

## Santee Cooper IRP | Public Stakeholder Meeting #1

### Interaction Details

#	Originating Question, Comment, Input	Asker Name	Response type	Answer, Follow-on Questions, Comments, Input
	Hey, thanks, Stewart. Good morning. My name is Findley Salter, and I'm here with Anthony Sandonato representing the South Carolina Office of Regulatory Staff, along with our colleagues from Jay Kennedy and Associates, Ben Pfeffer and Phil Hayet. We are grateful to Santee Cooper for pulling everyone together today for discussion on their Integrated Resource Plan. I want to let everyone know that even though we are here participating in this stakeholder session and future sessions, this does not represent an agreement on the positions discussed. ORS is tasked by statute represent the concerns of the using and consuming public and represent public utility services, regardless of the class of customer and preservation of continued investment in the maintenance of utility facilities services to provide reliable and high quality utility services. When this matter is brought forward before the Public Service Commission, ORS will review all the information presented and draft its position with its statutory requirements as a guide. Thanks, Stewart.	Findlay Salter	Raised Hand/ Open mic comment  live answered Stewart Ramsay	Welcome, thanks, I appreciate that context setting.
1	Maybe I missed this but I assume questions are through the Q&A box and our microphones are all muted?	Dennis Boyd	written	Yes - that is correct Dennis
2	I typed one slide too soon. ALL explained on slide 4!	Dennis Boyd	written	Thanks Denny.
3	What other IRPs have you facilitated please and how does the "all answers public" policy work please with information that may be confidential or sensitive?	Eddy Moore	live answered (addressed in the presentation)	The question and answers are all logged. So the platform keeps a running log that is available to us after the meeting, we'll clean that up and provide it to Santee Cooper for inclusion and their post meeting summaries that are going to be made available. So you'll in addition to being able to see the question and answers today, you'll be able to see all the questions and answers after the fact and go back and revisit those.
4	You said emails will not be made public, but will a list of attendees or organizations in attendance be available?	Ben Pfeffer	live answered Stewart Ramsay  written	<i>live:</i> Yeah, so there is a question from Ben Pfeffer, that emails aren't going to be made public, but the list of people who attended will be just like any public meeting, the list is typically made available and I will talk about who's registered and in a moment, it's quite a quite a wide group. So the list of attendees will be included in the post meeting summary, but we don't believe that you've given us permission to share your emails. And so we wouldn't include your email or your contact information. It would be name and any company affiliation that you've identified in in registering.  <i>written:</i> Yes Ben... and Stewart just saw your questions and responded. Thx!
5	How can we submit reference documents?	Donald Zimmerman	written	Please use the following email address to submit information: IRP@santeecooper.com

			written	Also, feel free to submit a link to materials to this Q/A.
6	What does ORS mean	Tim Haynes	written	Office of Regulatory Staff
			written	<a href="https://ors.sc.gov/">https://ors.sc.gov/</a>
7	Once Central and Santee have agreed to a proposed resource under the COA, is there process to reconsider that decision? Is Central obligated to pay for the resource at Santee's sole discretion, once it accepts a proposed resource?	Eddy Moore	written	The IRP process itself provides an ongoing opportunity for input and reconsideration. If a resource is agreed upon, the payment responsibilities are addressed through the Coordination Agreement.
			written	Thank you. Yes, I understand that the payment responsibilities are addressed through the coordination agreement—my question please was what those payment responsibilities are for Central, once Central has agreed to a proposed resource, and whether there is a process for reconsideration of those responsibilities under the coordination agreement, if for instance, the IRP changes the decision. Part of my question was whether it is at the sole discretion of Santee to proceed, once Central has agreed to a proposed resource—i.e., is the decision revokable on the part of Central.
			written	This is a new process for us, but if the shared resource is changed through this IRP process, Santee Cooper will work with Central to make sure we have reliable power for the system, and that could include a return to the shared resource discussions under the CA.
8	As part of its stewardship initiatives, is it likely we'll see Santee Cooper provide a commitment to lower its greenhouse gas emissions like other utilities have done?	John Brooker	written	John, thank you for that question. Santee Cooper is committed to reducing its carbon emissions profile. We have adopted resource planning principles representing key metrics that balance, among other things, environmental impacts, cost, and reliability. Additionally, as part of the 2023 IRP, Santee Cooper will be studying a portfolio that gets us to net zero carbon emissions by 2050.
		Chris Carnevale	written	Numerous expert studies have shown that the electric sector can get to 80%+ carbon-free generation by 2030 reliably, affordably, and with large public benefits. The U.S. national goal for decarbonizing the electric sector is now zero-carbon by 2035. Will Santee Cooper study portfolios that help South Carolinians benefit from a zero-carbon electric system on a timeline of ~2035 as many experts recommend and in line with the national goal? For reference: <a href="https://cleanenergy.org/blog/new-report-shows-growing-consensus-on-benefits-of-80-clean-electricity-by-2030/">https://cleanenergy.org/blog/new-report-shows-growing-consensus-on-benefits-of-80-clean-electricity-by-2030/</a>
			written	Chris, thanks for your follow-up. We would be interested in hearing from stakeholders about how we could best achieve CO2 emissions reductions in a way that would preserve system reliability and maintain customer affordability. Thanks for the link.
			written	Hi, Chris. We will also be covering potential portfolio options in a future stakeholder session, so there will be more focused opportunities to help us consider options to study.
			written	Great, thanks, Mollie and Jonathan.
			written	Thanks for participating Chris
9	Is Santee using capacity expansion software in its modeling and plan development?	Hamilton Davis	written	Hi, Hamilton. Yes, we will be using cap expansion software. This will be covered around slide 83. The slides are posted at the IRP site. <a href="http://www.santeecooper.com/IRP">www.santeecooper.com/IRP</a>

