert Seaton: We created this – our loan program goes back 36 years to March of 1983. And that was about two years after the state of Florida required utilities of a certain size to begin offering free home energy audits which we did. And it wasn't long afterward that our city commission wanted us to have programs to assist customers in doing things to partner with the energy audits themselves. So, that's how we got going.

We launched the loan program and a seven-measure weatherization program on the same day in March '83. I would say that our loan program has thrived over the years. There were times in the late 80's where we approached 800 loans a year. We still march along about 400 to 450 loans in a typical year recently.

The basic specifications in the program fundamentally it's 5 percent interest, five years' terms, $10,000 maximum amount. The loans are recorded. They're secured with the property lien. There's no down payment. No penalty for early payoff for solar photovoltaic (PV) installations in particular.

Slide 34. Establishing Policies and Procedures - Funding

Robert Seaton: We doubled the term to 10 years. We doubled the maximum of amount to $20,000. We try to encourage solar. Loan eligibility is a lot like what Nick described for Holland, Michigan. Ours is based on on-time utility payments without recent bankruptcy or foreclosure or federal tax liens.

We do have, for the last 10 years, we've had pretty comprehensive rebate programs both for natural gas appliances and for ENERGY STAR plug-in electric appliances. And participants in the loan program are eligible for those rebates and that's probably accounts for a lot of the kind of impetus – the marketing impetus that pushes the loan program along.

Slide 35. Challenges and Solutions

Robert Seaton: There you go. The program is funded or we lend about $3 million to $4 million a year. It is on-bill financing. That's a significant component. It's an important part of the program. The default rate in this loan program has been always low. It's maybe a little higher since the economic crisis of 2008. But it's still hovering below 1.5 percent, still seems pretty low.

Currently, there are about 38 eligible measures in the loan program; about triple the number that we started with. And most popular probably what you would expect ATrack, natural gas appliances especially water heaters, ENERGY STAR windows, ENERGY STAR reflective roofing, refrigerators, variable swimming pool pumps are all popular.

Some measures that are surprisingly less popular than you might think would be solar PV. I think we have a really good offer but it just happens that most – and there is a certainly an upsurge in solar installations on homes in Tallahassee. But by and large, those customers don't turn to us for lending. I think they don't turn to anybody for lending is my impression. They just pay cash.

Heat pump water heaters had been a popular measure in the program. They faded off after General Electric (GE) left the marketplace. Water source heat pumps stronger in earlier years, few installers, and so they're not so numerous. Solar films and solar screens seemed like great measures for Florida but have a relatively small place in the loan program. They are eligible measures.

OK. Early on in the program, we did establish a revolving fund for the residential loans, 10 years later for the commercial loans. It started in 1993. The funding was all internally sourced for these loans coming from electric revenues. So, it is all funded by ratepayer funds coming through electric.

We began with a $1 million in the first years. We added another $1 million in the second year. There were some subsequent additions over the years.

And at first, it was a zero percent interest loan and not on the bill in the first year. It was a payment coupon book. A very long waiting list developed. There was a slow administrative process. We were on a learning curve right then. But somewhere in the second year, we got it onto the utility bill and that made a big difference.

After 1993, we took on the current specifications, 5 percent interest, five years' term. And again, that was the year '93 that we started commercial loans.

We had a rush of loan applications as we came up to the interest rate change. We went from 3 percent to 5 percent in '93. We've had some particular challenges in the program early on especially. There was, I think I mentioned a long waiting list that developed it turned out not so much to be a problem of sufficient funding so much as an administrative slowdown. We just solved that by reviewing our procedure, changing our sequences, and found a way to speed up the process.

More critically, there was a slow contract of payment issue in particular for heating, cooling, and ventilation (HVAC) contractors. We specifically switched from approving loans prior to the signing of the promissory note to approving loans after the signing of the promissory note. So that a customer would go completely through the administrative process before we would mark them as approved and signal that to their chosen contractor. Then the contractor could begin work and on completion of a passed inspection in the case of HVAC. Then we would pay the contractors. So, that was a challenge. And we kind of re-sequenced the procedure to the program to get by that.

