Georgia Power Company 2022 Integrated Resource Plan

Unofficial Transcript of **Day Two** Hearings (April 5, 2022)

Including GPC Expert Witness Panel No. 2

(Direct Testimony of Francisco Valle, Andy Phillips, Jeffrey K. Smith, and Lee Evans) and

GPC Expert Witness Panel No. 3

(Direct Testimony of Mark S. Berry and Aaron D. Mitchell)

and intervenor cross examination

Transcript is synchronized with the YouTube video below, by timestamp:

https://www.youtube.com/watch?v=DwpQvbDCOnM

Total time of day one recording is 6 hours 47 minutes (approx. 9:45 am – 4:30 pm)

Transcript

Tricia Pridemore (PSC): [00:07:45] Okay. Let's call to order docket number 44160 and docket number 44161 Georgia Power 2022 Application for approval of its Integrated Resource Plan Georgia Power 2022. Application for approval of its amended DSM plan and Certification and decertification of certain DSM programs. I have a long list of intervenors today, so let's call for appearances first. Georgia Public Service Commission.

Preston Thomas (PIA): [00:08:18] Good morning, Preston Thomas, Alex Davis and Dan Walsh with the Attorney General's Office on behalf of the Public Interest Advocacy staff.

Tricia Pridemore (PSC): [00:08:27] Georgia Power Company.

Allison Pryor (GPC): [00:08:29] Good morning. Allison Pryor, Steve Hewitson and Brandon Marzo for Georgia Power Company,

Tricia Pridemore (PSC): [00:08:35] Americans for Affordable Clean Energy. Commercial group. Concerned Ratepayers for Georgia. Cypress Creek Renewables. Georgia Association of Manufacturers. Georgia Center for Energy Solutions. Georgia Coalition of Local Governments. Georgia Interfaith Power and Light and the Partnership for Southern Equity. Georgia Large Scale Solar Association and Advanced Power Alliance. Georgia Solar Energy Industries Association, Solar Energy Association and Vote Solar. Georgia Solar Energy Association. Georgia Watch. Interstate Gas Supply. Resource Supply Management. Restore Chattooga Gorge Coalition asked to be excused today. Sierra Club. Southern Alliance for Clean Energy and Southface Energy Institute. Southern Renewable Energy Association.

Tricia Pridemore (PSC): [00:11:16] Do we have any housekeeping matters to come before us before we get started? Miss Pryor, you want to swear in your witnesses?

Allison Pryor (GPC): [00:11:28] Good morning. At this time, I'd like to call Georgia Power Company's next panel of witnesses on direct. Mr. Valle, Mr. Phillips, Mr. Smith and Mr. Evans. Gentlemen, please raise your right hand. Do you swear to tell the truth, the whole truth, and nothing but the truth, so help you God? [Yes x 4.] Mr. Valle, please start by stating your full name, your employer, and your responsibilities for the record.

Francisco Valle (GPC): [00:11:52] Sure. Good morning, commissioners. My name is Francisco Valle. I'm the director of Market Planning for Georgia Power, responsible for providing load forecasts and economic analysis.

Allison Pryor (GPC): [00:12:02] And Mr. Phillips.

Andy Phillips (GPC): [00:12:03] My name is Andy Phillips. I manage the profitability and economic analysis team. My team is responsible for the energy efficiency, potential study and calculating economics for the DSM portfolio.

Allison Pryor (GPC): [00:12:15] Mr. Smith.

Jeffrey Smith (GPC): [00:12:18] Jeffrey Smith. Energy efficiency, excuse me, commission, Energy efficiency for Georgia Power. Our team is responsible for designing, implementing and evaluating the energy efficiency and residential demand response programs.

Allison Pryor (GPC): [00:12:32] And Mr. Evans.

Lee Evans (GPC): [00:12:33] Lee Evans. Costing and Demand Side Support Manager for Southern Company. I provide economic and planning support for customer facing programs.

Allison Pryor (GPC): [00:12:41] Thank you. Mr. Valle, On March 11th of this year, did you pre-file or cause to be pre-filed 29 pages of direct testimony in question and answer format in this case? [Yes.] And are there any corrections you need to make to your pre-filed testimony today? [No, no corrections.] If I were to ask you the same questions today under oath, would your answers be the same as are set forth in your pre-filed testimony? [Yes.] Chair Pridemore, At this time, I would like to identify for the record Georgia Power Company's application for the certification, decertification, an amended demand side management plan as amended by errata filed on April 1st as Exhibit GPC-2 and move Georgia Power Exhibit 2 into the record, subject to cross-examination. [So moved.] Court reporter has been provided a copy of the pre-filed direct testimony, and I now ask the Direct Testimony panel be copied into the record as a given here today. [So moved.] With your permission. Chair, I'd like Mr. Valle to summarize the pre-filed testimony of this panel. [Go ahead.]

Francisco Valle (GPC): [00:13:41] Good morning, commissioners. Our panel is here to support the budget 2022 load and energy forecast, the companies DSM proposal and a company request for certification, decertification and amended certificates as well as the proposed DER customer program. The company's budget 2022 Load and Energy Forecast provides a 20 year forecast of energy sales and peak demand to meet Georgia Power's planning needs. The major drivers of the long term forecast are the economy and the penetration and efficiency trends in electric end uses. Although the United States and Georgia have both experienced solid economic growth since 2013, the onset of the COVID 19 pandemic in March of 2020 caused a short but deep recession that then rebounded. The COVID 19 pandemic significantly impacted Georgia Power's retail sales, as many individuals remain at home in response to social distancing and isolation measures put in place during the pandemic. As Georgia returned to post-pandemic life, the state expects to return to a period of healthy economic growth as businesses continue to relocate and expand in Georgia, employment growth and population growth should follow. Georgia Power anticipates that total energy sales will grow at an average annual rate of 0.8% over the next 20 years. As in prior RFPs. The company's continued implementation of demand side programs and remains an important component of the 2022 IRP, as stated in the company's DSM application, the company seeks certification of one new DSM program, a certificate amendment for ten previously certified programs, decertification of two DSM programs, a waiver of a commission rule for one previously certified DSM program, and Commission approval of certain other energy efficiency related activities. For all certified DSM programs, the company is requesting an additional sum equal to 4 cents for every kilowatt hour saved using verified gross energy savings in the first year of each certified program. The proposed DSM programs were developed following a thorough evaluation, using the Commission's approval processes and in collaboration with Commission staff and the Demand Side Management Working Group. Based on the planned implementation levels, the company projects that the proposed DSM programs will result on average in approximately 113 megawatts of demand reduction and 431 gigawatt hours of energy reduction annually until the next IRP. It is important to note that due to lower avoided cost, many of the current DSM programs still appear less favorable under the total research cost and Rate Impact Measure Test when compared to the 2019 IRP. However, the company believes continuing these programs is beneficial in the current environment as customers are responding favorably and market efficiencies can be achieved by maintaining a presence in the marketplace. In addition to the aforementioned DSM programs, a key component of this panel's testimony pertains to dispatchable distributed energy resources to leverage the resilience and reliability benefits that dispatchable DERs can provide and meet growing customer need. The company seeks approval in this IRP of its new tariff based DER customer program. The DER customer program will provide demand response value and corresponding system resiliency and reliability benefits for all customers and support commercial and industrial customers with enhanced resiliency needs. The company's load and energy forecast and demand side management plan inform and support the company's request in this 2022 IRP. The company asked the Commission to approve the DER customer program, as well as its specific request identified in the 2022 IRP and DSM application. Thank you.

Allison Pryor (GPC): [00:18:19] Thank you. The witnesses are now available for questions from the bench and for cross-examination.

Tricia Pridemore (PSC): [00:18:26] Questions from commissioners. Okay. Georgia Public Service Commission.

Preston Thomas (PIA): [00:18:38] Good morning, panel. I'm Preston Thomas with public interest advocacy staff. And I will be handling the DER issues and load forecasting, and then I will be handling the panel over to Mr. Davis for DSM issues. I wanted to see if you could just describe the service the company would be providing under the Resiliency Asset Service Tariff, also known as RAST-1.

Lee Evans (GPC): [00:19:06] Yes, Commissioners under the Resiliency Asset Service Tariff, Georgia Power will install, maintain and operate a behind the meter feed generation or storage asset to meet that individual customer's resiliency needs. That customer will pay the revenue requirements through the charges on the resiliency asset service tariff over the life of the contract.

Preston Thomas (PIA): [00:19:29] And are these services available from unregulated firms competing in the market for backup power supply, energy procurement and construction? EPC.

Lee Evans (GPC): [00:19:41] Yes, that's correct. Third parties provide this service today to our customers and we'll be able to continue to provide this service to our customers. With the DER program, we see benefits that the system can extract from these assets through the combination of the RAST program and the DRC, the demand response component, that leverages these assets for the good of the system.

Preston Thomas (PIA): [00:20:05] So can you explain why, if they're available in the free market, that GPC should be allowed to offer them as a regulated service?

Lee Evans (GPC): [00:20:15] Yes. These are available in the market. But again, Georgia Power cannot leverage these assets for the reliability of the System. Through the program that we filed here today, we can call on these assets during times of reliability emergencies, or conditions or constraints, to reduce demand on the System and provide a benefit to all customers. That component is something that third parties cannot do.

Preston Thomas (PIA): [00:20:43] And you mentioned in your summary that these backup power supplies would be added to the rate base, but the participating customer would pay for the associated revenue requirement. Will this charge be added to the customer's electric bill? [That's correct.] And will GPC allow other firms that offer these services to their cost to the electric bill?

Lee Evans (GPC): [00:21:17] Not, I'm not quite sure I follow your question.

Preston Thomas (PIA): [00:21:20] So I guess my question is, does the fact that GPC's program costs appear on the customer's electric bill while competing firms can't do that, does that constitute an advantage for the GPC program over competing firms?

Lee Evans (GPC): [00:21:40] No, I don't believe so. I think the method of payment appearing on the bill is not a competitive advantage.

Preston Thomas (PIA): [00:21:46] Even though that might make it easier for the customer? That's not an advantage?

Lee Evans (GPC): [00:21:53] I can't speak to the payment methods that third parties deploy to their customers today. I think as a regulated service that the company is offering, it's appropriate for to appear on the bill.

Tim Echols (PSC): [00:22:05] Mr. Thomas, I want to ask a follow up question on this. Would this be a precursor to maybe tapping into electric vehicle batteries that would be plugged into the home in the future? Have you all discussed that possibility down the road?

Lee Evans (GPC): [00:22:21] We do think that there are possibilities as this program grows and we become more familiar in this space to further leverage DER assets to the extent the System sees benefits from it. This could be expanded to different customers or understanding the different use cases that these assets can be deployed for the benefits of the system.

Tim Echols (PSC): [00:22:42] And then just another follow up, Mr. Thomas, if you don't mind. So the townhomes in Atlanta that Pulte did with you all and the Birmingham Project, are you leveraging lessons learned from that? And if so, what were those lessons?

Lee Evans (GPC): [00:22:59] We haven't for this particular program, mainly because this one focuses on large commercial and industrial customers. To the extent the program eventually in the future might extend to residential, those are lessons learned that we can leverage for sure. This program leveraged conversations with commercial & industrial customers, focused on meeting their resiliency needs, understanding what those are, how the customer or the company might serve in this space. And then from there, understanding how those assets can be further leveraged for demand response value on the system.

Tim Echols (PSC): [00:23:32] And just one more on the commercial customers. Are you leveraging diesel generators as well? Caterpillar generators that might be attached to a facility maybe, in 15 minute intervals for DER.

Lee Evans (GPC): [00:23:44] Yes. The types of assets that we'll leverage in this program are going to be driven by those customers' needs. They're going to have a say in how that best fits their individual resiliency needs, provided it meets our qualifications. And that is a type of asset that we do see participating in the program with that quick start capability. [Thank you.]

Tricia Pridemore (PSC): [00:24:05] I believe this C&I DER proposal is similar to what some other states have done with natural gas fired generators for resiliency purposes, states like Louisiana. Have you looked at what other states, particularly in the Southeast, have done and and taken best practices and knowledge from that?

Lee Evans (GPC): [00:24:25] We have and you're exactly right. We do see other utilities around the country proposing different types of resilience programs to customers. Different jurisdictions, different considerations in each one of them. But we have reviewed those and taken certain elements of their programs into consideration.

Tricia Pridemore (PSC): [00:24:40] But this is primarily driven by what C&I ratepayers are looking for. [That's correct.]

Preston Thomas (PIA): [00:24:49] And do you think that GPC's cost of capital is less than the cost of capital of competing EPC firms?

Lee Evans (GPC): [00:24:57] I don't know the cost of capital of other providers in this market.

Preston Thomas (PIA): [00:25:03] But if the cost of capital were lower for Georgia Power than competing firms, would that constitute an advantage for GPC over competing EPC firms? [Just to make sure I follow, can you restate your question? Repeat your question.] Sure. So I understand that you don't know what the cost of capital is for other firms. But if it is lower for Georgia Power than other firms, would that constitute an advantage?

Lee Evans (GPC): [00:25:38] I don't know. I can't speak to how they price their products or what I think, or what price the customer would see there. So I don't know.

Preston Thomas (PIA): [00:25:52] And how will Georgia Power ensure that cost won't be paid by any non participating customers?

Lee Evans (GPC): [00:26:00] So the charges that the customer will pay through the resiliency asset service tariff will be based on the revenue requirements that the company will see during that contract. So as the costs will be included in a rate base. But also that revenue that that customer's paying is meant to offset those costs over the contract.

Preston Thomas (PIA): [00:26:23] So what happens if a participating customer closes up shop or leaves leaves this state? How is that handled?

Lee Evans (GPC): [00:26:34] Those would be handled in the terms and conditions of the contract. We'll have obviously risk mitigation elements to ensure that general ratepayers are not bearing the cost of that.

Preston Thomas (PIA): [00:26:46] So if a participating customer refuses to pay the backup power bill or any cost, non participating customers won't be forced to pay for those rate based assets.

Lee Evans (GPC): [00:27:01] Well, I think in the contracts we'll have elements to shield customers, our general customers, from that element for sure. Also, one of the benefits of this program is that the assets themselves can be redeployed to new customers within the program and new value extracted for that that new participating customer in the System. So in the event that that does occur, the asset itself being transferable, we see as a great benefit.

Preston Thomas (PIA): [00:27:29] So I heard you say that there are shields for the customer and that the asset can be re-used. But I didn't actually hear the answer to the question whether if there are costs where they refuse to pay the backup power bill. Is there any scenario where other customers could be forced to pay for those rate based assets?

Lee Evans (GPC): [00:27:53] I can't speak definitively. We think that's a very low occurrence. And just like we do in every area of our business, we're going to construct this program to ensure that the participating customers pay for the cost of it. But I think, I can't say in every instance that won't occur. But we think the probability is very small.

Preston Thomas (PIA): [00:28:13] So although a small probability, the probability exists, do you think that that might create an advantage over other firms, where other firms have to worry more about bad debt because they don't have the ability to pass that on in any scenario to other customers?

Lee Evans (GPC): [00:28:37] Well, I think Georgia Power cares very much about controlling bad debt and mitigating that risk today. So I don't think that's any different from any other provider. And...no, go ahead.

Preston Thomas (PIA): [00:28:47] But there is a scenario where this might be passed on to non customers. Other firms can't pass that on to other customers. Do you see this as any type of advantage Georgia Power might have over other firms?

Lee Evans (GPC): [00:29:04] I don't know how other firms would handle breach of contract.

Bubba McDonald (PSC): [00:29:07] What's other firms, please?

Preston Thomas (PIA): [00:29:10] We might, market firms, EPCs that offer the same service that Georgia Power wants to offer as a regulated service. Did I allow you to completely answer that? [I can't speak to how other firms handle breach of contract.] So I'd like to move to the DRC-1 tariff. And I wonder if you can explain for the commission the demand plus energy credit, DPEC-4 tariff, and how this proposed DRC-1 tariff is different?

Lee Evans (GPC): [00:29:52] Sure. I'll try. Not an expert in the demand plus energy credit here. But I can't speak to some of the high level differences there. Starting with the demand plus energy credit tariff, is commonly referred to as a type of interruptible program, and that does not require a behind the meter generation or storage asset behind the customer's meter, but more so relies on the interruption of their operations to reduce load on the system. That is fundamentally different from the the resiliency asset service tariff and the demand response credit tariff. Because we can see those same benefits from the system without interrupting that customer's operations. Simply shifting their load from the grid to that onsite resource where they can continue to make their product, provide their service during these times of critical reliability events without experiencing a disruption. But the system can receive and see the same benefits.

Preston Thomas (PIA): [00:30:48] So am I understanding that the tariffs...

Tricia Pridemore (PSC): [00:30:52] Mr. Thomas, can I ask you to move the mic, straighten the bend of it, and get it closer to you? Please.

Preston Thomas (PIA): [00:30:59] Thank you. So am I understanding that the tariffs are similar in concept, that they both provide a bill credit to the customer for reducing their connected load when requested by the company?

Lee Evans (GPC): [00:31:13] Well, and we haven't we have not designed the tariffs for DRC, but the concept of that program is that, yes, during a reliability event, we would call on that asset to shift the load from that customer's to the onsite resource, reducing the load, serve from the grid and alleviating some of those constraints that the System is seeing at that time. All customers would see a benefit from that because it is dispatchable. We could target that during the times that we need it to come on most. And the System would receive that benefit and the customer, and by that I mean the participating customer through the resiliency asset service tariff, would receive credits corresponding with that benefit.

Tim Echols (PSC): [00:32:00] Let me ask you a question on the software. Is it, you're aggregating these resources? Are you doing this through an automatic control? Or would this be a human action to call on that particular battery asset at that moment?

Lee Evans (GPC): [00:32:16] It would be automatic.

Preston Thomas (PIA): [00:32:21] So is the primary advantage to DPEC, or the DRC-1 tariff over the DPEC-4 tariff, that Georgia Power gets to determine when the resources come online and have more control since they own the resource?

Lee Evans (GPC): [00:32:47] I think there's a greater level of assurance in that response will materialize because it is backed up by a firm generation or storage asset as opposed to the flexibility of a customer's operations. So I do think there's a benefit there. Additionally, because that asset has a long, useful life and can ensure that response over that period of time. There's also a benefit in that assurance over the life of the asset or the life of the contract.

Preston Thomas (PIA): [00:33:17] And is there a reason the company doesn't just propose to change the DPEC tariff?

Lee Evans (GPC): [00:33:26] Well, again, they serve very different purposes. The customer program is meant to 1) serve customers resiliency needs and provide a system benefit during reliability events without interrupting that customer. The Demand Plus Energy Credit tariff does not require such backup assets and relies on that customer being interrupted. So I'd say they serve different customers in different needs.

Tricia Pridemore (PSC): [00:33:51] It might be helpful if you could provide us with a use case in each. Just give us an example for each of them. How would they be deployed?

Lee Evans (GPC): [00:33:59] Sure. So the demand plus energy credit tariff, for instance, an industrial customer might have flexibility. And when an event is called, they might shut down an operations line to reduce load serve by the grid. Whereas a grocery store, for instance, that sees benefit in having resiliency because they might be located on the coast and sees a benefit of being able to provide that needed service to the community in times of hurricanes. Right. We might call on that asset to shift the load from that grocery store to the generator. But that grocery store can still continue to serve the community without experiencing an interruption. But from the grid's perspective, we'd see the same benefit, provided the response was materialized.

Preston Thomas (PIA): [00:34:46] So just like I asked about, adding cost to the customer's bill, do you think the opportunity to provide bill credits to the customers constitutes a competitive advantage over other firms?

Lee Evans (GPC): [00:35:06] I'm a little unclear. So the credits provided through the demand response portion of the program is in response to the benefit the System receives. So we're we're the only ones, as the electric service provider in the state, that could receive those benefits to the grid. And it's appropriate compensation back to that customer for the benefits provided.

Preston Thomas (PIA): [00:35:33] I'd like to turn our attention to load forecast. At page ten lines six through nine of your testimony, you indicate that over the past decade, especially following the Great Recession, the difference in energy consumption in the winter and summer months has narrowed, causing winter and summer peak demand projections to also narrow in consecutive forecast. I think the panel yesterday mentioned in a brief answer that that this was due to heat pump usage. But staff is also curious if the company can provide a more detailed response and and explain what the company is doing to address that narrowing.

Francisco Valle (GPC): [00:36:23] Yeah, certainly so it's a fact. So the difference between the winter and the summer peaks have been narrowing over time. And the explanation for that, for the narrowing has been twofold. In the summer, you have increased efficiencies on air conditioning units and energy efficiency standards that are driving that use per customer down for the summer. In the winter, you have more penetration of electric uses, heat pumps, water heaters. And so that has created a growth in the winter.

Preston Thomas (PIA): [00:37:11] And what exactly is the company doing to try to to address this narrowing?

Francisco Valle (GPC): [00:37:20] So twofold. So first, our models, our load forecasting models, are well-suited to capture these trends in the historical data. So this, in the short term, we have these models that are called econometric models. Think about relationship that gets established between drivers and the use of electricity. And, and so any trends, any information that is part of the historical data gets incorporated in the model and then it gets propagated throughout the forecast. The second part that we were actively looking to reflect was our, as a result of that 2019 stipulation item, where there was a concern that the breakdown in the annual energies in the long term were not appropriately capturing the trends in seasonal sales. So the company investigated trends. We implemented a methodology that is looking at the end uses of the activities that are driving the electric use in our territory in the long term. So these are very specific and granular information that gets built up at a class level to determine the monthly breakdown and the sort of the contribution of summer peaks and winter peaks going forward. And it looks like the company is not projected.

Preston Thomas (PIA): [00:39:00] And it looks like company has not projected a continued narrowing of winter and summer peak demands in future years. Given the historical pattern of converging winter and summer peak demands, can you explain to us why it's not expected to continue?

Francisco Valle (GPC): [00:39:15] Yes. So when we do our models, we develop them with strong statistical properties. So they they're very robust and they, call it based on science, based on math. And so that part is not picking up a continued decline into the future. What is happening and where you see the, sort of the narrowing effect, is that when you look at forecast over forecast, the narrowing, the winter and summer peaks are getting smaller and smaller forecast after forecast. But we don't see them growing at a different rate into the short or long term rates.

Tim Echols (PSC): [00:39:59] Let me ask you about the EV load again. I know you all are using kind of a medium growth model and I think that agrees with where Cox Automotive and Kelley Blue Book, those guys that own all the wholesale auctions are. They don't think it's going to be as aggressive as maybe many people think. Do you anticipate the EV load having more impact in the summer or in the winter, or have you not looked at that?

Francisco Valle (GPC): [00:40:32] So, yes, we have looked at as of this IRP with the information that we have incorporated. Remember that we always use the best information available to us. It's translated into into a bigger impact in the summer versus the winter. And that is driven by the sort of the underlying assumptions between residential use and commercial use for this for these EVs going forward. [All right. Thank you.]

Preston Thomas (PIA): [00:41:05] Chair Pridemore, at this time, I'd like to turn the panel over to Mr. Davis.

Alex Davis (PIA): [00:41:19] Good morning, commissioners. Gentlemen. Good morning. I'm going to just direct my questions at the panel generally and whoever feels most appropriate to answer, feel free to answer. So the company is proposing to maintain the same DSM savings targets that were approved in the 2019 IRP. Is that correct? [Yes.] Why? Why maintain the same target savings levels?

Andy Phillips (GPC): [00:41:50] When developing the company's proposed case for the Commission to consider, the company develops the proposed case in accordance with the Commission approved DSM program planning approach. We also seek to achieve the Commission's guidance of developing a proposed case that maximizes economic efficiency while minimizing the upward impact on rates. We consider a number of factors when we develop the proposed case. We consider results of the potential study. We also consider results of recent program performance as well as any specific guidance received from this Commission. When we consider those factors for this particular proposed case, the company elected to keep the savings consistent with those that were established in the previous IRP. One of the things that's important to consider is, since the 2019 IRP avoided costs have continued to decline. And so in trying to achieve a balance of maximizing economic efficiency while minimizing the upward impact on rates, the company elected to keep the savings consistent, even though avoided cost and overall benefits of the portfolio have declined from what they were in the 2019 IRP.

Bubba McDonald (PSC): [00:43:11] In other words, you're saying if it ain't broke, don't fix it. Is that what you're saying?

Andy Phillips (GPC): [00:43:15] That's a good way to describe it. Commissioner, I would agree with that, yes.

Alex Davis (PIA): [00:43:20] Did the company consider adding any new programs to the portfolio, such as the Manufactured Homes Retrofit and Replacement Program?

Jeffrey Smith (GPC): [00:43:30] We did consider that program in particular. We've actually adopted part of those recommendations for that program into our program base case. The retrofit aspect of manufactured housing is in our AGIP program, and we looked at a variety of other programs as well.

Alex Davis (PIA): [00:43:50] But that program, even though it passed economic screening, or the TRC test, was not wholly added to the portfolio. Correct?

Jeffrey Smith (GPC): [00:44:02] That's correct. And looking at the whole program offering, while it does pass TRC, we had concerns around the replacement part of that program to where manufactured housing would be built and replacing an existing manufactured housing. There were concerns in how that would be implemented and how the energy, long term energy would be avoided from it. And so for those reasons, we did not include that aspect of it.

Jason Shaw (PSC): [00:44:31] Mr. Smith., you mentioned you looked at some of the recommendations. Explain what recommendations are you referring to?

Jeffrey Smith (GPC): [00:44:41] Commissioner, we had several meetings with Demand Side Management Working Group over 2020 and 2021. We met with that group eight times. And we also had a couple of additional meetings with subgroups for program ideation, energy efficiency and demand response program ideation. They submitted 11 ideas for programs for us to consider, programs or measures for our consideration. And in working through those, we actually have accepted over 50%, six of those 11 into our program offerings. And they included anything from the program that we just heard about around manufactured housing to programs around deeper savings, opportunities for whole house improvements in our program. A variety of measures like that. We did, of the six that we accepted, we did not add them as separate programs. We added them into existing programs to control administrative cost of having different marketing, different staff and different contractors to run those programs. We felt that was in the best interest of our customers. [Okay. Thank you.] Thank you.

Alex Davis (PIA): [00:45:56] I'd like to turn now to Hope Works. And if you would refer to page 13, lines 18 to 27 of your direct testimony. I believe that's where it's [13?] Yes, sir. Page 13. Lines 18 to 27. [I'm there.] Would you please. explain why the company is seeking to certify the Hope Works program, even though it has not been certified in the past?

Jeffrey Smith (GPC): [00:46:29] Sure. We are seeking to certify that program as it is growing to a size almost 40% higher than what it's been in the past. And like all of our other programs that are funded through the DSM tariff, those energy savings are counted. And for those reasons, we feel that energy savings for these customers who are receiving a service very similar to HEEAP should be counted in the company's energy savings as well.

Alex Davis (PIA): [00:46:57] HEEAP?

Jeffrey Smith (GPC): [00:46:59] I'm sorry that's an acronym for one of our other programs, its Home Energy Efficiency Assistance Program.

Alex Davis (PIA): [00:47:08] Thank you. But if this program were certified, the company would earn an additional sum on the savings that it generated. Is that correct?

Jeffrey Smith (GPC): [00:47:19] Under the methodology the company proposes? Yes.

Alex Davis (PIA): [00:47:26] So that's to say under the current methodology, that would not? [Correct.] Is the proposed Hope Works program cost effective?

Jeffrey Smith (GPC): [00:47:39] It is cost effective.

Alex Davis (PIA): [00:47:41] And are you aware of any administrative issues or burdens that the certification of this program would cause to how it works?

Jeffrey Smith (GPC): [00:47:48] We've had several discussions with Hope Works through the last several months and year. And they are supportive of the program, and they have addressed none to us.

Alex Davis (PIA): [00:48:02] I'd like to turn now to page 14, lines 16 to 21, regarding the Residential Thermostat Demand Response program. Is the company concerned that the thermostat program does not pass the TRC test?

Andy Phillips (GPC): [00:48:22] Well, the company is concerned that it doesn't pass the TRC test. It did pass the TRC test in the previous IRP and once the company began implementing the program we realized that it needed to be considered differently in terms of the overall benefits in how we calculate the TRC cost effectiveness. Initially, the program had been evaluated consistent with how other energy efficiency programs are evaluated. Typically an energy efficiency program or measure has an upfront cost. And take, for example, installing insulation. There is an upfront cost of installing the insulation and then the customer realizes the benefits over the life of that measure. And that was the way the TRC program had been modeled initially. Once we began implementing the program after the 2019 IRP, we realized that there are annual costs also included to help make that DR capacity available. And so the company, along with guidance of their consultant, AEG, chose to evaluate the thermostat DR program on a one year life in that the capacity is made available each year as long as the customer is willing to participate. AEG also confirmed that other utilities across the country with similar programs evaluate the thermostat program on a one year lifetime basis. And so it does pass, excuse me, it does fail TRC. The company is mindful of that. But we are asking for the TRC waiver in this case so that the program can continue. It's an existing program, it is providing value and we have a number of customers engaged in the program.