10	Will Santee Cooper undertake a DSM market potential study for this IPR as is mentioned in slide 30?	Chris Carnevale	written	Thank you for your question, Chris. Santee Cooper has completed a DSM market potential study, which it will refresh for the IRP. We plan to discuss this in greater detail later today on slide 71.
			written	Thank you, Claire.
			written	You are welcome.
11	Will Santee Cooper share the slides from this presentation?	Michael Wallace	written	Hello Michael. The slides are available at <a href="http://www.santecooper.com/IRP">www.santecooper.com/IRP</a>
			written	Our goal is to have the slides available ahead of each meeting so that folks can review them and have their questions and comments ready.
12	Does Santee Cooper buy any power from Co-generators in the state. Does SC own all the solar generation stations mentioned earlier in the presentation?	Tim Haynes	written	Thank you for your question. Yes, Santee Cooper does buy power from co-generators under purchase power agreements. The information provided in the presentation includes both the solar resources that we own and those from which we purchase energy.
13	I assume the 1,500 MW solar projection only includes the RFPs. Can the company share forecasts for how much they expect to be added to the system via PURPA connected projects?	David Rogers	written	Thank you for your question. IRP 2020 included 1,500 MW aggregate solar. Resource planning work focused on optimal resources that can be reliably integrated and did not differentiate between how the resources are procured. We are unable to pre-determine how many PURPA (QF) projects may be added. Subject to Public Utility Regulatory Policies Act, Santee Cooper is required to purchase output from Qualified Facilities, as defined in the Act and FERC's implementing regulations.
14	Historically, what percentage of economy purchases come from natural gas generation?	John Brooker	written	While we can't generally know what resources economy is coming from, we believe that natural gas fired resources are on the margin most of the time. If you have information on this topic you would like to share, please feel free to do so in this forum. Thanks.
15	How do you define "economy purchases"?	Jamey Goldin	live answered Stewart Ramsay	So one of the questions Jamey asked was how would you define economy purchases and then a couple of other questions about economy purchases, so maybe you could just touch on that make sure we're all thinking about your
			live answered Bob Davis	Economy purchases are those transactions that utilities typically participate in within a day. Sometimes they'll be longer than a day or but they're usually hour to hour. They're usually contracted within the day. They're transactions between individual utilities. And they're designed to help utilities maximize the efficient commitment, dispatch and operation of their systems. In other words, if some utility has a resource online, and another utility can purchase from them cheaper than they can by operating their own resources, they'll engage in what's known as an economy transaction. The term economy transaction infers the approach to maximizing the economy or the efficiency of system operations.
			live answered Stewart Ramsay	So it's basically a I saw an opportunity, today? There's no pre-existing arrangement. But I see that utility has got resources available at a lower cost than I can generate. So I'm going to buy from them for this hour, or these three hours or whatever the time period is?
			live answered Bob Davis	Right. And it's usually non-firm (that gets into a little more detail) but it means the system can't necessarily depend that they're there 100%. Generally, most utilities engaged in those contracts on a committed basis.

			live answered Stewart Ramsay	Its kind of like going into the market in a place you don't have a market.
			live answered Bob Davis	Where you don't have a deregulated market, like a MISO or a PJM, or some other place like that in the southeast where we're vertically integrated utilities largely, but the utilities still transact on a an economy basis. It's not prearranged. It's not predetermined prices. It's what's the effective rate or the effective cost of either reducing or increasing your operation in a given period of time.
15a	Do you have interface with PJM?	Jamey Goldin	live answered Bob Davis	Currently, I mean, Santee Cooper is interconnected with Dominion Energy in the Carolinas, South Carolina, Southern Company at the border with Georgia, Duke Energy, both Duke Energy Carolina and Duke Energy Progress. Currently, Santee Cooper does not have a direct interconnection with any of the deregulated markets like PJM, they would have to wheel that power through the Duke system and a bare minimum.
			live answered Stewart Ramsay	That's what I thought, but I thought it was worth clarifying. Thanks
			live answered Bob Davis	It doesn't mean they have never transacted with PJM it's just that there would have to be a significant economy of scale economy to for them to make it worthwhile to overcome the wheeling charges the transmission
			live answered Stewart Ramsay	Right, you gotta you got an intermediary between them and the market that they have to consider. Okay, great. Thanks. Sorry to take you away
			live answered Bob Davis	No, that's fine
		Jamey Goldin	written	If it penciled for the OATT would it be considered?
			written Stewart Ramsay	I think that Bob indicated that it would
			written	Thanks Stewart. Maybe we can look more into the OATT and clearing prices in border markets as an option/alternative to new build if it pencils. I know they've made Pjm and market purchases in the past. Thanks for getting into that and look forward to more discussion
			written Stewart Ramsay	I will make sure that Bob and the team include this in their considerations and what they look at.
16	What total size please (in MW, including any partners) is the combined cycle in the preferred plan?	Eddy Moore	written	Eddie, In the 2020 Resource Plan, the preferred plan included a 552MW (winter rating)
			written	So Central's share would be roughly 70% of that?
			written	Has that changed with the current plan?
			written	Central's share is still about 70%. Our most recent studies suggest showed a need more in the 1100 MW range due to increased load projections.
17	For the 550MW CC/CT capacity proposed to replace Winyah, does that include any capacity needed to serve Central? I was under the impression that Central has a 750MW firm capacity replacement obligation when Winyah retires.	Hamilton Davis	written	In the 2020 IRP, the NGCC resource covered Santee Cooper's aggregate need including from Central. Central's needs likely include some load not served by Santee Cooper in the NW part of the state.

18	Slide 42 says “based on feedback received getting gas to Winyah is feasible.” What feedback please, and from whom?	Eddy Moore	written	Hi Eddy, Central and Santee Cooper signed NDAs with gas pipeline companies to receive feedback. Studies conducted by pipeline companies will be necessary to confirm this initial feedback.
19	May answer this, but if not, what pipelines exist and what kind of lateral will have to be built. How many miles	Philip Hayet	live answered Stewart Ramsay	So along those lines Phillip had asked a question, I think it's, I know, you're probably not going to have the exact third decimal place answer is may answer this, but if not, what pipelines exist and what kind of lateral will have to be built, how many miles and this was in relation to the Winyah and National Natural gas transportation question
			live answered Bob Davis	There's actually a pipeline that runs right by the Winyah site, an existing pipeline. So when we talk about getting gas into the Winyah site, it's really about upgrading the existing pipeline infrastructure that's already in place by both within the Carolinas as well as external to the Carolinas to get gas for a new combined cycle facility for most people that understand that or know about the gas system, the gas system in the in the southeast is fairly fully utilized during most times. So any increase in gas utilization will require some system upgrades.
20	Will Santee share the results of these studies (i.e., pipeline, ELCC, and reserves) in advance of the May 2023 filing?	Taylor Speer	live answered Stewart Ramsay	Okay, great. Thanks. Okay. If not, now, there's a couple other other things. So Taylor Spears asked a couple of related questions that I think are worth bringing out here now. So you know, you're talking about the the studies, you know, the questions will Santee share the results of these studies, a pipeline ELCC and reserves in advance of the May 2023 filing. And one is the along those lines, once the anticipated completion date for those studies,
			live answered Bob Davis	The reserve margin ELCC, we intend to share the results of that evaluation at our next stakeholder meeting. So the results may still be in the process of being finalized at that point in time, but we intend to share throughout the stakeholder process, what we're finding obviously heading into an IRP study will be heavily influenced by both of those assumptions. So we intend to share those with stakeholders as we go on. The natural gas pipeline studies. We don't have a date certain on when those might be completed. But as we learn new information, to the extent it's not protected by confidentiality, we'll be sharing information on that also.
			live answered Stewart Ramsay	Ok so your intent just let's see if this blanket works, but your intent is to share all the results of all of the studies, save any protected information, and then that might be able to be shared under NDA with folks that need it. Did I get that? Correct?
			live answered Bob Davis	I think when we get to you got to correct. But I think when we get to some pricing related issues that that may require some [confidentiality]
			live answered Stewart Ramsay	Are there, certain things that you know or that partners of yours know, the pipeline owners may try to get their stuff as proprietary and you don't have permission to share that. But your intent is to share the results of the studies with the stakeholders.
			live answered Bob Davis	That's correct.