We also – at that same time, we became pretty emphatic in refusing to loan for measures installed prior to loan approval. We learned – and this was also quite early on – we learned to take the loan application form out of the customer's hand. And so, there's no longer a form that any customer would fill out himself or herself.

Our loan officer creates the application. We will ask the applicant for a copy of their recorded deed, copy or copies of their contractor bids. And we'll create the loan documentation from those documents. But there's a lot of hand holding in the program. And we learned to like the hand holding. It has gone better in that fashion.

Slide 36. Challenges and Solutions

Robert Seaton: We do not have a contractor list. We do not have a contractor list of approved contractors. Any contractors who's able to pull necessary permit in the jurisdictions having authority here either in the City of Tallahassee or Leon County is good for us in this program. And we do differ from some other utility loan programs in that way.

We try to keep on good terms with the local HVAC contractors. We joined their trade organization. We became friends with them on first name basis. We did what we could to just keep a good comfort level with local installers.

We do not pay – we don't send loan checks, generally speaking, to the customer. We send the check to the installing contractor. And that is common in other programs that I've spoken to. If the customer wanted us to send the check to the customer, we would require a paid receipt which kind of torches the meaning of having a loan in the first place. So, that seldom happens.

Yes, we did away with the three-bid requirements pretty early on. We found a lot of HVAC customers especially had long time contractors that they had worked with where they didn't want to be put through getting multiple bids when they knew already who they were going to work with.

We have a very strong Home Energy Audit Program. At first, it was kind of the cornerstone of all of our programs including the loan program. But we know it's hot in Florida. A customer whose air conditioner has broken is pretty desperate for replacement. We often had long waiting lists for energy audit appointments. So, we did away with that as a requirement prior to participation.

Slide 37. Advice – Do's and Don'ts

Robert Seaton: Some do's and don'ts in the program. We did resist the temptation to require a bundling of measures and it was a temptation. But it wasn't what the customers wanted. They felt tortured by it. And so we didn't do that.

We did, over time, began to completely align our efficiency standards with federal ENERGY STAR. We let ENERGY STAR do the heavy lifting in that way and that would be both for our loan program and for our rebate programs.

Slide 38. Analytics – Loan Numbers; Terms and Conditions

Robert Seaton: In terms of analytics, they are about, I think I mentioned, we do 400-450 residential loans a year and about 15 or 20 commercial loans and really the average loan program amount is about $7,300. We have had periods of double rebate in our rebate program and that drove up our loan numbers in certain years.

Again, the basics in this program are five-year term, $10,000 max, $20,000 for solar loans and we also loaned $20,000 – up to $20,000 for ENERGY STAR reflective roofing.

Slide 39. City of Tallahassee

Robert Seaton: And that's about it for my comments, thanks for listening.

Andrea Denny: Thanks so much, Bob. That was a lot of great information and advice. And just a reminder that if folks got a question that didn't get answered, you can go ahead and type that in for Bob and Julian and we'll get to that a little bit later on.

VII. Poll 3

Slide 40. Poll 3

Andrea Denny: Next, we're going to do our last poll and this is really to help us here at EPA inform our future work on clean energy financing. We just had a quick question about other green financing opportunities you might be interested in or are pursuing in your community. And again, you can choose multiple answers here.

So if you're not really interested in any other clean energy financing, you're interested in green bond, green bank, green loans or some other form of clean energy or green financing, if you do select that one, if you could go ahead and give us an idea of what it is you're thinking about in the Q&A box. That would be great.

Great, so I think we can go ahead and closed that poll. So there's – it looks like fairly high levels of interest in the three different clean energy financing mechanisms we mentioned here. We have 20 votes for green banks and then 17 votes each for green bonds and green loan. A handful, six or so people who are not really looking at other programs and a few suggestions for others and I'm seeing some description of those coming in, so great. Thanks very much for that information. We'll use that to help inform other resources we put out in the future.