Alex Davis (PIA): [00:50:14] Thank you. I'd like to turn your attention to the RISE pilot program. R-I-S-E. That's residential investment for saving energy. The current pilot and tariff were approved in 2020 and the company is requesting to continue this program. Is that correct? [That's correct.] And am I correct that the RISE pilot was designed to serve 500 customers but only currently serves around 17? [That's correct.] What changes does the company expect to implement to increase participation in this program?

Jeffrey Smith (GPC): [00:50:50] So the company expects to implement several changes and have actually been working with staff to address these implementation issues as they arise. One, hopefully we're coming out of the COVID world that we've been in and it will make implementation of the pilot easier and allow us to get into more customers homes to assess their availability. But we've also found issues around as we currently implement that program. Coming out of the 2019 IRP, there were things like considerations were only being given for the savings that are on the electric side of improvements that were being made. So we worked with staff and we start to layer those, those concerns. And we've also worked around issues, around expanding the zip codes in the city of Atlanta from 6 to 10. That opens up a different set of customers. So as you see with most pilots, they're a learning experience. And we are learning what things to fix and change to hopefully make that pilot more successful and get a customer group large enough to properly evaluate coming out of this IRP.

Alex Davis (PIA): [00:52:06] I'd like to turn now to additional sum questions. In this IRP, the company is proposing a new methodology for how it calculates the additional sum, correct? [Correct.] The new proposal, under the new proposal, the company would receive an additional sum of 4 cents for each kilowatt hour of electricity saved in the first year of implementing the relevant DSM program. Correct? [That's correct.] And then would jump up to 5 cents per first year kilowatt hour saved in excess of 120% of the certified energy savings goal for each year?

Jeffrey Smith (GPC): [00:52:42] For the savings from 120% and above, it would not impact the 0 to 120%.

Alex Davis (PIA): [00:52:52] And in contrast to the current program, there's no decrease in additional sum amounts generated if the total additional sum amount exceeds total program costs.

Jeffrey Smith (GPC): [00:53:02] Correct. We are seeking a methodology that is more predictable, more reliable, and allows us to value every kilowatt hour equally regardless of the program.

Alex Davis (PIA): [00:53:18] And is there a threshold amount of savings that must be generated before the company earns an additional sum?

Jeffrey Smith (GPC): [00:53:23] Not in our proposal.

Alex Davis (PIA): [00:53:26] Is it true that under the Company's additional sum proposal, a program that saves 10,000 kilowatt hours, I'm sorry, 10 million kilowatt hours a year for just one year, and an insulation program that saves 10 million kilowatt hours each year for 30 years, would both receive the same additional sum?

Jeffrey Smith (GPC): [00:53:48] It would be based on a per kilowatt hour saved, regardless of the measure life or the program that it happens in. It's just a flat kilowatt hour, cents per kilowatt hour.

Alex Davis (PIA): [00:53:59] Cents per kilowatt hour, but generated in the first year. Correct? So a program that had ongoing savings benefits past the first year, would it generate different additional sum amounts compared to a program that only generated savings the first year that it was implemented?

Andy Phillips (GPC): [00:54:23] I think what you're asking is for a program that realizes all the benefits in year one versus a program that realizes its total benefits over a number of years, what would the additional sum difference or calculation result be? [Yes, sir. Exactly.] So the additional sum will only be paid on that first year, first year kilowatt hour savings for, in either instance. So if there's a measure that has all of its benefits or savings realized in the first year, the additional sum will only be paid on that amount. If there is a measure or program that has an additional sum where benefits are spread out over ten years, only the savings from that first year would be included in that year's additional sum calculation.

Alex Davis (PIA): [00:55:15] Thank you. Are you aware of any other utilities that receive an additional sum incentive of 4 cents per first year kilowatt hour saved?

Jeffrey Smith (GPC): [00:55:23] We've evaluated a number of programs. There are none that is the direct design of the additional sum calculation. It is the net outcome of one program in Minnesota, but there is no one that is specifically a cents per kilowatt hour.

Alex Davis (PIA): [00:55:46] Thank you. And would you agree, subject to check, that using the company's proposed methodology, the DSM additional sum, would be over $17 million per year on average for for the years 2023 to 2025?

Jeffrey Smith (GPC): [00:56:03] If program goals were met as filed, yes, I would agree to that. And that puts it in line with the value of additional sum that this company, the PSC staff, and the Commission approved in the 2010 IRP. And over that time, I would say that our programs have grown. They've more than doubled over that time. And so the additional sum would be equal under this methodology to what it was back in the 2010 order.

Alex Davis (PIA): [00:56:36] Subject to check, would you agree that the additional sum between 2017 and 2021 averaged around $10 million per year.

Jeffrey Smith (GPC): [00:56:48] Subject to check. And I will say that's one of the reasons that the methodology that's currently in place is based on avoided cost. And so as avoided costs have come down over time, the additional sum changes. Whereas our program goals are doubling over that same period of time.

Alex Davis (PIA): [00:57:16] On the topic of free ridership. When the company spends money to implement a DSM program, some customers that receive an incentive or people who would have taken the action or bought, for example, thermostat regardless of the program in place. Correct? [Correct.] The current additional sum methodology is based on net savings, which is calculated by deducting savings attributable to free riders from gross savings. Is that correct?

Jeffrey Smith (GPC): [00:57:44] Correct. As well as spillover, which is customers that do more than what they were incented to do.

Alex Davis (PIA): [00:57:52] And under the proposed methodology, the company's additional sum would be based on gross savings, meaning that the additional sum savings could increase because of a DSM program, even if the individuals participating in the program were identified as free riders?

Jeffrey Smith (GPC): [00:58:07] Measures over time get evaluated, and as they get evaluated, those changes get implemented into the next program cycle. So those impacts would be if approved, those impacts, both positive and negative, would be applied to the next program cycle, and those discounts or additions would be seen there to the savings.

Alex Davis (PIA): [00:58:32] But just to clarify, under the current program, those savings would not be counted towards additional sum.

Jeffrey Smith (GPC): [00:58:41] Are you asking under our proposed...?

Alex Davis (PIA): [00:58:42] Under the current additional sum methodology.

Jeffrey Smith (GPC): [00:58:46] The current methodology, the new measure, it would be identical. It would only be, those methodologies for evaluation, those free ridership and spillover impacts, would be seen when we file our case under each updated IRP.

Alex Davis (PIA): [00:59:13] On page 22 of your direct testimony on lines 13 and 14, it's stated that the Company has no control over free riders and does not have the ability to structure programs to eliminate free ridership. However, I just want to ask a few questions. Is it not true that the company selects the eligible energy efficiency measures for the DSM programs? [Correct.] And the company defines who are eligible participants in these programs.

Jeffrey Smith (GPC): [00:59:48] The company, along with its implementation contract. Correct.

Alex Davis (PIA): [00:59:51] And the company determines the level of incentives paid to program participants in these programs. [Yes.] And the EM&V reports completed by the Company in 2021 or 2018 provide methods as to how free ridership can be reduced?

Jeffrey Smith (GPC): [01:00:09] They do, and then the company takes those methodologies and implements them either real time if they're process driven or futuristic in programs if they're impact driven.

Alex Davis (PIA): [01:00:21] And has the company made any of the changes to the DSM programs suggested by...

Jeffrey Smith (GPC): [01:00:30] In the evaluations? [Yes, sir.] We do. Yes.

Alex Davis (PIA): [01:00:39] Did the company experience difficult or...I'm referring to page 12 lines 20 to 27 of your direct testimony. [Sorry, you said page 12?] Yes, sir. Page 12. Lines 20 or 27. Did the company experience difficulties completing the EM&V for several programs last year due to COVID?

Jeffrey Smith (GPC): [01:01:15] Our evaluation contractors did run into difficulty and evaluations as stated in their reports around that. For several of the programs.

Alex Davis (PIA): [01:01:25] And for several programs, the net to growth ratio were not considered statistically valid, is that correct, by the evaluator?Is that correct?

Jeffrey Smith (GPC): [01:01:34] Yeah, I believe that's right.

Alex Davis (PIA): [01:01:36] You agree then that the EM&V results for were affected by COVID 19?

Jeffrey Smith (GPC): [01:01:44] Some of the programs were impacted. Therefore, their ability to evaluate them was impacted.

Alex Davis (PIA): [01:01:52] Does the company propose to use the 2018 EM&V results for any programs?

Jeffrey Smith (GPC): [01:01:59] Certain programs, we will use those those evaluation results. And there are ones that are less impacted due to COVID. So think about lighting. So residential lighting could have been purchased online. And the majority of the impacts that we saw from that program evaluation were due to code changes and ISO standards. So the impacts there of that evaluation were not driven by COVID, like ones would have been that involved being able to do work in customers' homes and businesses.

Alex Davis (PIA): [01:02:37] Of the programs that you've identified as being affected by COVID, are all of those programs residential? [No.] No. So will the company use the 2018 EM&V and the results for both residential and commercial programs?

Jeffrey Smith (GPC): [01:03:04] So the company will actually use what was recommended by the evaluators in those programs. So where those programs were impacted by COVID and the evaluator did not feel that the results were representative of how that program would have worked. Under normal conditions, they stated that we should use the older evaluation results or information from TEAPOT [Technical Economic and Achievable Potential] studies and things of that line. We will use it regardless of which way they said to go. We're not picking and choosing which ones we will follow and not follow.

Alex Davis (PIA): [01:03:43] And just a few more. Georgia Power Company, assisted by the Brattle Group and the Georgia DSM Working Group, completed a DSM whitepaper in 2021 that examined the feasibility of using the Aurora IRP model and allow DSM measures to compete head to head with supply side generation sources. Is that correct? [Yes.] And is it correct that one of the conclusions of that white paper is that, quote, "evaluating DSM resources alongside supply side resources in the company's resource planning process is possible."?

Andy Phillips (GPC): [01:04:14] Yes, that was one of the conclusions, along with a number of other conclusions that resulted from that particular study. An additional conclusion also noted that in modeling demand side resources in the supply side system, there are certain limitations and challenges. And the company concluded that the current methodology is the more appropriate way for evaluating and modeling demand side resources.

Alex Davis (PIA): [01:04:42] And one other conclusion was that the Aurora modeling system is well-suited for evaluating EE alongside supply resources. Correct?

Andy Phillips (GPC): [01:04:54] I think specifically we said that it was technically possible. I don't recall that we concluded that it was well-suited. We did show that it is technically possible to model demand side resources in a supply side system. But along with that, there were certain adjustments and workarounds that required that, that are not required in our current methodology. And so that led the company to conclude that, with the limitations and challenges of modeling demand side resources in a supply side system, the current methodology that has guided development of our proposed cases for a number of years is the most appropriate way for modeling and evaluating demand side resources.

Francisco Valle (GPC): [01:05:36] And Commissioner, that is that's an important point because with the White Paper we did the exploration that was required. But given the sophistication of the tool in order to to prepare the inputs and properly model this DSM programs in the system alongside with supply sources, you have to do a lot of grouping, a lot of bundling, and it's a complex process. So while it's doable, I want to make you aware of the complexities of adding this extra step within our planning approach.

Alex Davis (PIA): [01:06:21] Thank you, gentlemen. That's all I have.

Tricia Pridemore (PSC): [01:06:24] Thank you, Mr. Davis. I have a couple of questions for the panel before we start with interveners. So to follow on staff's questions about COVID impact to the DSM programs. I'm interested to unpack if there's any correlation to not paying a monthly electric bill and rate payer subscription to demand side resources. So in a March 2022 New York Times article titled "Utility Bills Piled Up

During the Pandemic: Will Shut Offs Follow?" They cite the fact that residents of New York and New Jersey owe a staggering sum of more than $2.4 billion to utility companies due to a moratorium and shut offs. Although the state of Georgia limited the moratorium on utility shutoffs for nonpaying customers more than New York and New Jersey has, how did the moratorium and the pandemic overall affect the subscription of ratepayers to these DSMB programs offered by Georgia Power?

Jeffrey Smith (GPC): [01:07:32] So Chair Pridemore, if I understand your question, we saw a decline in participation that we expect is tied directly to COVID. In 2020, we saw a overall participation rate in our programs at 56% of goal and 70% in 2021. So our attribution is that those programs did not meet goal due to COVID impacts.

Tricia Pridemore (PSC): [01:08:05] Can you determine if the programs dropped off even more so during the moratorium?

Peter Hubbard (GCES): [01:08:12] I have not researched that, but it's something I think we can go look at.

Tricia Pridemore (PSC): [01:08:16] Okay. Interesting. Okay. So a March 29, 2022 E&E news article went through President Biden's budget and how energy and energy programs are affected. So I'm going to read to you just the budget numbers. You probably have heard these. I know we all have. The president's $5.8 trillion energy proposal would spend 3.3 billion on clean energy growth alone. He is, goes on to be quoted, "my budget lowers family energy costs with tax credits to help people make their homes more efficient." This is considered to be the largest investment in energy efficiency. So the budget would allocate $4 billion to the Department's Office of Energy Efficiency and Renewable Energy, a significant jump from the 3.2 billion Congress provided in fiscal 2022. So with the largest proposed investment in energy efficiency in American history proposed, how are these Georgia Power DSM proposals in this docket positioned to leverage this proposed large federal investment?

Jeffrey Smith (GPC): [01:09:31] So our programs will always work to partner with other dollars and other other processes that are put in place. What we've seen is the vast majority of those savings are really were geared more towards, or excuse me, vast majority of those dollars that we were aware of are geared more towards billing assistance and rent relief, more so than actual energy efficiency improvements that reduce those costs. But wherever those program dollars are available and programs are in place that can line up with ours, we would seek to partner with those paths, with those programs.

Tricia Pridemore (PSC): [01:10:17] On page 14, if your pre-filed direct testimony, you mentioned two programs, the decertification of the power credit program that you seek to decertify this time and the certification of the Commercial Midstream program. Are you proposing to decertify these two programs because they have low a subscription rate?

Jeffrey Smith (GPC): [01:10:38] We're proposing to decertify, I'll start with with Power Credit. We are seeking to decertify that, because we have a, what we feel is a better program for demand, residential demand response in place with temp check, the thermostat controlled device. And we're also seeing a natural attrition of participation in that program over time. It's dropping, it's about 40 off, about 40% from its program high, and it's dropping at about 10% a year, naturally. So it's more for the fact that it's a better customer experience as well as a higher demand savings per device, with the new program.

Jeffrey Smith (GPC): [01:11:21] With the Commercial Midstream program, we're seeking to decertify it because the program, according to the evaluation that we did on it, is that that market has transformed. What we're seeing is those distributors that we were incenting to stock high efficient equipment where it was available. That wasn't the case when that program was launched and approved by this commission two cycles ago. But now they're saying 75 to 85% of the time they're stocking that anyway. And so it's just a, to the earlier point, it's turned into a high level of free ridership due to market transformation. So what we are finding, though, is that the measures, the HVAC and the cooking measures save a significant amount of energy. And so we have moved those measures back into customer facing incentives in the prescriptive program. And that was also one of the suggestions from the demand side management working group is a measure they would like to see in that program.

Tricia Pridemore (PSC): [01:12:28] So in other words, market new technology is surpassing some of these programs and now they're outlined, [correct], OK, on page 17.

So they're on line 16. It says that that what's proposed in this DSM energy efficiency package, quote, that minimizes the DSM plan, quote, "minimizes upward pressure on rates, maximizes economic efficiency." And your analysis, how does this compare to previous DSM plans to accomplish the same two goals?

Andy Phillips (GPC): [01:13:11] When comparing the company's current proposed case with what was proposed in the 2019 IRP, overall TRC benefits have declined by 30%, and that's due to a decline in avoided cost since the last IRP. Also, when comparing both proposed cases, for this IRP and the previous IRP, overall RIM results or Rate Impact Measure results have declined or worsened by 20%.

Tricia Pridemore (PSC): [01:13:47] Anybody else care to add to that one? Okay. Page 18.So we talk about the RISE pilot. So does this income qualified energy efficiency program that's proposed in this docket have corporate sponsorship, like the Income Qualified Solar Program outlined on page 48 of the Grubb, Mallard, Robinson, Weathers pre-file, direct testimony?

Peter Hubbard (GCES): [01:14:21] So Chair Pridemore, is, to make sure I'm understanding, you're asking, do any other corporations fund this program? [Yes.] With the exception of Georgia Power.

Tricia Pridemore (PSC): [01:14:31] Okay. All right. That's all I have. Thank you. Americans for Affordable Clean Energy. Commercial Group is not present. Concerned Ratepayers of Georgia. Okay. It's not present. All right. Cypress Creek Renewables. Not present. Georgia Association of Manufacturers.

Clay Jones (GAM): [01:15:10] Commissioners Panel, good morning. I just have a few brief questions for you about the DER program. So the assets that would be involved in the DER program would be, under your proposal, owned and operated by the company, correct? [Yes.] And you envision this program always being that way or do you envision a possibility where customer owned assets might be able to participate in the program?

Lee Evans (GPC): [01:15:34] I can't predict the future, but that's the program we put forward today is just on company owned assets.

Clay Jones (GAM): [01:15:39] Okay. And did you consider whether to, in developing the program, did you consider whether there might be existing assets out there that would also benefit the System if they were able to participate in the program?

Lee Evans (GPC): [01:15:51] In developing the program, we did look at different alternatives and that was something that was looked at and also the risk that was imposed on the System and the operations.

Clay Jones (GAM): [01:16:00] Okay. So the the DRC aspect of this, you only participate in it if, you can only participate in it if you're also participating in the RAST program, is that right, [that's correct], you have designed? And in this case, you haven't submitted a specific tariff or rates for either of these programs, is that right?

Lee Evans (GPC): [01:16:21] No, we'll make those, we'll provide those in the commission in a subsequent trial.

Clay Jones (GAM): [01:16:25] Would you agree with me that the terms and conditions of that tariff and of the contracts and the pricing will be critical in terms of incentivizing customers to participate in the program? Would you agree with that statement?

Lee Evans (GPC): [01:16:38] Can you repeat it?

Clay Jones (GAM): [01:16:39] Would you agree that the terms and conditions of these contracts and the tariff provisions and the pricing will be critical in incentivizing customers to participate in the program?

Clay Jones (GAM): [01:16:53] Yes, I think the program structure in terms of conditions in the contracts and tariffs is very important for participation.

Clay Jones (GAM): [01:16:58] For example, Mr. Thomasson asked a question about, well what if a company participates and then they close up shop. It might be important in those terms and conditions to provide address issues of assignability, for example, of the existing contract.

Lee Evans (GPC): [01:17:13] Yes, that's an element that would be in there.

Clay Jones (GAM): [01:17:16] And the more flexibility you provide, the more likely you are to be able to get people to sign up, all other things being equal. Would you agree with that statement?

Lee Evans (GPC): [01:17:24] Yes. It's a balance, right, of participation and the benefits that come with that participation and the risk that might be imposed with certain elements.

Clay Jones (GAM): [01:17:34] And then final question. Just to confirm, the pricing is intended and it's designed to be fully paid for by the customer that's participating in the program and not distributed or shared to other customers or spread to other customers. Is that correct?

Lee Evans (GPC): [01:17:50] The pricing in the resiliency, sorry, I assume you're talking about the resiliency asset service portion? [Yes.] The pricing in the resiliency asset service portion of the program will be structured to recover the revenue requirements that the company is exposed to during that contract life.

Clay Jones (GAM): [01:18:07] Okay. That's all I have. Madam Chair, thank you.

Tricia Pridemore (PSC): [01:18:11] Thank you, Mr. Jones. Georgia Center for Energy Solutions.

Peter Hubbard (GCES): [01:18:26] Madame Chair, no questions.

Alicia Brown (GCLG): [01:18:28] Good morning, everybody. Commissioners. I want to start with some questions on the RISE Pilot. So you mentioned ,that the RISE pilots only had about, I think you said 17 people sign up so far, is that correct?

Jeffrey Smith (GPC): [01:18:42] 17 that have participated in the Tier 2, the deeper retrofits.

Alicia Brown (GCLG): [01:18:49] Okay. So that would be those who received more than a direct install.

Jeffrey Smith (GPC): [01:18:52] Correct.

Alicia Brown (GCLG): [01:18:53] Okay. And you said COVID was certainly a factor in that. But are there any other factors that you would say in your experience are holding that back?

Jeffrey Smith (GPC): [01:19:01] One of the factors that, that's impacting it, is that it has to have a higher average monthly bill for a customer to save enough to pay back the cost of those improvements over the measure life.

Alicia Brown (GCLG): [01:19:19] So as a general rule, which customers would you say tend to have those higher bills, lower income customers or more affluent customers?

Jeffrey Smith (GPC): [01:19:29] So higher bills aren't necessarily tied to an income. They're tied to energy usage in a house. So I don't know that I could say that it's specifically ties to any one customer type.

Alicia Brown (GCLG): [01:19:44] Let's say you're in financial straits, though, and you are trying to make decisions that minimize your electricity bill. You're trying not to turn on your heater. Try not to use your AC as much. You would have a lower bill. Correct? Correct?

Jeffrey Smith (GPC): [01:19:59] So if you're asking if I were making intentional efforts to reduce my energy usage, would I have a lower bill? Yes, I would agree with that.

Alicia Brown (GCLG): [01:20:07] So certain low income customers have historically been making choices to control their bills that may prevent them from participating in this program. That's meant to increase their comfort, control their energy savings while still having some access to AC HVAC. Is that correct?

Jeffrey Smith (GPC): [01:20:25] Can I ask you to restate that question? I don't know that I got what you're asking.

Alicia Brown (GCLG): [01:20:29] Have you noticed that certain low income customers have made choices with their behavior that artificially reduce their energy use below what it would be if they weren't financially constrained and actually could achieve a level of comfort?

Jeffrey Smith (GPC): [01:20:44] I don't know that, I'm still not understanding your question. I mean, if you're asking do customers make choices to reduce energy, then I would say that applies to all customers that make that choice, not just because of an income level.

Fitz Johnson (PSC): [01:21:00] Let me see if I can help. And I'm having some difficulty as well. So I want to ask. Are you saying, because I am making a conscious choice as a low income earner, to lower, I then cannot participate in the RISE Program.

Alicia Brown (GCLG): [01:21:15] That's correct.

Fitz Johnson (PSC): [01:21:16] Because of those. Because of those. Because of my own...

Alicia Brown (GCLG): [01:21:18] Right. Like if I have decided to keep my heater on 60 degrees because I cannot afford to pay more, I'm not going to be able to achieve that 25% reduction that the RISE pilot requires?

Jeffrey Smith (GPC): [01:21:29] Thank you, Commissioner. That was helpful.

Alicia Brown (GCLG): [01:21:31] Apologies for that.

Jeffrey Smith (GPC): [01:21:32] No, that's fine. The way the program works, is an audit is actually done of that house. So those types of measures would not impact the evaluation of what is achievable by making improvements to the House versus behavioral changes.

Alicia Brown (GCLG): [01:21:54] And you mentioned that there are some issues with only electricity cost being included in the reduction that has to be achieved, the 25%

reduction. Are you saying that you've worked with staff to now include gas savings as well?

Jeffrey Smith (GPC): [01:22:07] Correct. We've worked with staff to make other improvements as well. As you just mentioned, it no longer has to have a 20, it doesn't have to follow the home energy improvement path of having to have a 25% energy reduction. If the savings, regardless of what those are, allow that customer to pay back the cost of those investments within the measured life, then they are now able to to go through the process.

Alicia Brown (GCLG): [01:22:34] Can you, you mentioned geography and you mentioned how you're expanding zip codes in, I believe, Atlanta. Is that going to follow with Athens? And are there any plans to expand this to other cities as well?

Jeffrey Smith (GPC): [01:22:45] So the zip codes that were expanded in Atlanta were in the same geographic area. As well, Athens, I don't know that there are any additional zip codes for us to expand to. We are looking at another city as well to be potentially expanded to but that, before we expand to another city or seek to expand to another city through communication with staff and the commission, it's got to show that there is a potential customer size there worth that that cost of adding another city. So the benefit of the two cities that we currently have is they're geographically close to one another and the same contractors can do that work. And so it reduces administrative cost. But we are looking at other opportunities.

Alicia Brown (GCLG): [01:23:39] You're mentioning the size of the customer base that could be reached as a factor in where you locate geographically. Can you explain why this is only an income qualified program when that artificially limits the reach of the people that you're, that can participate?

Jeffrey Smith (GPC): [01:23:54] Sure. So the original intent of the pilot was for income, qualified customers. Customers that don't have or potentially don't have the upfront dollars to invest in the improvements in their homes or the homes that they're in. Customers, the broader customer base, can participate in HEIP, through its whole house path, through its unbundled path, or through other programs that we have. So but the intent of the pilot wasn't income qualified for that reason.

Alicia Brown (GCLG): [01:24:27] But if RISE ultimately recovers the capital invested in the program through the regular payments back on the tariff, why would it make any difference what your income is if that money is ultimately recovered?

Jeffrey Smith (GPC): [01:24:39] Well, again, the pilot was focused. I mean, the pilot had a specific focus, which is income qualified customers that could not afford to make improvements without it.

Alicia Brown (GCLG): [01:24:50] So is it your opinion that if you are above 200% of the federal poverty level, you can automatically afford to make these improvements?

Jeffrey Smith (GPC): [01:24:59] That's not my opinion. I don't have any information to make a decision along that with that question.

Alicia Brown (GCLG): [01:25:06] Okay. You mentioned administrative costs at one point, and that's also been reflected in your comments about the declining total resource cost test results for these programs. Are there any efforts in place to reduce some of the overhead costs that are contributing to declining total resource costs economics. For example, efforts to streamline administration, marketing?

Peter Hubbard (GCES): [01:25:33] We I think if you look at our administrative and marketing percentages of our budgets since the 2019 IRP, they've gone down by 11%. So we are making efforts to reduce administrative costs and increase the percentage of incentives that are in program budgets.

Alicia Brown (GCLG): [01:25:55] Definitely glad to see that. But of course, as local governments, we're always interested in making sure that there aren't artificial barriers to participation in these programs, specifically when it comes to income qualification. Has there been any effort through RISE or HEAPP or any of these other programs to look at more of a census tract type approach and the demographics of an area as opposed to the conditions of an individual person?

Jeffrey Smith (GPC): [01:26:20] So the questions you're asking don't necessarily, if I'm understanding them right, impact the way a program is designed. It may impact the way we market a program. And we're always looking for better ways to focus in on programs and reduce administrative and marketing costs.

Alicia Brown (GCLG): [01:26:37] And to that point about marketing, you mentioned partnerships with trade allies. You mentioned partnerships on your lighting programs with food banks. But have there been any efforts to formalize partnerships with community organizations and local governments when it comes to things like heat and joint marketing efforts?

Jeffrey Smith (GPC): [01:26:57] Could you define what you mean by formalize?

Tricia Pridemore (PSC): [01:27:00] I mean perhaps even have a relationship with the local government where they are charged with marketing the program and even provided the marketing resources to do so because they have those relationships.

Jeffrey Smith (GPC): [01:27:11] We're always open to opportunities that are out there. We've been doing some work for the last two years with a group of folks in the city of Atlanta. We've also worked with different housing authorities around the state as well, and we're always open to opportunities.

Alicia Brown (GCLG): [01:27:33] To this point about feedback and being open to suggestions and new ideas, you mentioned the DSM working group being a factor in the programs that you're putting forth and putting forth aggressive cases and advocacy cases for the EE portfolio. Will that group be continuing for the next IRP cycle?

Jeffrey Smith (GPC): [01:27:53] That'll be at the determination of this commission. We're seeking for it to be.

Alicia Brown (GCLG): [01:27:58] And how were those original participants identified for this last go round?

Jeffrey Smith (GPC): [01:28:06] I don't know that, we are not the entity that customers or groups seek participation in. So I would think that would be a question for staff.

Alicia Brown (GCLG): [01:28:19] Okay. Shifting gears entirely, I believe it's being proposed to eliminate the automated benchmarking tool for commercial buildings. Is that correct?

Jeffrey Smith (GPC): [01:28:29] We're not seeking to eliminate it. We're just not seeking to continue it.

Alicia Brown (GCLG): [01:28:33] Okay. Can you tell me how many people are currently using that tool? How many buildings?

Jeffrey Smith (GPC): [01:28:42] As of 2021, at the end of 2021, there were 554 building reports generated. That does not necessarily mean it was 554 businesses. A report could have been generated multiple times on one business, but that was the number as of the end of 2021.

Alicia Brown (GCLG): [01:29:02] And can you explain the justification for failing to continue that program?

Jeffrey Smith (GPC): [01:29:08] So again, I mean, you're term of failing to continue. We're just not seeking to continue it. Essentially, it is a tool, That under the original ideation of it, was that it would provide building owners or people representing those building owners to get aggregated data of a building with multiple accounts, with the intent that they would then be able to identify opportunities to reduce energy in those buildings. When we evaluated the tool in 2020, there were little to no energy savings happening from the users of the tool. And so because of that, we don't feel that it's right to pass those costs through on a demand side management tariff if there's no demand side reductions happening.