			live answered Stewart Ramsay	<p>Okay. And I'd said earlier, I just want to reinforce this. You know, I understand Santee Cooper's commitment as presentations like the one we're going through today, we're going to be available in advance to the stakeholders in advance of the meetings is the general standard that we're applying. And the same would be true for underlying results and so on that go into that to the extent they don't contain protected information, anything that we're going to discuss with stakeholders would ideally or in most cases is going to be available in advance of the stakeholder meeting, unless it's something where you were burning the midnight oil before the presentation at the last minute?</p>
			live answered Bob Davis	<p>That's right. I mean, in general, if you look through the agenda we have this laid out, we've our next stakeholder meeting should be a fairly big meeting that will discuss the basic assumptions that we intend to use for the model. And we strongly encourage the stakeholders to help guide us on that process. We don't want to do this in a vacuum. We really don't. We want the stakeholders to give us their advice and their recommendations on alternatives that maybe we haven't thought about already. As we get into May, June timeframe for the next stakeholder meeting we will be rolling out, based upon the feedback of the stakeholders what our intent is, regarding some assumptions. It doesn't mean we still aren't going to take some input from stakeholders. But that's kind of the point where we, at some point, have to kind of draw a line and say, Okay, we're going to start running models.</p> <p>So and then sometime later on in the fall timeframe, we hope to have our models up and running some preliminary results on portfolios and prepared to share some of that preliminary information with the stakeholders before we finalize, so again, we can get some input at that point in time and then obviously, some between that meeting and by the time we get to an actual formal or official IRP filing, we'll have our nose to the grindstone and there may not be a whole lot of meetings during that period of time. And but we'll we will be publishing obviously the IRP hopefully, in that timeframe before though, whenever the PSE comes back and</p>
21	When is the anticipated completion date for these studies?	Taylor Speer	live answered in the previous question block	
22	Will Santee consult with solar/battery developers who are currently building battery projects in the development of its ELCC study?	Eddy Moore	written	<p>Hi, Eddy. The ELCC study is currently on-going. Santee Cooper has engaged Astrape for this work. As they have been active in this type of study in the Carolinas regularly over the last few years, we expect they are very plugged in with these entities. As we share information with the stakeholders, we will be looking for feedback, including from entities like these. Thanks.</p>
23	Thank you. Can you share how many MWs of PURPA projects are currently in the interconnection queue?	David Rogers	written	<p>Thank you for your question David. Santee Cooper currently has 205 MW of PURPA under development but we are not able to determine if a project in the transmission queue is a QF until we are approached to enter a PURPA agreement.</p>
24	With regards to coal retirement Santee Cooper, Dominion and Duke have announced unit closures within the state. Is any of those other retirements considered with Santee's IRP?	Karl Winkler	written	<p>Karl - From a transmission perspective, we do evaluate the impacts of unit closures identified by Dominion and Duke.</p>

25	Is Santee Cooper considering renewables other than solar. Does Santee consider biomass to be a renewable fuel source?	Tim Haynes	live answered Bob Davis	I think that most of the people in South Carolina right now would be looking to wind to provide an alternative for renewable resources, obviously, we're looking to solar with battery backup as part of that. But one of the things we're going to be looking at obviously through the portfolio evaluations is looking at a net-zero case. So we're definitely going down the path of needing some long duration batteries. So, both of those issues are somewhat leading edge for South Carolina, we aren't known in this area of the country as being a predominant wind producer, like an Oklahoma or Texas. So how we are going to do that. We've got offshore leases, but South Carolina is not necessarily a good place for that. North Carolina has some better wind off the cape. Onshore, unless we go to a much higher mast size is not necessarily a great opportunity to far off the coastal areas of South Carolina. So we are looking at wind. We don't have any preconceived assumptions at this point in time. So if the stakeholders have some information they'd like to share on that, then great, we are looking for the. Biomass. I'll give you my personal view, biomass should be considered a renewable resource, in my opinion, so long as that biomass is avoiding emissions that would otherwise occur. Either it's a green harvesting of a wood product or perhaps a utilization of wood waste that would otherwise rot and decompose. I think we'll see regulations moving forward that will recognize and put some constraints on what types of biomass are considered green and what aren't. But generally, I personally look at biomass as being a green resource.
26	Will the NGCC unit be treated as a fixed resource in the expansion plan or will it be treated as a selectable resource in the optimization analysis performed for the upcoming IRP?	Hamilton Davis	written	It will be treated as a resource option and evaluated based on the best information and uncertainties that we are available at the time.
27	Will there be an opportunity for stakeholders to provide front end input on the ELLC study methodology?	Hamilton Davis	written	The ELCC study is currently on-going. As it is being done by Astrape, who recently did similar work for Duke Energy, we believe this work will consider the precedent being set as a result of this other work and the associated engagement. As we share information about the study in future sessions, please feel free to provide feedback and direction.
			written	Thanks, Jonathan. Existing guidance from the PSC for DESC and Duke on ELCC studies and other IRP related issues should also be valuable for Santee's consideration.
			written	For sure. We are keeping a close eye on these proceedings. Thanks.
28	To clarify, will the reports be shared or does Santee intend to share only the outputs/conclusions?	Taylor Speer	written	Hi Taylor - these studies could potentially include sensitive information. we will certainly share the results but once the content of the reports is known we will make a judgment about our ability to share.
			written	Thanks, Rahul.
			written	Sure, Taylor. Glad you could join us today.

29	Does this mean, for example, that Central's reported load forecast will be treated as a fixed/pre-determined input into Santee's IRP?	Taylor Speer	live answered Greg McCormack	Yeah, I can. So, you know, central provides us with their forecasts, and we work closely with them, like I mentioned, and it certainly there's going to be a lot more detail talked about as it relates to Central. But you know, we work with them, they develop their forecast, and we kind of look at it and work with them. But at the end of the day, you know, when they provide us the forecast, we do consider that to be their forecast that becomes a part of Santee Cooper's system forecast, we've likely would not want to make any sort of adjustments on our end, unless we're talking about some sort of a scenario or something like that. And we certainly can, you know, work with Central and try and, you know, collaboratively figure that out. how that might work
			live answered Stewart Ramsay	Super, thanks.
30	Are you including electric vehicle charging(at home overnight?) in your future modelling? Not a factor in the past but will be in the future.	Andrew Stone	written	Hi Andrew, we are looking at the impacts of electric vehicles, both in our base forecast and in high electric vehicle adoption sensitivity cases. Because of the de minimus impacts so far, EV impacts are layered in as a post modeling adjustment.
			written	Thanks! Modelling only based on history can lead to surprises - so yes - need to adjust for the future, tricky!
			written	Thanks Andrew, you're absolutely right, and we're making sure to incorporate forward looking perspectives with these new technologies.
31	As more commercial and industrial customers adopt on-site solar and storage, how are your usage models adjusted? What are the uptake assumptions? Are the current and future CO2 reduction goals of these customers being considered?	Donald Zimmerman	written	As these resources are adopted, there will be an implicit impact on the load forecast. However, as these resources are expected to be adopted to a greater degree in the future, the current load forecast is expected to reflect an explicit forecast of distributed solar/storage adoption. As these resources are adopted, it will reduce requirements from Santee Cooper resources, thereby lowering CO2 emissions, so will be captured in that metric directly.
			Taylor Speer	written
		written		Taylor, Central and Santee Cooper have very similar forecast methodologies and work collaboratively to ensure that we have a robust forecast.
		written		Taylor, to be more responsive to your question, in addition to developing the Load Forecast, we evaluate our load forecast monthly compared to the actual load and weather adjusted load. That is to say, we look at forecast accuracy on a monthly basis, so if our forecast begins to deviate we can adjust for the future.
32	So is the IRP required to hit the 2040 load, or something more near-term such as 2030? The 2040 load seems difficult to predict.	Eddy Moore	written	Hi, Eddy. We plan for long-term future loads, recognizing that uncertainty gets larger out in the future. Hence, we will be looking at resource plans across a range of potential future loads but also need to make short-term plans and actions to ensure reliability of supply in the near-term.
33	Can I clarify here? If a large industrial's contract ends in two years, Santee will not be planning for that load the system passed that time?	Taylor Speer		<i>see next reply</i>
34	*on the system	Taylor Speer	live answered Greg McCormack	Correct - to the extent that the contracts have a termination date, we are assuming that they leave the system at that time.
			live answered Stewart Ramsay	Okay. And is that based on conversations with those entities about whether they'd be looking to re up? Or is that just a conservative assumption?



