Comments on "Operating Procedures for the Relicensing of the Saluda Hydroelectric Project FERC Project 516"

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C1.0 Summary

A review of the "Operating Procedures for the Relicensing of the Saluda Hydroelectric Project FERC Project 516" (subsequently called Op Proc) reveals opportunity for improvement in three areas.

- Clarity of the Mission statement for Op Proc
- Clarity on procedures for effective stakeholder engagement defined within Op Proc
- Clarity regarding the solution-discovery process and organization that will produce the Relicensing Agreement, through development of a Project Plan that lays out tasks and schedule for producing the Relicensing Agreement

Comments are organized in the following topics.

1. Explanation of how to improve the Mission Statement governing Op Proc, and an alternative Mission Statement which embodies the suggested improvements
2. Explanation of what improvements are needed in articulating the stakeholder engagement process, and a brief overview of recommendations
3. Explanation of what improvements are needed in articulating the solution-discovery process and organization, and a brief overview of recommendations
4. Recommendation that a Project Plan be produced and maintained as a tool for collaboration among all project participants, with a brief description of its scope
5. Specific suggestions for amending the Op Proc document that incorporate the above

C2.0 Mission Statement

C2.1 Deriving the Mission Statement

A Mission Statement should consist of two components: (1) a statement of the goal or objective, and (2) a statement of the approach, all expressed in 25 to 50 words (if possible).

The Mission Statement governing the Op Proc should be drafted in the context of the larger mission of the relicensing process. Starting from where we are right now, to reach a state of acceptable stewardship of Lake Murray and the downstream reaches of the Saluda River, the relicensing process must pass through three distinct Phases. Each of these Phases has its own Mission Statement. The three Phases are:

1. Establish a solution-discovery process and organization. This has been done, and presumably will be continually improved throughout the relicensing process.
2. Apply the solution-discovery process and organization to create a Relicensing Agreement and get it approved
3. Operate under the provisions of the Licensing Agreement

Each earlier phase in this sequence is the parent of the one that follows. Each earlier phase must be done well and completely as foundation for the ones that follow. Since our ultimate interest is in the outcome of Phase 3, Operation under the Relicensing Agreement, we may start with a presumed Mission Statement for Phase 3 and then craft the preceding Mission Statements accordingly.

C2.2 Mission Statement for Operation under the Relicensing Agreement.
As a starting point for deriving the Mission Statement that governs the Op Proc, we may presume the following Mission Statement for Operation under the Relicensing Agreement.

> "In order to equitably satisfy the interests of all stakeholders, SCE&G will create, maintain and dispose of physical features, and conduct activities, pertinent to Lake Murray and the downstream reaches of Saluda River, under provisions of the Relicensing Agreement."

This statement is brief, but it implies much. First of all, the goal is "to equitably satisfy the interests of all stakeholders." That word "equitable" implies that there must have been a preceding process in drafting the Relicensing Agreement that either defines "equitable" in particular situations to the satisfaction of all stakeholders, or sets up a process under the Relicensing Agreement by which "equitable" is defined for situations not already covered. The statement defines the approach, which is to "create, maintain and dispose of physical features, and conduct activities, under provisions of the Relicensing Agreement." The statement says that SCE&G will do it. The statement defines the scope of the Mission as "Lake Murray and the downstream reaches of Saluda River."

Therefore the mission of the relicensing process must be to produce a Relicensing Agreement that defines the scope of physical features and activities, tells what SCE&G must do about them, and in particular defines "equitable."

C2.3 Mission Statement for the Relicensing Process.
The Mission Statement for the Relicensing Process must address the goals of both Phase 1 (set up and maintain process) and Phase 2 (develop the Relicensing Agreement) as described in C2.1. Consequently, the Mission Statement offered to govern the Op Proc document (as well as all other Phase 1 and Phase 2 activity) is as follows.

> "SCE&G will manage the Relicensing Process through collaboration with state and federal resource agencies, non-governmental organizations, special interest groups and other interested stakeholders. This collaborative consultation process will be used to gather as well as disseminate information. The objective will be to learn from, as well as educate, stakeholders on the issues and come to a balanced settlement of those issues that accounts for the needs of SCE&G and the quality of the resource. To accomplish this, SCE&G will (1) establish, maintain and

improve a solution-discovery process and organization, charged with creating a Relicensing Agreement, and (2) apply the solution-discovery process and organization to create a Relicensing Agreement and get it approved."

