

Interview with Steve Slaughter

Interviewer: Karen Yancy

Transcriber: Karen Yancy

Date of Interview: March 11, 1987

Location: Mr. Slaughter's Office, Guadalupe Valley Electric Cooperative, Gonzales, TX

Begin Tape 1, Side 1

Karen Yancy: This is Karen Yancy. Today is March 11, 1987, and I'm conducting an oral interview with Mr. Steve Slaughter, manager of the engineering division of Guadalupe Valley Electric Cooperative [GVEC] at Gonzales, Texas.

What year did you begin working for GVEC and in what position?

Steve Slaughter: I began in 1972, and my position was systems engineer.

Yancy: What promotions have you received, and how did your job change as a result of the promotions?

Slaughter: Well, I received one promotion, engineering manager—

Yancy: What does it—

Slaughter: It was about, maybe four years—and the way the position changed—to begin with, when I came here as systems engineer, I was primarily responsible for office-type engineering activities. In 1974, I was still systems engineer. I was given the additional responsibility of the management of the technical services group. I maintained that responsibility until I became engineering manager, at which time I was given responsibility for management of all the engineering attitudes in this division, includes now, not only the technical services group but also the engineering office and engineering field survey group. We decided who needed a tax number—

Yancy: We'll get into that later. What experience did you bring to GVEC?

Slaughter: Educational, work experience—

Yancy: Yeah, past work experience.

Slaughter: Okay, I graduated from Texas Tech [University] in 1970, with a Bachelor of Science [degree] in electrical engineering. I was employed by the South Plains Electric Co-op in Lubbock, beginning in about 1968. I worked for them through college, through about half of my college years, and then worked for South Plains from 1970 to 1972. That's the primary work

experience. I can tell you how I used to sack groceries in a grocery store if you want me to tell you that—

Yancy: (Laughs) No, that's okay. What departments are under your direction, and what are their responsibilities?

Slaughter: Under the engineering division, there are four superintendents. There's a metering superintendent, an apparatus superintendent, an engineering office superintendent, and a load management control engineer. Those are the four departments which the engineering division operates.

Yancy: Mm-hmm, what are their responsibilities?

Slaughter: The title I gave pretty much indicates that to you. What we call technical services, as I mentioned earlier, is actually two groups of people, one of which are the metering people, which are primarily responsible for the operation and maintenance of all metering equipment in the Co-op. They have some additional responsibilities in the meter department as far as making determinations of underground cables, subdivisions that require underground electric service. The other group that comprises technical services is the apparatus department. The apparatus department is responsible for the maintenance and operation of large pieces of equipment that are present all over the system. Primarily, there is some equipment that's found in substations, the large nontransferable regulators. They also maintain all of the smaller transformers that come through the system for renewal purposes. The apparatus department also does some underground construction. Both of these groups have, over the last three years, seen some new responsibilities in the area which we call SCADA and load management. SCADA is a supervisory control system which we have been in the process of installing for the last three and a half years and have just about completed the installation. These two groups, primarily the apparatus group but to some extent the metering group, were responsible for the integration of the computer-operated equipment in Gonzales with the substation functions, the interconnections cables, and installations equipment to give the computer something to talk to.

The responsibilities of the third group in the engineering division we call the engineering office because—there's basically two groups of people in this area. One [is] the people that work in the engineering office. They're comprised of secretarial people, one person that does engineering calculations and reports and studies, three people that are draftsmen, and another person that is the receptionist. The other part of what we call the office group is actually a field group. There are two crews in the engineering office field group. They are the pole inspection group, who basically go out and make inspections of our lines, particularly note conditional poles and other things appropriate to performing maintenance activities. The other outside group is the field survey crew who does staking new lines from the old place. The field group primarily takes notes in the field that are transcribed by the office people, which will become an instrument that

we generally call a staking sheet, that is passed on to the construction people for performance of the job.

Okay, the fourth area and its responsibility is the newest area in the engineering division, which is the load management and SCADA. This group is headed by another engineer who's been with us almost four years, Alvin Hierholzer. Alvin's group is responsible for the installation of computer-operated equipment with respect to the overall communications system involved with the computer and the actual operation of the computer system. He has an operator working in the computer room and two technicians who basically maintain the communications system of the load management and SCADA subdivision. Okay, that's the four groups and subdivisions that are in this division.

Yancy: Okay, how has each department in your division grown since you began working in GVEC?

Slaughter: In what terms of the questions—?

Yancy: In general terms.

Slaughter: In general terms, the growth has been more predominate in the technical services area, which is meter and apparatus, and also in the completely new area of load management and SCADA. The office, engineering office personnel that comprise the office and fields services has probably grown the least in manpower over the years that I've been here. I could give you relative numbers, but I would have to look that up.