VIII. Green Energy Money $aver (GEM$) On-Bill Program

Slide 41. GEM$ On-Bill Program

Andrea Denny: And with that, I'm going to introduce our final speaker for today. Gwen Yamamoto Lau was appointed as the Executive Director of the Hawaii Green Infrastructure Authority in January 2017. She brings over 30 years of strategic leadership and lending experience in commercial banking as well as community development financing. Prior to joining the Authority, Ms. Yamamoto Lau served in a variety of executive positions including as President of the Hawaii Community Reinvestment Corporation, a community development financial institution. The Authority was created in November 2014 to administer the Green Infrastructure Loan Program which was capitalized with a $150 million green energy market securitization bond issue or GEMS which you're going to hear her talk about. Gwen, you can go ahead.

Slide 42. The Ins and Outs of On-Bill Financing

Gwen Yamamoto Lau: Thank you, Andrea. So good morning or perhaps good afternoon to most of you and aloha from Hawaii.

Slide 43. Hawaii's Energy Gap

Gwen Yamamoto Lau: As Hawaii has the highest cost energy ranging from 28.1 cents to 37.9 cents per kilowatt hour, depending on which island you live on, coupled with our high cost of living, the Hawaii Green Infrastructure Authority or HGIA, as Andrea mentioned was constituted by our state legislators in November 2014 to make green energy accessible and affordable for Hawaii's ratepayers

You know, almost half of Hawaii's households are classified as LICE, the United Ways' acronym for Asset Limited, Income Constrained, Employed or below. And to make matters worse, with the median price of a single-family home on Oahu at almost $800,000, approximately 43 percent of Hawaii's households are forced to rent.

Slide 44. Democratize clean energy

Gwen Yamamoto Lau: HGIA exists to democratize clean energy by providing nontraditional and flexible financing to enable our most vulnerable populations and opportunities to lower their energy cost while going green. Leveraging our on-bill repayment mechanism as a tool, we also seek to stimulate private investments and reach new markets.

Slide 45. Green Energy Money $aver ("GEM$") On-Bill Program

Gwen Yamamoto Lau: This past April was the official launch of our Green Energy Money Saver On-bill Program which is available to about 95 percent of the state on over five islands. Unique features of our program include nontraditional underwriting as Nick mentioned, which means no credit reports or debt to income ratio.

Qualification is a simple two-step process. First, the applicant cannot have had a disconnection notice from the utility over the past 12 months and second, the energy installation requested whether it's a solar, hot water heater, solar PV, commercial energy efficiency retrofit must have an estimated 10 percent minimum savings including the repayment of the loan.

This estimate in savings while not guaranteed is very important as our goal is to help our ratepayers be in a better place financially after the installation of the energy improvement than they were before. The estimated savings are not guaranteed as it is dependent upon a number of factors beyond our control such as weather, the cost of oil and of course human behavior.

With 43 percent of our households renting, it was important for our policymakers to ensure that the program was also designed for renters. We did this by tying the obligation to the utility meter which allows for transfer from tenant to tenant, split incentives and creative terms to eliminate obstacles for landlords. The interest rate is fixed at 5.5 percent with the term of up to 20 years. Our term is based on the estimated useful life of the retrofit.

While we have a $5,000 minimum loan amount, we are flexible on this and we are able to finance heat pumps, solar hot water heaters and solar PVs for residential low-moderate income households and renters. And solar PV and commercial energy efficiency for nonprofits, small businesses and multi-family rental projects.

Slide 46. Timeline of Hawaii’s On-Bill Program

Gwen Yamamoto Lau: I’d love to say that designing and implementing an on-bill program is quick and easy but unfortunately it was not. The journey of on-bill in Hawaii began in 2011, when the governor signed Act 204 into law which directed the Hawaii Public Utilities Commission (PUC) to investigate the viability of an on-bill financing program for Hawaii.

The PUC initiated the investigation on August 15, 2011. On February 1, 2013, the on-bill financing program was deemed viable. The PUC then commenced the implementation phase through our public benefits fee administrator, Hawaii Energy. On January 9, 2015, the Hawaii Energy Bill Saver Program manual was published by the PUC. However, in October 2015, its finance program administrator informed the PUC that it will not renew its contracts set to expire on December 31, 2015.