This Mission statement defines the scope, which is the Relicensing Process. It defines the goal, which is two-fold; (1) set up the process, and (2) employ the process to create and gain approval of the Relicensing Agreement. It defines the approach, which is collaboration among all stakeholders. This concept of collaboration should be spelled out and expanded in sections of the Op Proc dealing with the solution-discovery process/organization and stakeholder engagement.

C3.0 Stakeholder Engagement

The Op Proc document spells out meeting ground rules which are certainly necessary for a collaborative project. However, it is silent on the deeper aspects of effective stakeholder engagement that will lead to a quality product that enjoys consensus support. Suggestions for correcting this are offered.

C3.1 Benefits of Good Stakeholder Engagement

A thoroughly thought out and well-facilitated stakeholder engagement program is of benefit to SCE&G for the following reasons.

- It builds a better quality output. It taps into the resource of situation knowledge, technical expertise, and creativity that is embodied in the stakeholders.
- It results in a more flexible and adaptable, hence more robust Relicensing Agreement, since the Relicensing Agreement is not based on rigid forced compromises or authoritarian dictates. All stakeholders are willing to give when modifications to the Relicensing Agreement become necessary.
- It establishes a basis for automatic buy-in. It eliminates or marginalizes adamant opposition.

C3.2 Qualities of a Good Stakeholder Engagement Program

- It is inclusive. All viewpoints are represented and honored, no matter how seemingly insignificant, far-fetched, or inconvenient.
- It gets at root concerns where agreement is more likely and satisfaction greater. It avoids fixation on superficial positions, looking for the concerns behind the position whenever such a position is taken.
- The product is (1) a complete and concise understanding of stakeholder interests, and (2) validation of every decision made along the path to the final result.

C3.3 Elements of a Good Stakeholder Engagement Program

It is suggested that the Op Proc incorporate the following elements of good stakeholder engagement.

1. Identify all stakeholders, either as general types needing representation, or as specific instances to be included.
2. Recruit them into the process.
3. Empower them through (1) education about the issues and process, and (2) assistance

with organization so each stakeholder type is fully represented and linked into two-way communication with the project for inclusion in all stages of the solution-discovery process.

4. Facilitate dialog which (1) gets at the deeper interests, values and priorities of the stakeholders, and (2) is structured to provide the inputs needed by subsequent stages in the solution-discovery process.
5. Document stakeholder interests in the form of statements which clearly and concisely encapsulate the collective interests of like stakeholders. These interests statements are reworked until all stakeholders are satisfied that the statements effectively articulate their views. They serve as a sound starting point along a clear path to a good solution.
6. At every step along the solution-discovery pathway, validation of every decision is established by feedback with the stakeholders, iterating until stakeholder satisfaction with the product is achieved. Note, satisfaction means "I can live with it if I don't have to die for it."

C4.0 Solution-Discovery Process and Organization

C4.1 Principles of Solution-Discovery

The work of developing a Relicensing Agreement involves creation of products that satisfy the two-fold goal of the Mission Statement, above. These products are, in general, quite complex, both within themselves and in the relationships among them. Further, they involve issues which may be contentious. This being the case, a competent solution-discovery procedure is needed. A well-established and proven general solution-discovery procedure is available to do this kind of job. It is based on two very general and universal principles.

C4.1.1 First Principle: the Logical Sequence of Decisions

The first of these principles is that any process for reaching consensus on complex, technical issues must address decisions of certain types that are inherent in the process leading to consensus. These decision types are not optional. The logical sequence of decisions leading to consensus about resolution of an issue may be expressed as a series of questions.

- What is the issue?
- Who are the stakeholders in this issue?
- What are the interests of those stakeholders?
- What is the Definition of Success that depicts the qualities of a good solution?
- How are solution options generated?
- How are solution options evaluated?
- What is the preferred solution?
- Is that selection valid, and why?

To test the validity of this stepwise logical approach, ask the following questions.

- Can any of the questions in the sequence be omitted?
- What if they were addressed in a different order?