			live answered Greg McCormack	I think it's just a conservative assumption. It's what we would want to plan for, I believe.
			live answered Stewart Ramsay	So unlike your customer load and the load that you serve through Central you don't have requirements to beyond those contracts to serve the off system load. So there's nothing that would require you to enter into an agreement with them. If it made sense to enter into an agreement with them, and it benefited Santee's customers, then that's something that would be considered down the road, but not necessarily built into your forecast.
			live answered Greg McCormack	Exactly.
35	If Congress passes incentives for more efficient appliances, EVs, renewables and storage, etc. in the coming months, as the House of Representatives already has, how would IRP assumptions be affected?	Chris Carnevale	live answered Jacob Thomas	I think in short, it would depend on the timing of when that legislation gets passed, relative to our planning process that we have here. Obviously, we rely pretty heavily on the EIA Annual Energy Outlook. And so legislation passed in the next few months would not be a part of that outlook. We draw from there. Depending on the amount of information available, there may be opportunity to either run a scenario or we're trying to make some kind of adjustment, but it would be difficult to do given our timing right now unless something was passed today or tomorrow.
			live answered Stewart Ramsay	Okay, but correct me if I'm wrong. I mean, the EIA forecast and the information you're using already anticipate a trajectory of continued efficiency, is that correct?
			live answered Jacob Thomas	They do. But it's, it tends to be more naturally occurring, it wouldn't have potential legislation built into it
			live answered Stewart Ramsay	And wouldn't have, if there were incentives will give you, you know, the feds will pay you to replace your refrigerator that may not be in your forecast.
			live answered Jacob Thomas	That's right, because they usually finish their projections in April, late March, early April timeframe. And so they don't try to anticipate future legislation, per se.
		Chris Carnevale	written	Thank you for answering that.
36	Do your direct serve industrial customers have the opportunity to serve their own loads, if doing so would be economic for the system as a whole?	Eddy Moore	written	Thank you Eddy. Industrial customers have the option of providing their own onsite generation. In order to operate in parallel with our system they must complete a generator interconnection agreement with Santee Cooper.
		Taylor Speer	written	And follow-up question how will Santee value that load reduction?
			written	Thank you.
			written	Good question Taylor. Our rates are developed based on cost of service, for our industrial customers, they would see a reduction in their consumption on their monthly bills.
37	Thank you, Stewart!	Taylor Speer	written	you're welcome
38	Much as I would prefer to finish early I do agree with 1:30 restart as scheduled	Dennis Boyd	written	Thanks Denny - glad you're participating today

	<p>Hi, yes, I just didn't want to leave y'all with a deafening silence. It was a powerful presentation. And I just want to assure you all that it's very much appreciated. And I guess, from the perspective, at least of one in party. I'm with Coastal Conservation League that has spent a good bit of time over the last couple of years, working on IRP issues, and then other stakeholder groups. I guess, our sense is that to the degree the kind of detailed assumptions and studies can be shared as much on the front end as possible, that allows us to make constructive responses. And, at the end of the day, there's this PSC process, which is sometimes sort of arduous. And my experience is that eventually, there's disclosure of that process. The only question is, whether it's too late to react to it. And building consensus to me hinges upon sharing the information earlier on so that it can be the subject of collaboration. I appreciate all the responses that have been appearing in the Q&amp;A thus far. And so we just want to continue in that vein. So thanks.</p>	Eddy Moore	<p>Raised Hand/ Open mic comment</p> <p>live answered Stewart Ramsay</p>	<p>Thanks, Eddy and Rahul, maybe you can chime in after me, but one of the things that my team and I were pleased about when we first started working with what Santee Cooper was the view they brought to this. That's a little bit different than some of some of the other work we've done. Their view is "this is who we are, we want the input." We want it whether we agree with. There's so many diverse views. We may not be in agreement with all of them, but we want to hear all of them and be able to address all of them. And, you know, we were encouraged, by their view that they want to get as much of the information in the hands of the stakeholders in advance as possible. So in addition to presentations, other underlying information too, so that the stakeholders are able to come prepared, and not just show up at a stakeholder meeting and see the results of the analysis for the first time and, and have to think about it on the fly. The other thing that I found quite refreshing was the view that when we go into the whatever, hearing process or conversation at the end, when we file the IRP, nobody should be surprised. We may not be in agreement, but nobody should be surprised about where we agree and where we disagree. People shouldn't have to wait for the filing know what's going to be in there. And I think that's a pretty useful position for them to be taking, Rahul, anything, anything you'd like to add to that?</p>
			<p>live answered Rahul Dembla</p>	<p>Thank you. Now that I think, Eddie, that's a really good point. And I think we have the same objective here. As you can see that the schedule of the sessions we've laid out, and we said, you know, it's five sessions, and it's they're fairly regular adding that's designed to achieve that kind of communication and avoid surprises, you know, there will be some clearly limitations in terms of as you mentioned, Eddie, the there is a PRC filing date we have to get to and a lot of these studies and assumptions will be fairly real time. And we can, you know, totally our goal is to get that out and have a discussion or open discussion with the with you and others, other stakeholders in in real time. And, you know, I think the key phrase there, what you said was, I think building consensus, and when we are very serious about it, that's where we want to be because that will maximize our chances of success. So I appreciate that question. And we will do our best. Thanks. Thank you.</p>