Following the search for replacement finance program administrator, the PUC determined that there was not a viable replacement that met its need in the current program structure. Thus on May 20, 2016, the PUC suspended the Hawaii Energy Bill Saver Program and directed the utility to work with HGIA to design and implement an on-bill repayment mechanism for its exclusive use.

So, we began our on-bill journey in late 2016, early 2017 with weekly project meetings consisting of members from HGIA, the electric utility and Concord, our loan servicer. In April 2018, the PUC conditionally approved our green energy money saver on-bill program and in December 2018, we received final approval.

The information technology (IT) systems programming between the utility and our loan servicer was the most time and resource consuming. Additionally to ensure utility bill integrity, the testing phase was complex and comprehensive. And finally, after almost two and a half years of work, on April 8, 2018, our repayment mechanism went live on the utility bill.

Slide 47. Challenges – Design & Implementation

Gwen Yamamoto Lau: Due to the suspension of the Bill Saver Program that when HGIA began working on designing its GEM$ program, we needed to once again get stakeholder buy in. Stakeholders that had previously invested five years in helping to development – to develop original program, had lost confidence in Hawaii's ability to execute.

Using the foundation established with the Bill Saver Program manual, we incorporated design enhancements based on feedback from energy stakeholders, landlords, the utility and consumer advocate. I find innovating or creating a new program to be fun, rewarding and challenging. The hardest part isn't coming up with ideas to design programs but the discipline and focus needed to transform these ideas into documents, processes and procedures for execution.

IT programming and testing to automate the billing process was also time and thought intensive. Having to brainstorm scenarios which don't yet exist in order to program and test on two different operating systems, the utilities' and the loans – our loan servicers. The project team must also have strong technical expertise, whether it's in lending programming or loan servicing and also be comfortable being outside of the comfort zone for prolonged periods to undertake this task.

Slide 48. Challenges - Deployment

Gwen Yamamoto Lau: When we finally got the program approved, our next challenge was to – on how to get the word out. As a lender for state agency, we lack both funding and marketing expertise. Additionally, this financing program being brand new to Hawaii is made more difficult by the complicated solar PV interconnection programs available such as Standard Interconnection, Customer Grid-Supply, Customer Self-Supply, Customer Grid-Supply Plus, and Smart Exports, making it difficult for the general public to understand.

The subject matter is also too complicated for typical mass marketing tactics like direct mail. We found that making presentations or having conversations is the best way to help interested ratepayers, especially the low-to-moderate income (LMI) population and the hard to reach understand how this program works.

Unfortunately, as a state agency, we are not able to increase staff without approval of the state legislature or the governor to accommodate the increased workload of educating ratepayers on five separate islands, training contractors on the unique nuances of the on-bill program and processing loan applications. As such, some of the most important characteristics required on our team is to have a huge appetite for hard work and the ability to remain flexible and fluid in implementing this new program.

Slide 49. Results

Gwen Yamamoto Lau: Luckily, through the generosity of a local energy stakeholder, who provided a grant, we were able to engage a communications professional to help us get the word out. Thanks his – thanks to his expertise, applications we see monthly are up by over 300 percent to date and this is specifically for the on-bill program, it does not include our other financing. We have approximately 50 single-family projects approved, aggregating $1 million, the average loan size, $21,000 with an average project size of $25,000.

We have established a $20 million solar plus storage fund for those ratepayers without a tax appetite. The average loan size is $34,000 with an average project size of $62,000. And we have approved eight commercial projects for nonprofits, small businesses and multi-family projects aggregating $3.3 million with an average loan size of $422,000 and an average project size of $792,000.

Lastly, with the culture of kaizen or continuous improvement, we are seeking ways to streamline our processing. We are also finding that the on-bill repayment mechanism is unlocking new markets as developers are leaning in to providing solar to renters, low and moderate income rental projects and LMI households for community solar projects.

We look forward to the continued enhancement of our program for greater impact.

Slide 50. Thank you

Gwen Yamamoto Lau: Here's my contact information, feel free to reach out to me. Thank you.