Yancy: Has the energy situation changed the services your division offers? How so?

Slaughter: The energy situation, the cost of energy per—

Yancy: Mm-hmm.

Slaughter: It has quite definitely affected—I'd say, without exception, every division. Starting down the list, with respect to the metering department, the energy situation has caused us to be much more particular about metering instruments themselves. The accuracy of those instruments is tested from the meters to the physical connections of the meters in the field. Not to say that we weren't doing a good job before, but as the cost of energy goes up, the measurement of that quantity becomes more critical because you are dealing with more volume. Also on the metering side, we have initiated some newer activities over the years, such as meter reading, where we go out and actually read meters to determine that we have the most accurate reading available because a number of our members read their meters, so we have initiated programs where we catch up on meter readings and make sure that the data that we are accumulating is accurate.

We have another program that has probably received much greater emphasis. We were working on it back seven or eight years ago but we've become very serious about it over the last four or

five years, which is our meter change-out program. We're on a cycle. About every seven years, we visit and go around and change out every meter on the system from the old meter. We have them tested and calibrated and place it back into service. In the metering area, we have, over the period of energy escalation and cost, become much more aware of the accuracy of the meters produced, to a very high contributing factor to the cost.

In the apparatus department, we have initiated a program of transformer-loss testing. Transformers are, as a whole, probably the largest single energy loss device in the system. Again, because the cost of energy has become a significant fact, that cost of losses associated with the transmission of energy has become significant, so we're attempting to buy, with respect to the large item in transformers, we use a very low-cost efficient cum., recognizing the fact that we don't transmit energy from Point A to Point B without any loss. But there are a number of things that we can do to control the loss to keep them at the lowest possible level. So the apparatus people are involved in a testing program of transformers in two areas. One area is wherein we test old transformers that are removed from service for possible reconditioning and replacement into new service. They're tested with the idea that being older units, they were not bought with what we call "lost criteria," so their losses may or may not be acceptable to the criteria that we are using today. They are responsible for determining if an old transformer, even though it may be physically able to perform electrically, it may not, from an energy-loss standpoint, be capable of being put back into service and be economical. In the other transformer testing, the procedure is we purchase transformers, new transformers from manufacturers on prescribed loss criteria; we tell the manufacturer what the value of loss for the transformer is, and the manufacturer designs his [transformer] based on what we tell him our loss values are. In an effort to keep him honest, because we do pay a premium in specifying certain loss criteria rather than buying off the shelf a transformer that has whatever loss inherent to it, we test every transformer that we purchase on this acceptable criteria to be sure that the manufacturer is providing us with the losses he said he would and that we are paying for.

Probably the most outstanding that energy cost has—in fact, in the engineering division is in the newest department of load management and SCADA. The purpose of the load management system is that it is a load control, reduction program that is primarily concentrated on shaving each load that we present to our system through our power generator. It is direct control reduction of heat energy consumption. It is in an effort to try to smooth the overall pattern of the load in that we are able to group control, to take the heat out to some extent, to not only cause this to have a cheaper power cost, but cause us to operate an overall more efficient system. The SCADA, what we call SCADA, which is Supervisory Control and Data Acquisition, is a monitoring system by which we are much more carefully looking at our substations and the loads on our lines to determine if we have problems associated with energy loss or with overloads—we will know about much sooner studying the system from a real-time interactive computer setup than five years ago when we studied the system based on charts and graphs that we read once a month or so, and we're looking areas where we can do a better job of controlling energy loss

through the system. We are very much aware of energy loss in this part of the system. As far as the other groups, the office groups, primarily in the inspection crews, which inspects poles and lines that are already in place, one of the primary things that we have them look for are trees and sources of bad connections; those are all energy losses. In the new construction area, we are overall attempting to construct larger capacity lines because energy loss is directly proportional to the size of the conductor that you run on the lines. So we're trying to run larger conductors to keep our energy losses down and at the same time provide the capacity that the load requires.

Yancy: What would you describe as your important accomplishments? What changes have you implemented? How successful have they been?

Slaughter: I guess I'm going to have to answer that question two ways. From a personal standpoint, I probably would rate among the highest accomplishments that I've seen to growth that I have been able to instill. We have some extremely sharp individuals in our area, and the fact that I have been able to take those individuals and place them in an environment where they can nurture their own potential is a very rewarding thing to me personally. From a broader standpoint (telephone rings)—in a broader standpoint, maybe in more respect to the overall business aspect of the area, I would say the more important accomplishments fall in the way we have been able to respond to the needs of a growing electric system, of which it had some pretty sizable spurts in growth over the past number of years. And we've been able to do more than just keep up with what's happening, at the same time the load on the system to the people has been increasing, we have been able to not only satisfy the immediate needs but improve the overall efficiency of the way the system is operated. So, we not only have been able just to keep up or to keep status quo, we've also been able to improve at the same time we have had some fairly large growth situations. Now, those are very general and broad, and I'm not sure that's—

Yancy: That's what I want. In your opinion, what makes GVEC distinctive? Is it customer satisfaction, the conservative expansion, or something else?