<p>This is Frank Holleman and I'm at the Southern Environmental Law Center. I have some environmental issues I might raise later when you get into that topic. But the point you just made, I think is important in another context. And that is one of the major environmental consequences of the operation of the Santee Cooper system is the water pollution impacts particularly around Winyah and Cross. The importance of the stakeholders learning things at the last minute and not being involved up front. That's exactly how the water pollution permitting process works with Santee Cooper, and others for that matter, is that major document which comes out once every year, once every five or once every 15 years. It just gets dropped for public comment with no stakeholder process like this in advance. We've just been going through that for both Winyah and Cross. So it just occurred to me and we do have more input with other utilities, or at least one other utility, Duke for example. It just occurred to me as you were speaking and pointing out the positive aspects of this kind of process. It would be the water pollution aspects the Santee Cooper operation are very important had tremendous impacts on Lake Moultrie and surround in the waterways and in the Horry and Georgetown counties. But no process like this exists for the development of those important processes at all. And I think that's something that might be reconsidered even for the current permits, and definitely consider for these major air pollution and water pollution permits. I think it'd be better for all concerned because right now, the stakeholders have no way of knowing what thinking really went into the permits other than a not very revealing permit rationality it provides. So I would just lay that out. It's something for Santee Cooper to consider.</p>	<p>Frank Holleman</p>	<p>Raised Hand/ Open mic  live answered Rahul Dembla</p>	<p>That's a very fair concern. Let me take it back. I'm not equipped to respond to that question. But I will follow up internally on that. But, I appreciate it.</p>
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<p>Thank you for this nice conversation. Certainly appreciate Stewart, you addressing my questions and Santee being responsive to stakeholder inquiry. Hi, Rahul, nice to see you again. I'm here on behalf of Alder Energy. Alder Energy is a solar developer that really focuses on commercial and industrial load reduction through on-site solar, as well as well as other things. So my focus at this time is really understanding what Santee is going to do in terms of its load forecasting. And I think that I was surprised that the co-ops and Central's load forecast might be just an assumed variable in Santee's IRP. So I was hoping to get some more clarity on exactly what data Santee would be using to determine the efficacy of Central and the co-ops load forecasts.</p>	<p>Taylor Speer</p>	<p>Raised Hand/ Open mic comment  live answered Stewart Ramsay</p>	<p>I see a couple of different interpretations for the response. And I see how somebody could hear what we said "as we're just going to take their forecast as a point response". I think it's actually way more sophisticated than that. Central's done its own IRP and has got its own load forecast. And that detailed information is shared between them. And I think in the, in the presentation, you've got links to what Central has prepared. And so my take is Central and Santee are sharing a lot of information about load forecast. And the questions that I've asked I haven't talked to, to the Central folks myself, but the questions I've asked of the folks inside of Santee Cooper that are doing the load forecast, they're quite confident in the consistency of approach the way that they're looking at things in a in a consistent way. They're using the same resources we have for it input data. And when it's not the same resource, it's a comparable resource, they use this one that would have been our second choice, the thing we're using would have been their second choice. They're both reasonable. And so I think it's much more than we just take it as a given. It's more we've looked at their load forecast. Their methodology is highly consistent with ours. Central has the ability to talk to and look at the load forecasts of each of its individual members, and tune those based on the changes in the areas that each of them serve. So, my sense is taking a look at the work that Central has done may be able to get you the answers that you are looking for in terms of what the details of a total Santee-wide forecast would look like. Rahul or Greg you know, correct me if I'm if I've got that wrong.</p>
		<p>live answered Rahul Dembla</p>	<p>No, I think Stewart that's right. And Taylor, Let me add to that. So it definitely is a long process of working together with them. It's not taking a variable and getting comfortable with what's driving the load forecast, which is I think, Stewart, you did a nice job of explaining that. And how you did that is exactly right. But also know that we have in our contract and Central also has a process for doing this together. And there is a planning committee of executives from both organizations that review this forecast, and discuss it. And there are several meetings between now and the May time frame to get comfortable with the assumptions for the staff to work together to get a product together that makes sense to us. We will not plan for it if you're not comfortable with it is our how I would say it. So that process works really well. And it has worked very well over the past few years. I've been there. Finally, there's the approval mechanism. The planning committee approves the load forecast. And that's how we get to that point in May. So it's a fairly thorough process. Taylor. Is that is that responsive?</p>
	<p>Taylor Speer</p>	<p>Open Mic</p>	<p>It sure is. Thank you. I'll follow up question. And this is sort of moving beyond the central issue. But with respect to Santee's planning, to Santee expect to implement any customer programs, whatever they may be, you know, for example, could be something comparable to Duke's GSA program? Will there be in any modeling based on customer programs to reduce demand or that take account for either on site solar, or something more unique, like GSA, which would be offsets, or?</p>
		<p>live answered Rahul Dembla</p>	<p>I think some of this we will address this afternoon and customer side programs. I think that's right after lunch. Right. So let's get to that. And if we have not answered, then we'll get back with you.</p>

			live answered Stewart Ramsay	Think that's right, Rahul, I think that you're going to get to part of that answer today. And, you know, in the discussion of DSM programs and market potential study it may not, I don't know that you are yet at the place where you're in a position to talk about the the other kinds of programs that might incent solar or anything else. So but I think part of it'll get answered today, Taylor, and the rest of it will will be coming in subsequent meetings.
		Taylor Speer	Open Mic	Okay, thanks for having us again. Thank you.

## LUNCH BREAK

39	What is Santee Cooper's relationship with Resource Innovations?	Findlay Salter	written	Thank you for your question. Jim will provide an overview of the relationship in his introduction.
40	What did "to some extent" mean in terms of incorporating Central DSM programs in this IRP	Philip Hayet	written	Central manages DSM programs separate from Santee Cooper, targeting programs to the customers of its member systems. Projection of Central DSM program impacts are reflected in the Central load forecast.
			written	Is it possible to pursue a joint DSM program between the two entities?
			written	Santee Cooper coordinates with Central on a number of resource planning issues. We would be open to coordinating on joint DSM initiatives if an opportunity were to present itself.
41	How much did Reduce the Use reduce peak loads please? Does Reduce the Use cause a net cost reduction for all ratepayers (including non-participants)? Thanks!	Eddy Moore	written	Thank you for your question. Santee Cooper's Reduce the Use programs prioritized energy savings. While it was not the focus of the Reduce the Use program, we can pull together a report of the estimated demand savings and get an answer back to you through email. If desired, you can also post the question by email at <a href="mailto:IRP@santeecooper.com">IRP@santeecooper.com</a> . We will discuss the cost-effectiveness testing later in the presentation and will present results of the updated Market Potential Study in future stakeholder sessions.
42	Can Energy Efficiency and Peak Demand Reduction numbers be shown as a percentage of overall load?	Ben Pfeffer	written	Thank you for your question, Ben. We do not have that number readily available. In the next session when we provide the updated MPS, we can provide it.
			written	Thank you!
			live answered Stewart Ramsay	So you know, one of the questions that's popping up is, you know, can we show energy efficiency and peak demand reduction numbers as a percentage of overall load? I think that'll show up later and in subsequent conversations, but it's just something for you and Patricia that to bear in mind as we get further through the conversations. It helps it put it in context for folks.
43	Is there potential for Industrial EE?	Eddy Moore	written	Thank you Eddy. Santee Cooper does not currently offer EE programs for industrial customers under the L-rate. We would be happy discuss any programs with our industrials that would better promote energy efficiency.
44	With the South Carolina Energy Freedom Act requiring low, mid, and high level portfolios of energy efficiency in IRPs, for the Santee Cooper 2023 IRP, will those three levels of EE be established by the market potential study refresh?	Chris Carnevale	written	Thanks, Chris. Yes. Santee Cooper will be running such DSM sensitivities through the IRP process based on the results of the updated MPS.
			written	Thanks, Jonathan.
			written	Sure...not problem.