IX. Question and Answer Session

Slide 51. Question and Answer Session

Andrea Denny: Thanks so much, Gwen. That was really interesting and helpful I think for people who are thinking about starting one of these programs themselves. I just want to remind everyone on the line that you can take a moment to type in a question for Gwen or for any of the other speakers that you might not have – might not have had a chance to type in yet. And we are going to go ahead and get started and I'm going to go back to the beginning and start with a question for Nick.

And you know, while I'm saying for Nick, if other people want to jump in as well, Gwen or Bob or Julian and add to Nick's answer, please feel free to do that. So, the first question we have is state enabling legislation needed for a rural co-op or an Investor Owned Utility (IOU) to offer an on-bill financing program?

Nick Henner: Sorry, I forgot I was on mute.

Andrea Denny: OK, did you hear.…

Nick Henner: So I believe – I believe the answer is it’s dependent on the state but you know if – if Gwen or Bob want to jump in to help better answer that question or describe their experience of setting up the on-bill in their – in their individual state, that would be welcomed.

Gwen Yamamoto Lau: I'll jump in, I'm not sure if it's necessarily required, however, it does help move the process along. Our state has very aggressive clean energy goals and along it – with it, the policy – having strong policies make projects move faster, if you can call what we did fast.

Robert Seaton: In Tallahassee, I'll say that was a question in the early 80s whether it was right for a public utility like ours to be lending public money to the public. And it was debated on the front pages of our local newspaper, our city attorney defended it as justified in the – within the concepts of demand side management. So that our – locally-owned utility could defer or delay or downsized future expensive power plants through the success of loan program and other programs but that's how it was discussed at the time.

Andrea Denny: Great, thanks. So, this is another question that was targeted at Nick, which is what percent of on-bill program are to commercial or industrial properties for its residential and multi-family properties? You know, we got some numbers from Bob and from Gwen about their respective programs, I'm curious I guess whether that – those kinds of rough percentages hold true more nationally or across programs broadly.

Nick Henner: I don't have those numbers on hand for, you know, nationally what they are. I'm not sure that they exist at the moment but there is – I would check out the Lawrence Berkeley National Laboratory report. That is kind of the most robust study of these types of questions, so I would have to pull that up myself to know – to give the right answer.

Andrea Denny: No worries, thanks. All right, sorry, I have one more for you Nick and then we'll let you off the hot seat. This is and maybe the LBNL report might be a good answer to this as well but where can I look for more resources on examples of consumer protection efforts related to on-bill or tariff programs?

Nick Henner: So, a good place to look I think would be where I mentioned earlier, the Environment – the Environment and Energy Institute. They have a – their on-bill – on-bill financing page is really a great resource for just about any questions you have about setting up an on-bill program and concerns for it. I believe – a few of my slides, I referenced – I have a link to their page.

Andrea Denny: Great, thanks Nick. All right, we'll let you off the hook, at least for a few minutes, and turn to some questions for Bob and Julian. So the first question is, in the City of Tallahassee, is there a startup or application fee assessed and if so, is it a fixed amount or a percentage of the loan?

Robert Seaton: There is no startup or application fee, although I'll say there's a – maybe there is, there is an administrative fee that's part of the loan total and repaid 1 percent. There's a 1 percent admin fee but there's no down payment, there's no at the start, upfront payment.

Julian Ganoudis: In our loan program with the $10,000 maximum, the doc stamp and recording fees, administrative fees, those type of fees are included in that $10,000 maximum. So, typically you might have a couple hundred dollars that comes out and those kinds of fees and then say, if it was a proposal for $10,500, then $9,800 would go to the contractor and the customer would be out-of-pocket for whatever the difference was over that amount.

Andrea Denny: Great. Next question, again for Tallahassee is, does the Tallahassee program cover the cost of the – of building shell for example insulation or air sealing improvements?

Robert Seaton: We don't have the shell itself and carpentry related to the building shell as a loan measure.

Julian Ganoudis: Except for roofs.

Robert Seaton: Yes, except for roofs. We do have loans, among the loan measures are loans for sealing insulation, wall insulation and floor insulation and windows. So, all part of the shell but we do not have a specific measure for like carpentry undertakings.