Slaughter: What makes GVEC distinctive is that I feel we are responsive to our membership. That, to me, is the most important thing about GVEC. I have worked at another co-op. I've seen the cooperative philosophy in more than one area, and at GVEC we truly believe the co-op law; we practice it. We don't just go tell people they're members and then tell them to go away; "we'll let you know when we need something." At GVEC, we try to find out what the member wants. We recognize he's an owner, and we genuinely try to provide him with not only with what he needs but also what we think is the most efficient and effective use of the dollars he's contributing and capital of the company. It's the recognition of the fact that the member is the owner and keeping a very close contact with that member and trying to determine what his needs are and of advising him of what things we're doing to keep his investment in the system as a viable, stable commodity. That's probably; to me, what the most important thing to GVEC has been, and we sincerely believe it and practice it. It is one of the things, our close contact with the membership, is one of the things that has enabled us to get out into some new areas, like the load

management program. We asked the members to go in his house and put a control device on his water heater and air conditioner. This has been tried by other utilities with not as much success as we've seen at GVEC; by success, I mean the acceptance by the customers to allow this to happen because we have a very good rapport with our customers. They think we are doing a good job; they trust our judgment; they feel like when we come out with a program for improvement of efficiency or reduction of load, that it's something that's good for them because we've instilled the confidence in them that they feel like we're headed down the right road, and it's much easier for us to get our customers involved in newer activities and programs than other co-ops or lower down the list, investor-owned utilities who consider the customer more or less just a bill payer.

Yancy: Have there been any innovations in your division while you have been manager? If so, what were they?

Slaughter: The electric utility business is a much more viable industry than people give it credit for. The acceptance of electronic devices is probably the greatest innovation that I have seen in business since I have been here. I don't think the utility industry is that much different from any other industry in what electronics have done to it, basically in the computer area. The utility industry is probably much more reluctant accepting the new ideas that electronic technology makes available to us because we're very concerned with the overall continuity or service that we provide to members and consumers. Consequently, when somebody comes out with a new electronic gadget, we don't necessarily go out and put it on until we are firmly convinced that it will not adversely affect the overall reliability profile of basically keeping your lights on. I think at GVEC we have probably been as eager as any utility that I'm aware of to accept the newer electronic solid state devices and that we trial and error to determine which ones were feasible for use in an operational capacity and which ones weren't. Overall, that's probably the greatest innovation I've seen since I came to this place. If you had asked me back in 1970 how much electronics we would have at a distribution-based utility, I would have said practically none; so I would have been very wrong, very wrong indeed.

Yancy: What do you see as the future of your division? And of GVEC?

Slaughter: The future of GVEC; let me do that one first. The future of GVEC is going to be such that I feel if there are going to be survivors in the smaller electric co-ops or in the big, we will definitely be on top of the survivor list. We have recognized the fact that our fundamental principles or members' ownership are still valid but that the cost factors are becoming much more interesting. We try to respond to changes in cost by improving overall system efficiency, actually stepping up our efforts to communicate with the membership why the costs are changing and what we're trying to do to control it. We have just recently taken steps to improve our position in the financial area of lending. We are not sitting back hoping that things are going to be all right; we're doing our best to make them be that way. We will be one of the survivors when—there is, definitely in motion, although I think it's still somewhere in its infancy, a purge

of the climate under which rural electric co-ops will be run. The little ones that are not too substantial from the economic position are going to go by the wayside; they're going to be taken over by other co-ops or by larger utilities. There's going to be a certain blending in the electric co-op area, not unlike the blending we've seen in the whole agricultural scheme where the little farms are all fading away and the big guys are buying them up, taking the good part of them and using it for their benefit and taking the not-so-good part and trying to discard it. GVEC is going to survive all of that because we, through our management efforts, have been smart enough to see that we needed to change, and I wish I could say the same for our neighbors. We will be survivors, I think that is the most important thing about GVEC, and I don't want to leave the impression that I think we're just going to survive as by barely pulling ourselves out. We're going to survive because we've set in motion forces that are going to bring us out of this in much better shape than just maintaining some level of usefulness. With respect to the engineering group, what will I see, I guess the main thing that I see with respect to the engineering group at GVEC is that the future is probably going to bring us much more into the reality of doing all of our own engineering. Right now, we—on major projects, we—two things happen: our financial divorce from the Rural Electrification Administration will somewhat affect the relationship engineering had with REA, although—

End of interview