45	Regarding the slide 69 residential savings showing that 39% savings are behavioral—is that an annual (1-year) snapshot or cumulative measurement of savings please? Usually behavioral savings have short persistence and thus do not accumulate like building envelope savings...	Eddy Moore	written	The pie chart reflects the cumulative savings in 2030 by program type. For behavioral, the measure life is 1-year as you mention, with the opportunity for repeated savings year-over-year by customers who continue to receive the home energy reports. So for the behavioral program, the savings is based on 2030 home energy report participants.
46	What is “Home Energy Reporting” in the residential savings category?	Chris Carnevale	written	Thank you for your question. "Home Energy Reporting" includes home energy usage reports that result in behavior modification yielding energy savings.
			written	Is that info that is on the monthly bill? Like comparing your usage for the month this year to the month last year? Or comparing your monthly usage to neighbors?
			written	Thank you for your question. We have not yet implemented this program. A typical home energy report is a separate document that helps customers analyze their usage and provides recommendations to help encourage energy conservation in their home.
47	Am I correct in calculating the total energy use in 2030 is 10,800 GWhs?	David Rogers	written	David, Assuming that you're referring to the total system load, our 2021 Load Forecast 2030 energy load was forecasted to be about 28,000 GWh. Does that answer your question?
			written	I'm trying to figure out what the 100 GWhs of savings denominator would be, given that Central's EE programs aren't included tin that 100 GWh total? I think the 28,000 includes Centrals load.
			written	Santee Cooper's direct serve customers represent about 4000 GWh in 2030. You are correct that the 28000 has Central included; the 4000 GWh of our direct serve is just Santee Cooper residential and commercial customers.
48	I'm curious about Santee seeking "feedback provided by retail customers" under Act 90 (2021). Can Santee please direct stakeholders to a proposed forum for that feedback? Thank you.	Taylor Speer	written	Hi, Taylor. We appreciate opportunities to engage with our customers. This forum is intended to provide such an opportunity. We published notifications to this forum in both print media and e-mail. Please also see <a href="http://www.santeecooper.com/IRP">www.santeecooper.com/IRP</a> to keep up with information we publish and feel free to submit questions or comments to <a href="mailto:IRP@santeecooper.com">IRP@santeecooper.com</a> .
			written	Taylor, we have an database of about 125,000 customers who have opted in to email communications from us, and we sent notice of this meeting to that group and included links to email us and to visit our IRP page on the website that Jonathan referenced above. We plan to continue reaching out to retail customers in this manner. We also are running ads promoting the stakeholder meetings in daily newspapers around the state and promoting the process, meetings, web and email links on our social media accounts (and boosting those posts). Thanks for asking.
49	For the load forecast in the 2030-2040 timeframe, do you assume that EE program investments continue to produce similar annual amounts of energy and demand savings? Thanks!	Eddy Moore	written	Thank you for your question. We carried out 2030 numbers for 2030-2040. We expect to complete at least one additional MPS by that time, which will provide us with an updated understanding of what energy and demand savings can be achieved during that time period.
		Eddy Moore	written	Thank you!
50	Is Demand Response targeting both summer and winter. Is it mainly one or the other?	Philip Hayet	written	Thank you for your question. We are targeting our winter peak; however, we plan to conduct events as needed throughout the year.

51	Are you studying the DERMS stacked values of V2G? <a href="https://nccleantech.ncsu.edu/2021/09/21/nc-cooperative-demonstration-of-vehicle-to-grid-smart-charger-shows-economic-value/">https://nccleantech.ncsu.edu/2021/09/21/nc-cooperative-demonstration-of-vehicle-to-grid-smart-charger-shows-economic-value/</a>	Keith Thomson	written	Thanks for the info, Keith. Santee Cooper is open to considering how best to integrate vehicle-to-grid operations in the future. However, at this time, the saturation of EVs on the Santee Cooper system is too small to provide significant value to system operations. Santee Cooper will track the development of the industry as it matures and will adopt programs and practices as appropriate. Stay tuned...
52	Are the coop's participating in Residential EV Charging Program?	Russell Worrell	live answered Patricia Housand	Central participates in, in the same organizations that we do. We have not been directly collaborating with them, because they have a huge collaboration among themselves through the electric cooperatives in South Carolina. And so we keep in contact with the head of their program development, just to see what they're doing, and we exchange ideas. Whatever is good for them is maybe good for us. We just are kind of exchanging ideas but not in lockstep with each other. No, but definitely taking what's beneficial from each other. And yes, they were very active participant, as well as we were with the EV initiatives hosted by the Duke Institute on behalf of the State Energy Office due to Act 46. And so they participated on several other stakeholder breakout groups, as well as we did.
53	It's good to look forward to the market innovations coming this Spring and beyond: Be Prepared is a good motto. <a href="https://www.pv-magazine.com/2022/02/04/ford-sunrun-to-backup-us-solar-homes-with-the-electric-f-150/">https://www.pv-magazine.com/2022/02/04/ford-sunrun-to-backup-us-solar-homes-with-the-electric-f-150/</a>	Keith Thomson	written	Keith, thanks for your comment and the article link!
54	Does the market potential study include sensitivities relative to commercial and industrial adoption of customer-sited solar (and + storage)?	Taylor Speer	written	Taylor, we're still working on our base case and sensitivities, but we are not anticipating a high likelihood of industrial solar in the base or sensitivity cases. We will likely include different cases for commercial, however.
55	<a href="https://www.drive.com.au/news/volkswagen-to-offer-two-way-charging-tech-in-2022/">https://www.drive.com.au/news/volkswagen-to-offer-two-way-charging-tech-in-2022/</a>	Keith Thomson	written	Thanks for this too!
56	<a href="https://thenextweb.com/news/bi-directional-charging-is-a-gamechanger-with-ev-charging">https://thenextweb.com/news/bi-directional-charging-is-a-gamechanger-with-ev-charging</a>	Keith Thomson	written	And for this!
57	<a href="https://www.designnews.com/automotive-engineering/fermatas-two-way-v2g-ev-charger-project-confirms-load-balancing-benefits">https://www.designnews.com/automotive-engineering/fermatas-two-way-v2g-ev-charger-project-confirms-load-balancing-benefits</a>	Keith Thomson	written	Thanks Keith
58	Does the market potential study include sensitivities for commercial and industrial adoption of customer-sited solar (and + storage)?	Taylor Speer	written	Taylor, we're still working on our base case and sensitivities, but we are not anticipating a high likelihood of industrial solar in the base or sensitivity cases. We will likely include different cases for commercial, however.
			written	Santee has direct and indirect customers that are eager to reduce their demand and usage, and turn to green power. Please assist them in providing solar programs that allow them to accomplish their goals, and account for that in Santee's resource planning.
			written	Santee Cooper has been and will continue to work with all customers to accomplish their energy efficiency goals. As customers make energy efficiency improvements, they see immediate savings on their monthly bills, and these improvements will be reflected in load forecasts.
59	<a href="https://www.fermataenergy.com/utilities">https://www.fermataenergy.com/utilities</a>	Keith Thomson	written	Thank you -