Julian Ganoudis: And we have a ceiling insulation grant program as well that pays up to $400 for residential customers to help them bump up their insulation. Sometimes people may go over that and include the amount as a loan measure as well.

Andrea Denny: Great and then the final question I'm going to ask you right now specifically to Tallahassee is whether you allow e-signatures for loan signing?

Julian Ganoudis: No, we don't. Most of our paperwork, the application process and all that is done through e-mail and can be done with e-signatures but we do require the promissory note and documents to be notarized, so they aren’t e-signed.

Andrea Denny: Great. So turning to Gwen, we had a question about whether Hawaii is a municipal utility or has municipal utilities, could you speak to that?

Gwen Yamamoto Lau: No, so we have two utilities, one is a coop, that is on the island of Kauai, that's the 5 percent that we're not able to finance and the other one is investor-owned.

Andrea Denny: OK, great. I think, Gwen, that this one might be for you but it might also be one that Tallahassee could weigh in on. To qualify for a loan, do you have – do you have to have a minimum debt to income ratio and do you require proof of income?

Gwen Yamamoto Lau: No, we – it's really based on the repayment of the utility bill. Although, we do ask on our application for stated income, household income and household size and that's how we determine what income category they are in to qualify them as a low-moderate income household. We used these Housing and Urban Development (HUD) metrics for that.

Andrea Denny: Great and – sorry go ahead.

Julian Ganoudis: Yes, this is Julian. So as Nick kind of mentioned earlier in this presentation, for us, we aren't looking at someone's credit bureau rating, we're using an internal bill history and repayment. So if the customer has good bill history, no bankruptcies or foreclosures in the past couple of years and we do put a lien on their property and they are owners, then they are pretty much automatically eligible.

Andrea Denny: Great. And then, one – final one for Gwen, right – for right now which is how is the on-bill financing mechanism being used for community solar projects, is it being coordinated with the utility provider that has a community solar program?

Gwen Yamamoto Lau: Yes, so right now we're not able to finance it. We need to go back to the PUC for approval for that; however, we're finding that community solar developers are interested in leveraging the mechanism. It does two things for them, it mitigates the risk and it also lowers their cost because in essence we will be doing their servicing for them. So, we are working on putting together a request to go back to the PUC to enable us to be able to use the on-bill repayment mechanism for that purpose.

Andrea Denny: Great. So now, we have a number of questions that I think maybe more than one person could weigh in on, so I'm going to throw some of these out there and people can jump in. So, one that seems interesting was whether any of you have calculated if these programs actually reduce the peak demand and saved the utility money on reduced capacity charges.

Gwen Yamamoto Lau: So I'll weigh in, so we've not calculated it, although anecdotally I understand that it has reduced peak demand charges for our commercial clients.

Andrea Denny: Great. Bob or Julian, did you want to weigh in?

Robert Seaton: I know that's been calculated here in Tallahassee in the past. I don't have figures in my head available to speak more in detail to it though.

Julian Ganoudis: I mean was the question reducing peak demand charges or reducing system peak loads?

Andrea Denny: It asked if it reduce peak demand and saves money on reduced capacity charges.

Julian Ganoudis: To the system. Yes, so it has – I don't know what the numbers are for us but it has been computed and analyzed and I think that's one of the things they probably consider with future plans though.

Robert Seaton: Yes, definitely in Tallahassee for some 35 of the 36 years of the program, fuel switching from electric to natural gas was a major component in the loan program and the – and fundamental to our efforts at demand side management reducing peak load on the electric utility.

Andrea Denny: Great. So another question that's come in is whether on-bill financing could be – could be a mechanism that could use for municipal or county projects?

Gwen Yamamoto Lau: So, sorry, so it can be. We do financing for state agencies and if they choose to repay it on-bill, we can have it done that way.

Robert Seaton: We're thinking that we haven't done that in Tallahassee.

