

MEETING NOTES

**SOUTH CAROLINA ELECTRIC & GAS COMPANY
SALUDA HYDRO PROJECT RELICENSING
OPERATIONS RESOURCE GROUP**

**SCE&G Training Center
November 1, 2005**

final 12-23 ACG

ATTENDEES:

Alan Stuart, Kleinschmidt Associates
Alison Guth, Kleinschmidt Associates
Ray Ammarell, SCE&G
Bill Argentieri, SCE&G
Lee Xanthakos, SCE&G
Gina Kirkland, SCDHEC
Mike Summer, SCE&G
Sally Wofford, SCE&G
Randy Mahan, SCANA Services
Kristina Massey, Kleinschmidt Associates
Steve Bell, Lake Murray Watch
Mark Leao, USFWS
Joy Downs, LMA
Tom Ruple, LMA

Dick Christie, SCDNR
Bud Badr, SCDNR
Parkin Hunter, Columbia Audubon
Bill Marshall, LSSRAC
George Duke, LMHOC
Bill Hulslander, Congaree National Park
Patrick Moore, SCCCL/Am. Rivers

DATE: November 1, 2005

ACTION ITEMS:

- Draft Mission Statement:
Randy Mahan

HOMEWORK ITEMS:

- Review ICD and Study Requests
- Think about what information needs to be presented in this group for educational purposes

AGENDA TOPICS FOR NEXT MEETING:

- Develop mission statement
- Discussion on the content of a Model
- Review of stakeholder interests
- Presentation on Saluda
- Review of requested studies and a determination of what information already exists

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DATE OF NEXT MEETING: **December 6, 2005 at 9:30 a.m.**
Located at the Lake Murray Training Center

INTRODUCTIONS AND PURPOSE

Alan Stuart opened the meeting and everyone introduced themselves.

He introduced Lee Xanthakos as the presentation speaker and noted that the purpose of the RCG would be to try to identify resource specific issues. Alan noted that because SCE&G was using the TLP it would be a cooperative process. He mentioned that the difference between cooperative and collaborative had been a topic of confusion.

DISCUSSION

Lee began his presentation on how and why Saluda Hydro operates the way it does.

He noted that he manages the system control room in the Palmetto center downtown.

Lee began to discuss the grid and noted that it was a constant balancing act and they had to work together with other utilities. He mentioned that what SCE&G does is very important to other power companies and vice versa. Lee explained that an example of the grid was the large towers with power lines that you see crossing the highway. He explained that electricity travels at the speed of light and noted that if you have a “hiccup” in power anywhere in the country, SCE&G feels it.

Lee presented a map representing the NERC (North American Electric Reliability Council) and noted that each company connects to one another which, in turn, provides a balance of authority.

Lee showed that SCE&G was connected to 5 other control areas.

Bud Badr asked: “How are you connected”?

Lee replied: “Our plants are connected directly to their plant by lines.”

Lee began to explain how the grid works. He noted that when customers turn on their appliances, and a demand surfaces, it is important for SCE&G to supply the power. He noted that there were three ways to supply power:

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- Fossil fuel plants
- Nuclear power plants
- Hydro – noted that there is Fairfield Pumped Storage, Saluda, and a few run of the river plants such as Parr and Neal Shoals

George Duke asked what the capacity of Fairfield was.

Lee explained that it was 560 MW. Lee began to explain the meaning of peak demand. He noted that in the summer the peak is late in the day and in the winter the peak is in the morning. In the summer you pump in the early morning. In the winter you pump at noon, although it varies from day to day.

George asked if this depended on weather cycles and Lee replied: “Very much, if there is flooding we cannot run Fairfield.” He noted that it was a license requirement that Fairfield cannot generate if the river flow is over 40,000 cfs.

Lee continued to discuss balancing the grid and noted that balance means that there is enough electricity flowing from the generators to meet the Customer’s demand. He noted that balance was measured in real time. He pointed out that if SCE&G is over-generating they will call a plant and tell them to cut back and vice versa. He noted that there was a certain order in which plants were taken off and online.

