UNANSWERED BATTERY QUESTIONS

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In keeping with the **BATTCON97** theme of having open honest discussion that we can all benefit from, this presentation is a list of questions that we hope can be answered at this conference.

The following is a compilation of questions that we have received from participants of this conference, as well as friends and colleagues in this industry. To be honest about it, some of the questions are our own.

These questions are not meant to put anyone on the spot, or pick on anyone in particular. They are aimed at just about every group represented here. We believe the answers to these questions, if not already covered in one of the previous sessions, will stimulate some interesting discussions. We hope that the answers will allow us to understand each other a little better and improve our working relationships.

Well! On with the questions:

Battery Manufacturers

- Why should I buy a VRLA battery rather than a Vented battery (assuming that my facility can accommodate either one)?
- Which is the most reliable technology and what would you recommend for my data center application? Keeping in mind that every minute of outage equates to 2 million dollars in lost revenue.
- Have we solved all the known problems with VRLA batteries?
- What is the realistic life of this technology? Is it the same as the warranty period? Why is the advertised life twenty years, when no one believes that and the performance record is less than half of this?
- Do you feel that the users understand their role in maintaining this type of battery? How do we educate them better?
- Now that the users have finally taken an interest in testing and maintaining their batteries, will we be seeing any product design changes, specifically in the terminal post area that will make this task easier? How about means for terminating monitoring leads?

Battery Users General

- Have any of you realistically analyzed how many of your battery system failures are due strictly to user induced problems? Problems such as:

    * Specifying the wrong battery for the application
    * Improper storage - (High temperature, too long without charging)
    * Improper installation
    * Improper charging
    * Lack of maintenance

- How many of you use a purchase specification when buying equipment, spelling out the minimum acceptable requirements? If not, do you realize that your purchasing manager is going to find you the least expensive and least likely to work equipment on the market?

- How many of you are planning to out source the maintenance and testing of your battery systems in the future?

- How many of you are actively planning to use battery monitoring as part of your maintenance program?

Telco Applications Issues

- How did VRLA batteries ever get selected for outdoor cabinet applications? Didn't anybody question the performance in 140 ^{o}F temperatures? What is being done to extend life in outdoor cabinets?

- How long are the batteries lasting?

- Are Nickel Cadmium batteries a viable option?

Power Company application issues

- In a downsized world, what is happening to the maintenance program? Is it being automated or neglected?

- What rate should be used when capacity testing lead acid substation batteries? How about Nickel Cadmium?

- Is it necessary to measure specific gravity? If so, how often?

UPS Applications issues

- Why are battery cabinets (12 volt modules) not designed to make the batteries more readily accessible? Do users realize that they are sacrificing ease of maintenance and safety for a lower product price?

- What is the commissioning procedure for verifying battery performance on medium to large UPS systems? Is it done without the customer insisting on it?

- Do customers realize that when they purchase a UPS system, they typically receive the least expensive battery on the market? Are they given a choice in the selection of the battery?

- Are there any Electro magnetic emission standards that apply to cabinet type UPS systems? If so is anyone meeting them?

Test service issues

- What type of training do service personnel receive before they show up on the job site? Do we not need some type of certification program?

- How is a test service company selected? Strictly on price, or does performance count? How do the users convince purchasing that price is not the most important selection criteria?

Test equipment issues

- Truth in advertisement - Can Internal cell measurements really identify all cell problems? Is 85%-90% detection a good number? If not what is?

- How long after a product has been obsoleted by a new design, should the equipment manufacturer provide repair and calibration support?

Nickle Cadmium issues

- Disposal. What is required?

- What are the failure modes? Any special charging requirements?

Other issues

- How accurate are the capacity curves and tables provided for both Flooded and VRLA batteries? How many batteries are typically used in the test sample to generate these curves? How much of the information is calculated or projected rather than generated from actual testing?

- Is anyone using the IEEE standards? If not, why not?

- What do we need from future standards? How about a written test, that in addition to formal hands on training, forms the requirements for certifying a battery technician?

- Internal cell ohmic values differ from one instrument to the next. How do we get the battery manufacturers to accept warranty claims based on these readings? If a particular impedance, conductance or resistance instrument is used in conjunction with a capacity test set to establish baseline and failure level criteria, will that satisfy the battery manufacturers?