Andrea Denny: So, a question about how well on-bill financing can work with rent or landlord and could an irresponsible landlord kind of use this to improve the property and put the cost of the improvements on the renters. You know, I wonder if you could just speak a little bit about your experiences or Nick maybe anything that you guys have done research on about kind of how well this has worked for – or how it benefited renters.

Julian Ganoudis: Well, I would say that we have a loan limit, so it's one loan per residential customer or commercial customer at a time. They can get multiple loans as long as they don't exceed the maximum loan amount. So for a landlord, they could borrow and if they had a commercial account, then bill payment will go under the commercial account. If it's a residential unit that they owned, then that payment would go – it would have to go on to their own residential utility bill if they have a residential account with the City of Tallahassee, so it limits them to how much they could do at one time. And as to whether or not they would increase the rent, based on that, I don't know but would still be an improvement to the property and reduce bills for the renter.

Robert Seaton: And we've done quite a few for loans like that where the loan payments go to the property owner's home utility bill for improvement that are rental property.

Gwen Yamamoto Lau: For ours, we have – we limit our financing only to energy improvements that are approved such as solar hot water heaters, solar PV, heat pumps, so it's specific improvements per se. The rent, it's split incentive, so the renter – if the renter cannot have a lower utility bill estimated including the repayment of the retrofit, we will not approve it. So it's a – it's a split incentive, it benefits both – it must benefit both the renter and the landlord.

Andrea Denny: Great, thanks. So, there's been a few questions and I'm going to kind of aggregate a little bit, just related, I think, with people understanding how – what happens when the person who originally qualified for the loan or the program moves out of the building and is it repaid at the time of sale of a property or does it transfer to a new owner? Could someone maybe just walk a little bit through how that – and maybe Nick, maybe this is a question for you, more generally or if Tallahassee or Hawaii want to weigh in but just explain a little bit how that works or a different examples of how that works.

Nick Henner: It is definitely case by case, depending on the structure of the program but generally the loan – so like – for conventional, the loan, and please others chime in, but would be paid off at the sale but there's a [crosstalk].

Julian Ganoudis: And this is Julian with the City and that's how our program works as well.

Gwen Yamamoto Lau: So ours is a little bit different. It gives a little bit more option. So when it's a renter, when it's an investment property, we require the landlords to disclose the existence of a – this on-bill application on the utility meter. And so, they need to share with their potential new client, sorry, new tenant, have some paperwork filled in. Because the retrofit, say the solar PV or solar hot waters already on the home, we don't do another analysis to see their savings but the new tenant needs to agree to that before moving in. And then, we can continue the obligation of the – repayment of the obligation when the new tenant signs up for the utility account. When it's a homeowner and it's on-bill, we require them to disclose to a new – and they're selling their house, we require them to disclose on the application to the buyer. If the buyer agrees to it, then it's great, the obligation transfers. If the buyer refuses to accept the on-bill obligation, then at that point we ask that they pay us off with an escrow. And typically a seller can recoup the investment by just – by the sales price.

Andrea Denny: Great. A question for Tallahassee, whether you happen to know what the uptake level has been for a reflective roof through this program?

Julian Ganoudis: Yes, it's been significant. It's the – since we started the roofing loans for ENERGY STAR Reflective Roofing, it's been the largest item that we loan for after HVAC systems.

Andrea Denny: Well, great. And then, I think this is a question probably for both Gwen and Bob and Julian about the requirements for commercial loans and how those might differ from residential?

Julian Ganoudis: So for our residential customers, I mentioned that earlier that they have to, again, it's based – the loan is to the landlord, to the owner. And so for them, it's based on bill payment history, no bankruptcy or foreclosures recently and they have to own the property we put a lien on it. It's the same thing for commercial customers, they have to own the property. So, there's a downside in our program for commercial customers since a lot of commercial customers are leasing. And middle and larger commercial customers also have deeper pockets. You know, more financing options and oftentimes the size of equipment and the amount that they need for improvement is greater than what our program allows. So, that's why we might only have 15 or 20 commercial loans a year but we got 400 to 500 residential loans and hope that answers.