George Duke asked: “When you are over-generating where does it go?”

Lee explained that in a situation where demand is 4000 and generation is 4000 MW SCE&G is balanced and there is no energy flowing across the lines. If demand is greater than generation, for example, if they did not plan well that morning or a plant went offline, SCE&G will take in electricity from neighboring utilities.

Lee noted that they have a meter called “inadvertent” and they try to keep it as close to zero as possible. He noted that if they see they have a negative number of inadvertent they will pump more on the grid...to bring it back to zero. He pointed out that it was called “payback in kind”. He noted that if you had everyone putting out or taking in you have a problem.

Lee noted that an ACE stood for Area Control Error. He noted that a lack of balance causes flow between control areas.

George Duke asked: “When you plan do you plan at some percent capacity?.”

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Lee Xanthakos replied: "If a plant is on line we get a report on dependable capability, and we run at that number. If you have a problem then you have contingency reserves. And Saluda is an important reserve."

Lee continued to explain that not all power plants are the same. The nuclear plant is on all the time, if it trips it comes on at 1MW a min, and it would take an hour for it to get to 60MW. Natural gas is the same way because it needs to warm up. Lee mentioned that Parr Gas Turbines can come on quickly but can not always reliably do so in the time required to serve reserves. Lee explained that another option was to buy power.

Lee noted that the energy from Saluda stays on the grid. He explained that Saluda stays offline until an emergency, In order to be considered reserves it has to be offline and ready. During unbalanced short periods of time other systems supply deficiency in generations.

Steve Bell asked, "Are TVA and Corps lakes tied to you?"

Lee replied, "TVA and Corps lakes are not directly connected to us but are connected to SEPA SOCO, etc, our VACAR partners."

Lee explained that imbalances in the system are caused by such things like power plants breaking down, fuel problems, power line problems etc. He noted that SCE&G could return balance by increasing generation or reducing demand by approved programs.

Reducing demand could include a load curtailment program, can choose a plan depending on the scenario.

Scenario 1 – Tomorrow is going to be cold and a large number of plants are offline, SCE&G would do public appeals through the media, large industrial customers will come offline that SCE&G has interruptible service contracts with.

Scenario 2 – The grid is balanced, but a nuclear station comes offline, He noted that then there is a voltage reduction.

Joy Downs asked, "What if we didn't have Saluda, what would we do?"

Lee responded that there were several ways to do this, you could use Fairfield Pumped Storage, but it has limitations...they could keep all the coal fired plants at a reduced load. They could find alternate generation which would require them to build some other sort of quick start plant.

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Gina Kirkland pointed out that hydro was one of the cleanest powers you could have in terms of what is good for the environment.

Lee began to discuss the rules that they operate by. He pointed out that it could be broken down into the NERC, the SERC and then finally VACAR. Lee continued to discuss the grid rules as presented in the presentation. He noted in order for each utility to avoid carrying 1000 MW in reserve, which is what SCE&G would have to do to stay in compliance with BAL-002-0, which is their most severe single contingency (loss of a nuclear unit), SCE&G joined with other utilities to form a reserve sharing group. SCE&G's requirement is thus to carry 200 MW.

He pointed out that just because Saluda is running doesn't mean that SCE&G directly needs the power; it could mean another member of their reserve sharing group had an outage. He noted that for their problems they usually call Duke because they have hydro and that is the most reliable.

He noted that in the VACAR contract, if they have to call on another company for reserves we pay the price to generate the power +10%.

Joy Downs – “How can you be sure that they actually have an emergency and they are not just buying the power off of the grid?”

Lee Xanthakos - we write up compliance reports and Duke, or the power plant that we receive power from, also writes up report and compliance is reported quarterly to SERC .

Lee went through a few examples with the group.

Lee began to explain why Saluda was used for reserves.

He noted that they don't always just use Saluda, but may use Fairfield if it is available. If you don't have hydro you have to have other options like turbine farms that are loud, expensive, and only 50 percent reliable, so you have to have reserves for your reserves.