Alicia Brown (GCLG): [01:29:59] What would you estimate the cost of that tool is being?

Jeffrey Smith (GPC): [01:30:02] It's between $150,000 and $200,000 a year right now.

Alicia Brown (GCLG): [01:30:08] So you would need to see a commensurate amount of energy savings to propose to continue.

Jeffrey Smith (GPC): [01:30:16] Well, I'm not saying anything around an equal value is what justifies it. It's that it's doing what the tool was intended to do. We're not saying that the tool doesn't need to exist or that we agree that it should or shouldn't. We just don't feel that it should be funded by demand side management.

Tricia Pridemore (PSC): [01:30:33] Are you aware that the cities of Atlanta and the cities of Savannah are in the White House's Building Performance Standards Coalition?

Jeffrey Smith (GPC): [01:30:41] No, I'm not.

Alicia Brown (GCLG): [01:30:42] Are you familiar with what that coalition has agreed to do or committed to do?

Jeffrey Smith (GPC): [01:30:46] I'm not.

Alicia Brown (GCLG): [01:30:48] So just in brief, we have committed to pass legislation or ordinances by 2024 for buildings performance standards. Would that change the calculus in any way if plans are underway for those kinds of building performance, monitoring and improvement?

Jeffrey Smith (GPC): [01:31:06] Again, it still does not show energy savings as a result to it, so it wouldn't change our opinion.

Alicia Brown (GCLG): [01:31:15] Okay. Moving to demand response, you have two different tariffs that are being proposed. One is onsite for a customer's use and one is on site for the system's benefits. That correct.

Lee Evans (GPC): [01:31:30] You mean that DER customer program?

Alicia Brown (GCLG): [01:31:32] Yes, the DRC and the RAST programs.

Lee Evans (GPC): [01:31:35] Yes. It will be comprised of two elements. One, the resiliency asset service tariff, which we provide that onsite generation or storage resource for the individual participating customer, and then the DRC, which leverages that same asset for the good of the system during reliability events.

Alicia Brown (GCLG): [01:31:53] So many of our governments in this coalition are interested in the idea of resiliency hubs where somebody can go. If there's a hurricane and power is out, perhaps they're medically dependent on electricity. If you're on that tariff for the benefit of the entire Georgia Power system, will there be any opportunities to opt out in the event of a severe weather event?

Lee Evans (GPC): [01:32:17] So we're not, currently we're not contemplating allowing opt outs primarily because the benefit that the system would see by an opt out is severely diminished. If we can't count on those resources to respond, that degrades the value of the entire program. So as far as an opt out, no. However, these assets can run for individual resiliency needs of the participating customers. So if a storm was coming and there was a local outage event or anticipation potentially of a local outage event for that participating customer, that's what they're paying for the asset to provide them. Is that resilience. So I don't, I don't know that there would be a need to in that specific circumstance.

Alicia Brown (GCLG): [01:33:06] So that resiliency, it wouldn't necessarily be sending electrons to the grid. It would be generating electrons that could be used on site for the benefit of the whole system.

Lee Evans (GPC): [01:33:16] That's correct. The program is not constructed to supply energy to the grid, but facilitate a reduction of demand from the grid.

Alicia Brown (GCLG): [01:33:25] I see. Is there any basis for the minimum size requirement of 250 kilowatts?

Lee Evans (GPC): [01:33:31] So we looked at the potential of our customers that could participate in this program and saw that the vast majority of that potential existed with customers that could aggregate or had one megawatt of demand response capability. So it was to reduce administrative costs while realizing the maximum benefit that in the program.

Alicia Brown (GCLG): [01:33:55] And just shifting back to broader income qualified programs. I guess my last question, something that we've noticed in our conversations with Georgia Power and just in our observations in our own communities, has been that the state of the housing stock is often a barrier and that's the case for small businesses as well when it comes to RISE, when it comes to HEAPP. Are there any efforts underway to make more funds available for pre-weatherization type work that enables the energy efficiency improvements themselves?

Jeffrey Smith (GPC): [01:34:26] We have been having conversations with other groups that receive funding or philanthropic in nature and do structural improvements to houses is to have a potential partnership there to work together. But we have not done anything formally is what we've proposed in our programs currently.

Alicia Brown (GCLG): [01:34:47] Will the donation platform for HEAPP be maintained and more aggressively advertised?

Jeffrey Smith (GPC): [01:34:53] We are seeking to have the the crowd funding aspect maintained. And we would expect to market it more. It didn't make sense during COVID to go out and raise funds that we couldn't spend at the time. So I would expect, as things continue to return to normal, that we would market that more.

Alicia Brown (GCLG): [01:35:15] And actually, one last question and your experience. Does the $5,000 average that's spent in the HEAPP program for income qualified, typically cover the needs in the home?

Jeffrey Smith (GPC): [01:35:24] So we're currently in the program we're administering right now, that's a $3,750 value. Our cap, we are seeking to extend it to $5,000 per home, and that is from direct input from members of the working group, along with companies that do that type of work, that appeal, that is the right value.

Alicia Brown (GCLG): [01:35:45] All right. Thank you so much.

Tricia Pridemore (PSC): [01:35:52] Georgia Interfaith Power and Light and the Partnership for Southern Equity.

Jill Kysor (GIPL-PSE): [01:36:00] Good morning, commissioners. Good morning, Panel. [Good morning.] The company views DSM as a resource, correct? [Correct.] And I think in your testimony, you note that there is 113 megawatts of reduced demand built into the load forecast as a result of the company's DSM portfolio, correct?

Andy Phillips (GPC): [01:36:25] Yes. The 113 megawatts is in relation to the proposed case.

Jill Kysor (GIPL-PSE): [01:36:31] And there's a benefit to all customers, not just participants, by this lower demand. Right?

Andy Phillips (GPC): [01:36:38] Could you be more specific in what you mean by benefit?

Jill Kysor (GIPL-PSE): [01:36:42] Sure. By lowering the demand that you have, that could lower the need to bring on that additional amount in supply side resources, correct?

Andy Phillips (GPC): [01:36:53] Yes. Energy efficiency does result in less capacity needed to serve through other resources.

Jill Kysor (GIPL-PSE): [01:37:00] And on page ten of your testimony in lines 26 and 27, you state that the company is current DSM portfolio will account for 1,500 megawatts of peak demand reduction by 2025. Correct?

Andy Phillips (GPC): [01:37:18] That's correct.

Jill Kysor (GIPL-PSE): [01:37:20] About how much of that 1500 megawatts of peak demand reduction is associated with or attributable to the RTP program?

Jeffrey Smith (GPC): [01:37:31] I can take this one. It's about 230. So there are two, on the on demand side, on the forecasting side, there is a about 200, subject to check, 230 megawatts of demand response.

Jill Kysor (GIPL-PSE): [01:37:55] And on the load forecast. In one of your responses to a data request, you noted that the company used to rely on a 20 year rolling analysis of weather years, correct? [That is correct.] And now the company, the new methodology introduced in, I think 2018, under that the company will always start at 1980 and just go up to the current year and each update?

Francisco Valle (GPC): [01:38:26] That is correct, yes.

Jill Kysor (GIPL-PSE): [01:38:28] And the purpose of that was to minimize variations in that set of data?

Francisco Valle (GPC): [01:38:37] Yes. So one of the one of the goals of whether normalizing the load the forecast is to create a reference to isolate the impacts of weather in the forecast. So when you have that reference, one of the attributes that is desirable for planning purposes is is to be stable. So a longer definition like the one we use provides more of that stability that is less impacted by extreme weather events. [wut?]

Jill Kysor (GIPL-PSE): [01:39:10] Do you think it's useful to study trends over time and how energy usage is related to weather patterns?

Francisco Valle (GPC): [01:39:19] Can you be more specific?

Jill Kysor (GIPL-PSE): [01:39:21] Sure. If you're using, like, an ever growing set of years in your study, might that dilute some of the impacts in how trends may change over time?

Preston Thomas (PIA): [01:39:36] Are you thinking specifically about the 20 year, the last 20 years, versus the definition of weather normal that we use?

Jill Kysor (GIPL-PSE): [01:39:44] Right. I think you use a 41 year or a 41 year period in this current study. If you're looking at that, you might dilute some of how customer behavior during severe weather events might change over the decades as homes become more efficient or technology changes.

Francisco Valle (GPC): [01:40:09] So I would say in terms of temperature, the trends that you have seen in the last 20 years are also present in capturing the longer definition that the company uses. So I'm trying to, I don't know if I'm answering your question.

Jill Kysor (GIPL-PSE): [01:40:27] I think that's fine. I can move on. [Thanks.] I think I heard you in response to Staff's counsel's question. Note that one of the reasons that the company doesn't propose higher savings targets is because of program economics, in large part due to lower avoided cost rates. Is that correct?

Andy Phillips (GPC): [01:40:52] That's correct. Since the 2019 IRP, overall benefits have declined from or compared with what was proposed in the 2019 IRP.

Tricia Pridemore (PSC): [01:41:02] And lower avoided cost rates is a big part of that.

Andy Phillips (GPC): [01:41:06] Yes, yes.

Jill Kysor (GIPL-PSE): [01:41:07] And customers generally benefit when there's lower avoided cost rates?

Andy Phillips (GPC): [01:41:11] Yes. The fact that the company's avoided cost has declined shows that we are managing our fleet of resources efficiently and effectively and capitalizing on all of the resources available to help manage our load.

Jill Kysor (GIPL-PSE): [01:41:30] And then I'm trying to understand them, when it comes to the proposed additional sum methodology there, it seems like the company is asking to remove the relationship to avoided cost and switch to a different methodology. And by removing that relationship to avoided cost, it might result in higher cost to customers for the additional sum.

Andy Phillips (GPC): [01:41:55] So the current methodology does incorporate the Avoided Cost component. And what we have seen over time with the decline in Avoided Cost is that some residential programs barely pass the TRC benefit and therefore commercial customers in terms of additional sum are carrying more of the overall weight of providing additional sum. The company's proposed methodology to base additional sum on overall kilowatt hours saved is more in line with the allows the incentives to be more in line with where the savings are actually realized.

Tricia Pridemore (PSC): [01:42:36] Approximately what's the annual budget for the proposed DSM portfolio?

Peter Hubbard (GCES): [01:42:43] The entire budget is around $84 million, I believe. That's including all aspects of things funded through the DSM, not just the programs.

Tricia Pridemore (PSC): [01:42:54] Do you have, do you know about what it is, with just the programs?

Andy Phillips (GPC): [01:43:01] And are you asking for just the certified programs, not some of the other programs like Learning Power and Energy Efficiency Awareness?

Jill Kysor (GIPL-PSE): [01:43:08] Either is fine. Just a ballpark.

Jeffrey Smith (GPC): [01:43:10] So the budgets for the programs is $71 million.

Jill Kysor (GIPL-PSE): [01:43:14] So the budget is about $71 million. And under the new methodology, the company, if it hits its targets, could make $17 million a year in additional sum, maybe even more?

Jeffrey Smith (GPC): [01:43:25] If they, if the kilowatt hour savings were, goals were hit, then that would be the additional sum earned. Yes.

Jill Kysor (GIPL-PSE): [01:43:34] Thanks. I'm going to shift gears to the Distributive Energy Resource or DER program and I'm going to try not to retread any ground. But, so I, guess, first, I think I heard you say that the participating customer would have a say in what type of DER resource would be implemented or installed?

Lee Evans (GPC): [01:44:01] That's correct.

Jill Kysor (GIPL-PSE): [01:44:02] And would solar plus storage be one of those options?

Lee Evans (GPC): [01:44:06] Potentially the dispatchable nature of the storage battery would be the resiliency aspect, and that would be the one that, the piece that could participate in the demand response credit.

Jill Kysor (GIPL-PSE): [01:44:16] And so ultimately it's, is it the customer's choice or the result of a conversation between the company and the customer? Does the company have some input as well?

Lee Evans (GPC): [01:44:28] Well, the company will have requirements such as the environmental permitting requirements of the assets to enable, to ensure that they're able to run when called upon. But the customers resiliency needs are driving the selection of that asset.

Jill Kysor (GIPL-PSE): [01:44:43] And the cost recovery will be the same, whether our customer participates in both RAST-1 or RAST-1 and DAC-1, correct?

Lee Evans (GPC): [01:44:57] Yes. The payments that the company receives from that individual participating customer through RAST-1 one will be the same, whether they participate in DRC or not, the DRC would just provide a credit.

Jill Kysor (GIPL-PSE): [01:45:13] And then a couple of questions about the RAST-1 program. Will the DER only operate when the grid goes down?

Lee Evans (GPC): [01:45:24] So the under the resiliency asset service tariff, the asset will operate in the event of a loss of local, local event to that individual customer. Or to the extent that they're participating in the DRC, that asset will also run during a reliability event on the System.

Tricia Pridemore (PSC): [01:45:43] If they're only an RAST-1 participant, it will only run during a loss of load event.

Lee Evans (GPC): [01:45:50] That's correct.

Jill Kysor (GIPL-PSE): [01:45:53] And so is it, in essence, Georgia Power will be providing kind of traditional backup power for those customers that are only participating in the RAST-1?

Lee Evans (GPC): [01:46:03] Yes. We'll be providing that resiliency service that we've heard from our customers that they're looking for and other utilities across the nation are providing.

Jill Kysor (GIPL-PSE): [01:46:12] And that resiliency benefits the participant. Does it also benefit non participants? If you're only looking at participation in the RAST-1 program?

Lee Evans (GPC): [01:46:23] Just the participating in the RAST-1 is just a benefit for that participating customer and they'll the one, and they'll, as a result, be the ones paying for that asset. Right. The customer program in total, leverages this reality, that customers are installing these assets for their individual resiliency needs and seeing the opportunity for Georgia Power to now provide that additional DRC program on top of it to leverage those assets for the good of the System.

Jill Kysor (GIPL-PSE): [01:46:54] And then you said that they'd be paying for it. I think I heard you say that the capital costs, the upfront cost would be rate based, right?

Lee Evans (GPC): [01:47:01] That's correct.

Tricia Pridemore (PSC): [01:47:02] And so if it's rate based, it's paid for by all customers or however it gets distributed in the cost allocation in the right case. I just want to make sure sure.

Lee Evans (GPC): [01:47:13] Let me clear that up. So it will be rate based assets, but the revenue received through the RAST will also be above the line revenue. Offsetting those revenue requirements in keeping non participating customers cost, the cost will not shift to non participating customers as a result.

Jill Kysor (GIPL-PSE): [01:47:36] Shifting to a couple of questions about the DRC-1 tariff. Will Georgia Power operate the DER only when the grid goes down or/and when there's a reliability event?

Lee Evans (GPC): [01:47:51] Well, we'll operate the assets through the DRC to prevent the grid, as you say, the grid from going down. It will be during reliability constrained times, but to prevent that from occurring.

Jill Kysor (GIPL-PSE): [01:48:02] Will Georgia Power operate the DER at any times outside of reliability events?

Lee Evans (GPC): [01:48:10] No. As currently constructed, the program would only operate the assets during reliability events.

Jill Kysor (GIPL-PSE): [01:48:16] And sorry, some of the some of this is a bit technical for me. So I think I heard you earlier say and I might be wrong, though, because this is a different framing. Under the DRC-1 is the DER callable by Georgia Power in a loss of load event? Or is it only available to the participating customer to meet their load on site?

Lee Evans (GPC): [01:48:41] Help me with the example. I'm not quite sure I'm following.

Jill Kysor (GIPL-PSE): [01:48:44] If there's a loss of load event. If a customer participates in both the RAST and the DRC tariffs and there's an actual loss of load event, will that DER be available first and only to the participating customer to meet their demand?

Lee Evans (GPC): [01:49:02] Well, the asset is only going to serve that customer's individual demand [01:49:06] no matter what. It's [01:49:07] not sized to export to the grid. It's sized for their individual load. So whether it's called for a local event, right as we have trees fall down, on lines, creating a very local outage event, that asset will run for that individual customer. If there's a System reliability event, it'll still run and meet that individual customers needs. But by reducing the load on the system, the System will see that reliability benefit.

Jill Kysor (GIPL-PSE): [01:49:39] And you got to my next question I was going to ask. So how will you determine the appropriate sizing? Is it limited to the customer's load?

Lee Evans (GPC): [01:49:48] That's correct.

Jill Kysor (GIPL-PSE): [01:49:51] And when Georgia Power uses the DER that's behind the meter of a DRC-1 customer, does that customer receive a dual benefit, where they're getting both a bill credit for their participation in DRC-1 and a reduced electricity bill because they're not importing kilowatt hours off the grid?

Lee Evans (GPC): [01:50:16] Well, they would see a slight reduction in their electricity bill, because, again, these assets are not going to be called for DRC that often, only during reliability events. But they're paying for that asset. So they're paying for the ability to call on that asset. And the System is then providing a credit because of the reliability benefit that that asset's provided. So they would see both the credit and a slight reduction in their bill only when those reliability events are called on.

Jill Kysor (GIPL-PSE): [01:50:49] And the program is only open to cust... to company owned assets. And I'm curious, is the long term goal of this program to prove out, model of Georgia Power deploying company owned DERS? Or is this more of a bridge toward a DER program that could involve customer owned assets?

Lee Evans (GPC): [01:51:11] We've proposed it just for customer owned assets because we think that's, limits the risk, the reliability risk that that third party ownership could impose on the program. We also see the benefits of leveraging that for the system benefits and the administrative efficiency that Georgia Power's ownership provides.

Tim Echols (PSC): [01:51:32] Let me ask you a question. How is this grid benefit different than a company or an individual that puts solar on their home? How is it different?

Lee Evans (GPC): [01:51:48] Sure. So the dispatchable nature of the call when the asset starts up, you know, as we heard yesterday, the growing winter reliability. Right? If an event occurs pre-sunset or pre-sunrise. Right? We can call on these assets to reduce that constraint on the system. So it really boils down to the dispatchable nature of the asset and ensuring that it can respond when we need it to.

Tim Echols (PSC): [01:52:14] Thank you.

Tricia Pridemore (PSC): [01:52:17] Is about 3:30 in the morning on Sunday. And I was driving up in North Bartow County and there were multiple plants Sunday that were operating in the dark, still, what, three, maybe 4 hours from sun up in the case of an outage for them, these DERs could provide them with the necessary energy so that they could operate a shift, right?

Lee Evans (GPC): [01:52:39] That's correct.

Jill Kysor (GIPL-PSE): [01:52:43] I have no more questions. Thank you.

Tricia Pridemore (PSC): [01:52:47] Georgia Large Scale Solar Association and Advanced Power Alliance. [No questions.] Georgia Solar Energy Industries Association, Solar Energy Association, and Vote Solar.

Scott Thomasson (GSEIA-SEIA-VS): [01:53:03] Morning gentlemen. I just have a couple quick questions on the DER customer program. With regard to the company ownership of the DER assets, is the company planning to do competitive solicitations for EPC for those assets?

Lee Evans (GPC): [01:53:18] Yes, we're currently looking at what capabilities exist in the DER market from both the OEMs, the original equipment manufacturers, and EPC providers in this space, to learn how we can better leverage them when, should the program get approved in the future.

Scott Thomasson (GSEIA-SEIA-VS): [01:53:33] But the intent is to competitively procure those like you would for other resources? [That's correct.] And then one clarification on the revenue requirement that sort of brings in for other customers. I heard you tell Mr. Jones that the revenue required assets are going to be rate based and the revenue requirement will be recovered from the customers participating in RAST during their participation, and that they will only pay that revenue requirement for the term of their participation. Is that correct? [That's correct.] What happens if the company, say, owns more assets for this program then customer demand justifies over time? Is that revenue requirement that's not being paid by customers during the life of that asset then recovered from other customers in rate base? Or does that just accrue to other customers or does the company pay? That when it's not being when an asset's not actively being used in the program and having that revenue requirement.

Lee Evans (GPC): [01:54:45] So we're going to have these assets are going to be procured for the individual customer and installed per their requirements for their resiliency needs. So they'll be integrated behind the meter into their electrical system, serving their needs. So there's not going to be a stockpile of inventory to deploy. I'm sure the question..

Scott Thomasson (GSEIA-SEIA-VS): [01:55:06] I thought I heard you testified earlier that one advantage of these assets, these resources as that the could be redeployed for other customers.

Lee Evans (GPC): [01:55:16] Yes, I think he was asking about it in the event of a breach of contract where the customer did not fulfill their obligation. And a benefit of the program is that these assets can be redeployed to new customers. And in that event, they would have been somewhat depreciated and could be a great value to a new customer in the program.

Scott Thomasson (GSEIA-SEIA-VS): [01:55:39] OK I won't dwell on that. I think that covers my question. Moving on to the the DRC bill credit. What's the nature of the bill credit? How is it structured? Is it a fixed fee or a fixed payment to the customer based on the capacity amount or on that value? Or is and is it fixed regardless of how much the resource is actually activated or during an outage event? Is it sort of a flat fee payment or a capacity or availability payment?

Lee Evans (GPC): [01:56:16] Sure. So the the DRC credit portion will be fixed a monthly payment over the contract life, but it'll correspond with the asset contract and it will be independent of if the assets called upon or not. And the reason is because, just like with the company's other dispatchable demand side programs, this will be reflected on the resource ledger and defer future capacity needs. So the system will receive benefits and all customers will receive benefits of this program regardless of if it's actually needed and called upon in a given year. Because of that capacity deferred.

Scott Thomasson (GSEIA-SEIA-VS): [01:56:55] And there's not any additional compensation or credit for each time that that it's actually called upon? It's just a flat rate. [That's correct.] And just to clarify, is it is it correct that the benefit that comes from those payments and the resources, isn't that those resources are directly serving the grid, but more that they are allowing sort of an island of that load during an outage event. So what you're paying them for is to take their load off, not that the DER is essentially a grid asset, but it's a system resource and in a similar to a demand response that they're they're taking their load off the grid. Is the benefit, correct?

Lee Evans (GPC): [01:57:44] That's correct. And I wouldn't characterize it necessarily as islands, because a good number of customers might not choose to completely cut off service from the grid, but just reduce service during those outages. [So it could be an incremental.] Exactly. So so it doesn't necessarily have to be an island situation, but a reduction in demand served by the grid.

Scott Thomasson (GSEIA-SEIA-VS): [01:58:05] Okay. And I know you've answered the question about having customer owned or third party owned assets within this program, and that the company is not currently looking at that. But has the company considered, similar to a couple of questions that Commissioner Echols asked, other compensation programs, other credit programs, that might be structured a little differently, but they could compensate customers for resources that they own themselves or that the third party owns, for any benefits that they may provide that may not be quite as firm or as as dispatchable as this program is intended?

Lee Evans (GPC): [01:58:50] We haven't at this time, this program was focused on realizing the growing need in customers to meet their resiliency needs and how we can leverage the installation of those assets going forward for the benefits of the system. We didn't look at developing anything else out of that.

Scott Thomasson (GSEIA-SEIA-VS): [01:59:08] And no immediate plans to look at, develop a program like that in the future?

Lee Evans (GPC): [01:59:14] Not at this time.

Scott Thomasson (GSEIA-SEIA-VS): [01:59:15] That's all the questions.

Tricia Pridemore (PSC): [01:59:19] Georgia Solar Energy Association, not present. George Watch. Stepped out. Interstate Gas Supply, Resource Supply Management, not present, Georgia Watch..[I might have a few more questions.] Well, since you missed a couple, we're going to make sure you don't duplicate.

Liz Coyle (GW): [01:59:48] Good morning still. I have several questions. I think Mr. Smith, that's on Colony. Mr. Smith, for today at least, most of them will be ones for you to answer the survey. Anyone can feel free to jump in at any point. I wanted to just start with a quick follow up question to Ms. Kysor's question. She asked you about the budget for DSM and then ask you to break out the program budget. Do you recall that? And I believe the answer was $71 million.

Jeffrey Smith (GPC): [02:00:39] That's right.

Liz Coyle (GW): [02:00:41] Could you further break that down for me, as it relates to your proposal in this IRP, to...I might be paraphrasing a little bit, but it appears that you're going to aim to have more of the additional sum collected tied to the actual customer class where the program offering occurred. I believe I heard you testify earlier that right now commercial customers are paying more of the additional sum than residential customers.

Jeffrey Smith (GPC): [02:01:17] That's correct. Correct. They are. The commercial class in the case that we're proposing would pay, it's broken out by the percentage of savings. So it would be 70 plus percent would come from the commercial class. Or you're asking...

Liz Coyle (GW): [02:01:36] In the current, I'm asking it in the, in your proposal, of that $17 million, in Additional Sum, how much would now be borne by well, maybe, currently and then in the future, how much of the $17 million is currently borne by commercial versus residential? And how much would that change with your new proposal?

Jeffrey Smith (GPC): [02:01:59] So I think I would have to address it by percent because they're different amounts, right? So. Right? In the proposed program, and let me, if you don't mind, reference the filing. Bear with me. I'm sorry.

Liz Coyle (GW): [02:02:24] That's quite all right.

Jeffrey Smith (GPC): [02:02:26] So in appendix F in the filing, residential...based on the proposed plan would be about 3.8 million to 17. And that plus that...[Commissioner McDonald: Get close to that microphone, please, sir.] Sorry, Commissioner. Residential would be about 3.8 million of the 17 and 13.4 would come from the commercial class.

Liz Coyle (GW): [02:03:01] Thank you. And am I correct that that 3.8 million would be paid by all your residential customers regardless of whether they participated in the DSM programs?

Jeffrey Smith (GPC): [02:03:14] Correct.

Liz Coyle (GW): [02:03:17] So would it surprise you that according to the 2020 US census, 14% of people living in Georgia are living in poverty?

Jeffrey Smith (GPC): [02:03:30] I would not say it surprises me.

Liz Coyle (GW): [02:03:33] And would you agree there are many low to moderate income? And let me just say I'm going to refer to you referring to that in future questions as LMI (Low to Moderate Income) just for shortening. Okay. Would you agree there are many low to moderate income or LMI Georgians in your service territory?

Tricia Pridemore (PSC): [02:03:50] Ms. Coyle, I'd prefer it if you would say it out each time because mine is not a standard acronym. We. Yes. In the utility industry. [Yes, ma'am.] Thank you.

Jeffrey Smith (GPC): [02:04:00] I'm sorry, could you restate the question?

Liz Coyle (GW): [02:04:01] Would you agree there are many low to moderate income Georgians in your service territory?

Jeffrey Smith (GPC): [02:04:06] We don't ask our customers to identify income level, so I can't say to the word many, but I would say there are low to moderate income customers of ours.

Liz Coyle (GW): [02:04:21] Would you agree? Lower income people often live in older, less efficient housing?

Jeffrey Smith (GPC): [02:04:27] Again, I don't, we don't ask them to tell us about their housing stock.

Liz Coyle (GW): [02:04:30] So would you agree that the customers you currently are serving with your income qualified programs often live in older, less efficient housing?

Jeffrey Smith (GPC): [02:04:43] The customers that we currently serve, I would agree, because those are the homes that have the savings opportunities.

Liz Coyle (GW): [02:04:49] And would you say that those individuals might be living in single family as well as multifamily housing?

Jeffrey Smith (GPC): [02:04:56] Correct. We have participation in both single family and multifamily dwellings in our income qualified programs.

Liz Coyle (GW): [02:05:06] And would you agree many of your low to moderate income customers experience a higher energy burden, meaning they pay a significant portion of their monthly income on utility bills.

Jeffrey Smith (GPC): [02:05:19] We don't, so when you used the term energy burden, that defines 6% or more of their household income going towards all energy, and we don't have access into that data to be able to say percentages.

Liz Coyle (GW): [02:05:36] So let me ask it, let me ask you this way. If a household is a lower or moderate income household, does that mean that their monthly budgets for all of their expenses are lower than a higher income household?

Jeffrey Smith (GPC): [02:05:54] Can you ask it again?

Liz Coyle (GW): [02:05:57] Would you agree that people of lower income have lower monthly budgets for all their household expenses than someone of higher income?

Jeffrey Smith (GPC): [02:06:09] I would agree that their income is lower, but as far as what their expenses are for, their budgets would be tied specifically to them.

Liz Coyle (GW): [02:06:18] But everybody, would you agree that regardless of your income, you need shelter, you need food, you might need medicine, you'll have transportation costs, and you'll certainly have water, electric and maybe gas costs.

Jeffrey Smith (GPC): [02:06:38] I would agree that all people have basic needs.

Bubba McDonald (PSC): [02:06:41] Would that not take in consideration of other help, outside sources, i.e., federal government programs that would be involved, that other group above what you're talking about, would not participate.

Liz Coyle (GW): [02:06:58] And many moderate income Georgians are not taking necessarily taking advantage of those programs as well. I would agree with that. But I believe you answered earlier. I forget which Intervenor asked you that she was asking a question about whether lower income customers or higher income customers used more or less electricity. And I believe your answer was it doesn't it's not a factor of income. It's a factor of energy use in the household.