C4.1.2 Second Principle: Form Follows Function

The Form Follows Function principle states, "First determine the Functions that a solution must perform, then select a Form which will perform those and only those functions." The rationale for this principle is discovered by considering the consequences if it is not followed. The functions of a form are inextricably associated with the form. When a form has been selected, all the associated functions, and none other, come with it. If a form is improperly selected, it may not deliver all the necessary functions. Worse, it may deliver undesired functions which cannot be avoided. Therefore it is better to first describe the solution in terms of all its desired functions it must deliver, and all the undesired functions it must avoid. Then select a form (or combination of forms) that does just that.

C4.2 Stages of the Solution-Discovery Process

The stages of the solution-discovery process define a rather formal approach, starting with stakeholder input and concluding with a solution that enjoys consensus support of all stakeholders. In this relicensing project, such formality is necessary, first to help us keep our heads straight as we navigate the thicket of complexity, and second as a tool for supporting the collaborative spirit among the large community of stakeholders with contending interests.

To be done well, solution-discovery proceeds through stages as described briefly below. These stages are inherent in the general flow of solution discovery for any complex problem, and are not a matter of choice. Ignoring or giving mere lip service to any of them imperils the outcome.

In reading this description of the solution-discovery procedure, consider how these stages apply to (1) development of process and organization used to develop the Relicensing Agreement , and (2) development of the Relicensing Agreement itself through use of such procedures. In other words, the solution-discovery procedure is a general tool, used in both to create process, and then as a part of that process, to create the Relicensing Agreement.

Of course, these stages of solution-discovery are not intended to be carried out unthinkingly by rote. They are laid out here in a general and fairly complete form as a template which may be modified, using good judgment, to fit particular situations. In some cases, the fully formal approach is best. In other cases, these stages may be applied informally, but with due consideration that nothing of importance is overlooked.

The general stages of the solution-discover procedure, as applicable to a particular issue, are described below. The implement the general questions in C4.1.1 and the Form Follows Function principle in C4.1.2.

1. Determine the interests, values and priorities of the stakeholders (for more on this see Stakeholder Engagement). Document this information. Working with the stakeholders, continue revising this document until all stakeholders are satisfied that their views are adequately articulated. This activity of revision continues throughout the process as later stages expose additional concerns of stakeholders. Note: it is not yet the time to resolve

conflicts among stakeholders, but such conflicts should be clearly articulated for resolution at later stages.

2. Convert this document of stakeholder interests into a Definition of Success in terms of the Qualities of a successful outcome, with measures that define satisfaction. Avoid declaring any solution features which might be intended to deliver the desired outcome Qualities. Validate this with the stakeholders, revisiting as later stages may indicate appropriate.

3. Identify the Output Functions which the solution must perform to deliver the Definition of Success. Avoid declaring any solution features which might be intended to deliver the Outcome Functions. This is an important step in establishing the foundation for a good solution, in accordance with the Form Follows Function principle, and should be done prior to the design of a solution. Validate with stakeholders and revisit as necessary.

4. Set up the process for searching for solution options. This process should be reasonably exhaustive, so that good solutions are not missed, and expeditious so it arrives quickly at a short list of options for serious evaluation. Validate with stakeholders and revisit as necessary.

5. Set up the evaluation process, including screening criteria and methods of analysis for scoring options against the criteria, that will be used to make the selection of the preferred solution. Validate with stakeholders and revisit as necessary.

6. Design and select the Solution. Use the search process (stage 4) to generate solution options. Use the evaluation process (stage 5) to make the selection Revisit the entire process to be sure the result is sound, and validate with stakeholders.

Throughout this process, give particular attention to interdependencies. Seek to maximize synergy and minimize conflict. Carry out tradeoffs and compromises to resolve remaining conflicts. More comments on this issue are provided in section C4.3 below.

C4.3 Solution-Discovery Methods and Tools

There are well established and proven methods and tools for doing solution-discovery for complex and contentious problems (such as this relicensing project). They exist in many versions, associated with professions such as systems engineering and architecture, to mention just two. Their purpose is to

- Structure the path that the project will find through the thicket of complexity
- Keep track of, integrate and render useful the vast amount of information that is pertinent
- Support the technical tasks involved in characterizing the problem, devising and assessing solutions

To be consistent with the spirit of stakeholder engagement, the project should consult

with stakeholders on the selection and implementation of a set of such tools to support the project. Dr. Cutler would be more than happy to assist in the selection of this toolset.