Saluda is the reliable solution for keeping the system online.

Parkin Hunter asked, “Have you ever had the instance of drought, and the lake is down and you cannot generate?”

Lee replied, “No because even with an hour of generation, it won't affect level of lake very much.”

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Randy Mahan noted that one of the reasons why SCE&G needs to have the minimum lake level of 345' in the license is because SCE&G needs to be able to bring it down to 345' for maintenance of the dam.

Dick Christie asked if you could re-agree with VACAR that you would only carry 100 MW in reserves instead of 200.

Lee replied that, "We need VACAR as much as they need us, they may find another partner if they are unhappy with us, it is a load/generation ratio, as we grow; the collective ratio grows as well."

Gina Kirkland asked, "I know SRS is not available, but is there actually thought to use it?"

Randy Mahan responded that there are thoughts toward that, but that is still not solving the contingency reserve issue that you need Saluda for.

George Duke noted that he had a completely different perspective about Saluda coming into this meeting than he has after hearing the presentation. He noted that he had always assumed that SCE&G used Saluda to supply low cost power that they in turn sold high, which is absolutely not the case.

Lee concluded the presentation and the group then began to discuss the mission statement.

Randy Mahan pointed out that there were a lot of ways to develop mission statement, they could be worked on separately and melded together or they could brainstorm as a group.

Patrick Moore noted that many stakeholders have addressed the formation of a process group.

Randy Mahan replied, "I don't think that is necessary, if there is a procedural issue that needs to be resolved, we will create an ad hoc group. But I believe that creating one now is a solution waiting for a problem."

Joy Downs noted that LMA does not necessarily see that there is a need for a procedural group but there are some questions that LMA has.

Steve Bell noted that if some individuals feel that they need to meet aside, informally, they could do so to develop recommendations.

Randy Mahan replied, "I think we tried to make it clear that if you have recommendations you can submit them; however, Saluda Relicensing is not a democratic process, it is a cooperative process."

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Gina Kirkland noted that not everyone is going to be completely happy, but you have to come to a consensus as a group.

Randy Mahan noted that SCE&G has a responsibility to take a recommendation and try to achieve consensus on a topic. He also noted that anyone can submit comments to the FERC on their own, as well.

Dick Christie pointed out that consensus is a decision that everyone can live with. It may benefit one individual more than another but it is a decision that most people can live with.

Gina Kirkland added that there is always someone who is not happy and cannot live with it, there are extremes that are unhappy but you can usually get consensus from “almost everyone”.

Steve Bell asked, “What happens if the group agreed, for example, that the lake levels should be a certain height.”

Randy replied that a consensus guides what SCE&G puts in the application packet and in turn goes to the FERC. If a consensus is reached and SCE&G disagrees, then SCE&G states that they disagree and why they do so, then the FERC will decide the outcome. He noted that individuals also have the option of filing a comment on this separately.

Alan noted that if everyone came to an agreement that a settlement agreement would be the end result.

Dick Christie noted that as far as communication between the groups goes, in other processes they have combined meetings and issues when facilitators decided to do so.

Alan Stuart noted that if this presents itself, they may see the need to combine a meeting.

Bud Badr noted that he believed the function of an Operations RCG would be to get with the other RCGs, take what everyone wants, balance input and needs, and develop a model. Bud continued to note that he has hired 2 more individuals to work primarily with the FERC relicensing issues and will be able to help SCE&G when they need something from DNR.

Alan began to discuss the issue of the “Parking Lot” as presented in the operating procedures. He noted that from a few comments that he has read that he believes there is a misunderstanding about the “Parking Lot”. He noted that the parking lot is used for items that are irrelevant to the topic at

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hand and disrupt the flow of the agenda. He noted that that particular item would then be placed in the parking lot to be discussed at the end of the meeting or placed on the next meetings agenda.