Jeffrey Smith (GPC): [02:07:32] Correct. Subject to check. That was what I said.

Liz Coyle (GW): [02:07:36] But if someone is making under $30,000 a year but has the same energy use as someone making $100,000 a year. And they have the other expenses that housing, etc. Would it not be a bigger chunk of the paycheck for that $30,000 or below income to pay the power, the same power bill as someone with a higher income?

Jeffrey Smith (GPC): [02:08:08] Yes. In your example, if income levels are different and the energy use is the same, then yes, the lower income earner would have a higher percentage of their earnings.

Liz Coyle (GW): [02:08:18] And that's all, it really wasn't a trick question. And so, would you further agree that many of your customers who would most benefit from demand side management programs you offer can least afford the upfront cost? That lower income customers can least afford the upfront cost of DSM programs?

Jeffrey Smith (GPC): [02:08:46] Correct. That's part of the budget difference from last cycle to this cycle is a higher percentage of income qualified customers are in our program offering and that requires a higher expenditure of improvement cost.

Liz Coyle (GW): [02:09:05] So would you agree that, over the years, I've been a big fan of your income qualified programs?

Jeffrey Smith (GPC): [02:09:14] I would agree that you are a big fan of income qualified programs. Yes.

Liz Coyle (GW): [02:09:17] Especially when they're designed in ways that have the greatest benefit for your income qualified customers. Would you also agree that customers experiencing frequent disconnect and reconnect and possible, leading possibly to uncollected bad debt, increases costs to all residential customers?

Jeffrey Smith (GPC): [02:09:42] I'm not the right person for that.

Liz Coyle (GW): [02:09:44] Anyone else able to answer that?

Lee Evans (GPC): [02:09:46] Could you repeat your question?

Liz Coyle (GW): [02:09:47] Well, when when customers experience, is it, Mr. Smith, is it correct that some of these income qualified programs that you offer are that under your department, including the prepaid program?

Jeffrey Smith (GPC): [02:10:05] Prepay is not an energy efficiency program?

Liz Coyle (GW): [02:10:07] No, but I mean, but some of these programs have a specific intent of trying to help prevent disconnect, helping people be able to afford their power bills, maybe pay off their arrearages and keep the lights on. It's good for them to keep their lights on. But are there not costs associated with the system of frequent disconnect, reconnect, and then in some cases, bad debt that never gets collected from the customer? Don't you ultimately spread that out to all your residential customers? That might be a rate case question.

Jeffrey Smith (GPC): [02:10:34] Again, I'm a witness for energy efficiency, not on the right side of business.

Liz Coyle (GW): [02:10:38] Right. Fair enough. Thank you. Okay. So now with that context, I'm going to turn to your testimony. We are finally. So I wanted to ask you about the. Looks actually that that one was asked and answered. I was paying attention. On page seven, lines 24 of your testimony, you talk about having that DER can provide meaningful customer can meet a growing customer need. Is it customer need that you've identified or is it customer demands? Is this something that your customers are asking for?

Lee Evans (GPC): [02:12:00] I think it's both. I think we've identified customers in certain segments that have a need and have been seeking solutions from Georgia Power.

Liz Coyle (GW): [02:12:11] And then a little bit further down, line 27 of that same page. You mentioned demand response, value and corresponding system resilience. Would this, are we talking about, and again, I know this is not a rate case, but with the smart usage program that you offer, be the kind of demand response that you're indicating in this testimony?

Andy Phillips (GPC): [02:12:39] I don't know that smart usage is considered a demand response.

Liz Coyle (GW): [02:12:43] Well there's a demand charge tied to if you're on that rate.

Andy Phillips (GPC): [02:12:48] Correct. There's also a demand charge for a number of our commercial rates, but they're not included in our demand response portfolio.

Liz Coyle (GW): [02:12:54] That's not what you're talking about on this page. So I'll move beyond that.

Tricia Pridemore (PSC): [02:13:31] Miss Coyle. Don't make me get out the final Jeopardy music. I heard about that last night. I'm sorry I missed that. I would just make sure that [You still have an opportunity to hear it.] I was just making sure I didn't ask questions I already heard asked earlier. I thought I might have time over lunch to go back and cross out some of my questions. But everybody moved too quickly today. So I wanted to ask you some questions. Several beginning on page 11, but really a few times in your testimony, there's a reference to the Commission's economic screening policy outlined in the 2004 IRP order, directing proposed DSM plans, minimize upward pressure on rates and maximize economic efficiency. Is that correct?

Andy Phillips (GPC): [02:14:16] Yes.

Liz Coyle (GW): [02:14:17] Are you aware of whether this the rule number is written? You had the rule number, actually. Where's the score?

Bubba McDonald (PSC): [02:14:26] You remember me? You can't read all that and then ask them if that's correct, because they swore it is correct.

Liz Coyle (GW): [02:14:33] I just want to make sure they know what the lead up to my question is. Yes. Well, somewhere in there you have the actual rule number. But would you agree, would you say that the commission has ordered Georgia Power to make sure that all of the companies plans and the IRP, whether their supply or demand side, minimize upward pressure on rates and maximize economic efficiency?

Andy Phillips (GPC): [02:15:06] I can't speak to the specifics of the supply side plan, but as it relates to development of the demand side plan, the company does seek and developing its overall proposed case to achieve the directive that was set forth by the Commission in the 2004 IRP to put forth a case that seeks to maximize economic efficiency while minimizing upward impact on rates. And the company has considered that in a number of IRP since then, and those programs were eventually approved by this commission.

Liz Coyle (GW): [02:15:36] Would you agree that there are aspects of this IRP and every IRP that ultimately will put upward pressure on rates because most IRPs are followed by a rate case when the company asks for a rate increase?

Andy Phillips (GPC): [02:15:55] I can't speak to specific IRPs, but as you said, we seek to minimize those upward impact on rates wherever possible.

Liz Coyle (GW): [02:16:07] Do you have any reason to think that there is a particular burden on the demand side to not put upward pressure on rates? There's a lot of discussion about not passing the TRC test. Some of the programs that you're recommending, continuing that maybe there's a greater challenge or push on the demand side to not put upward pressure on rates.

Andy Phillips (GPC): [02:16:24] Well, the company calculates the cost effectiveness in accordance with a number of industry standards, specifically the California standards for cost effectiveness test. And these specific tests are included in both the IRP rules and the DSM program planning approach. And part of a number of those cost effectiveness tests incorporate the Avoided Cost of both generation transmission and distribution. And so as Avoided Costs continue to decline, which is a good thing for all of our customers, it does put pressure on some programs to continue to pass the TRC test specifically.

Liz Coyle (GW): [02:17:05] And yet you, and I'm just now I want to follow up to that on page 13 of your testimony, beginning line six. You're describing your request to waive the DRC requirement for specifically for the residential thermostat demand response. And you had quite a bit of response to earlier questions about why that is. But I'm interested whether you consider asking for a waiver for any of the other programs that might not have done so well on the TRC.

Andy Phillips (GPC): [02:17:35] No, we did not consider that. There are some unique attributes related to the thermostat DR program where the company felt that a waiver was appropriate to ask for. In this case, as I mentioned, it's already an existing program in place. It is capacity that is included on our resource ledger. We're planning on that capacity to be available and we have a number of customers that are already engaged and support that program.

Liz Coyle (GW): [02:18:04] Is there a reason you didn't consider applying a waiver request to any of the other programs?

Andy Phillips (GPC): [02:18:11] Well, for those reasons I just stated is why we specifically cited or suggested or requested that a waiver be considered for the thermostat DR. Or we felt that given those specific attributes of the thermostat DR program and the fact that it did pass TRC in the previous IRP and doesn't pass TRC now because we changed the way it's modeled, the TRC program is expected to be cost effective within this 12 year planning cycle. And so for those reasons we are request requesting that the Commission consider the TRC waiver for that specific program.

Jeffrey Smith (GPC): [02:18:49] Additionally, it's the only program that has a measure already in place. All other programs are incenting to change behaviors or change measures.

Liz Coyle (GW): [02:18:59] Thank you for that. And now this one is definitely going to be for you. Mr. Smith. It's at the bottom of page 13. You're describing the Hope Works program. Would you agree that I'm a big fan of the Hope Works program?

Jeffrey Smith (GPC): [02:19:11] I'd say you are so.

Liz Coyle (GW): [02:19:13] And so? In seeking to increase financial support for the program, you also acknowledge that this is a program that exclusively serves the single family home. Is that correct?

Jeffrey Smith (GPC): [02:19:30] Correct. Hope Work's model is senior citizens, single family homes that are income qualified.

Liz Coyle (GW): [02:19:36] And would you agree that you're seeking to increase the budget and make certified the program because they have been so successful with that task.

Jeffrey Smith (GPC): [02:19:44] It is, we are seeking to increase and certify the program because it has been effective over the years and there's additional opportunity with that customer base.

Liz Coyle (GW): [02:19:54] Are you able to make a comparison between the success of the Hope Works program and the existing HE...[Home Energy Efficiency Assistance Assistance Program.] Yes, thank you. [I don't understand your question. Could you restate it?] Well, so Hope Works has a specific long standing approach to improving the energy efficiency of income qualified seniors homes. You have another income qualified program that's somewhat similar with a HEEAAP. Is that correct?

Jeffrey Smith (GPC): [02:20:36] They have similar customers in mind? Yes.

Jeffrey Smith (GPC): [02:20:41] I, would, and I believe I heard you just say that you believe that Hope Works has an effective program.

Jeffrey Smith (GPC): [02:20:48] Their program is proven effective through as we've worked with them.

Liz Coyle (GW): [02:20:52] Yes. And so I'm asking for and I recognize that HEEAP is a newer program. I'm just asking whether you can make a comparison in terms of the delivery of savings for HEEAP customers as compared to Hope Works customers.

Jeffrey Smith (GPC): [02:21:12] Yes, I don't feel that we can make that comparison right now. HEEAP launched obviously during the pandemic and we have not had a large enough participation group to say that that I feel that there is any tie there.

Liz Coyle (GW): [02:21:30] Would you say that, as we get further into this 2023 to 2025 cycle and you have further opportunity to post-Covid roll out HEEAP, would you agree that that would be a fair question to ask?

Jeffrey Smith (GPC): [02:21:48] I agree that the evaluations of both of those programs, if approved by this commission, would point out savings for each customer group cost per customer group process findings. Those would be outlined in those evaluations.

Liz Coyle (GW): [02:22:05] And because the Hope Works program is specifically seniors and single family housing, and you're proposing to increase the budget there, would it be appropriate for you to direct more of the budget for HEEAP to non-seniors and non-single family households?

Jeffrey Smith (GPC): [02:22:27] I would point out that another program, and I apologize for all the acronyms commissioners, but HEIP, which is the home energy efficiency improvement program, it does have a carve out of $500,000 for income qualified multi improvement projects. And then any customer, regardless of age, can participate in HEEAP as well.

Liz Coyle (GW): [02:22:54] I appreciate that and I do appreciate the carve out in the HEIP program. But because the Hope Works program is so specifically targeted to income qualified seniors and single family homes, in addition to the $500,000 carve out in the HEIP program, would the company consider being more deliberate about targeting through marketing or other measures more non-senior customers for the HEEAP program?

Jeffrey Smith (GPC): [02:23:33] So I'm trying to unpack all the acronyms myself. How we market the way we go about doing that will be determined once an implementation company is selected. If these programs are approved and at that point in time, we would know who we're more specifically marketing to under HEEAP.

Liz Coyle (GW): [02:23:54] That's a maybe.

Jeffrey Smith (GPC): [02:23:55] I'm saying we have to implement them before we know how to adjust them.

Liz Coyle (GW): [02:24:00] But is it reasonable for one on the advocacy side to want to make sure that all of your income qualified customers have the opportunity to experience the benefits of these programs and not just seniors?

Jeffrey Smith (GPC): [02:24:17] That's your call as an advocate. You're going to advocate for what you think is right.

Liz Coyle (GW): [02:24:22] Fair enough. I put that one. And again, I'm going to just go back to the, and again, in your testimony on page 17, lines 14 through 17, the company continues to follow the policy, which we've just discussed, that you've asked for a waiver for the thermostat program. Is this a policy that might that you might want to consider asking for a waiver for the policy going forward for all of the programs?

Lee Evans (GPC): [02:25:15] To my knowledge, the company has never requested for a TRC waiver in previous IRPs. We see this as an exception. And for the reasons we shared earlier, we feel like the Thermostat DR program, the request for a waiver was merited given the specific nature and benefits of that program and the fact that it's already existing today. So we do not see that the waiver will be a standard practice. It's an exception to the rule and a rule that has guided development of our proposed case for a number of IRPs.

Liz Coyle (GW): [02:25:48] Thank you. And in that same paragraph, as you talk, and again, as it relates to the economics of the programs, you testified that the benefits from the programs decline. Would you say that that statement applies to customers who can afford the upfront cost of installing these measures without the incentive less and not so much to the customers we've just discussed who can't afford the upfront costs?

Lee Evans (GPC): [02:26:22] I'm not sure I understand the question. Can you rephrase that?

Liz Coyle (GW): [02:26:24] Would you would you say that the benefits of the company's demand side management programs have declined in some ways because of the term you've used, free ridership, that you have more customers who are choosing without an incentive to make their homes more energy efficient.

Lee Evans (GPC): [02:26:47] I can speak to the benefits as it relates to the TRC. Let me see if I can answer that question, then we can we can continue further. The benefits are declining because of Avoided Costs are declining. And Avoided Costs are declining, not because of any particular customer situation, but because of the way that we are operating our system. Specifically as we as we state in the testimony, low natural gas prices, as well as low to moderate growth, and an increase in renewables are driving the reduction of Avoided Costs. So that's what's driving the reduction in benefits.

Liz Coyle (GW): [02:27:24] And in the case of the TRC.

Lee Evans (GPC): [02:27:26] Yes, that's well, we include avoided cost costs in a number of our cost effectiveness tests, but that specifically related to the TRC was what I was speaking to.

Jeffrey Smith (GPC): [02:27:38] And to further add to that point, with the exception of income qualified specific programs, we don't ask customers to identify their income level and the other programs that we have. So we're evaluating the program for all participants, which could include income qualified and non income qualified customers.

Liz Coyle (GW): [02:27:58] Thank you. And so let me moving on from there. And I mentioned free riders. Would, is that a term that means people who are taking advantage of programs even if they didn't need to? Or does that mean they're already going to be buying, they're planning to buy LED light bulbs, and that you just happen to have a special for your program. And so that makes them a free rider.

Jeffrey Smith (GPC): [02:28:24] So free ridership is determined through survey questions as part of an evaluation, and it can be partial free ridership or holistic free ridership. So a customer may answer, yes, I would have done this anyway and we would not receive credit through the evaluation for those energy savings where they can say it partially influenced me and then we would receive partial credit for that.

Liz Coyle (GW): [02:28:51] Okay. And again, I recognize that in some cases you're not finding out about whether your customers specifically are income qualified or not. But is it theoretically likely that there are fewer free riders who are also low income?

Jeffrey Smith (GPC): [02:29:13] I don't know that I can answer that question.

Liz Coyle (GW): [02:29:15] Thank you. And then I'm just I'm curious. This is the bottom of page 19 two, lines 22, three through 24, where you're talking about you do have specific targets for income, qualified customers for your residential programs to increase customer participation. So when you've said on the one hand, you don't ask your customers what their income is, how do you plan to target them?

Jeffrey Smith (GPC): [02:29:45] We ask them if they are in an income qualified program, they have to qualify [Yeah, right.] But the way you target them varies on what the program is. It could be anything as far as as somebody mentioned earlier, using census tract data. It can be working with other organizations that are already qualifying customers through the programs that they're working in. And we would partner with them to to implement our program to that same customer.

Liz Coyle (GW): [02:30:15] And you did have a few questions about that earlier. And I think the response was you haven't really done much of that yet, but you would be willing to work with local governments or other avenues to better market these programs to lower income communities?

Jeffrey Smith (GPC): [02:30:31] Again, with all of our programs, including income qualified programs, if there are opportunities to work with other groups or partner with other organizations, we are always willing to entertain that.

Tricia Pridemore (PSC): [02:30:43] Wouldn't they be identified through the similar channels that the Salvation Army programs are identified through? You've got non governmental entities that do that type of work and serve those communities and they're the ones that find the customers or find the ratepayers for you.

Jeffrey Smith (GPC): [02:31:04] That's correct, Chair Pridemore.

Liz Coyle (GW): [02:31:08] And on page 21 of your testimony, beginning at line three, you begin to describe the company's proposal for a basically a tiered price increase. You call it a tiered scale approach, but is it not a price increase going from $0.04 to $0.05 and above that 120% of savings?

Jeffrey Smith (GPC): [02:31:32] So can you ask that question again.

Liz Coyle (GW): [02:31:34] On on page 21, at line six, you asked, the company proposes a tiered scale approach to encourage achievement of certified energy savings. Is that correct and tiered scale approach. Page 21, line six.

Lee Evans (GPC): [02:31:53] Could you restate your question?

Liz Coyle (GW): [02:31:55] Yes, yes. Well, so am I correct that this tiered scale approach you're describing here relates to what you discussed earlier, which is that the company is requesting for your additional sum methodology that you're proposing to change there. And in this approach, your decimal sum will go from $0.04 to $0.05 for the incremental amount above 120% of savings. [Correct.] So I apologize for calling that a tiered price increase. That's just what it seemed like to me. It's a slight price increase.

Lee Evans (GPC): [02:32:33] And I think it's important to note that this additional sum is not a price increase. Our customers do not pay for additional some directly like they do the price of their energy bill. It's a result of the savings that the company realizes through its residential and commercial programs.

Liz Coyle (GW): [02:32:51] But customers do pay the Additional Sum.

Lee Evans (GPC): [02:32:56] Yes, additional sum is incorporated as part of the overall tariff. But the way you phrase it as a price increase, I wanted to make sure the Commission understood that this is not a price specifically charged to our customers like it is the price of energy.

Liz Coyle (GW): [02:33:18] You are asking to be able to earn a penny higher additional sum on savings above 120%. And you're also working to design the program in a way that, as we discussed earlier, more of the savings that go to a certain customer class will be charged to that customer class. I think you said $3.4 million of the $17 million will now, in your proposal, would be charged to the residential class because that's where these savings are coming from.

Lee Evans (GPC): [02:33:57] Yes. I believe that was the amount. So that's your question.

Liz Coyle (GW): [02:34:00] So my question is, well, well, well, so residential customers, if they experience in their programs the residential program savings above 120%, will they be paying an extra penny in additional sum?

Jeffrey Smith (GPC): [02:34:20] It's not customers. It's not based on customers saving above 120%. It's if it's, our programs exceed 120% of their goals.

Tricia Pridemore (PSC): [02:34:31] Right, but if the programs exceed more than 120% of their goals, the customer class where that program occurs, so it's a residential customer program and you achieve savings, a company's targets of above 120%, the customers in that class will pay that extra penny.

Andy Phillips (GPC): [02:34:55] The customers fund the all of the DSM programs through the DSM tariff. It's based upon a certain percentage applied to the base bill for both residential and commercial customers. And so additional sum is funded through the DSM tariff, just like program costs and incentive costs are funded through the DSM tariff. And so the DSM tariff is where the additional fund would be realized under the current or excuse me, under the proposed methodology in terms of providing or funding additional sum.

Tricia Pridemore (PSC): [02:35:31] Customers will pay for the additional sum.

Liz Coyle (GW): [02:35:34] Ask a question for us, Ms. Coyle. I think I've been asking that I don't.

Allison Pryor (GPC): [02:35:41] Objection. I think the answer... [Sustained.].

Liz Coyle (GW): [02:35:45] So. And this is the case whether or not a customer participates in these programs, right? All customers will pay for the higher additional sum?

Andy Phillips (GPC): [02:35:56] All residential and commercial customers do fund the DSM tariff regardless of whether they participate in our energy efficiency programs or not.

Liz Coyle (GW): [02:36:09] Thank you. I believe that is the end of my questions.

Tricia Pridemore (PSC): [02:36:17] Sierra Club. How many questions do you have? [Three.] Come on up. Drew Carey says, come on down. You're the next exciting contestant on The Price is Right.

Zach Fabish (SC): [02:36:39] So thank you. So very briefly, you assess the impacts of electric vehicle adoption on overall demand for the planning period, right?

Francisco Valle (GPC): [02:36:54] Yes, it's part of the load forecast and it's more or less an adjustment to it.

Zach Fabish (SC): [02:36:59] Has the company evaluated as part of this IRP, the transmission Make Ready projects and other charging infrastructure that would be needed to power those additional electric vehicles?

Francisco Valle (GPC): [02:37:09] No. For the purposes of the of the load forecast, we're interested in providing an assessment of the customer needs. How many, how much usage is going to come from the customers, the infrastructure to come with it. But it will be a part of a discussion of a different panel.

Zach Fabish (SC): [02:37:29] A different panel during this IRP?

Francisco Valle (GPC): [02:37:32] So infrastructure was probably better cover, yesterday in panel one, and then rate related that will be for the rate case.

Lee Evans (GPC): [02:37:41] Is your question specifically to the the Georgia Power Make Ready program?

Zach Fabish (SC): [02:37:47] Yeah. Just to the extent the company has done an assessment of what will be the Make Ready and other needs to actually get the chargers in place to serve those EVs that would be causing that load.

Lee Evans (GPC): [02:37:59] I know that there are other organizations in Georgia Power that do assess the Make Ready needs, as well as the needs to serve customers who are going to have electric vehicles, both residential, commercial and industrial. That's not something that we specifically study here specific to either our DSM or load forecasting.

Zach Fabish (SC): [02:38:21] Okay. Thank you. That's all I have. I'm sorry. I'm Zach Fabish for the Sierra Club.

Tricia Pridemore (PSC): [02:38:30] Thank you, Mr. Fabish. Southern Alliance for Clean Energy and South Face Energy Institute. Mr. Baker. Mr. Jacobs, how much time? Talk to me about time so I can plan. About 30, 40 minutes? OK I think that now would be a good time for us to take a break. Break for lunch. We will reconvene at 1:25.

Fitz Johnson (PSC): [03:43:04] All right, Mr. Baker. Go ahead.

Robert Baker (SACE-SF-VS): [03:43:07] Okay. Thank you. Commissioner. Panel, my name is Robert Baker. I represent the Southern Alliance for Clean Energy and the Southface Energy Institute. Thank you for your time today. I have a few follow up questions on Chairman Pridemore asked about leveraging federal funding for energy efficiency. Is the company aware that the federal low income residential weatherization program received $3.5 billion?

Jeffrey Smith (GPC): [03:43:39] We're familiar that they received an amount of money, not that specific amount.

Robert Baker (SACE-SF-VS): [03:43:43] Okay. Thank you. What are Georgia Power's plans, if any, to work with the Georgia Environmental Finance Authority to maximize the impact of the companies residential home retrofit programs?

Jeffrey Smith (GPC): [03:43:56] Again, Georgia Power is willing to work with and discuss opportunities to leverage joint programs in any time. We've actually have reached out to GEFA early on when state when federal dollars were being discussed and coming to the state. So we've initiated initial discussions and again willing to have conversations along that line.

Robert Baker (SACE-SF-VS): [03:44:18] Thank you. And finally, what are the barriers to working with state and local governments as partners to deliver home energy efficiency programs? Are there any barriers?

Jeffrey Smith (GPC): [03:44:29] I'm not prepared to discuss any today that I'm aware of.

Bubba McDonald (PSC): [03:44:32] Have you run into any problems with Homeowners associations and renovations, like we do with solar panels? But I just wondered if you ever had.

Jeffrey Smith (GPC): [03:44:47] Not as it directly relates to energy efficiency, Commissioner.

Robert Baker (SACE-SF-VS): [03:44:53] All right. Let me refer you to page seven, line 14 of your pre-filed testimony. And the company projects and demand reduction of 431 gigawatt hours of energy reduction annually for 2023-2025. Are the 431 gigawatts net or gross savings?

Andy Phillips (GPC): [03:45:13] The 431 gigawatt hours are gross savings for the overall portfolio.

Robert Baker (SACE-SF-VS): [03:45:19] Thank you. In evaluating the DSM programs, do you use a single avoided cost for the full year or do you use Avoided Cost, or do Avoided Costs vary hourly?

Andy Phillips (GPC): [03:45:33] Could you restate your question? I want to make sure I understood what you were referring to around using a single avoided cost value.

Robert Baker (SACE-SF-VS): [03:45:40] Right. Do you use a single number as the avoided cost number for evaluating DSM programs? Or do you have the Avoided Cost broken out on an hourly basis?

Andy Phillips (GPC): [03:45:54] Yes. I'm sorry. I understand. The avoided cost values that the company uses are broken out hourly across the year and across a number of years based upon the company's overall projected avoided cost value. So they change hourly.

Robert Baker (SACE-SF-VS): [03:46:07] So those are dynamic numbers changing hourly, you say?

Andy Phillips (GPC): [03:46:12] They are dynamic in that they do change from hour to hour.

Robert Baker (SACE-SF-VS): [03:46:17] Does the location impact an avoided cost? The location of a resource?

Andy Phillips (GPC): [03:46:26] No. We do not consider locational value in setting avoided cost for our energy efficiency programs.

Robert Baker (SACE-SF-VS): [03:46:33] Thank you. Page seven, you say due to lower avoided cost, many of the current DSM programs still appear less favorable under the total resource cost and rate impact measure test when compared to the 2019 IRP. Are you discussing net benefits there?

Andy Phillips (GPC): [03:46:53] When you say net benefits, what exactly are you referring to? That's because we're referring to overall benefits. I don't know what you mean by net benefits.

Robert Baker (SACE-SF-VS): [03:47:02] Net benefits in the sense that you're making some adjustment to the gross figure. Is it your testimony that you would be only using gross? The gross.

Andy Phillips (GPC): [03:47:13] Yes. To the best of my knowledge, that is the value that we would use in evaluating the cost effectiveness of our programs.

Robert Baker (SACE-SF-VS): [03:47:20] All right. And could you generally tell me what is included in calculating the avoided cost amount? Big picture.

Andy Phillips (GPC): [03:47:34] The company calculates of what it costs based upon generation avoided cost transmission and distribution of avoided costs. All three of those are included in the avoided cost values for the total resource cost test as well as other cost effectiveness tests.

Robert Baker (SACE-SF-VS): [03:47:50] And would you agree that DSM programs provide a capacity value to the company?

Andy Phillips (GPC): [03:47:57] Yes. And that energy efficiency lowers overall demand and therefore that negates capacity having to be generated to serve that need.

Robert Baker (SACE-SF-VS): [03:48:12] And at page eight, line 13, you refer to trends in electric and uses. What are the trends in electric and uses that are identified? What are you referring to?

Francisco Valle (GPC): [03:48:27] I can take that question. So trends. So we have we have seen trends in use per customer. Those are part of the models we have used. We have seen trends in terms of the number of customers moving into our territory. So the statement, it's about the drivers up the use of the total electricity use in our territory.

Robert Baker (SACE-SF-VS): [03:48:56] Thank you. Was the growth in the number of electric heat pumps one of those trends in electric and uses that affected winter load forecast?

Francisco Valle (GPC): [03:49:10] Is one of the elements. Yes. So like I'd explain it before in the morning, the decline in the growth for summer peak demand has been coming from increased energy efficiency standards. So it's a more penetration of those standards. And in the winter is more use for electric use, for space heating, for water heater, and not so much on the efficiency part.

Robert Baker (SACE-SF-VS): [03:49:40] Thank you. You state at page nine, "Residential sales are expected to grow by an average of 1.1% per year over this period as customer growth outpaces the reduction in use per customer resulting from energy efficiency." Isn't it true that the proposed DSM / energy efficiency measures in this IRP aren't even sufficient to keep up with customer growth?

Francisco Valle (GPC): [03:50:08] Sorry. So question about how you try to clarify the impact of DSM on the growth, electric growth of residential customers?

Robert Baker (SACE-SF-VS): [03:50:18] Based on what you're proposing, you're estimating that, or expected to see an average growth of 1.1% a year for residential customers, is that correct? [Correct.] Based on what is being proposed in this IRP DSM program, are you keeping, is there enough in the program to keep up with the increase in the residential growth to cover all the demand for residential customers?

Francisco Valle (GPC): [03:50:48] I'm having trouble following your question. So are you asking me for the drivers of the 1.1% growth per year?

Robert Baker (SACE-SF-VS): [03:50:58] Well, I'm referring to the growth in energy use of customers. Is the DSM program going to be keeping up with the growth in energy use based on the 1.1%?

Francisco Valle (GPC): [03:51:13] And so at 1.1%, commissioners, is the result of, think about two driving forces. One is the economy. Right? We have a good thriving economy in Georgia that is attracting businesses, is creating population growth. So the number of customers will go up. At the same time, we have use per customer that has declined as energy efficiency spenders getting placed. People replace their old air conditioners with newer versions. So the use of the base goes down. So those two forces are the result of that. And also you have to remember that the total forecast include adjustments and one of those adjustments is for DSM. So the number that you're quoting is for everything included.