C4.4 The Solution-Discovery Organization

The Op Proc tells us that the solution-discovery process will be implemented through an organization consisting of the SHRG, RGCs and TWCs. Because of interdependencies among the issues (as defined by stakeholder interests plus professional expertise), interdependencies within the solution as defined in the Relicensing Agreement, and a complex mapping between issues and solution-elements (each issue may require contributions from several solution elements, each solution element may contribute to several issues), an integrated approach to developing the Relicensing Agreement is necessary. However, the structure and functions of the SHRG, RGCs and TWCs presents the risk that the approach will be fragmented along lines defined by the various RGC issues, and the integrated approach will be lost. This can be fixed.

Amend the Op Proc document to charge the SHRG with responsibility for attending to interdependencies. This means specifically:

- The SHRG shall develop (1) an integrated problem definition which combines all the issues pertinent to the relicensing with interdependencies described, (2) an integrated architecture for the system of physical features and activities that will operate under provisions of the Relicensing Agreement to address the issues, and (3) a mapping between problem and solution architecture. These shall be used to support the following task.
- In allocating issues to the RGCs and TWCs, the SHRG shall ensure that the integrity of the collective issues does not become fragmented, that problem definitions and solutions developed by the RGCs and TWCs are coordinated, compatible, and when assembled into the overall system architecture, constitute an integrated whole.

Methods and tools as mentioned in C4.2 are available to support the SHRG in these responsibilities.

C5.0 Project Plan

Presumably the Mission Statement would spawn a Project Plan. The Project Plan in initial version should be produced as quickly as possible as a tool for collaboration among stakeholders. The Op Proc document would be subordinate to the Project Plan.

The Project Plan might be divided broadly into Phase 1 and Phase 2. Phase 1 would operate in solo until the process and organization for Phase 2 are set up and launched. At that point the emphasis shifts to Phase 2, leading to production and approval of the Relicensing Agreement. Phase 1 would continue in parallel, at a lower level, performing process maintenance and improvement in support of Phase 2. The elements of the Project Plan might be:

- Project Organization, in terms of organizational elements, roles and responsibilities of each element, relationships among elements, and identification of who should be assigned to each element

- Project Task Network, consisting of all Tasks necessary to do the job, expressed in input-process-output format, linked together in a network. The network must be complete so that all necessary Final Products are delivered, all Tasks are linked by Internal Products (outputs of earlier tasks providing all needed inputs to later tasks), and all initial Inputs are identified
- Definition of the Information Structure that supports the project, consisting of all Inputs, significant Internal Products and Final Products, in terms of content and quality
- Allocation of Tasks to Organization Elements
- Timeline

Note that the Project Plan is a living, evolving document. At the beginning and throughout, the explicit nature of future Plan elements cannot always be known, but the existence of these unknowns can be anticipated. Consequently, a part of the Plan will be continual looking ahead to identify and define such elements as they emerge.

C6.0 Recommendations for Amending the Op Proc Document

In the following, paragraph numbers starting with "P" (as P1.1) refer to the Op Proc, and those starting with "C" (as C2.2) refer to this comments document.

In P1.1, substitute the Mission Statement from C2.3.

In P2.2 and P2.3, reference the solution-discovery process in C4.2 as the method to be used to develop recommendations for resolving issues and to develop the package for SCE&G management. Also reference the use of appropriate tools as described in C4.3.

In P2.3, add the bulleted items from the end of C4.4.

Add a new section P2.7 Stakeholder Engagement after P2.6 Team and Group Composition… The new P2.7 includes the bulleted items from C3.2 as the goal, and items 1 through 3 from C3.3 as the method. Consider allocating this responsibility to appropriate groups within the stakeholders, i. e., the stakeholders can assist the project by recruiting additional stakeholders and preparing them to participate constructively.

Renumber P2.7 and P2.8 as P2.8 and P2.9.

In P2.8 (renumbered):
- Add material from C3.2 as a statement of goals of facilitation.
- Add items 4 through 6 from C3.3 to the responsibilities of the facilitator.

In P2.9, define provisions for conducting the work of the SHRG, RCGs and TWCs on-line, thereby avoiding meetings and accelerating the pace. Numerous tools are available to support this, which automate the process of disseminating information, conducting discussions, reaching decisions, and documenting results.

Finally, it is strongly recommend that SCE&G/Klienschmidt prepare a Project Plan with

concurrence of the stakeholders as soon as possible, as described in C5.0. The Op Proc document should be included as subordinate to the Project Plan.