Gwen Yamamoto Lau: For our program, the criteria is the same, whether it's commercial or residential. I will say for nonprofits especially, they like the on-bill program because typically Hawaii is a very conservative lending environment. And so typically, most commercial loans require some kind of recourse or guarantee. And as you know nonprofits, they don't have anybody to guarantee the loan, so it works well for nonprofits. And good or bad, the rates, our utility rates are pretty high here. So even if they have to forego the solar tax credits, it still makes sense for them.

Andrea Denny: Great, thanks. Gwen, one more for you, are there any stats available in Hawaii about how much money the nonprofit organizations that have participated have saved through your program?

Gwen Yamamoto Lau: I don't have it off the top of my head. We do track our – we do have energy metrics that we tracked and report to the PUC. It's not necessarily looking down to nonprofits, whoever asked that question, would like to e-mail me. I can certainly provide them the answer to that.

Andrea Denny: Great, thanks, Gwen. All right, well I think we just have a couple more and then we'll wrap up. So for Nick, we wondered if you could share a few examples, maybe of utilities or localities that you think have really robust on-bill programs that people should look into and if you prefer to just refer people back to the resources, that's fine too, but if there's any off the top of your head that you think – that you would recommend people look at, that would be great.

Nick Henner: Sure. I would definitely take a look at New York State Energy Research and Development Authority's (NYSERDA) in New York. They have a pretty robust program as well as – I forgot the name of the administrator but that operates the Tennessee Valley Authority's program. Those are two off the top of my head that I would recommend.

Andrea: Denny: Great. Thanks, Nick. One last question for Bob and Julian. How do you track energy efficiency improvement as result of the loan the city offers?

Julian Ganoudis: Well, you know, we tracked the different measures just through a database type of system for how many measures we do of the 39 or so measures that we have every year and we report that. As far as the energy efficiency gain, that's more difficult. So, it's basically assumed as like in a (zero) rating or something like that, if you're going from an 8 or a 9 or a 10 through a 15, you know what the efficiency gain would be.

Robert Seaton: There are, you know – the potential concerns with things like free-ridership that we don't report over in the loan program at least.

Andrea Denny: Yes, great. And then one last question for Gwen, since you mentioned kaizen, we're just wondering what adjustments or improvements you see on the horizon for the program?

Gwen Yamamoto Lau: So you know, one was already mentioned, it's including asking for approval to include community solar projects, also in our loan processing. And also we're finding that – and it's kind of a conundrum, so we do have – because we are trying to help the low-moderate income homeowners and renters, we do find that they have had disconnection notices. And so one of the things, we would like to go back and tweak our program with is maybe they – instead of approving a solar PV, most people applied for solar PV here in Hawaii, is maybe we can, you know, deny, counter-offer a solar hot water retrofit to reduce their energy cost. Because, the reason why they're probably having a disconnection notice is because they're having trouble paying the utility bill. If we can get the get that utility bill down, then perhaps they can pay it on time. So, that's things that we are contemplating and doing some due diligence on to see if we should be tweaking the program that way.

Andrea Denny: Great, thanks so much, Gwen. So I …

Julian Ganoudis: This is Julian. Can I make a quick comment about the loan programs in general?

Andrea Denny: Absolutely.

Julian Ganoudis: Sure, so for the utility for us, you know, a loan program is a win-win situation because we have a low default rate, 1 percent or less and the money going out comes back to you since it's a loan. So, it's so much better than giving money out through rebates that never come back to you, so it's a great thing for us. It helps reduce customer cost and lowers high bill complaints and the customers are genuinely appreciative of those efforts.

Andrea Denny: Great, thanks so much.

Slide 2. Slide 52. Connect with the State and Local Energy and Environment Program

Andrea Denny: So, I just want to thank all of our speakers one more time. We really appreciate you being here today and sharing your expertise with those people that were able to call in or who will be able to watch the recording. For those participants on the line, I encourage you to click on this link here to our webinar feedback form, that really helps us put together future webinars and tailor them to be useful to you. I also encourage you to visit our website and sign up for our newsletters to stay informed about new products we have coming on clean energy financing and other topics. And with that, I'm going to turn it back to the operator to close up the call. Thank you.