Bubba McDonald (PSC): [03:52:02] Thank you. So the answer would have been yes. Yes, maybe.

Robert Baker (SACE-SF-VS): [03:52:12] And you have a few questions about the T-Stat DR program. And I believe you said, correct me if I'm wrong, did you say that it would take 12 years before it was cost effective? Is that the prediction or is that your projection?

Andy Phillips (GPC): [03:52:30] Based upon the current modeling assumptions, the thermostat DR program would be cost effective in the year 2031.

Robert Baker (SACE-SF-VS): [03:52:39] And not any time before that?

Andy Phillips (GPC): [03:52:42] No. And that's based upon our current modeling assumptions.

Robert Baker (SACE-SF-VS): [03:52:45] Is that due to the number of customers you need participating in the program to get it up to a certain level to make it cost effective?

Andy Phillips (GPC): [03:52:53] No, that is not dependent upon the number of customers. That's a result of the TRC test compares the overall benefits and, compared to the overall cost. And so the benefits are less in the cost. And therefore the TRC is overall negative for the thermostat DR program.

Robert Baker (SACE-SF-VS): [03:53:13] And let me direct your attention to page 17 of your pre filed testimony and up there beginning at line three of page 17, you identify three factors which have helped to reduce avoided costs. Three Main drivers. You say the lower forecast of natural gas, prices, modest load growth, and an increase in renewable resources. Do each of these drivers contribute equally to the declining program economics and benefits of the company's DSM portfolio?

Andy Phillips (GPC): [03:53:53] I'm not aware of that. Witness Weathers would be the best person to ask that, since it's his organization that's responsible for calculating the avoided cost.

Robert Baker (SACE-SF-VS): [03:54:06] Okay. Could you rank in magnitude these. three drivers and their significance to impacting Avoided cost?

Andy Phillips (GPC): [03:54:15] No, I cannot.

Robert Baker (SACE-SF-VS): [03:54:21] And isn't it true that if natural gas prices increase, the company can apply for a fuel cost adjustment? Is that true? If natural gas prices increase further...

Andy Phillips (GPC): [03:54:30] Are you referring to the fuel cost recovery? [Yes, sir. Yes.] That is, that would be something that would be separate from a demand side management program.

Robert Baker (SACE-SF-VS): [03:54:43] But could the company ask for a fuel cost increase at gas prices?

Andy Phillips (GPC): [03:54:46] Yes. That's in general is the number of requirements that that would be required in order to ask for that adjustment. Yes, that's my understanding.

Robert Baker (SACE-SF-VS): [03:54:53] Okay. If hypothetically, if gas prices increase for the company, shouldn't the company's avoided cost calculation for DSM programs also be adjusted, to be fair, as far as taking into account the additional cost of natural gas?

Andy Phillips (GPC): [03:55:14] I believe Witness Weathers testified yesterday that the company uses long term forecasts and setting those avoided costs. And in doing that, some of the short term impacts are not considered. And as of now, the company's long term forecast continues to project that same trend in Avoided Cost.

Robert Baker (SACE-SF-VS): [03:55:31] Thank you. And turning just to general question about free ridership. Do you know if the company could modify its program design to substantially reduce the amount of free ridership? Is there anything that you all have considered to help reduce that problem?

Jeffrey Smith (GPC): [03:55:51] Yeah. So as programs are evaluated, once every cycle, those evaluation results come back with suggestions on how to improve programs to lower free ridership. And we take those into account in future implementations.

Preston Thomas (PIA): [03:56:07] Have they been, have the changes been working?

Jeffrey Smith (GPC): [03:56:12] I would say so. Doesn't mean that future issues don't lead to additional free riders, but the ones that are identified, we we take those changes in and the program moves forward as long as it still passes economics.

Robert Baker (SACE-SF-VS): [03:56:27] All right. And would you please clarify whether the figures throughout the IRP and DSM filings reflect net or gross energy efficiency savings. Are those, based on your prior instance, gross savings?

Andy Phillips (GPC): [03:56:43] Well, the 431 gigawatt hours is gross savings.

Robert Baker (SACE-SF-VS): [03:56:59] So are, do you use net energy efficiency savings in any other for any other figure? Is there any other figure that uses net energy savings?

Andy Phillips (GPC): [03:57:11] Not that I recall.

Robert Baker (SACE-SF-VS): [03:57:19] Turning to page 24. That page, you describe the new Distributed Energy Resource Customer Program with two optional tariffs, the RAST 1 and the DRC 1. But those programs, could the RAST program be offered to residential customers in the future, or a RAST like program be offered to customers in the future?

Lee Evans (GPC): [03:57:47] The company doesn't have plans at this time to extend it beyond the commercial and industrial customers we've laid out. Going forward, we'd have to weigh what benefits could be realized for the system and what administrative costs that would be incurred.

Robert Baker (SACE-SF-VS): [03:58:04] And just so I understand, the, is the financial benefit or the attractiveness of the RAST program, the fact that the company will pay the capital expense of purchasing the generation equipment that's being installed at the customers premises rather than the customer having to go into their pocket and pay for the generation resource.

Lee Evans (GPC): [03:58:27] I think there's multiple benefits with the program. One is that it does allow Georgia Power to provide the service to our customers that they're seeking, but then also Georgia Power's ability to further leverage those assets during reliability events for the good of the system.

Robert Baker (SACE-SF-VS): [03:58:41] All right. But isn't one of the benefits if I were to participate and apply for the RAST program, would Georgia Power pay for the entire capital expense or purchasing the generation asset that's being installed at my factory or business?

Lee Evans (GPC): [03:58:57] Georgia Power would provide that asset and we would be the owners of it. But that individual participating customer, through their resiliency asset charge, would pay for the revenue requirements associated with that asset over the contract.

Robert Baker (SACE-SF-VS): [03:59:12] But that's over, is that over the life of the asset or is it a five years, ten years? How long is the payback period for that capital investment?

Lee Evans (GPC): [03:59:23] The payback period of the investment? The payback period would be over the life of the asset.

Robert Baker (SACE-SF-VS): [03:59:29] Okay. But once again, just, the company, I want to install a backup diesel generator at my facility under the RAST program. It costs $1,000,000.Do I have to spend $1,000,000 to buy that generator to put in my factory?

Lee Evans (GPC): [03:59:46] No, not. I think I understand the question a little bit better now. So, yes, no, not up front again. Georgia Power is going to buy these assets, install them behind the customers meter for their individual service. The customer then will pay through a monthly charge, the cap...the revenue requirements. And whenever I say revenue requirements, I mean the depreciation expense, the carrying cost on the asset, the associated operations and maintenance expense with it, along with any incurred fuel costs to run the asset. So all the cost of the asset over that contract life will be incorporated into what that monthly charge is for that customer.

Tim Echols (PSC): [04:00:23] A quick, quick question. Are you familiar with Green Mountain Power in Vermont?

Lee Evans (GPC): [04:00:27] Somewhat, yes.

Tim Echols (PSC): [04:00:28] Have you seen their program about home battery? I know we're talking about commercial here, but he's asking about residential programs. They have, were you aware, they have a bring your own device. So if you've already got a battery system, you can get on their program or you can get a Tesla Powerwall from them or an Enphase IQ battery, and so you can pay for it, on your bill. And then they also have a program where they can tap into that. So are you familiar with any any of those programs?

Lee Evans (GPC): [04:01:04] I am familiar with that program and a couple other new ones like it across the country. Yes.

Tim Echols (PSC): [04:01:10] Do you think the company would be open to taking a look at this in the future, as battery prices continue to go down? Especially if you've got a chance to evaluate it on a commercial program.

Lee Evans (GPC): [04:01:22] Yes, I think this program does have the benefit of being able to serve as a platform that it has the company sees benefits that we can extract from these type of distributed resources going forward in the future, that we can expand the program as those opportunities present value to all customers.

Tim Echols (PSC): [04:01:37] Thank you.

Robert Baker (SACE-SF-VS): [04:01:40] Thank you, Commissioner. Turning to pages 27 and 28 of your profile testimony, you discuss the limitations on how often Georgia Power company can dispatch the DER under DRC tariff. Does the eight hour limit apply even for customers enrolled in the four hour and two hour tranches?

Lee Evans (GPC): [04:02:01] No. Let me clear that up. So this is a programmatic element that we deliberately installed to allow for battery technology participation. We designed the program technology agnostic, meaning we weren't requiring certain technologies to participate, but also not blind to the limitations that certain technologies like storage assets have. So we allowed for three types of participation assets that have the ability to run for 8 hours of consecutive use. And a lot of, those think of your generators, your typical behind the meter generators that customers rely on. But also the customers seeking battery or storage solutions that can only potentially run for 2 hours of consecutive use or 4 hours of consecutive use. They still can participate in the program and with a specialized demand response credit calculated at the value the system would receive from that shortened response time.

Robert Baker (SACE-SF-VS): [04:03:03] Thank you. Thank you. The company is requesting a 4% Additional Sum and with a higher 5% Additional Sum if the savings grow higher than 120% of the certified energy savings goal by class. If the company is asking for an incentive to for superior performance, it also be fair to also have some type of provision in the Additional Sum that also provides a disincentive for poor performance, such as in a situation if energy savings are only 75% or less of the target or goal by class, wouldn't it be appropriate, based on your record, your request also have some kind of incentive for you to to meet your basic goal or standard?

Jeffrey Smith (GPC): [04:04:00] So the Additional Sum by statute is, is to incent the utility to do energy efficiency, not to penalize them. But to be fair, if we don't reach goals and we don't save kilowatt hours, there is no $0.04 per kilowatt hour that we get. So we believe the methodology that we put forward encourages us to get to goal and put every effort forward to get as much as we can with the budget that's approved.

Robert Baker (SACE-SF-VS): [04:04:32] You think you'd have a little more incentive if you didn't meet your your basic goal. And you knew you're going to get an incentive, but a little less than an incentive than what you had asked.

Jeffrey Smith (GPC): [04:04:43] For, so what I'll say is, again, it is an incentive by statute. The other thing I would say is Georgia Power has had energy efficiency program goals since 2011. And historically, with the exception of the two COVID years, we have exceeded our program goals. So we put forth every bit of effort to meet our DSM savings targets already. [Thank you.]

Francisco Valle (GPC): [04:05:12] So, Commissioner, just real quick, I want to make sure that the commissioners understand that the current methodology is not really working, that meant, that it's supposed to be. And so our proposal is to first simplify, to create something that is not an algorithm in trouble, provides the right incentives, and reasonable, and get us back to to what the the additional sum was at the beginning of this program. Because as the avoided cost and the economics keep deteriorating, we're going to get less and less and less, although we are keeping this programs alive for the benefit of the customers. So it's regardless of the ins and outs of how this gets implemented is a matter of of recovering and getting us back to what this meant to be.

Robert Baker (SACE-SF-VS): [04:06:06] All right. Next set of questions. Over the IRP planning period, is the company's total revenue requirement less with the base case DSM portfolio than it would be without it? Want me to repeat it?

Francisco Valle (GPC): [04:06:24] I don't think we can talk revenue requirements in this in this panel.

Robert Baker (SACE-SF-VS): [04:06:28] All right. All right. Could you explain? You're asking for a change in the additional sum. Why isn't the current additional sum formula working right now?

Jeffrey Smith (GPC): [04:06:58] But, as we stated previously, the current methodology is based on avoided cost and program costs. And as we previously outlined, that is driving it down at a rate of 40%-ish from what it was originally approved at. While our program goals have more than doubled over that same time horizon, so the intent of it being there to incent us is not necessarily keeping pace with what it was originally designed to do. And furthermore, again, it is set as an incentive to encourage the utility to do more. And in the residential space, under the current methodology, it would be almost zero in the grand total of things if that current methodology applies forward into this cycle.

Robert Baker (SACE-SF-VS): [04:07:56] Thank you. Focusing on the base case portfolio and the efficiency savings levels proposed for the next three years. Does this mean that over the IRP planning period, the amount customers will pay the company through rates is less with the base case than without it?

Jeffrey Smith (GPC): [04:08:25] I'm not sure I understand your question. You can ask it again. I'll go through it again.

Robert Baker (SACE-SF-VS): [04:08:30] Focusing on the base case portfolio and the efficiency savings levels proposed for the next three years, does this mean that over the IRP planning period, the amount customers will pay the company through rates is less with the base case than without it?

Andy Phillips (GPC): [04:08:49] I'm not sure that we can speak specifically to that question. When we develop the proposed case, the company follows the nine step Commission-approved DSM program planning approach. As we said earlier, we strive in setting those program targets to achieve a balance of maximizing economic efficiency while minimizing the upward impact on rates. Those are the considerations in developing it. We don't consider any rate impact that might result, and we don't consider that because it's not part of the DSM program planning approach.

Francisco Valle (GPC): [04:09:20] And Commissioner, I want to make sure that you understand that there is one word is revenues. But but when we're talking about revenue requirements and company revenues, we're talking about the amount of money that serves to pay the investments and in the field and the O&M that we incur. The revenues that are part of the DSM discussion are a marginal impact, that is supposed to measure the sort of the subsidization or the impact on the non-participants. So it's not a company revenue. It's more of a, the analysis of like, are we doing the right thing by cross-subsidizing?

Robert Baker (SACE-SF-VS): [04:09:59] Okay. Let me just throw this question and see if you can handle it, answer it... Over the planning period, is the company's total revenue requirement less with the advocate's case DSM portfolio than it would be with either no DSM portfolio or the Company's base case?

Andy Phillips (GPC): [04:10:19] Like I said, I don't think we're prepared to speak to revenue requirements when we're referring to either the company's proposed case or the the advocate's case. We, in developing those, as we said, we try and achieve this balance of TRC, the overall benefits versus the rate impact measure and minimizing the upward impact on rates. We do know that as proposed, the company's case has an average RIM impact of -$283 million. That would drive rates up. The advocates case, as it's proposed, would have a RIM impact of -$543 million. So much more significant impact in terms of increasing overall rate pressure when compared to the company's proposed case.

Tim Echols (PSC): [04:11:08] While he's looking up something, we've been talking about the transmission issues. We've got upgrades, South Georgia being flush with energy there, needing it in north Georgia. Does the proximity or the location of some of the programs that you have, does it or could it have an impact on transmission planning at all?

Andy Phillips (GPC): [04:11:41] Commissioner, I don't think so. Not that I'm aware of, in terms of how we evaluate the avoided cost of energy efficiency. Those avoided costs, as we said earlier, which include generation, transmission and distribution, we evaluate that as, at a System level or a company level. And so we don't assign that to specific parts of the state.

Tim Echols (PSC): [04:12:05] What about just from an electron standpoint? Does does it make sense that if we had more more DSM in North Georgia, that it would positively impact us having to make upgrades or keep it from having to build that next substation? I mean, that may be out of your, beyond the scope of what you guys want to answer.

Andy Phillips (GPC): [04:12:34] I guess the answer is it could, but we don't have any information, at least in terms of how we assess or evaluate energy efficiency programs at this point to say whether it would or wouldn't.

Tim Echols (PSC): [04:12:44] All right. Thank you.

Robert Baker (SACE-SF-VS): [04:12:46] Mr. Chairman. Just to make this question a little easier on the panel, could I give them a document to refer to? I've shown it to Georgia Power counsel and...

Fitz Johnson (PSC): [04:12:56] [Yes, you may.]

Robert Baker (SACE-SF-VS): [04:13:13] All right, gentlemen. Just for the record, this is, I handed you a document from volume two, three to the 2022, DSM case summary data MG0 demand side management Working Group Advocacy Case, "The Economic

Summary for all programs." And I'm going to refer you to line 1-11 rows C, D, and E. I've highlighted the those three numbers on the tab page. They're in front of you. And I just want to ask you, the Advocates case has net benefits of about 170, 206 and $244 for the years 2023 through 2025, for a total of approximately $621 million of net benefits to the utility system for the portfolio over the next three years. Is that a correct statement of the numbers on that chart?

Andy Phillips (GPC): [04:14:14] Sorry. Can you tell us again, where are you looking? We're having trouble finding the numbers.

Robert Baker (SACE-SF-VS): [04:14:18] It's the highlighted. Row 111, C, D, & E. Column C, D, & E. It's the tab...

Andy Phillips (GPC): [04:14:31] I'm not seeing row 111, and I'm not seeing a column labeled C, D, & E. So. So. All right. So if you could. I think we're on the same page now. Mr. Baker, could you restate your question?

Robert Baker (SACE-SF-VS): [04:14:55] I just want to confirm that that based on the Advocate's case net benefits, that it shows that 170, 206 and $244 million over the years 2023 through 2025, for a total of approximately $621 million of net benefits to the utility system for the portfolio for just the next three years. Is that correct? Statement of that...

Andy Phillips (GPC): [04:15:24] Yes, the individual, the incremental measure, or the incremental values that you spoke of are highlighted. And specifically, these are, so the page that we're looking at calculates the, it's the economic summary, it's the cost effectiveness test results for the advocacy case. And Mr. Baker has highlighted the row that speaks to the program administrator cost test. And so those values that you highlighted, the incremental values are correct.

Robert Baker (SACE-SF-VS): [04:15:53] And the total net present value benefits over the 12 years shown on this table are $3,345,000,000, is that correct?

Andy Phillips (GPC): [04:16:05] I'm sorry. Could you say that number one more time, Mr. Baker?

Robert Baker (SACE-SF-VS): [04:16:07] Is the total net present value benefits over the 12 years shown on the table $3,345,000,000?

Andy Phillips (GPC): [04:16:16] Yes.

Robert Baker (SACE-SF-VS): [04:16:18] And when all the costs and benefits are accounted for, for total costs, system costs, the customer cost would be $3,345,000,000 higher if the Company did no DSM compared to the DSM portfolio in the advocate's case. Is that correct?

Andy Phillips (GPC): [04:16:36] Restate your question one more time. I want to make sure I'm following your premise.

Robert Baker (SACE-SF-VS): [04:16:40] When all the costs and benefits are accounted for or total system costs, the customer cost would be $3,345,000,000 higher if the Company did no DSM compared to the DSM portfolio in the advocate's case. Is that correct?

Andy Phillips (GPC): [04:16:59] I don't know that I can agree with that. As we understand the program administrator cost test. So the program administrator cost has tries to answer the question of, "Is this program or is this portfolio good for the utility?" And so it compares the benefits the utility realizes versus the cost. And specifically, it's some of the benefits that we've spoken about earlier, it's the the avoided cost of generation transmission and distribution compared to the cost of offering the program. And so what this is showing us is that there are positive net benefits to the company by offering these programs, as the advocacy case has been developed, of course, in trying to achieve the commission's directive of maximizing economic efficiency while minimizing the upward impact on rates, those benefits to the utility would come at a cost to all customers. Specifically in those years, it's -300. And if I can read this, 396 million - 543 million in the year 2024, -688 million. And that's the number I said earlier. On average, the advocates case would result in -543 million on average, an upward impact on rates. And so those benefits do come at a cost to consumer, excuse me, to customers as well. It's all customers. It's the customers that choose to participate in our programs and the customers who choose to not participate. They would bear the cost of the programs based upon the advocate's case at those levels.

Robert Baker (SACE-SF-VS): [04:18:35] Okay. Thank you for that answer. But if you if you compare the present value savings of the advocate's case to those of the base case, aren't the savings from the advocates case more than $1,000,000,000 more than the base case?

Andy Phillips (GPC): [04:18:53] I don't have the the base case information in front of me. I'm looking just at the advocates case. But the advocates case does include higher savings compared to what the company's proposed case is. It, as I said earlier, those higher savings do come at higher cost to customers, both the customers who choose to participate in the programs and those that do not.

Robert Baker (SACE-SF-VS): [04:19:29] And just for clarification, aren't the TRC benefits net benefits above and beyond cost, just for clarification, are the TRC benefits net benefits?

Andy Phillips (GPC): [04:19:42] The TRC, the total resource cost test evaluates the benefits. It takes a societal perspective and considers the benefits regardless of who realizes the benefits, and it compares it to the cost, regardless of who pays the costs. And so it evaluates the benefits to the society or the community as a whole. Whereas some of the other cost effectiveness tests are specifically directed at one entity, whether it be the participant or the the program administrator.

Robert Baker (SACE-SF-VS): [04:20:14] Thank you. Thank you very much. And how do you energy annual energy efficiency savings levels in the base case compare to those required by the commission in the 2019 IRP?

Jeffrey Smith (GPC): [04:20:28] So just for clarity, are you asking what the savings totals are for this IRP compared to the previous? [Approximately.] They're the same, 431 gigawatt hours a year.

Andy Phillips (GPC): [04:20:44] And just for clarification, they're the same based upon the results of the IRP. The 431 gigawatt hours that we are including in our proposed case are 15% higher than what the company proposed in the 2019 IRP. But in terms of what this proposed case equates to versus what was settled in the previous IRP, they are roughly the same. They're consistent.

Robert Baker (SACE-SF-VS): [04:21:13] And when developing the IRP and the proposed DSM portfolio, did the company pursue increases in the levels of energy efficiency and demand response resources as a solution to the issues of power plant retirements, load growth, and winter peak and reliability concerns?

Andy Phillips (GPC): [04:21:33] No, not specifically related to how the company's proposed case was developed. As we stated earlier, when developing the company's proposed base case, we consider a variety of factors, but we do follow the commission approved DSM program planning approach. And I don't recall there's any steps in the DSM program planning approach that includes some of those factors that you specifically cited in your question.

Francisco Valle (GPC): [04:21:59] And one thing, Commissioners, you have to, I want to remind you that, is that when we plan for the DSM programs in the planning process, we reduce the load forecast by the amount of energy and peak demand that are coming from this. So in that respect, is treated as a priority resource, right. And is a savings on the peak demand that don't have to be served in the future. So to that, to that extent, they do capture that value in our planning.

Robert Baker (SACE-SF-VS): [04:22:31] Okay. Thank you very much. This question that may be a hearing request, but let me ask of you and see if you can answer. What is the program administrative cost effectiveness ratio for both the base case and advocate's case, respectively, for the years 2023, 2024 and 2025?

Andy Phillips (GPC): [04:22:51] Are you asking what the ratio is when one is divided by the other?

Robert Baker (SACE-SF-VS): [04:22:58] Yes.

Andy Phillips (GPC): [04:23:00] I don't have that ratio right offhand, but that that result can be calculated by the information that's been provided. Where you compare the savings from the advocate's case versus the proposed case...

Robert Baker (SACE-SF-VS): [04:23:13] And where, what would you refer me to a document or to a spreadsheet that information could be pulled from?

Andy Phillips (GPC): [04:23:18] That information was included in the technical appendix two, I believe, volume two, as part of the company's main filing. It would be the same source for where you had this DSM advocacy case information.

Robert Baker (SACE-SF-VS): [04:23:31] All right. Thank you very much. All right. According to the White Paper, at page 2021, the TEAPOT study identified 3,877 gigawatt hours of cost effective and achievable energy efficiency savings for the year 2032. While the competitive analysis through Aurora showed as much as 3,050 gigawatt hours. Correct?

Andy Phillips (GPC): [04:23:59] I want to make sure I'm looking at the same page. Did you say page 21? [Yes, sir.] And can you restate those numbers, Mr. Baker?

Robert Baker (SACE-SF-VS): [04:24:05] Yes, sir. Referring to the TEAPOT, that was the figure of 3,877 gigawatt hours, OK. And then referring to the Aurora study showed a 3,050 gigawatt hours. Is that correct?

Andy Phillips (GPC): [04:24:20] That's correct. Commissioners, this is referring to the DSM white paper that we spoke of earlier. This is where the result of the 2019 order, directed the company to collaborate with staff to investigate methodologies for evaluating energy efficiency in the supply side system. And so as a result of that order, the company did collaborate with staff, did investigate methodologies, and did produce the white paper in accordance with the order. And so what Mr. Baker is specifically referring to is a table within the White Paper that compares the cost effective, achievable potential for from the TEAPOT study or the energy efficiency study with one of the three methodologies that was modeled in the White Paper. And so in this particular case, the TEAPOT study, the energy efficiency potential study, did identify more cost effective energy efficiency than what was modeled in the supply side system for that specific approach or methodology.

Robert Baker (SACE-SF-VS): [04:25:28] Thank you. Thank you very much. And now, isn't it correct that the Aurora model is a model that was developed by the company? Is that correct?

Andy Phillips (GPC): [04:25:41] Aurora was not developed by the company. Aurora is a model that is provided by a separate company, and the company utilizes Aurora in evaluating its supply side systems. Witness Weathers might have spoken about Aurora more specifically yesterday, and that's still being used today. Yes.

Robert Baker (SACE-SF-VS): [04:26:01] Okay. All right. But isn't it correct that the amount, referring back to the two figures from the TEAPOT study and from the Aurora study, isn't it correct that the amount of energy efficiency savings proposed by Georgia Power in its base case is only about 430 gigawatt hours over the next three years and even lower in 2032 compared to the potential savings from TEAPOT and. Aurora.

Andy Phillips (GPC): [04:26:27] Well, it's 431 gigawatt hours annually. And I think it's important to note the values that we spoke of earlier, the 3,877 gigawatt hours, that the energy efficiency potential study, the current process identified as cost effective. That value is based upon the year 2032. And as Mr. Smith just noted, the 431 gigawatt hours included in the company's proposed case is an incremental value based upon the years 2023, 2024 and 2025. So it's not an exact apples to apples comparison, Mr. Baker, based upon the way you're asking that question.

Robert Baker (SACE-SF-VS): [04:27:06] All right. Well, thanks. Thanks for the clarification. I did not know that. Is the explicit purpose of the Aurora analysis to show the least cost way to meet future energy needs by having DSM compete directly against supply side resources?

Andy Phillips (GPC): [04:27:22] I'm not an expert in Aurora. That's a Witness Weather's organization is responsible for the Aurora system and the Aurora modeling. As it relates to the White Paper, what I can speak to are the adjustments, the additional steps that the company had to take in order to model demand side resources in the supply side system. Those are additional steps that are not required in our current methodology. So I can speak to some of the additional work required to model demand side resources in Aurora. I can speak to the extra work that would required on the back end of modeling energy efficiency or demand side resources in our supply side system. What I can't speak to is, is the Aurora system itself.

Robert Baker (SACE-SF-VS): [04:28:08] When using the [unintelligible] competitive analysis method, the company's revenue requirement was lower than the cost of supply when the Company ramped up. to 3,050 gigawatt hours of efficiency savings by 2032 that they could have used. Doesn't a lower revenue requirement mean lower utility cost overall?

Andy Phillips (GPC): [04:28:34] I'm not exactly sure I understood the question. You included a number of items in there. You specifically cited some of the results of the from the DSM white paper as well as a question about revenue requirements. So can you...

Robert Baker (SACE-SF-VS): [04:28:50] It was a compound question. I'm sorry. Let me just ask a simple question. Doesn't a lower revenue requirement mean lower utility cost as a general proposition?

Andy Phillips (GPC): [04:29:01] Are you asking? Lower revenue requirements lead to lower costs for customers. [Yes, sir.] Generally. I think so. Like I said, in terms of how we develop the economics revenue requirements is not something that we consider and it's not part of the DSM program planning approach.

Robert Baker (SACE-SF-VS): [04:29:21] Thank you for your response. And would you say that cost effective energy efficiency programs, are lower than avoided cost?

Andy Phillips (GPC): [04:29:37] Yes. As it's defined, cost effective energy efficiency programs, depending upon which cost effective cost effectiveness measure is being utilized because there are different inputs to each one of the different cost effectiveness tests. But the company does evaluate cost effectiveness in a variety of ways. And so I didn't know if your question was specifically referring to TRC or some other cost effectiveness test.

Robert Baker (SACE-SF-VS): [04:30:06] I'll move on to the next question. Referring to the IRP main document at page 8-53, if electric avoided cost were to significantly increase in the time period 2022 to 2024, would the company increase its energy efficiency program budgets and savings?

Andy Phillips (GPC): [04:30:25] I'm turning to that. Could you restate that page again?

Robert Baker (SACE-SF-VS): [04:30:27] Sure. It's the IRP main document, page 8-53.

Andy Phillips (GPC): [04:30:35] And then what specific part of that document or that page are you reading?

Robert Baker (SACE-SF-VS): [04:30:40] Dealing with the avoided cost avoided cost were to significantly increase due to due to the economy cost with the company.

Allison Pryor (GPC): [04:30:55] Objection. This question calls for speculation.

Fitz Johnson (PSC): [04:31:00] All right, move on. All right.

Robert Baker (SACE-SF-VS): [04:31:08] I just have a few questions about the manufactured housing retrofit and replacement program. Was the, was this program cost effective under the TRC test and program administrator cost test?

Jeffrey Smith (GPC): [04:31:24] I know it was for TRC. I'm not 100% sure on the program administrator test.