60	What will be the opportunities for stakeholder input on the DSM market potential study?	Chris Carnevale	written	Thanks for your interest. However, due to the length of time it would take to embark on a totally new MPS, we are using the same data and assumptions that we did in 2019. The only change will be that measures will be vetted using the Utility Cost Test rather than the Total Resource Cost Test. Those results will be discussed in the May Stakeholder meeting.
61	Will the IRP plan allow for endogenous retirements of existing units if that's determined to be economic? Or are all the existing units hard-wired run until specific retirement dates?	David Rogers	written	Hi, David. At this time, our thinking is to run a potential portfolio reflecting an early retirement of Cross during the 2030s to test the economics versus continued operation. During the next stakeholder sessions, there will be additional opportunities to discuss potential portfolios.
			written	Thanks.
62	In slide 77, is the 500 MW first tranche of solar or the next 500 MW of solar PPAs reflected in the blue "other" category?	Eddy Moore	written	Eddy - Slide 77 depicts our existing winter capacity demand and supply. It does not include future resources and does not include solar. Our winter peak occurs early on a winter morning at a time when solar does not offer meaningful capacity.
			written	Just to clarify, we did not reflect any winter capacity value from solar during our resource planning activities over the last couple of years. We anticipate that our on-going ELCC study will refine this assumption.
		Taylor Speer	written	Jonathan, I'm sure you're aware, but PSCSC rulings may be instructive to Santee on solar capacity values for winter peaking events.
		Eddy Moore	written	Thanks Jonathan. I am thinking the 500 to 1000 MW of solar will change the duration of the winter morning peak—i.e., shorten the current 7AM-9AM width of the peak. I mention this because a shorter peak may change the character of battery resource (or the amount of gas burn) needed to help meet the load. Also, if batteries are allowed in the RFP, solar+batteries might be offered.
			written	Thanks, Eddy. I think that makes sense. Our ELCC study will help us understand the capacity value of solar/storage, and the optimization analysis will include solar and various types of storage resources as options, so this phenomenon should be accurately depicted and evaluated.
			written	Taylor - We are indeed keeping a close eye on the Duke and Dominion proceedings. Thanks.
63	Thanks, Jonathan!	Eddy Moore	written	Sure thing!
64	Can Santee comment on any quantitative risk analyses that may be used for portfolio evaluation?	Hamilton Davis	written	Our anticipated approach is to analyze potential portfolios across a wide range of potential future conditions for load, fuel prices, DSM, and CO2 regulation/taxes. The specifics will be covered in the next stakeholder session in April/May, at which point we'd be happy to discuss your thoughts/suggestions. Thanks for the question.
65	Least cost energy calculations are changing as technologies advance and improve: <a href="https://www.nrel.gov/news/program/2021/documenting-a-decade-of-cost-declines-for-pv-systems.html">https://www.nrel.gov/news/program/2021/documenting-a-decade-of-cost-declines-for-pv-systems.html</a>	Keith Thomson	written	Keith, The decline in solar prices is a classic example indeed. Thanks.
66	<a href="https://ourworldindata.org/battery-price-decline">https://ourworldindata.org/battery-price-decline</a>	Keith Thomson	written	Keith, We are in fact watching the projected decline in battery prices as we move through this process.



67	Defending America with continuously improving tools and plans: <a href="https://www.eenews.net/articles/army-details-plans-to-hit-net-zero-carbon-emissions/">https://www.eenews.net/articles/army-details-plans-to-hit-net-zero-carbon-emissions/</a>	Keith Thomson	written	Thank you Keith
68	<a href="https://microgridknowledge.com/xendee-defense-and-government-microgrids/">https://microgridknowledge.com/xendee-defense-and-government-microgrids/</a>	Keith Thomson	written	Thank you again.
69	Customer sited DER should not be forgotten. Growth of PV / Storage has the opportunity to grow significantly and should be part of the overall load reduction / generation mix. See:	Donald Zimmerman	written	Thank you. I hope Bob's answer was responsive
70	<a href="https://www.communitysolaraccess.org/wp-content/uploads/2022/02/CCSA_BRO-White-Paper_20220214-1.pdf">https://www.communitysolaraccess.org/wp-content/uploads/2022/02/CCSA_BRO-White-Paper_20220214-1.pdf</a>	Donald Zimmerman	written	We have been and will continue to monitor this to determine when and what resources to include in our load forecast.
71	EnCompass has the ability to model endogenous retirement. It would be helpful if the company was willing to model at least one scenario that included the endogenous retirement of Cross. Given increasing costs associated with coal plant, and likely regulations, the company should consider earlier retirement dates than what the 2020 IRP included.	David Rogers	written	Thanks, David. Our current intent is to model an early retirement of Cross (in the mid-2030s) and evaluate the associated metrics from the portfolio. We believe that will provide sufficiently useful information regarding this portfolio option. We will be addressing the potential portfolios and approach in the next stakeholder meeting.
72	Also for assumption recommendations, We've found NREL's ATB moderate forecast to be useful for more mature techs like solar and onshore wind and NREL ATB advanced forecast for newer tech like battery storage and offshore wind.	David Rogers	written	We are familiar with the ATB publication and will be assessing the resource option parameters over the next couple of months. We will cover this material at length in the next stakeholder session. Thanks, David.
			written	Thanks Jonathan.
73	Subgroups - Focus topics working groups:	Steven Castracane	written	Subgroups - Focus topics working groups:
			written	Steven, Thank you for your input and for participating today.
74	Parris Island Microgrid, Deep Energy Retrofit Reduced Utility Energy Demand by 75% <a href="https://microgridknowledge.com/white-paper/parris-island-microgrid-ameresco/">https://microgridknowledge.com/white-paper/parris-island-microgrid-ameresco/</a>	Keith Thomson	written	Thank you
75	<a href="https://atb.nrel.gov/electricity/2021/index">https://atb.nrel.gov/electricity/2021/index</a>	David Rogers	written	Thanks, David. We'll be looking at the projections from this resource for sure.
76	The upcoming renewable RFP might also be a source of price discovery, particularly if it includes battery storage.	Eddy Moore	written	Certainly, renewable RFP and like processes provide useful info on pricing and terms of solar and battery resources. Our recent processes in this regard have already been helpful, both to us and to other utilities in the region. Thanks for your participation and questions/comments.
77	The forest products industry is well established in SC. It has the expertise for converting waste biomass to energy. Other states have included biomass energy in there portfolio with success.	Tim Haynes	written	Thank you Tim. Santee Cooper also has biomass in our portfolio , through contracts with independent power producers.
78	What will you do make final decisions about data assumptions when disagreements arise? Please share any thoughts on that now, as it will help down the line.	Philip Hayet	written	Hi Phillip, we will handle these on a case by case basis; our goal will be to reach consensus. In certain situations, where consensus is not reached, we will do our best to handle it via sensitivity cases (to test variances to our base case assumptions).
79	<a href="https://www.advancedenergy.org/2021/08/24/duke-energys-focus-on-resiliency-strengthens-north-carolinas-grid-and-communities/">https://www.advancedenergy.org/2021/08/24/duke-energys-focus-on-resiliency-strengthens-north-carolinas-grid-and-communities/</a>	Keith Thomson	written	Thank you