Randy Mahan then discussed the evolution of an issue. He gave Recreational Flows as an example and noted that you need to first decide what you need to know in order to discuss whether recreational flows are going to occur. Then you take the information and decide whether or not and how to address the issues. Then you decide what info is needed to address the issue, and what you need to know in order to make a reasonable recommendation.

Bud Badr pointed out that you need to make sure you support your issue.

Randy continued to note that they want decisions to be scientifically driven. He also noted that disagreement may arise on whether or not a study needs to be done because there may already be information available. It was also noted that some studies may be combined in order to answer as many questions as possible with one study.

On the topic of a mission statement, Gina Kirkland noted that she thought that a scope of the group needed to be better defined. She noted that she felt that a group could potentially get bogged down with issues that belong in other groups. She pointed out that maybe KA or SCE&G could offer a draft starting point and let the group put meat to it.

The group decided that SCE&G would develop a "strawman" before the next meeting and then discuss it from there.

Alan noted that a homework item would be to take the study requests, read through them, and make recommendations from there.

Randy noted that the long, in-depth studies need to be flushed out first, as they will take more time to accomplish.

Bill Hulslander asked, "Who will conduct the studies and who will decide who will conduct the studies."

Randy replied that the RCG will develop the scope and the TWC will determine the best way to conduct a study.

Alan then brought up the subject of the media; He noted that there was a rule in the operating procedures that a person who is an active member of the media cannot be an active member of an RCG. He noted that there were some individuals who were contributing writers to various

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newspapers and if there were problems where information came up in the media, then it will be dealt with. He noted that people need to be able to express themselves without being afraid that what they say will be written about. He noted that if you want to speak to the media afterwards, please do not say that you represent the RCG. However, you may represent your own agency or NGO.

Steve Bell asked if they could have closed meetings.

Randy replied that nothing should arise that would warrant a closed meeting.

Alan noted that they would be taking the operating procedures and revising them per comments submitted.

The group began to discuss homework items. Alan noted that one item for the group to think about would be what sort of presentation or information needed to be presented to the group.

Dick Christie noted that they needed to give thought to the product they would like from a meeting. He noted that different needs could arise and the group should try to pin them down. He continued to note that products are items needed to address in the model, low inflow protocol, operations protocol. He noted that he thought that they needed to make a decision on how recommendations were used.

The group began to discuss the use of the hydraulic model and Bud Badr noted that he would be able to help with this model and give information. He noted that this model would help to make value judgments.

Ray Ammarell noted that he would like to see a presentation that discusses operational requirements, system requirements and such. It was also mentioned that information on the flow forecasting model and Probable Maximum Flood was needed.

Steve Bell asked about standard license articles and Alan noted that he would find these and send them to Steve.

The group closed by outlining the agenda for the next meeting.

In closing, Bill Marshall asked the group if a compromise time could be established, possibly halfway through the day in order to benefit those who are working.

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Gina Kirkland responded that an occasional group meeting with all the resource groups in the evening would be okay.

Bill noted that his suggestion would be that they start around 3:00

The group noted that this was a difficult issue. It was discussed that an occasional evening meeting may be okay, however if they started at 3:00 in the afternoon the meeting may last until late at night.

Dick Christie noted that in his experience there will be a critical mass of people who are essential to the meeting. He noted that he doesn't mind going from around 1:00 to 7:00 if those individuals who you would be meeting later for could come every time.

Alan Stuart noted that it may be best that Bill Marshall meet separately with those individuals who cannot attend and keep them up to speed. He noted that he plans to have updates at quarterly Public Meetings.

Bill Argentieri asked if it would be beneficial to start at 1:00 in the afternoon.

Gina Kirkland responded that it would not be beneficial if they wanted to get through all of the agenda items. She noted that if the group is going to cover a lot of stuff and you are resource limited then the group needs to try to get as much accomplished at one meeting as possible.

It was also noted that if the meeting was started later in the afternoon, those traveling from out of town would have to drive back late as well.

The group concluded to keep the next meeting at the 9:30 schedule.