Robert Baker (SACE-SF-VS): [04:31:36] Do you happen to know what the approximately, what the cost effectiveness score was for the program under the TRC test or the program administrator cost test?

Jeffrey Smith (GPC): [04:31:47] For TRC and, subject to check, I want to say it's around 1.6 or 1.8 [Subject to check] on TRC.

Robert Baker (SACE-SF-VS): [04:32:00] Do you know how approximately how many manufactured homes are in Georgia Power service territory? Approximately.

Jeffrey Smith (GPC): [04:32:07] I do not subject your check. Would you be surprised that would you agree that possibly 145,000 manufactured homes are in the service territory.

Jeffrey Smith (GPC): [04:32:18] That, I'm not aware.

Robert Baker (SACE-SF-VS): [04:32:21] And would you agree that energy efficiency use per square foot for manufactured homes, especially older homes, is typically higher than other types of housing?

Jeffrey Smith (GPC): [04:32:31] I would say older homes that have not had improvements are typically more, use more energy than similar homes that are newer.

Robert Baker (SACE-SF-VS): [04:32:40] In general, would you agree that the people who, customers, residents who live in manufactured home, meet the low income threshold, by a greater proportion?

Jeffrey Smith (GPC): [04:32:53] I'm not aware of that number.

Robert Baker (SACE-SF-VS): [04:32:58] And finally, did the Georgia Power achieve the required energy efficiency targets ordered by the Commission in the 2019 IRP?

Jeffrey Smith (GPC): [04:33:06] Are you asking if we achieved the goal? Yes. Yes. As previously stated, we achieve 56% of our goal in 2020 and 70% of our goal in 2021. Well, residentially, we were above 100% of goal in 2021.

Robert Baker (SACE-SF-VS): [04:33:27] So were these numbers you just gave me 56% and I was for commercial or blended total? Total, total.

Robert Baker (SACE-SF-VS): [04:33:34] Now for residentia, you were over in 2021? OK.

Robert Baker (SACE-SF-VS): [04:33:41] Should the company be required to capture additional savings in future years when it fails to hit the required savings targets in prior.

Jeffrey Smith (GPC): [04:33:48] Years? Well, that's a determination for the commission to make, historically their annual targets, they don't carry forward. And again, historically, excluding the COVID years, we've averaged 111% of goal over those years, minus 2020 and 2021.

Tim Echols (PSC): [04:34:09] And Mr. Smith, part of the Covid issue was that you couldn't get into the homes. Right. You couldn't go in and implement the program.

Jeffrey Smith (GPC): [04:34:17] Yes, Commissioner, there were several issues. That was definitely one of them. The inability to safely go into customer homes and businesses, workforce issues that were prevalent throughout the time timeframe, economic situations which were resulting from Covid. There was a myriad of reasons. Yes sir.

Robert Baker (SACE-SF-VS): [04:34:40] And final question. In your transmission and distribution system planning processes, do you consider distribution and transmission system projects that could be deferred or avoided by locationally targeted DSM resources?

Andy Phillips (GPC): [04:34:53] I think Witness Robinson is the best witness to direct any transmission or distribution questions to.

Robert Baker (SACE-SF-VS): [04:35:02] All right. Thank you very much, gentlemen. Thank you for your time. Patience. Thank you. Commissioners.

Preston Thomas (PIA): [04:35:07] Thank you, Mr. Baker. Mr. Mahan, are you online?

Simon Mahan (SREA): [04:35:15] Yes. And I have no questions. Thank you. Cool. Thank you. All right.

Fitz Johnson (PSC): [04:35:24] Redirect?

Allison Pryor (GPC): [04:35:25] Yes. Just a few questions. Mr. Evans, earlier today you were asked several questions regarding the RAST 1 tariff and how it compares to market products. Is Georgia Power proposing to deploy this service because customers have requested it?

Lee Evans (GPC): [04:35:39] Yes.

Allison Pryor (GPC): [04:35:41] And is it the intent of this offering to offer a company owned asset to address those customers identified need?

Lee Evans (GPC): [04:35:47] Yes.

Allison Pryor (GPC): [04:35:48] And is it accurate that similar programs have been offered in other jurisdictions? And in that regard, Georgia Power is simply just making a similar service available?

Lee Evans (GPC): [04:35:57] Yes.

Allison Pryor (GPC): [04:35:59] And Mr. Smith, I believe Ms. Brown asked you a question earlier about the automated benchmarking tool. Can you please clarify the company's position as to why it's proposing to no longer continue offering this product?

Jeffrey Smith (GPC): [04:36:13] Sure. The company is no longer proposing to offer the product because there's no energy savings associated with it. It should also be noted, though, that that is not a Georgia Power owned resource. It's a publicly available tool that anyone can go out and contract for.

Allison Pryor (GPC): [04:36:29] Thank you. And finally, Commissioner Pridemore asked a question about the impacts of Covid on DSM participation. Can Georgia Power determine by month and by program how far the company was below its goal in 2020 and 2021?

Jeffrey Smith (GPC): [04:36:44] Yes, the company can look by program by month in each of those years and determine how far below that monthly goal we were and attribute that back to social distancing and safety protocols that were put in place due to Covid.

Allison Pryor (GPC): [04:37:00] Thank you. No further questions.

Fitz Johnson (PSC): [04:37:03] Thank you, sir. Do you have any further exhibits?

Allison Pryor (GPC): [04:37:06] No, I think that was covered earlier. And if there are no further questions, I'd ask that the panel be dismissed.

Fitz Johnson (PSC): [04:37:12] Okay. Thank you. All right. At this time. Thank you very much, gentlemen, for your time. You are excused. We are going to take, 20. Let's come back and we're going to start the final panel at 2:30 sharp.

Bubba McDonald (PSC): [04:37:26] Commissioner, before we do that, could we kind of get a feeling from the commissioners here that we will finish tonight no matter how long people speak?

Fitz Johnson (PSC): [04:37:38] All right, you guys.

Tim Echols (PSC): [04:37:40] I checked with the Georgia Building Authority and they are going to keep the air on until 10:00 tonight. We've got that squared away. We're good. Good.

Fitz Johnson (PSC): [04:37:50] All right. All right. So we get back to we get down to 2:30 sharp. Thank you.

Fitz Johnson (PSC): [04:47:02] If the Commissioners return. I have to have a quorum to start.

Fitz Johnson (PSC): [04:49:33] All right, Mr. Marzo. You'll swear in the witness.

Brandon Marzo (GPC): [04:49:34] Thank you, Mr. Chairman. At this time, Georgia.

Brandon Marzo (GPC): [04:49:36] Power Company will cause the final panel of Dr. Mark Berry and Mr. Mitchell. They're currently seated in the box. With your permission, Mr. Chairman. I'll swear them in. [Go ahead.] Gentlemen, would you raise your right hand. Do you swear the testimony you give today is the truth, the whole truth, and nothing but the truth. So help you God? [Yes.] Dr. Berry, please start by stating your full name, your employer, and your responsibilities for record.

Mark Berry (GPC): [04:50:01] My name is Mark Simpson Berry. Currently serve as vice president of Environmental and Natural Resources for Georgia Power Company. With Georgia Power Company are responsible for the Environmental Compliance Stewardship Programs, the natural resource portfolio and the real estate portfolio. I also serve as Vice President of Research and Development for Southern Services. In that role, I'm responsible for Southern Company's research and development program.

Brandon Marzo (GPC): [04:50:29] Thank you, Dr. Berry. Mr. Mitchell, would you do the same?

Aaron Mitchell (GPC): [04:50:31] Sure. My name is Aaron Mitchell. I'm director of environmental affairs for Georgia Power Company. I lead a team that is responsible for environmental compliance, permitting and oversight, as well as production of the Environmental Compliance Strategy and implementation and oversight of the company's CCR compliance program.

Brandon Marzo (GPC): [04:50:53] Thank you, gentlemen. Dr. Berry, on March 11th of this year, did you pre-file or cause to be pre-filed 35 pages of direct testimony in question and answer format in this case? [Yes, I did.] Gentlemen, are there any corrections you need to make to your pre filed testimony? [No.] If I were to ask you the same questions today under oath, would your answers be the same set forth in your pre filed testimony? [Yes.] Commission. Just for the record, their trade secret and public disclosure version of environmental compliance strategy that has previously been entered as GPC 1-PD and GPC 1-TS. It was entered with the first panel's testimony.

Fitz Johnson (PSC): [04:51:30] Okay.

Brandon Marzo (GPC): [04:51:32] Chair Johnson, also the court reporter, has been previously provided a copy of the brief out direct testimony and now asks that the direct testimony be entered into the records if given here orally today.

Bubba McDonald (PSC): [04:51:43] Mr. Marzo. Yes, sir. My memory is short. Did you swear the witnesses?

Brandon Marzo (GPC): [04:51:47] Yes, sir, I did. I did. I would not forget that. [I forgot.] It wasn't very memorable. [I just wanted you to ask.] That's your colleague. For the record, Chair Johnson, the company filed on March 30 of 2022 a Demonstrative Exhibit to accompany the summary of the panel. That's been handed out to commissioners and provide it to counsel.

Fitz Johnson (PSC): [04:52:22] Okay.

Brandon Marzo (GPC): [04:52:23] Dr. Berry, would you please summarize your brief testimony?

Mark Berry (GPC): [04:52:26] Yes. Good afternoon, Commissioners. We appreciate the opportunity to appear before you today. The purpose of our testimony is to support Georgia Power environmental compliance strategy, or ECS, which is a comprehensive strategy designed to provide cost effective plans for the company to meet environmental compliance obligations while providing customers with clean, safe, reliable and affordable energy. Building on the success of previous ECS filings, the company's ECS seeks to continually optimize compliance plans in an increasingly dynamic and uncertain regulatory environment. The ECS considers existing and potential legislative and regulatory requirements and determines plant specific compliance options. These options are evaluated based on an available technology cost schedule, plant operations and the environment. This iterative approach is designed to provide the company the necessary flexibility to develop and refine its compliance plan in the best interests of customers as additional information becomes known.

Mark Berry (GPC): [04:53:38] Georgia Power ECS includes the following major components. First, the company's ELG strategy effectively considers increasing environmental pressures on coal units, the availability of cost effective low- and zero-carbon resources, and future system reliability needs. The ECS detail of the unit specific compliance options selected for each site, including wastewater treatment controls required for ELG compliance at Plant Bowen Units 3&4 and Scherer 1&2, as well as the proposed retirement of Bowen Units 1&2, Scherer Unit 3, and Wansley Units 1&2.

Mark Berry (GPC): [04:54:21] The ECS describes the unique opportunity to pursue parallel compliance path for ELG for Scherer Units 1&2 while the company continues to evaluate the membrane based treatment systems needed to comply with the voluntary and incentive program pathway by 2028. Preliminary results from the evaluation indicate that the VIP pathway is potentially feasible at Scherer. The company expects to provide additional information, including updated cost estimates and associated research on the membrane based treatment system to this commission in May. Second, the company's CCR strategy approved in 2019 IRP, which includes the closure of all 29 ash ponds and 12 landfills, continues to be effectively implemented with significant progress made over the last three years. The company continues to evaluate opportunities to refine and optimize its closure plans, including consideration of plant retirements proposed in this IRP and the closure strategy.

Mark Berry (GPC): [04:55:31] If the Commission approves retirement of the coal units at Plant Wansley, Georgia Power recommends modifying its ash pond closure plans at the site from closure in place to closure by removal. The retirement of Plant Wansley presents a unique opportunity to use the existing onsite landfill to support the ash pond closure. The company will provide an updated ECS and associated technical appendices to support this recommendation to the PSC in the coming weeks. While the current closure-in-place strategy provides a robust solution, closure-by-removal provides the opportunity to maximize the use of the existing landfill asset, manage construction and operational risk associated with the current closure-in-place design, and preserve the option for future beneficial use of ash as driven by the market.

Mark Berry (GPC): [04:56:30] Overall, Georgia Power is seeking to identify market driven opportunities and maximize the value for the beneficial use of stored ash at its active and retired plants across the state. Currently, the company is in the final stages of evaluation of bids, responding to the request for proposal for the beneficial use of stored coal ash at Georgia Power facilities and will move forward with opportunities that present expected value to the ash pond closure strategy. To realize this value. The company will begin investing in ash processing infrastructure at applicable facilities over the next three years. As with any commodity, there are inherent market risks that could impact the assumed volumes of ash reuse. However, the following graph depicts an example of long term value that could be achieved through strategic installation of ash processing infrastructure as market opportunities develop. The red line indicates the cumulative cost of the closure program without beneficial use. The blue line represents the potential value of beneficial use through the expected reduction in overall cost of the closure program. Third, the company's climate approach uses a long term outlook and assumes a carbon constrained future to appropriately mitigate risks and challenges associated with potential climate policies that could impact customers. This approach emphasizes the importance of proactively preparing for a possible future carbon policy.

Mark Berry (GPC): [04:58:22] Finally, research and development is a long standing cornerstone of Georgia Power environmental strategy and continues to play a pivotal role in the company's compliance plan. The company leverages R&D to bring alternative and cost effective technologies to market and to inform our decision making to bring value to customers. The tall wind and hydrogen microgrid demonstration projects requested in this IRP are key R&D efforts to position Georgia Power to meet the rapidly changing technology landscape while minimizing costs and mitigate mitigating risks to customers. With the Commission's oversight, the company is well positioned to continue to build on successes for the benefit of customers with its 2022 ECS through robust research efforts, cost effective strategy optimization, reliable operations, and environmental compliance. Thank you, Commissioners.

Fitz Johnson (PSC): [04:59:24] Thank Mr. Barry.

Brandon Marzo (GPC): [04:59:26] Chair Johnson. We do have copies available of the demonstrative exhibit. I'd also like to mark that as Georgia Power exhibit number three.

Fitz Johnson (PSC): [04:59:35] Thank you.

Brandon Marzo (GPC): [04:59:37] With that, Chair Johnson, witnesses are available for cross-examination.

Fitz Johnson (PSC): [04:59:41] All right. Thank you. Commissioners, any question for the witness? All right. Georgia Public Service Commission. Thank you.

Preston Thomas (PIA): [04:59:56] Preston Thomas on behalf of public interest advocacy staff. If you could turn to the main docket document, page 1-13, item number 15, it indicates that the company is requesting approval of the capital O&M and CCR ARO cost, but not yet the recovery of this cost. Am I correct that the ECCR revenue requirement is not subject to true up or reconciliation to actual cost?

Aaron Mitchell (GPC): [05:00:40] I am not a commissioner. I'm not a great witness. However, generally, that is my understanding.

Preston Thomas (PIA): [05:00:48] That is your understanding. So the company doesn't maintain tracking of whether it is over recovering its ECCR costs, does it?

Aaron Mitchell (GPC): [05:01:04] While the company maintains and projects through this Commission in various forms in the Environmental Compliance Strategy, the costs associated with activities that are necessary to comply with environmental mandates, whether they're federal or state. We update those to this commission on an annual basis, depending on the type of costs. If it's CCR ARO costs related to ash ponds that's done semiannually. And then every three years, of course, in this filing. An exact comparison, I'm not aware of an exact comparison, if that's your request.

Preston Thomas (PIA): [05:01:42] So I guess my question is, is there way for staff and the commission to tell whether in 2020 or 2021 the company over recovered its ECCR cost?

Brandon Marzo (GPC): [05:01:59] Chairman Johnson. I think if there are questions about the cost in this case, that's obviously fair game. To the extent that we're talking about what is heard in a prior period where it's covered by an accounting order, we have an ASR docket where that information is provided. We also went through a rate case. Obviously, the ASR is ongoing, an annual review of that process. These witnesses are not revenue requirements witnesses that will speak to, necessarily that, if there are questions about the costs, generally for environmental controls, excluded stock. If they are, prepared to speak to that.

Fitz Johnson (PSC): [05:02:29] I'll sustain.

Preston Thomas (PIA): [05:02:32] Commissioner. Then I would, may I approach the witnesses with a response to that request? May I approach.

Fitz Johnson (PSC): [05:02:43] Make sure counsel...

Brandon Marzo (GPC): [05:02:50] I still remain concerned. But I mean, I'll you know, I'll let staff counsel ask a question and then leave an objection if needed.

Fitz Johnson (PSC): [05:02:57] Thank you. You may approach.

Preston Thomas (PIA): [05:03:44] After you look at this, this data response, STF LA-4-12, in this docket. Does it help you better answer that question at all? Even if you can't give depth, can give a yes or no answer as to whether it's possible for the Commission to tell in 2020 or 2021 if the company over recovered its ECCR cost?

Aaron Mitchell (GPC): [05:04:18] Well, specifically, the response says the company does not maintain an under or over recovery balance related to the ECCR tariff.

Preston Thomas (PIA): [05:04:29] And the company's proposed ECCR costs include amount for contingencies. Right?

Aaron Mitchell (GPC): [05:04:41] Yes, commissioners, the company does, not on all projects, but where relevant include contingency consistent with industry practice on large projects or longer term projects to ensure that we're providing the best cost estimate possible for completion of that project.

Preston Thomas (PIA): [05:05:04] And so, if the company has an ECCR that includes contingency amounts and then in a given year, it doesn't incur the full amount estimated for that contingency that could result in over collection of actual cost, right?

Aaron Mitchell (GPC): [05:05:21] While it's true that if that scenario played out, that the company may recover more than is actually spent, it's also true that if the company overspends as compared to our estimate, that the company would under recover the actual costs compared to the original estimate based on what's in the ECCR tariff.

Preston Thomas (PIA): [05:05:45] But if you don't track it, there's no way for the Commission to know.

Aaron Mitchell (GPC): [05:05:53] Do you have a specific question?

Preston Thomas (PIA): [05:05:56] So it just, you said it could be over recovered or it could be under recovered, but we don't have a way of knowing that. Is that correct?

Aaron Mitchell (GPC): [05:06:06] Well, as as your DR you handed me showed, commissioners, we don't track that. And that is not required, as I understand, by the Commission for the ECCR tariff.

Preston Thomas (PIA): [05:06:21] And the company has announced that Scherer Unit 3 will be retired and has requested decertification of that unit, right?

Aaron Mitchell (GPC): [05:06:33] That is correct.

Preston Thomas (PIA): [05:06:37] And even though the company is proposing these closures, it's still planning on spending a substantial amount for capital expenditures on Unit 3&4 scrubbers, sealers and bag houses. Correct?

Aaron Mitchell (GPC): [05:06:55] You're referring to the...[Scherer Unit 3]. The dollars included in the ECCR table once the selected supporting information.

Preston Thomas (PIA): [05:07:05] Right. So even though that, they're planning to be retired, substantial amounts are expected to be spent for compliance. Right?

Aaron Mitchell (GPC): [05:07:13] Commissioners, the company does intend to continue to invest to maintain a reliable unit at Plant Scherer Unit 3, as well as invest in the necessary environmental controls to ensure that we comply with our permits related to continued operation of that unit. Those costs are included through the requested retirement date of December 31st, 2028, for Unit 3 at Plant Scherer.

Bubba McDonald (PSC): [05:07:43] What will that amount be? Cost of that?

Aaron Mitchell (GPC): [05:07:45] The total cost? Commissioners, I do not have that total. [Approximately].] I believe it's in the unit retirement study. Commissioner, I can look that up if you would like.

Bubba McDonald (PSC): [05:07:59] Well, just approximately. Okay.

Aaron Mitchell (GPC): [05:08:02] I don't know specifically.

Preston Thomas (PIA): [05:08:09] So since the company has decided to, Plant Scherer Unit 3 is uneconomical to run and is requesting this decertification, could any of these capital expenditures have been avoided?

Aaron Mitchell (GPC): [05:08:29] The projected capital expenditures that we've included.

Preston Thomas (PIA): [05:08:32] That's right.

Aaron Mitchell (GPC): [05:08:35] I'm not familiar with the specifics of all those expenditures that are included. I know that the environment, the expenditures related to environmental capital, O&M and costs that are necessary to comply with environmental regulations are included in the ECCR table throughout the period and up until, well, throughout this three year period for this IRP. As to whether or not those costs can or would be avoided, I think depends on this commission's decision, on the company's recommendation to retire that.

Preston Thomas (PIA): [05:09:16] So then I guess was your answer that they couldn't have been avoided? Any of those cost?

Aaron Mitchell (GPC): [05:09:25] Any of the costs in the three year projection.

Preston Thomas (PIA): [05:09:28] Right. I'm sorry. Was a long answer. I was just trying to determine whether you were saying that none of those capital expenditures for Unit 3 could have been avoided since they're going to be decertified?

Aaron Mitchell (GPC): [05:09:42] Well, I would say, Commissioners, our request to decertify that unit is 2028. We've included costs in the ECCR table for the next three years through 2025. Those costs would be required to be incurred to comply with our current permits and operate the existing environmental controls at Plant Scherer through 2025 whether or not the Commission orders the company to retire Scherer Unit 3 in 2028.

Bubba McDonald (PSC): [05:10:14] Doctor, do we have any units that are going to retire prior to that, in the scheme of all the retirements we're talking about?

Mark Berry (GPC): [05:10:24] Yes, Commissioner. Wansley Units 1&2.

Bubba McDonald (PSC): [05:10:30] There won't be any cost to keep Wansley through this year, environmental upgrades, anything like that?

Mark Berry (GPC): [05:10:41] Not upgrades. Not upgrades, but O&M to operate the equipment.

Bubba McDonald (PSC): [05:10:44] Is anything between Wansley and Scherer? It's going to be retired?

Mark Berry (GPC): [05:10:51] No, no. So all of the retirements listed here are for 2028 and to to take advantage of the ELG boiler cessation option. The Wansley 1&2 units would are requested to retire this year, and you would only have O&M costs, not costs to install new equipment. Commissioner, am I being responsive to your question?

Bubba McDonald (PSC): [05:11:20] My question is more vague than your answer is.

Mark Berry (GPC): [05:11:25] Well, that's not going to be problem.

Bubba McDonald (PSC): [05:11:28] You know, I'm a little slow like that. But I'm trying to see if if we could move the closure of Unit 3 at Scherer back this way and not have to expend all those costs. That's where I'm kind of trying to get. And I'll ask that question later.

Preston Thomas (PIA): [05:11:49] Mr. Chairman, may I approach?

Preston Thomas (PIA): [05:12:28] So looking at the company's data request to STF LA-4-13 which mentions the capital expenditures in the ECCR table for 2022 through 2025 are $228.9 million, and that includes a contingency of $9.5 million for all projects valued at more than $1 million. Does that $9.5 million dollar contingency include the contingency amounts for CCR AROs that are listed in the response, or not?

Aaron Mitchell (GPC): [05:13:13] Just to be sure I understand your question, of the values listed here in this response. You're asking, are CCR ARO contingencies included in that amount?

Preston Thomas (PIA): [05:13:25] In that $9.5 Million dollar contingency?

Aaron Mitchell (GPC): [05:13:27] No, they're not.

Preston Thomas (PIA): [05:13:27] No. Okay. So the company is requesting commission approval for projected spending to develop beneficial uses for stored combustion residuals such as coal ash, right?

Aaron Mitchell (GPC): [05:13:54] That's correct.

Preston Thomas (PIA): [05:13:56] And the company hasn't quantified the the savings from beneficial use of CCR, has it?

Aaron Mitchell (GPC): [05:14:06] Well, the the illustration or the slide or demonstrative that accompanied Dr. Berry's summation was an early depiction of information. As we continue to work through the request for proposals and negotiate with bidders, that shows an early indication of what the investment in beneficial use at ash ponds and the resulting benefit would provide. I know those numbers and charts may be small to see.

The actual investment included in the filing is trade secret, as we're still negotiating with vendors. However, the overall benefit based on a couple of sites. And again, this is an early indication, is approximately a $300 Million downward pressure on the total cost of the closures for those two sites. That's primarily due to two factors. One is the actual sales of the ash that goes into a beneficial use market. Those get credited back directly to offset the costs of the closures. Secondly, the value, it reflects the value of placing that ash into a beneficial use market. Therefore, the company does not have to incur costs associated with ash plant closure because that ash is gone. So the resulting closure costs of less volume at any given site is less. Cumulatively, that equates to that approximately 300 million, based on the early estimates resulting from the RFP.

Tim Echols (PSC): [05:15:46] Were you aware that this insulated concrete form technology, I don't know if you've seen this. I was at a Habitat for Humanity ribbon cutting the other day just on the foundation that they were doing, actually was using ready mix with coal ash in it to build the first of its kind habitat home here in Georgia. So it's a newer technology they're trying that I guess, it's taking some of our ash and putting it into into a home, rendering it inert and helping a person in the process.

Mark Berry (GPC): [05:16:24] Commissioner, I really appreciate those comments. We do see continued demand for the ash from our operational units. [05:16:31] So right now we're seeing 85% overall use. [05:16:34] And for fly ash, that percentage is actually higher. As we see the coal units reduce in use and also retiring, we expect that demand to continue. And we saw a good response in RFP where we're seeing ready mix folks coming in and saying, hey, we want this material. It adds benefits in the marketplace. So we think the demand will continue into the future.

Bubba McDonald (PSC): [05:16:58] Doctor, are you reaching out beyond just the use of concrete and other technology for the use of coal ash?

Mark Berry (GPC): [05:17:06] Yes, Commissioner, we are. So we started a research facility up at Plant Bowen. Last year, it was commissioned. And we're getting a lot of interest from various parties that are interested in testing their particular technology. We're looking into rare earth and critical materials space. Lots of interest there. We are using that facility to kind of classify the material that we're offering for sale and gaining insights that are helping us in the RFP. So we are casting our net far and wide. We think this material is a valuable material and it will continue to deliver value to customers in the future.

Bubba McDonald (PSC): [05:17:44] The assessment of these materials. So where are they being studied? Georgia Tech or...where?

Mark Berry (GPC): [05:17:51] So we are working with some universities. Most of the research is actually being done at the facility itself. So we have infrastructure at the facility. We are coordinating with vendors who have interest. So we have shipped material to them to say, Hey, why don't you try this material out yourself and then come back to us if you're interested in pursuing additional testing opportunities.

Preston Thomas (PIA): [05:18:22] So of that projected savings, do you have any idea what portion of that savings is in early years and what portion is in later years?

Aaron Mitchell (GPC): [05:18:34] Well, as an illustration, the same document that we just referenced as part of Dr. Berry summation shows that the later year showed the most value. Although sales of ash would occur almost immediately as we engage with a vendor and they begin those ash sales. The larger impact and the larger value is from the reduction in the amount of ash and the volume of ash that we actually have to close and a reduction in resulting reduction in the total closure construction costs.

Preston Thomas (PIA): [05:19:13] So what's the projected spending for developing the beneficial use applications?

Aaron Mitchell (GPC): [05:19:23] So we have included the costs based on this RFP and the shortlist of bidders in this IRP. Specifically, we've given a range. Again, that number is trade secret. It's included in the environmental compliance strategy, while we are still negotiating price. We have included the costs at one facility in the budget and our ARO numbers over 2022 and 2023 to get the infrastructure in place to begin the beneficial use activities.

Preston Thomas (PIA): [05:20:02] So the savings will come mostly in the later years. Am I correct that the spending will come mostly in the early years to develop the beneficial use?

Aaron Mitchell (GPC): [05:20:14] That's right. Again, over a two year period, 2022 and 2023, for one facility, we have costs estimated and included in the budgets, in the selected supporting information in the ARO tables. Once that investment is made, about 3 to 4 years later, you would start to see the larger impact of the closure reduction and closure costs. Although again, just to repeat, once that facility is active, ash sales and the benefits of those sales will begin, will be realized immediately. And we will credit that against the cost of the ash pond closure for customers.

Mark Berry (GPC): [05:20:58] Commissioners, if I can just explain, kind of maybe give some context of why this investment is needed. If you're going to sell ash into the ready mix market, it has to meet a certain classification, class C or class F. And the ash that is in our our closures don't necessarily meet that specification. So you have to do some investment in order to kind of upgrade that material so you can actually sell it into the market. So this investment is needed in order to realize that benefit.

Tim Echols (PSC): [05:21:29] But just one clarification. Mr. Thomas had asked you about the true up on the funds. So what you're saying, Doctor, is that the sale of the ash, it's not just going to go back into, against that fund. It's going to be credited to ratepayers directly? So it's not going to get lost in something that's not true. Right?

Aaron Mitchell (GPC): [05:21:52] Well, it will offset the costs. There won't be a credit issued to customers. Customers will never be charged for the ash pond closure costs equal to the amount of the value of the beneficial use, if that makes sense.

Preston Thomas (PIA): [05:22:11] Did the company's projections show that the revenues from projected revenues from the beneficial use will outpace the costs spent to develop the beneficial use?

Aaron Mitchell (GPC): [05:22:28] So let me answer that twice, in two ways. Commissioners, if you'll be patient.

Preston Thomas (PIA): [05:22:33] Don't accuse me of asking it twice.