80	The Georgia Power 2022 IRP has some recent data assumptions on wind energy in the Southeast	Ben Pfeffer	written	Ben, Thanks for this information.
81	The financial risks (e.g., Santee's bond rating) of carbon emissions should be a sensitivity in Santee's modeling.	Taylor Speer	written	Taylor, thanks for your comment. We will be including financial risks as we move through this process.
82	Subgroups - Focus topics working group: rate design, cost allocation, Economic Purchases and Secondary Power/Interruptible program modifications.	Steven Castracane	written	Subgroups - Focus topics working group: rate design, cost allocation, Economic Purchases and Secondary Power/Interruptible program modifications.
			written	Thanks Steve. We are committed to listening IRP recommendations. These focus topics seem largely unrelated to IRP. Many of these topics would be appropriate in a rate stakeholder meeting process; Santee Cooper will provide assistance with these topics should a rate process occur.
83	My personal opinion: time spent on SMR and hydrogen (not commercially viable and highly risky) is less useful than time spent ensuring that available distributed, renewable, and demand-side resources are fully assessed.	Eddy Moore	written	Thanks, Eddy. We will be talking further about resource options at the next stakeholder session, but we'll certainly be thinking hard about these options.
84	<a href="https://ors.sc.gov/consumers/electric-natural-gas/solar/south-carolina-energy-freedom-act">https://ors.sc.gov/consumers/electric-natural-gas/solar/south-carolina-energy-freedom-act</a>	Keith Thomson	written	Thanks, Keith. Noted.
85	South Carolina can be a leader in least cost, clean energy, including beneficial electrification, job creation, and greater resiliency in the face of known known challenges to our future security.	Keith Thomson	written	Keith, thank you for that comment and for participating today.
86	I think SMR planning would be highly speculative.	Chris Carnevale	written	Thanks for the input, Chris. When we cover resource options at greater length in the next session, there will be a more focused opportunity to provide input on the options we look at. You're right though, some up front screening may be helpful.
87	Did I hear Bob Davis correctly say that Santee Cooper plans to study multiple study periods. What are Santee Cooper's plans at this point for doing that? Has Santee Cooper decided yet what its base study period will be? This may require a conversation.	Philip Hayet	written	We'll cover this at more length in a later session. The modeling of a net-zero portfolio by 2050 may require a differing study period, but at this point we have not determined our exact approach with respect to study period across the potential portfolios. Thanks, Philip.
88	If this is the next steps segment, I would suggest please:  1. We suggest please that Santee should consult solar/battery community on ELCC study prior to completion. Getting on the same page may conserve time. 2. Explore modified timeline and terms for solar RFP including battery procurement. 3. Consult on the 2050 net zero scenario, as it may reasonably require a no-CC or reduced-CC scenario for the 2030's. 4. Please share Santee's part of the joint transmission study that was conducted with DESC & help us understand the nature of transmission flow, voltage support, and reliability constraints.	Eddy Moore	written	Eddy, thank you for your participation and for these specific suggestions. We plan to share a number of studies that are related directly to our IRP process as we go forward.

89	Just to be clear your thumbs up meant we will discuss this, correct. You can give another thumbs up if you agree.	Philip Hayet	written	Hi Philip, the thumbs up is a zoom button that indicates that someone appreciated the question. We look forward to seeing you in the next meeting!
90	Good job.	Keith Thomson	written	Thanks Keith, and thanks for participating.
91	Thanks, Santee, for being responsive to questions and comments!	Taylor Speer	written	Taylor, thanks for participating and for your comments and input.
92	Thanks for the thoughtful engagement during today's meeting. Much appreciated.	Hamilton Davis	written	Hamilton, thanks for participating and for your input.
93	Yes, thank you to Santee and to Vanry!	Eddy Moore	written	Eddy, thanks for your participation.
94	Thanks for the engagement today!	David Rogers	written	Thanks David, and thanks to you for participating.
95	Can you tell me how many MW is provided from biomass by independent power producers and who they are?	Tim Haynes	written	Thank you for your question Tim. Santee Cooper purchases the output from DOMTAR PAPER COMPANY, LLC, which owns and operates a biomass-fired electric generating facility, from which Santee Cooper purchases approximately 38 megawatts.  <i>Ammendment addition to the above answer: Santee Cooper also has biomass purchase power agreements with Atlantic Power Cooperation to buy a total of 35.6 MW from facilities in Allendale and Dorchester Counties.</i>
96	Thank you for hosting this session today.	Chris Carnevale	written	Thanks Chris, and thanks for your input.
	This is Frank Holleman, again from the Southern Environmental Law Center. And I want to put one environmental issue for on the table for consideration that relates to the investments Sandy Cooper and its ratepayers had made over the years. Sandy Cooper has really done a very good job and been an industry leader in cleaning up its unlined coal ash pits. And in addition, of course, Sandy Cooper is having the significant and worthwhile expense but significance if expensive is air pollution controls. All the result of those investments that were go into landfills. He said landfill it at Winyah. And there's a landfill at Cross Line modern land landfills that contained the waste has been removed through that process. It's significant expense. And one main reason that was all done was to keep those toxic pollutants and coal ash and the FGD blowdown out of the waterways surrounding waterways.	Frank Holleman	Raised Hand/ Open Mic live comment after final presentation live answered  Stewart Ramsay	Thank you Frank

But unfortunately, and to me, this is ironic in the recent proposed permits that Santee Cooper has proposed for these two sites, it proposes not to use any modern treatment to remove the toxic substances from the Lychee that flows out of these landfills into the waterways. In fact, it proposes to use technology that's 50 or more years old. Rather than using modern available technologies, which would remove mercury for example, like Moultrie, one of our state's most important fisheries is impaired from mercury, due to he not insignificant part to the pollution coming from Santee Cooper's coal fired plants, Cross being nearby, and it discharges Lychee directly into the lake. And the same thing is true of the waterways around Winyah In Georgetown.

Furthermore, the approach is being proposed has been rejected by the EPA itself. And I just don't think this is what the senior management and board of Santee Cooper who want to do because it undercuts investments and is directly contrary to what's in the slideshow about trying to be environmentally good stewards. So I would just I would hope that the policymakers at Santee Cooper reviewing the RFP would consider these investments and to make them worthwhile you got to treat this landfill ha. And this is a ongoing problem even after the coal fired plants closed because this landfill these landfills are going be there for years or decades into the future. So I would just like to lay that on the table for consideration during the IRP because to me, it's being penny unwise and pound Foolish at the same time. So thank you. I just want to lay that out for your consideration.