Aaron Mitchell (GPC): [05:22:36] I may end up answering the question twice. First, the chart that we showed does show that the small investment in the beginning, if you look at the red line, it drops below. It shows an increase in early spend and that's, again, due to the capital infrastructure. Quickly, though, thereafter, the delta between the lines grows significantly. So that's a long way of saying the benefits more than pay for themselves, if you will, in the long term. As far as what's included in the companies budgets in the CCR ARO tables in the selecting supporting information, while the company has included for one facility the capital infrastructure necessary to begin that process, we have not yet reflected in our outgoing budgets the benefit of that. So we've kept the budget the same while, again, we finish signing contracts and negotiating with the successful bidders. Once the contracts are signed, we will not only include the capital infrastructure, we will also forecast the benefit in the budgets for the specific facilities going forward.

Tim Echols (PSC): [05:23:53] Do you think it is possible in the future, many years from now, that one day we will actually use all the ash that we have, maybe it's 20, 30, 40, 50 years into the future. And we won't have any coal ash in the ground, and it'll all be gone because it's gone to beneficial use, because there aren't any other coal plants in America creating coal ash?

Aaron Mitchell (GPC): [05:24:23] I think, Commissioner, there's a high likelihood that a vast majority of the ash could be leveraged. And I'll give you an example. One of the facilities that we're looking at has a fairly large volume of ash stored in the ash bond. The beneficial use project that we are looking to implement would, in just the 15 year closure period, use half of that volume. Millions of tons of ash to be beneficially reused and gone from that facility. The company would like to see ongoing use of that, as Dr. Barry testified, I believe, in 2019. The fact that, very much so, we would like your statement to be true. And in fact, if we were to continue that success after the 15 year period, we would expect more of the remaining half of the ash volume to be utilized.

Preston Thomas (PIA): [05:25:22] Based on your current projections. We're talking about a very small percentage right now, though, right?

Aaron Mitchell (GPC): [05:25:30] Maybe ask me that again, more specifically.

Preston Thomas (PIA): [05:25:36] OK. The beneficial use that's being projected now would just represent a small percent of the coal ash, right?

Aaron Mitchell (GPC): [05:25:44] Of the total coal ash that the company has in our ponds. It would be a smaller percentage. But again, using the example that I just gave to the Commissioner, millions of tons at one facility over the long term are projected. Again, that depends on market factors, as Dr. Berry stated earlier. But if we're successful in leveraging these RFPs to beneficially reuse this ash, I believe the percentages could be significant over the long term as the commissioner referenced.

Preston Thomas (PIA): [05:26:20] Right. But my question is just for right now, are we talking about less than 5%, less than 10%?

Aaron Mitchell (GPC): [05:26:30] Over the 15 year period. I can't give you specifics again because we're still negotiating and selecting the bidders. It would result in millions of tons of ash, that is, maybe 10% plus if we're successful.

Tim Echols (PSC): [05:26:54] If we have, do we have around 90 million tons? Is that what you estimate approximately? [Correct.] And it seems like you had said that we would use 10 million over 15 years. So that's that's about 10%. Is that about right?

Aaron Mitchell (GPC): [05:27:10] That's about right. And that's just a couple of projects. Right? As we continue and advance this, we'd like to explore more of this and more applications. Again, it's market dependent. As Dr. Gregory said, we want to give these vendors a steady, consistent supply of quality ash that they can use, that should heighten their expectation, as well as looking for other markets to invest in as well.

Tim Echols (PSC): [05:27:37] And it benefits us to get ahead of other states, building the equipment, having the equipment that will remediate the ash and turn it into a beneficial product, right?

Aaron Mitchell (GPC): [05:27:49] Correct, Commissioner. And I would point out that Georgia Power has elected to do it differently than other states. Other states have mandated beneficial use regardless of the market capacity for it. And those utilities have ended up paying people to take the ash. We've elected to have the market compete for the benefit of customers and provide us viable options. That actually puts downward pressure on our total closure costs instead of upward pressure as other utilities and states have experienced.

Preston Thomas (PIA): [05:28:24] And the spending that will be done in the early years to enable the development of the beneficial uses. Is the company asking for ratepayers to pay those costs?

Aaron Mitchell (GPC): [05:28:36] Yes, we are including those costs. Again, we have included those in one facility where we are negotiating contracts and we will include those in our ARO estimates that we provide to the Commission. Again, those come in semi-annually in a separate docket as ordered in 2019, and we'll continue to reflect those. I might add that those costs are cost shared with these vendors that we are engaging in business with.

Preston Thomas (PIA): [05:29:05] I'd like to turn to ash pond closures. Am I correct to say that the closure estimates and selected methods have been developed with input from external and internal experts? Is that correct?

Aaron Mitchell (GPC): [05:29:23] That's correct. We have, Georgia Power has engaged third party engineers, third party experts, third party geologists that are experienced in solid waste landfill closures and ash pond closures, to develop our closure plans, help us develop our permitting documents and designs, as well as construction plans, to execute compliance with the federal EPA rule.

Preston Thomas (PIA): [05:29:54] And the company has told the commission that site-specific closure method is the most cost effective to allow compliance with CCR rules, support permit requirements and mitigate environmental risk. How does the commission know that the site specific closure method is the most cost effective method for compliance? Has the company done any analysis on alternatives?

Aaron Mitchell (GPC): [05:30:25] I mean, let me respond and see if I hit your question correctly. The company has stated that each of the ash pond closures is a site specific determination and even same, the, even ash ponds on the same property require different engineering and closure designs. We have engaged the third parties that we referenced in the previous question to ensure that we address all those site's specifics. But in all cases, those designs dre developed in compliance with both the federal and the state coal combustion residuals rule, which lists specific performance standards that you have to meet for the closures of each ash pond and landfill.

Bubba McDonald (PSC): [05:31:09] Would Plant McDonough be an example of what you just said?

Aaron Mitchell (GPC): [05:31:12] Plant McDonough? Yes, sir. We are, there are four ash ponds at Plant McDonough. One of those ash ponds is being closed by removal. The other three are being closed in place. But even those three have very specific designs associated with them based on their site specific nature.

Bubba McDonald (PSC): [05:31:32] And the technology proves that that particular type of structure, you monitor the water table, and all of those things that go into making it in compliance with EPA, etc..

Aaron Mitchell (GPC): [05:31:47] That's right, Commissioner. Not only the way that we close the ponds and the specific designs are specified in the rules. But as you reference, the monitoring of the groundwater before, during, and after the closures is mandated, reporting that to Georgia EPD is mandated. So all those are aspects of both the federal and the state rules that the company has to comply.

Bubba McDonald (PSC): [05:32:14] Would that same type of technology be applicable at Scherer?

Aaron Mitchell (GPC): [05:32:24] Type of technology? The closure in place method?

Bubba McDonald (PSC): [05:32:29] To do the same things to meet the qualifications etc. to take certificate of the proof.

Aaron Mitchell (GPC): [05:32:37] Well again, Commissioner, they are all different and they all require a little different design. The performance standards for closures in place are very specific. Those third party engineers look at those performance standards to ensure that the site specifics are taken into account at McDonough Unit 1, that unit has been closed in place. I'm sorry, Ash Pond 1 has been closed in place, and we are adding a subsurface barrier wall around that ash pond to close it. Ash Pond 3&4. Those are closed in place. And a combination of of expanding or extending the cover system as well as enhanced de-watering systems are installed to comply with that. At Scherer, some very similar and specific attention has been given to the site specifics there to comply with those performance standards which include taking the ash pond from approximately 550 acres down to approximately 300 acres, and consolidating that ash, extending the cover system beyond the edge of the waste, as well as ensuring that is watered and monitored as part of that closure.

Bubba McDonald (PSC): [05:33:55] What about Branch?

Aaron Mitchell (GPC): [05:33:57] Plant Branch has had five ash ponds. One of them has been removed, so there are four left. We are closing those by removal, constructing a new landfill and placing the ash from the ponds in that way. [On site?] Yes, sir.

Preston Thomas (PIA): [05:34:18] May I approach?

Fitz Johnson (PSC): [05:34:19] Yes, you may approach.

Preston Thomas (PIA): [05:34:24] And Madam Court Reporter, can you tell me which exhibit number staff is at? So I'd like to turn your attention to STF-LA-4-4, the company's response to staff data request. And if you go towards the last paragraph on the first page, it states that the site specific closure method is the most cost effective to allow compliance with CCR rules, support permit requirements and mitigate environmental risks. So again, I just want to ask and you know, there was a very long answer. So how does the company, the commission, know that this is the most cost effective approach to allow compliance with CCR rules to permit requirements and mitigate environmental risks?

Aaron Mitchell (GPC): [05:35:34] Well, the company has designed each to be compliant and, commissioners, they may not be the cheapest option to be evaluated, but the company's determined that they are the most cost effective option to comply with the requirements of the rule. Certainly the company looked at other alternatives, even at a cursory level, that would have costs more and those scenarios were eliminated for that reason.

Preston Thomas (PIA): [05:36:02] Were analyses done and provided the Commission on alternatives?

Aaron Mitchell (GPC): [05:36:08] Uh. No.

Preston Thomas (PIA): [05:36:12] Did you cost out alternatives?

Aaron Mitchell (GPC): [05:36:15] In some cases early, when the 2015 federal rule came out, the company engaged with these engineers that we've been discussing to look at what are the viable options for compliance and assessed the site specific nature of each ash pond and landfill, to determine what was feasible and achievable to be the most cost effective to comply. [05:36:41] In some cases, there was one option that was considered. [05:36:46] Again, we talked about a number of factors previously with this commission when they approved our 2019 ash pond closure strategy. Those factors include the size of the ash pond, the volume of material in the ash pond, the proximity to lakes and rivers and our ability to effectively execute construction because of that proximity. So all those things factored into, as well as the cost, what the ultimate closure strategy is for each and every ash pond.

Preston Thomas (PIA): [05:37:25] But just to be clear, the answer was no, I believe, to whether alternative analysis was provided the Commission.

Aaron Mitchell (GPC): [05:37:32] That's correct.

Preston Thomas (PIA): [05:37:42] Referring to page 20, line 10 of your testimony, where it reads, "Does EPA's new position change the company's request in this case?" And you state "no." Is the company's answer of no due to the legal standing of EPA's rule amendment?

Aaron Mitchell (GPC): [05:38:09] When you ask, related to EPA's rule amendment, you mean their press release in January? [Right.] Okay. Our answer is no, that the EPA's announcement in January does not affect our closure plans. Commissioners, just a little background on that. EPA issued determinations for specific facilities in the Midwest and the Northeast related to their compliance with the CCR rule. In that, EPA expanded upon the well-understood interpretation of the 2015 CCR rule. In doing so, they addressed inadequacies with those specific facilities. They did not change the rules. So there's been no rule change, and therefore the company has not changed our strategy as a result. And as this commission knows, Georgia EPD has been delegated authority by EPA to oversee and implement CCR and ash pond closures in the state. And the company has and will continue to work with EPD to ensure that we comply with those requirements.

Preston Thomas (PIA): [05:39:26] And also, Mr. Chairman, as we move on, I wanted to see if I could request that STF-LA-4-4 be marked as staff exhibit number eight.

Brandon Marzo (GPC): [05:39:46] So the company's pursuing, I think you mentioned, closure in place for ten ash ponds, referring to 40 CFR Section 257 102 D, it states that the owner operator of a CCR unit must ensure that at a minimum the CCR unit is closed in a manner that will control, minimize or eliminate to the maximum extent feasible, post-closure infiltration of liquids into waste and release of CCR leachate and contained runoff to groundwater surface waters of the atmosphere. So would you agree that it is possible by removing instead of covering in place, to have none, would that not be the maximum extent feasible?

Aaron Mitchell (GPC): [05:40:49] No, it wouldn't. The specific provision you read is under a section for closure in place. The previous section 102 C, perhaps, I believe, is related to performance or includes performance standards for closure by removal options. Back to your reference, the 102 D list, the requirement that you read as well as many others that you have to comply with when you close an ash pond in place. As we referenced earlier, the third party engineers that we've engaged have looked at that specific performance standard as well as the others, and ensured that the company's designs for the ten closure-in-place ash ponds do control, minimize, or eliminate post-closure infiltration as part of our designs. And that's what we've included in our applications that we submitted to Georgia EPD in 2018. And that's what we believe complies with the rules. And we'll work with Georgia EPD as they continue to issue those permits.

Preston Thomas (PIA): [05:42:04] So it sounds like the company is confident that they're in compliance. But I'm sure you're aware that the EPA met with Georgia EPD earlier this year regarding Georgia's coal combustion residuals permit program, right?

Aaron Mitchell (GPC): [05:42:21] Yes.

Preston Thomas (PIA): [05:42:22] And can you tell us the nature of those conversations?

Aaron Mitchell (GPC): [05:42:26] I was was not a part of those conversations, commissioners. But I understand that EPD and EPA continue to meet about Georgia Power's applications at EPD to ensure that they are aligned on issuance of those permits.

Bubba McDonald (PSC): [05:42:48] And when you're talking about that, and you're talking about these meetings with EPD and EPA and Georgia Power, and some of these facilities are jointly owned, not just Georgia Power, are these other parties involved in that same engagement of meetings?

Brandon Marzo (GPC): [05:43:08] No, Commissioner. And to be clear, we were not involved. Georgia Power is not involved in the meetings with the EPA and EPD, though we have met with both separately over the last few years.

Bubba McDonald (PSC): [05:43:19] I discovered that they were meeting y'all. Those three parties were meeting.

Aaron Mitchell (GPC): [05:43:23] Oh, no, sir. The co-owners, though, on the co-owned facilities at Scherer and Wansley, Georgia Power is the agent and operates the power plant on behalf of all owners as well as represents...

Bubba McDonald (PSC): [05:43:37] Even though they're not majority owners in some of those facilities?

Aaron Mitchell (GPC): [05:43:41] Correct. My team does the permitting, the compliance reporting, and the environmental compliance oversight for those co-owned facilities on behalf of all owners. That's part of the ownership agreement, and we're obligated to act in the best interests of all owners of those facilities.

[05:44:02] But you would agree that there are methods that would cause no penetration of groundwater, right?

Aaron Mitchell (GPC): [05:44:09] Oh. Could you ask me again?

Preston Thomas (PIA): [05:44:12] There are methods that would not cause these same concerns that closure-in-place causes. Right?

Aaron Mitchell (GPC): [05:44:21] Well.

Preston Thomas (PIA): [05:44:22] Removal. Correct?

Aaron Mitchell (GPC): [05:44:24] I'm sorry?

Preston Thomas (PIA): [05:44:25] Removal would be another option, right?

Aaron Mitchell (GPC): [05:44:26] Well, the EPA approved, in fact, two methods in the rule. And both are approved methods for closure. And the EPA has said that both methods are equally as protective of the environment if the performance standards are complied with. And those two methods are both closure-in-place and closure-by-removal. So there's not simply one method, and it's not the company, it's the EPA that has determined that those methods are protective of the environment.

Preston Thomas (PIA): [05:44:56] I didn't ask whether there were multiple methods or whether they both protected the environment, but there are would you agree that there are certain problems that exist with groundwater, with covering in place, that don't exist with the other approved method?

Aaron Mitchell (GPC): [05:45:15] No, I don't think I would agree with that. The EPA determined methods to protect the environment for a closure in place, I believe is your question.

Preston Thomas (PIA): [05:45:25] But one doesn't cause concerns that the other can alleviate?

Aaron Mitchell (GPC): [05:45:33] Well, EPA is the the arbiter and determiner of...

Preston Thomas (PIA): [05:45:37] I'm not asking if they're both approved. I'm asking if one has concerns that the other does not.

Brandon Marzo (GPC): [05:45:45] Chair Johnson, I think the question has been asked and answered...

Preston Thomas (PIA): [05:45:49] I believe he has continued to answer that there are two methods and they're both approved. He hasn't actually answered the question of whether one method has concerns that the other does not. I'll give you an opportunity to see if...

Brandon Marzo (GPC): [05:46:03] If there's two acceptable methods under the law that says both are protective...

Preston Thomas (PIA): [05:46:07] I'm not asking if they're both protective. I'm asking if one has concerns that the other does not. They can both be approved and protected and one have one set of concerns that are not...

Fitz Johnson (PSC): [05:46:17] Counsel, I'll allow him to continue.

Preston Thomas (PIA): [05:46:24] [Ask me again, please.] Sure. Do you think that cover-in-place has any concerns that removal does not have in terms of groundwater?

Aaron Mitchell (GPC): [05:46:35] I think that if the company complies with EPA's performance standards for closure-in-place, that groundwater is protected adequately, as EPA has determined.

Bubba McDonald (PSC): [05:46:46] But my question on the question would be is, the EPA has concerns, or is it down below that investor has concerns that, there's downstream, where are the concerns coming from? Does EPA have a concern over either one of those that they have approved, or they're outside concerns that don't agree with the EPA and EPD's position.

Aaron Mitchell (GPC): [05:47:10] I think there are parties on all sides, Commissioner. Specific to EPA's activities in January where they address the four facilities seeking compliance and permits, EPA specifically said that those four permits, those four facilities' permit applications and designs were deficient compared to the requirements of the rule. Georgia Power...

Bubba McDonald (PSC): [05:47:37] Does that kind of meet your effort of that concern?

Preston Thomas (PIA): [05:47:42] So are you saying that the concerns are coming from parties including the EPA is looking at this again, or what is your answer? I'm not sure I understand.

Aaron Mitchell (GPC): [05:47:52] My answer is that the EPA's actions in January were site specific to four facilities. The EPA determined that their engineering designs were deficient when compared to compliance with the rules. I'm saying that Georgia Power's position is different and that we believe our designs are compliant. Several of the deficiencies that EPA noted of those four facilities included lack of engineering method description to comply with the performance standards, as well as lack of engineering controls related to the performance standards. And Georgia Power has included both of those and all of our designs, whether it is a closure-in-place or a closure-by-removal.

Preston Thomas (PIA): [05:48:40] Okay. So it's your testimony that, both methods, one method doesn't alleviate groundwater concerns. Is that your testimony?

Aaron Mitchell (GPC): [05:48:58] My testimony is EPA has determined both methods are equally protective if one complies with the rules.

Preston Thomas (PIA): [05:49:12] So. Can you confirm for the response that you're pursuing closure-in-place, that upon closure of each ash pond, the company has precluded the probability of future impoundment of water, sediment or slurry at the CCR impoundment?

Aaron Mitchell (GPC): [05:49:34] Yes.

Preston Thomas (PIA): [05:49:38] And. I think that that concludes my questions. So I appreciate your time. Thank you. And I'd request that staff exhibit A be entered into the record. [So moved.] Thank you.

Fitz Johnson (PSC): [05:50:15] Okay. As we get into our list here of interveners, I want to remind everybody of Chair Pridemore's guidance early on. If questions have been asked and answered, please do your very best not to repeat those questions. We'll start with Americans for Affordable Clean Energy.[Mr. Chairman, no questions.] Thank you, sir. Commercial Group. [Not here.] Concerned Ratepayers of Georgia. [No questions Mr. Chairman, I do have a follow up from yesterday, where I requested that the panel have nameplates, very similar to what the commission has, and I think that would be very helpful when you have a panel of two or four people. So we kind of know, you know., which witness is.] If you're still there, we'll take it under advisement. Mr. Prenovitz. [Thank you, sir.] Yes, sir. Georgia Association of Manufacturers. [No questions.] Thank you. Georgia Center for Energy Solutions. [Mr. Chairman. No questions.] Thank you, sir. Georgia Coalition and Local Government.

Alicia Brown (CLG): [05:51:41] Yes sir, just a couple. So as a group of local governments were interested in some of the R&D projects that you have underway, and specifically wanted to ask a question about the hydrogen microgrid concept. In the testimony on the very last page. It's talking about how a plan to use grid energy and electrolyzer and water is seen as an enabler to zero emission transportation. Is there understanding that if you're using grid energy, this is not giving you full insight into what zero emission hydrogen would look like?

Mark Berry (GPC): [05:52:17] Yes. Yes. Your characterization is correct. So, Commissioners, in this project, we are going to use grid energy such that we really want to investigate the production of hydrogen. We're working with a host of partners on this particular project, and we're trying to demonstrate the concept with the view that in the future, as more renewables come on to our grid, and even in a co-located application, that you will be able to create what they call green hydrogen. But what we're trying to do in this particular project is move forward the development of PEM electrolyzers. So we're working with NewHydrogen, working with GM in terms of the vehicles. So we do understand that in this project, while using green energy, it may not have the attributes that you mentioned, but we're really trying to push the technology forward, and that's why we're using grid energy in this case.

Alicia Brown (CLG): [05:53:17] So there's there's no interest in seeing just what capacity factor you would need from curtailed solar for the economics to work out. This is more focused on the trucking side of things.

Mark Berry (GPC): [05:53:27] It's focused on trucking, but it's also focused on resilience and reliability. In this particular project, we're going to take grid energy, we're going to produce hydrogen that we're going to store on the site, and then we'll use that hydrogen for two purposes. One purpose is to be placed in a fuel cell truck as a fuel. Right? And these will be trucks that will serve Georgia Power customers. And the second case, we will take the hydrogen, run it through our fuel cell, and we'll use those electrons to power mid-size trucks. And also the fuel cell will then be able to provide electricity back to the grid. So we're studying a number of things in this particular project. One is transportation, the other is reliability and resilience.

Alicia Brown (CLG): [05:54:19] Okay. Thank you for that. You also mentioned in your testimony this idea of a long duration storage, and it seems to be implying the 100 hour iron battery that's being pioneered, I believe, in Minnesota is where that's being demonstrated. Are there any solid plans for that right now or is that just something that is in the works?

Mark Berry (GPC): [05:54:41] So I think you are referring to the Form Energy Project. So we are looking at that particular technology. We have a lot of interest. What we see early on is that this particular technology, because of the materials that it used, could be ten times less than the cost of a battery technology. And just because of how it would be designed that you could kind of put modules together and make large volumes of energy storage cost effective. So we are interested in that technology. We're going to be following that 1 MW demonstration with high interest. I would also say that our R&D program encompasses many other long duration storage technologies. We're doing thermal storage, other electrochemical technologies like flow Batteries, for instance. We're also looking at gravity systems and chemical storage. So the Hydrogen Microgrid Project is a chemical version of energy storage.

Alicia Brown (CLG): [05:55:41] And you mentioned reusing used electric vehicle batteries. Is that going to be for a grid scale application or is that looking at behind the meter as well?

Mark Berry (GPC): [05:55:49] So we're not doing anything right now on that.

Alicia Brown (CLG): [05:55:56] All right. Thank you.

Tim Echols (PSC): [05:55:58] Let me... I hope you are. Because my motion in 2019. [No, not in those projects.] Is there something you need to talk to me about? [No, no, not me. Not those projects that she mentioned.] Okay. But we do have that thing being teed up, right?

Mark Berry (GPC): [05:56:17] Yes. Yes. Commissioner.

Bubba McDonald (PSC): [05:56:18] It's not too high is it?

Mark Berry (GPC): [05:56:20] No, no. I don't want to whiff it like I would on on a on a golf range there. Commissioner.

Bubba McDonald (PSC): [05:56:26] Is it, am I correct in saying that the use of hydrogen for fuel for over-the-road trucks is, gives an extended mileage over compressed natural gas?

Mark Berry (GPC): [05:56:41] Yeah, those technologies are quite similar. What we're doing in this particular project is that we're trying to demonstrate for transportation, that the total cost of ownership is the same as a diesel vehicle. But you would have a lot, you would have zero emissions if you use green hydrogen. So that is the vision in the future, why this is good for customers, I think we have all seen a raise in prices when it comes to gas and diesel as we drive by the pumps.

Bubba McDonald (PSC): [05:57:17] We won't go there.

Mark Berry (GPC): [05:57:20] And we see in our electricity prices that we see that they have remained low for a long period of time. So if we're able to demonstrate this technology and able to enable this type of transportation, then we could possibly shift, reduce emissions and also reduce cost volatility to customers.

Fitz Johnson (PSC): [05:57:43] All right. Thank you, Ms. Brown. Right. Georgia Interfaith Power and Light and Partnership for Southern Equity. [No questions.] Thank you, ma'am. Georgia Large Scale Solar Installation and Advanced Power Alliance. [No questions.] Thank you, sir. Georgia Solar Energy Association? [No questions.] Thank you, sir. I do believe I missed Georgia Solar Energy Industries Association. [I was answering for one.] All right, you guys. You guys are picking right up on this. All righty. Georgia Watch. Ms. Coyle. She's not over there. Come back to her. Georgia Gas Supply. [No question.] [You must be present to win, right?] All right. Restore Chattooga Gorge is excused. Sierra Club?

Zach Fabish (SC): [05:59:12] So just, Good afternoon, Zach Fabish, for the Sierra Club. Thank you for being here to answer some questions. I think I can trim quite a bit from here because folks ahead of me have already asked a lot of questions I might have had. But let me just ask first, if it's all right, question about Scherer. So I believe you mentioned that, in your testimony at least, page 17 lines 5-7, that as regards effluent limitation guidelines. compliance at Scherer, the additional research efforts at Plant Scherer are scheduled for completion prior to the conclusion of the 2022 IRP proceedings. Is that correct?

Aaron Mitchell (GPC): [05:59:57] You said 17 five through seven.

Zach Fabish (SC): [05:59:59] Yeah, I think that's what I said. It's what I wrote, I hope is what I said. [I see that. Yes.] OK. That's true. And did you mention earlier that you expect to supplement the IRP or submit some additional information on that point?

Aaron Mitchell (GPC): [06:00:14] Yes, we anticipate having additional information to submit and update the commission in May, in the month of May.

Zach Fabish (SC): [06:00:23] And there's no preview you can give us now?

Aaron Mitchell (GPC): [06:00:25] Well, as Dr. Berry stated and we included in our testimony, that what we're talking about here is scrubber wastewater compliance with the ELG rule. There are a few updates and options since we last met with the Commission in the 2019 IRP. And that EPA issued a new rule that provided another option or, to evaluate outside of the general compliance. What we've included in this IRP for Plant Scherer are costs and controls associated with the general compliance by 2025. Those include a physical, chemical, biological treatment system. But in addition, we've told the commission that we are evaluating a membrane based water treatment system that would comply with an option provided in the 2020 ELG Rule called the Voluntary Incentive Program that gives you three additional years to comply. The evaluation that we're doing right now is an evaluation of that membrane technology, and it's not yet completed. And while we see promise in that technology, there are remaining R&D efforts that need to conclude so that we can understand the full costs and ensure the full compliance of that system before we recommend that system as a solution.

Zach Fabish (SC): [06:01:59] Okay. Thank you. I have a handful of follow-up questions on the CCR beneficial use. So just page 26, line 20 in your testimony, you've discussed marketing 85% of, I think, the operational CCR material? That sound about right?

Aaron Mitchell (GPC): [06:02:18] Correct. And that's that's in reference to the ash that comes from the operating power plant.

Zach Fabish (SC): [06:02:24] Yeah, Great. And then I think on page ten, lines nine through ten, you said companies continue to recycle 87, 85% of the operational CCR. So I just want to confirm that these two terms mean the same thing. [So it's ten...] Lines. Nine through 10 on page 10

Aaron Mitchell (GPC): [06:02:43] Yeah. So. Yes, I believe the intent is the same.

Zach Fabish (SC): [06:02:51] Thank you. And so and then, and I think I appreciated the demonstrative and the opening. But just so I understand, beneficial use is not just limited to the operational coal ash. It's also something that can happen with the legacy CCR materials, right?

Aaron Mitchell (GPC): [06:03:10] That's correct.

Zach Fabish (SC): [06:03:16] And. So given this was discussed earlier, that there are two methods for compliance under the CCR Rule, for closing and impoundment, either excavate, remove, closure-by-removal or closure-in-place. Does the closure-by-removal make it easier to beneficially use those CCR materials?

Aaron Mitchell (GPC): [06:03:38] It could, but it is site specific, if, and dependent on the quantity and quality of the ash at any given ash pond. And certainly if you're handling the ash anyway, it may be more cost effective to beneficially reuse that ash. But it does not preclude the opportunity from ponds that are closed in place to harvest that ash, process it, and also beneficially reuse the ash from those close-in-place ponds as well.

Bubba McDonald (PSC): [06:04:16] Is the makeup of the ash now, the difference in ash determined by the [unintelligible] pipe, now we have what's called clean coal, versus old coal or [unintelligible] that's used in the generation process. Any of those things different that causes a different quality of ash in the results.

Mark Berry (GPC): [06:04:38] Yes. Yeah. So Commissioner, that is an excellent, a great question. What has happened over the years is that plants across the United States have upgraded their combustion systems and burn out most of the carbon. So the carbon is the the constituent that does not allow you to use it in concrete. So if you were to take ash that was produced, say, in the fifties and that is in your pond, then your unburned carbon is actually higher.

Bubba McDonald (PSC): [06:05:14] Could you reburn it?

Mark Berry (GPC): [06:05:16] You could, but you have extracted most of the value from the material. So with some ashes that unburned carbon has to be below 15%, so it may be 20%. So there's not a lot of value there from re-combustion, but it still doesn't meet the specification. So for construction, you have to meet these specifications. So before you would use it, you would have to reduce carbon from 20% below 15%. So what we have done in our closure program is we have gone and created profiles of all our ash and our ponds so that we can provide that material, when people are investigating, if they want to use it for beneficial use, that way they can understand what investment is required to upgrade that material so it meets the specification.

Bubba McDonald (PSC): [06:06:08] With the coal going in, it's basically the same thing. There's no good, is there a difference in coal and clean coal?

Mark Berry (GPC): [06:06:16] So I'm not sure I understand your reference to clean coal, but I will say that the result from the combustion is different with the types of coal you use. So PRB coal combusts very different. The boiler has to be set up, very different than, say, Illinois Basin or Central Appalachian coal. So at Scherer, you have to have for a class C ash that would be from Plant Scherer. The carbon has to be less than a percent. So when you look at it, it actually looks yellow because there is no unburned carbon present. If you look at it a bituminous ash like Illinois Basin, when you look at it looks gray because there is unburned carbon still present. I hope that's responsive to your question.

Bubba McDonald (PSC): [06:07:03] At my level of understanding, it's very good. Okay.

Zach Fabish (SC): [06:07:11] Thank you. Just to follow up really briefly, so but if you close in place, you've placed an impermeable cap over the top of it, to get at the coal ash, you'd have to bust through that cap. You'd have to undo what you just did to close the facility. Right?

Aaron Mitchell (GPC): [06:07:30] You would have to open the cover system up and, anticipating that, could add value to beneficially reuse, this ash that the company has included, as part of our applications to Georgia EPD, requests to do that, and EPD has issued permits with that capability to go back in and harvest that out for beneficial use. That's not new to ash ponds. That's something Georgia Power has done in our landfills for many years. There are examples where we have gone back into landfills at Plant Bowen and Plant Wansley to beneficially reuse ash and gypsum over the last 15 years and to a great extent reuse that material. So that's something that we believe provides value, whether or not the company has a plan at this point in time to reuse it, but to maintain the option to get the permit with Georgia EPD, that allows us to harvest that out at some point into the future.

Tim Echols (PSC): [06:08:40] If that ash had been taken to another landfill, like ash that was being dumped in Wayne County, Georgia, once it's mixed with other stuff, you can't beneficially reuse it, right? It has to be kept by itself with just ash and kind of a mono fill. Right?

Aaron Mitchell (GPC): [06:08:57] That's exactly the term commissioner. And that's why the company has focused on, when not in our own landfills, maybe mono fill applications, where possible, to preserve the option of beneficial use in the future.

Zach Fabish (SC): [06:09:17] So I want to ask a couple of follow-up questions about the discussion earlier about EPA's, what EPA did in January. Can I approach with an exhibit?

Fitz Johnson (PSC): [06:09:27] You can approach.

Zach Fabish (SC): [06:09:43] This, just give you a minute to take a look at it. [Any specific portion?] Well just first. Are you familiar with this document?

Aaron Mitchell (GPC): [06:10:13] Yes. This is this is one of the determinations that I referenced earlier that EPA made specifically for a General James M. Gavin plant.

Zach Fabish (SC): [06:10:26] Thank you. If you could turn to page 40 of the document. It's an excerpt so you don't have to actually go 40 pages in. If you look at the, towards the bottom, there's a sentence starts, "EPA is preliminarily determining that the FA [the flash reservoir] unit is in contact with groundwater." Do you see that?

Aaron Mitchell (GPC): [06:11:04] I do, yeah.

Zach Fabish (SC): [06:11:05] And do you see where it says EPA is, as a consequence of this, proposing to determine that Gavin has failed to meet the requirement to develop an adequate closure plan and demonstrate the performance standards will be achieved? You see that?

Aaron Mitchell (GPC): [06:11:21] I do.

Zach Fabish (SC): [06:11:22] Okay. Is this at least part of the position you referenced in your testimony that EPA took in January?

Aaron Mitchell (GPC): [06:11:34] Ask me again. Sorry.

Zach Fabish (SC): [06:11:35] Sorry. Yeah, that's. A little. Page 19 of your testimony. You mentioned that EPA took some actions in January. Is this part of what you were referring to in your testimony there?

Aaron Mitchell (GPC): [06:11:49] Yes, this is one of the determinations that they released in January.

Zach Fabish (SC): [06:11:55] So I guess my question is just a follow up on the questions earlier. Given that EPA has expressed this opinion that if the CCR materials are in contact with groundwater, the requirements of the CCR rule for closure in place are not met. Are CCR materials at any of the facilities that the company is proposed or pursuing closure-in-place, are they in contact with groundwater?

Aaron Mitchell (GPC): [06:12:35] As I said earlier, and I'm looking for a reference here, earlier on the same page, on page 40, part of EPA's determination, as I said earlier, was...that in this specific case. And I'll read here from the third line down. EPA is proposing to determine that Gavin has not documented how the closure performance standards will be achieved. There are no details in the closure plan posted on Gavin's website or any other document provided as part of the demonstration that will allow EPA to determine if the closure performance standards will be met." And so putting in context the sentence you had me read and repeated, I believe in other parts of this document, the specific facility here, EPA has found deficiencies in the closure plans specifically, as I've just read, that the company did not provide details on how they would comply with the performance standards. And specific performance standards. And while there's a statement about groundwater, there are specific performance standards that have to be met by this and any other facility. Georgia Power, on the other hand, has included specific descriptions of how we will comply and meet the performance standards found deficient in this example, but not deficient in Georgia Power's applications. We've also included engineering methods and controls. Also, EPA finds deficient here, in this example, again, not deficient in Georgia Power's closure plans because we have included those for each and every of our ash closure designs.

Bubba McDonald (PSC): [06:14:32] Does this mean that if you proceed, even though you haven't gotten, they then don't approve your plans, does EPA come in and stop you in the process? Or does, you go ahead and finish the process? And then when the testing comes into place and if they find it adequate or if they find it inadequate, you can be penalized some time. But the inadequacy, do they also possibly approve the adequacy?

Aaron Mitchell (GPC): [06:15:02] Well, again two responses for you, commissioner. First, again, Georgia EPD has been delegated authority in Georgia to oversee and implement this program. As a result, they've instituted a comprehensive permitting program that we have to comply with, and we've supplied EPD with that information. If EPD finds that our plans are deficient, EPD can ask the company to change. If EPD does that, the company will 100% comply with the oversight of EPD through issuance of those permits. Secondly, you mentioned the data and the groundwater compliance. Regardless of the first fact, the company has obligations to continue to monitor groundwater, even if compliance has been achieved with the closure and EPD has issued us a permit to close the ash pond. If there are issues of groundwater later, the company is obligated to take corrective actions to remediate the groundwater there. So it's a yes in both case, Commissioner.

Zach Fabish (SC): [06:16:15] But can I get an answer to my question? Is the CCR material in any of the impoundments that you're proposing to close in place in contact with groundwater?

Aaron Mitchell (GPC): [06:16:27] We have ten ponds scheduled to be closed in place. It is true that some of those ponds will continue to have saturated ash after the closure has been completed. However, as I've described, the company has included engineering designs and details on how the company complies with the specific performance standards for those closures in place.

Zach Fabish (SC): [06:16:56] Could I ask you to name which of the impoundments will have, I forget how you put it, but liquids in place after closure?

Aaron Mitchell (GPC): [06:17:08] Yeah, Subject to check, commissioners. We have Plant Hammond ash pond 3. It's called the ash management area at Plant Yates. McDonough ash pond 1. And Scherer ash pond 1. Again subject to as check.

Zach Fabish (SC): [06:17:40] Given that's subject to check, could I make that a hearing request?

Fitz Johnson (PSC): [06:17:45] Yes. Thank you.

Zach Fabish (SC): [06:18:06] That may be all the questions I have. So thank you very much. [All right. Thank you, sir.] Could I move to have the exhibit entered into? [It will be in.] Oh, did I ask? Can it be marked Sierra Club Exhibit one? [Exhibit one? Yeah] I think that was our first one.

Fitz Johnson (PSC): [06:18:26] All right. Thank you. Southern Alliance for Clean Energy and Southface Energy Institute. Welcome back, Mr. Baker.

Robert Baker (SACE-SF-VS): [06:18:39] I appreciate it. Good afternoon, gentlemen. Robert Baker for Southern Alliance for Clean Energy and for Southface Energy Institute. Let me refer you to page eight, line 19 of your pre-filed testimony in which it states that the company requests the Commission approval of the Environmental Compliance Strategy and the related Capital Operations and maintenance and CCR asset retirement obligations, costs, and associated measures taken to comply with government-imposed environmental mandates. My question to you all is approximately how much is the Company requesting this commission approve for those costs?

Aaron Mitchell (GPC): [06:19:43] So I will, commissioners, I'll refer to the ECCR table and selected supporting information in the volume of the IRP. Total capital costs. I can give it to you by year, Mr. Baker, if that works for capital costs.

Robert Baker (SACE-SF-VS): [06:20:15] Is there a ballpark figure? Is there a total figure you're asking this commission to approve in this proceeding? That's what I'm asking.

Aaron Mitchell (GPC): [06:20:24] It's complicated by the nature of some trade secret information related to the ECCR table on the O&M expenditures. The capital expenditures in total are not trade secret, but they are not summarized by year.

Robert Baker (SACE-SF-VS): [06:20:43] We're talking billions of dollars, correct?

Aaron Mitchell (GPC): [06:20:48] Not associated with the ECCR table, but when you when you include the value of the CCR ARO program, it does. But again, as we discussed earlier, this commission approved the company's CCR and ash plant closure strategy in the 2019 IRP. We were recommending some changes to that strategy in this IRP.

Bubba McDonald (PSC): [06:21:15] As it stands right now, to answer your last question, and you said that's plural, it is two or more.

Robert Baker (SACE-SF-VS): [06:21:21] Yes, I will, let me be a little more specific. Are they requesting approval of $9 billion from this commission, in this proceeding, for cost recovery. That's what I would like to know. Billions. Or you can come to the nearest billion. I don't care. Closest billion that you can come up with.

Aaron Mitchell (GPC): [06:21:41] You're referring to the ash pond and ARO...

Robert Baker (SACE-SF-VS): [06:21:47] I'm referring to your statement here on page eight, lines 19, you list here and you say you're requesting the commission approval of the ECS and the related capital operations and maintenance and CCR Asset Retirement Obligation cost and associated measures taken to comply with government-imposed environmental mandates. I'm asking a very broad question. How much are you asking this commission to approve in this proceeding here?

Aaron Mitchell (GPC): [06:22:23] So again, we are asking the commission to approve costs associated with environmental compliance in the ECCR tariff represented in the table. And those are costs, capital and O&M costs to operate and maintain our environmental controls at our power plants as well. In the Environmental Compliance Strategy, we are asking the Commission to approve our ash pond closure and CCR program strategy and associated costs. Again, though, with the CCR ARO program, the

Commission did approve in the 2019 our strategy to close 29 ash ponds, 19 by removal and 10 in-place. While those actions were approved and the Commission in the resulting 2019 rate case approved recovery of the requested dollars in the rate case, the company is updating its CCR ARO ash pond closure strategy to reflect the change in Wansley and other program updates as we've discussed. So I can't give you a specific total. It is true that the ash pond closure program is at $8.99 Billion estimated completion over a 60 year period.

Robert Baker (SACE-SF-VS): [06:23:53] Is that the figure you're asking this commission to approve today? I mean...

Fitz Johnson (PSC): [06:23:58] Mr. Baker, I think we're asking, to have you move on.

Robert Baker (SACE-SF-VS): [06:24:04] That he has not answered the question.

Fitz Johnson (PSC): [06:24:05] He has answered the question. Please move on.

Robert Baker (SACE-SF-VS): [06:24:07] It's $9 billion.

Fitz Johnson (PSC): [06:24:09] Mr. Baker.

Robert Baker (SACE-SF-VS): [06:24:24] Due to the magnitude of these expenditures, wouldn't it be more appropriate for these costs to be reviewed and approved in the upcoming rate case?

Aaron Mitchell (GPC): [06:24:36] So I'm not a rate case witness, commissioners, but we are presenting the strategy as we have done in previous prior IRPs and the associated cost for the Commission's review and approval of the strategy and asking the Commission for approval of that. But we are not yet asking for the recovery of that, and that is appropriate for a rate case proceeding. Mr. Thomas had asked you try to get you to answer which which was the best. Do you remember that conversation?

Tim Echols (PSC): [06:25:07] So the 8.99 over 60 years that we, the strategy we approved in 2019, if the federal government or the state government determines that something else has to be done other than the strategy that you're currently using, you will come back here and ask us for that money, won't you?

Aaron Mitchell (GPC): [06:25:31] Yes, Commissioner.

Tim Echols (PSC): [06:25:32] So it could go from 8.99 to 10.99 or 11.99. But you are coming back here to us for the money, right? Right? That's part of our, that's part of the regulatory compact that we have. Right?

Aaron Mitchell (GPC): [06:25:48] Yes sir.

Tim Echols (PSC): [06:25:49] And so you're attempting to do this in the most strategic way but you, in some ways, it is risky. Right? Because we have a federal government that seems to go back and forth on different things. Right? And you've weighed that risk?

Aaron Mitchell (GPC): [06:26:08] Yes, Commissioner. And we've put our best plan and our best estimates forward to do that. And as regulatory regulations change, even at the state level, as we have done for many, many years, we will update our compliance strategy, not only during IRP years. We do that annually to the Commission. And we will inform the Commission of those impacts and related costs. We also update, Commissioner, this Commission semiannually on the specific ash pond program and the Commissioners approved, the commission approved that in 2019 and ordered the company to bring that every six months to this commission.

Tim Echols (PSC): [06:26:47] But it is your intent to comply with with law? Correct?

Aaron Mitchell (GPC): [06:26:51] We must.

Tim Echols (PSC): [06:26:52] And then our responsibility is to make sure that you've got the money to be able to do that, assuming it's a prudent expense.

Aaron Mitchell (GPC): [06:26:59] Yes, Commissioner.

Tim Echols (PSC): [06:26:59] And that's how the relationship works.

Bubba McDonald (PSC): [06:27:02] Does that mean comply with regulations rather than law? So some of, some of the, that was an administration when a lot of regulations were abstracted rom a list of regulations. And then regulations have come back in. And as I have described earlier to the same audience, I'm sure, you look on my door, if the cost of energy is going up and it says, don't call my office, tell the White House and Secretary of Energy. And so that, so would would regulation be acceptable instead of law?

Tim Echols (PSC): [06:27:42] Yeah, I think so. And, Commissioner, we've seen administrations change their mind. We saw the Clean Power Plan come and we saw it go. And so there are plenty of people that would like us to go further with this and dig it all up, line every pond and put it back in there. And you could do that, couldn't you?

Aaron Mitchell (GPC): [06:28:07] It is possible, yeah.

Tim Echols (PSC): [06:28:09] And you would come to us for the money. And then we would go to the ratepayers for that money.

Bubba McDonald (PSC): [06:28:16] If approved.

Tim Echols (PSC): [06:28:17] If approved. Right. So in, in some ways, we are hoping that the strategy survives this administration. It may it may not. We don't know. But this commission is tasked with making sure that we agree with the strategy that you have. It's not that we're rubber stamping your strategy. We could compel you to spend 11.99 or 12.99 or whatever it took. But it's up to this commission to make sure that you're doing what's in the best interest of everyone in our state, particularly your ratepayers, right?

Aaron Mitchell (GPC): [06:29:03] That's correct, Commissioner. And that's that's precisely what the company has done. Is looked at those recommendations, regulations, and put forth a plan that complies in the most cost effective way possible.

Tim Echols (PSC): [06:29:16] Thank you.

Robert Baker (SACE-SF-VS): [06:29:19] Just one clarification. So are you only asking this commission to approve costs that have actually been spent to date?

Brandon Marzo (GPC): [06:29:36] Mr. Chair, I think we've gone far afield with public cross-examinations on cost recovery. The company has asked for approval of its environmental compliance strategy. That is in our filings as a specific request. Caveated within that request is the fact that cost recovery is something that will be handled in the rate case. And we keep going on these questions asking about how things are going to be recovered and this is being done as if this is the first time we've done this, when we've done this in 2019. It's the same sort of fouling the air. We've provided both the tables of cost in this case, as well as the table for the next three years. That information is being available to all parties and it's the same format. And there's a lot of, I guess, forgetfulness among parties today as to how that operates. So I don't really understand why these witnesses are being asked rate making questions, questions about cost recovery. And that's made entirely clear within the filing the company made.

Fitz Johnson (PSC): [06:30:33] Sustained.

Brandon Marzo (GPC): [06:30:33] Thank you.

Robert Baker (SACE-SF-VS): [06:30:36] Turn to page nine of your testimony. You highlight certain emission reductions through 2021. And why did you only emphasize carbon dioxide reductions up to or through 2020?

Aaron Mitchell (GPC): [06:30:54] At the time of the filing, the company had not completed yet its year end updates to its emissions. Those takes some time. Well, when going through and quality assuring those and reporting to the agency. So that reflects that difference.

Robert Baker (SACE-SF-VS): [06:31:24] Did carbon dioxide emissions increase in 2021?

Aaron Mitchell (GPC): [06:31:29] No. Mr. Baker, thank you for asking that. I should have said that. Nonetheless, even though we only included through 2020, the emissions were consistent and remained greater than a 60% reduction.

Robert Baker (SACE-SF-VS): [06:31:55] Turning to page 25 of your pre-filed testimony line 26. If the Commission approves retirement of the coal units at Plant Wansley, Georgia Power recommends modifying its ash pond closure plans at the site from closure-in-place to closure-by-removal. Approximately how much extra will this cost compared to the original plant?

Aaron Mitchell (GPC): [06:32:23] So what I can say, Commissioners, is that the cost is an increase compared to the original plan. We have not yet completed that final analysis and completed report. We plan to update this Commission in April with updated Environmental Compliance Strategy document, reflecting a recommendation to close-by-removal the Wansley ash pond, contingent upon the Commission's approval, to retire and decertify those units. As well, we will update the cost tables in the selected supporting information for Plant Wansley related to those ARO tables and the change in strategy.

Robert Baker (SACE-SF-VS): [06:33:08] Thank you. At page 22-19, for you there. Did any of the 3,000 groundwater samples collected in 2021 show any groundwater contamination?

Aaron Mitchell (GPC): [06:33:28] Well, I can't speak to all that number, large number of results. I can't say that at some facilities, we have had limited number of detections of constituents above a federal CCR standard. However, in those instances, the company has installed additional wells to ensure that we understand the limits of those detections. And in all cases, the company has confirmed that there is no impact above a drinking water standard off of our property.

Robert Baker (SACE-SF-VS): [06:34:07] Were the properties or the facilities with the contamination results for those the ones that had contact with groundwater?

Aaron Mitchell (GPC): [06:34:21] No commissioners. I don't think that was limited to those facilities.

Robert Baker (SACE-SF-VS): [06:34:27] No. There are more than those facilities or no, it wasn't any of the facilities that had contact that you indicated had contact with groundwater.

Aaron Mitchell (GPC): [06:34:40] Just to be sure I'm clear. You're asking for the list, the facilities I listed earlier. Did those detections occur?

Robert Baker (SACE-SF-VS): [06:34:49] Yes. You identified, I believe, three facilities where there was ash, there was contact, the ash pond had contact or the ash CCR had contact with groundwater. Were any of those the facilities that had the water contamination results?

Aaron Mitchell (GPC): [06:35:10] Again, there's volumes of data and, subject to check, commissioners. There were detections at those facilities, but also at some other other facilities. Again, just to emphasize the work the company is doing to ensure that those are limited and that there is no impact to drinking water standards off of our property.

Robert Baker (SACE-SF-VS): [06:35:35] Thank you. Did any of the 998 million gallons of treated water contain or show any contamination from coal ash or CCR byproducts?

Aaron Mitchell (GPC): [06:35:48] So those numbers are in reference to our de-watering activities at our ash ponds. That's a significant amount of water that we're treating at numerous sites. Our data to date that we submit to EPD on a monthly basis and published to our website show that we are protective of water quality standards and EPD has confirmed the same.

Robert Baker (SACE-SF-VS): [06:36:17] So there are indications where there's indications of contamination from coal ash or CCR in any of the, it's a large amount of water. There was no contamination in 998 million gallons?

Aaron Mitchell (GPC): [06:36:33] Our water discharges were compliant with our EPS, our wastewater discharge permits.

Robert Baker (SACE-SF-VS): [06:36:42] The treated water, you're talking about?

Aaron Mitchell (GPC): [06:36:45] The water we discharge is in compliance with our permits.

Robert Baker (SACE-SF-VS): [06:36:53] At Page 31, Line 6 you discuss the kinds of research conducted by Southern Company Research and Development. Was any demand side management research done? And if so, what kind of research?

Mark Berry (GPC): [06:37:05] So can you be more specific in your question?

Robert Baker (SACE-SF-VS): [06:37:11] Page 31. I'll turn here, your pre-filed testimony? Line six. You indicate that. You state that "research conducted by Southern Company Research and Development explores a diverse range of solutions to help Georgia Power keep pace with the evolving energy landscape." And then you list certain technologies that are being investigated. I'm asking, did any of that research impact or evolve DSM technologies?

Mark Berry (GPC): [06:37:55] So can you give me an example of something that you are that you're looking for, in terms of...

Robert Baker (SACE-SF-VS): [06:38:02] Energy efficiency, demand response?

Mark Berry (GPC): [06:38:04] Yes, we are conducting energy efficiency research.

Robert Baker (SACE-SF-VS): [06:38:12] Yeah. Do you happen to know what type of energy efficiency research you do?

Mark Berry (GPC): [06:38:17] I can't speak to the specifics, but if you can make a request and we can get you that information.

Robert Baker (SACE-SF-VS): [06:38:24] If you if you could do that, then just. I don't want you to go too much trouble with it.

Mark Berry (GPC): [06:38:28] Oh, it's no trouble at all. Okay.

Robert Baker (SACE-SF-VS): [06:38:30] Could I make that as a hearing request? Can I make, Mr. Chairman, can I make that as a hearing request just to identify. That not be too complicated? Just if you can identify certain technologies. [Happy to do it.] Thank you. [Yes, I'll allow it.] Thank you.

Robert Baker (SACE-SF-VS): [06:38:45] Then turning to page 30, all the scenarios in figure 2 on page 30 indicate higher carbon prices than $50 a to. Would the company be opposed to running an additional scenario of its capacity expansion model and production cost model with a carbon price derived from the breakeven cost for Vogtle Units 3&4.

Aaron Mitchell (GPC): [06:39:11] I don't know, I don't know if I understand your question. We're not the witnesses for the for the modeling. We can speak to the legislation that informs the pricing as depicted in the graph here. But we can't speak to model runs or potential scenarios.

Robert Baker (SACE-SF-VS): [06:39:47] Could you respond to, how did you pick the $50 a ton price for doing the model?

Mark Berry (GPC): [06:39:56] Oh, yeah, yeah, sure. So we think that the $50 per ton price is representative of the carbon risk that exists. If you look at the proposed bills here that are listed in this table on page 30 of the filed testimony, it represents the texts that are in those bills. So if you look, some of them start below $50. But in those specific cases, within three years, those prices, they escalate at $10 per year. So by 2025, all of the taxes that are proposed in those bills would be greater than $50. Those taxes continue to escalate at a certain percentage each year. There are in many of those bills penalties that would exist if the economy does not achieve the desired carbon reductions that would actually make those costs increase even higher. We also believe that this $50 per ton price represents compliance, really costs if the EPA required us to retrofit technologies on our fossil-fired facilities. So this $50 per ton price represents a wide range of carbon risks that exists.

Robert Baker (SACE-SF-VS): [06:41:20] Thank you, gentlemen, for your time. Thank you, Commissioner.

Fitz Johnson (PSC): [06:41:24] Thank you, Mr. Baker. Mr. Mahan, are you online?

Simon Mahan (SREA): [06:41:30] Yes. Good evening. No questions. Thank you.

Fitz Johnson (PSC): [06:41:34] Thank you, sir. Mr. Marzo. Redirect.

Brandon Marzo (GPC): [06:41:38] Thanks, Mr. Chair. Just a few questions. First off, this this morning, you were questions from Mr. Thomas about the CCR. Do you recall those? [Yes.] And are the company's avoided capital costs, including ELG compliance, included in the company's unit retirement studies? [Yes, they are] And does the ECCR table include recovery already, of already installed environmental controls? [Yes.] And can the company avoid the costs that have already been spent for those controls? [No, it cannot.] Is the company complying with the commission's 2019 rate case order as it pertains to CCR? [Yes, the company is.] Now, Mr. Mitchell, Dr. Barry, you testified in the 2019 IRP, is that correct? [Correct, yes.] Is it, or are you aware, or is it your understanding that the commission approved the ECS in the 2019 IRP? [That is correct.] Okay. Now you were asked some questions. And let me just complete that question. Am I also correct, in terms of rate recovery, that was handled in 2019 rate case? [Correct.] Okay. And so you were asked some questions by Mr. Thomas related to L&A-4-12, if you recall. You may still have that in front of you. [Yes.] And that was the question concerning the true up of the ECCR. And I want to ask you, like, is it your understanding that the ECCR is similar to any other base, sort of base rate? [Yes.] And there's no true up to to base rates, is that right?

Aaron Mitchell (GPC): [06:43:28] That's my understanding.

Brandon Marzo (GPC): [06:43:30] And to, am I right, to the extent that there is an over under recovery, or there's a over, there is an, if there is additional spend, more than what is forecasted, the company takes the risk whether or not that spend is higher than anticipated.

Aaron Mitchell (GPC): [06:43:45] Yes. And that's what I attempted to communicate.

Brandon Marzo (GPC): [06:44:05] Okay. And we talked about the announcement by EPA of a new position, here this morning. I think that was actually asked by a couple of parties, staff and, I think, Sierra Club as well. Do you recall those? [Yes.] Now, has there been any change to the CCR rule governing the closure-in-place performance standards?

Aaron Mitchell (GPC): [06:44:27] No, there has not.

Brandon Marzo (GPC): [06:44:29] So that rule is the same rule that's been in effect the entire time that the company has put its plan from this commission.

Aaron Mitchell (GPC): [06:44:35] Correct. The CCR rule was, the federal CCR rule was issued in 2015, followed by the Georgia CCR rule in 2016. And while there have been some minor changes to those rules, none have changed the performance standards related to our commission approved strategy in 2019.

Brandon Marzo (GPC): [06:44:59] And I believe you mentioned this, but just for clarity, does Georgia have its own federally approved CCR permit program?

Aaron Mitchell (GPC): [06:45:05] Yes, they do.

Brandon Marzo (GPC): [06:45:06] Okay. And has EPD issued final permits for closure-in-place facilities already under that program?

Aaron Mitchell (GPC): [06:45:12] Yes. They have issued a final permit at Plant Bowen for a closure-in-place there at Plant Bowen.

Brandon Marzo (GPC): [06:45:18] And has a draft permit being issued as well?

Aaron Mitchell (GPC): [06:45:21] They additionally have issued a draft permit for Plant Hammond ash pond 3, which is a closure-in-place.

Brandon Marzo (GPC): [06:45:29] Now as it pertains to the CCR strategy and the spend that goes on to implement closures in place, do you report to this commission more often than just in these triennial reviews?

Aaron Mitchell (GPC): [06:45:43] Yes, we do. We, as ordered in 2019, the company is, the company submits and files a semiannual CCR ARO filing. That includes a report and update on our ash pond closure compliance activities at all 29 ash ponds as well as our 12 CCR landfills, and includes details on the two new landfills that the company will build to comply with these rules. It also includes the associated costs and the company's updated cost assumptions and cost projections on a semiannual basis.

Brandon Marzo (GPC): [06:46:25] So is it fair to say, to the extent there are any changes or any updates that occur over time, that's something that will come to the commission's attention fairly quickly.

Aaron Mitchell (GPC): [06:46:32] Yes.

Brandon Marzo (GPC): [06:46:33] Okay. Chairman Johnson. I think that's all I have.

Fitz Johnson (PSC): [06:46:48] Okay. Thank you. Do you have any further exhibits to enter?

Brandon Marzo (GPC): [06:46:54] Just Exhibit three, Georgia Power three.

Fitz Johnson (PSC): [06:46:57] Thank you. I'll move it. Right. Are there any other housekeeping, commissioners, that we need to take up at this time?

Bubba McDonald (PSC): [06:47:11] Goodness gracious.

Fitz Johnson (PSC): [06:47:17] I'm going to ask for the court reporter at this time to make all exhibits part of the record. And thank you, ma'am, for your time. And thank all of you. I know there's some heavy eyes out there. Get some rest tonight. We appreciate your time. Gentlemen, you're excused. And thank you very much. [Thank you, Mr. Chair.] We stand adjourned.