

A Sales Guide To Power Protection

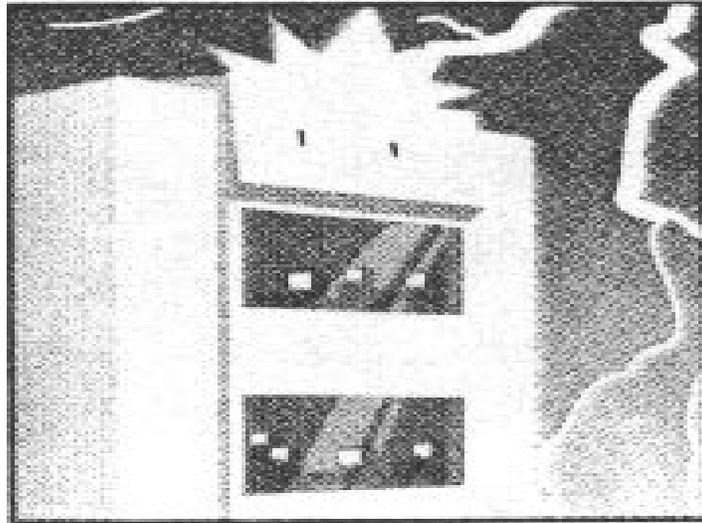
By Alan S. Horowitz

Think of the relationship between electrical power and computers as similar to the aliens and the populace in "The Invasion of the Body Snatchers." Most of the time, electricity and aliens are benign and non-threatening, and remain hidden like wolves in sheep's clothing. But watch out when there's the urge to assert themselves. They burst forth like unearthly powers and wreak havoc among the unsuspecting.

A multibillion-dollar industry has arisen to meet the threat of electricity gone haywire. "Power protection," it's called, and shrewd resellers are profiting from end users' undeniable need for clean, reliable power. This is an exciting market because:

- The competition is weak (few resellers give it much thought);
- Electric utilities, electrical systems in buildings, electrical equipment itself, and Mother Nature all combine to assure that no one is guaranteed clean, reliable power.
- Reseller's profit margins, despite recent price drops, have held up; and
- It's a relatively easy sale.

Power protection, at its most basic, is hardware and software used to protect against power problems and provide the means to monitor such problems. Surge suppressors and uninterruptible power supplies are the two most widely used hardware products in this market. Power protection software monitors the power load, and controls the hardware in the event of problems, such as



when the power goes on the fritz and an orderly server shutdown is needed.

Why Become A Power Protection Guru?

Power protection products enhance reseller profitability in several ways:

Image: By offering these products and having the ability to provide effective site evaluations, the power protection guru differentiates himself from resellers who know little or nothing about power protection. Such expertise creates an image of professionalism and authority, which in today's competitive market has considerable value.

Action Checklist

Benefits of Selling Power Protection

- Expertise enhances your image
- Profit margins are solid
- Service contracts become more profitable
- Your closing ratio will improve

Product Profitability: Power protection products carry solid profit margins, which have held up during the recent onslaught on computer prices. Enhancing this profitability is

the low cost of making a sale. Rarely sold as a standalone product, power protection is typically an add-on to computer system sales – sell a network and you can almost automatically sell power protection without additional sales calls, followups, or paperwork. Selling doesn't get much easier, quicker, or cheaper than this.

Service Contract Profitability: The less the reseller has to service, the greater the profitability on service contracts. How important is power to system problems? Half of all computer repair calls are estimated to be power related, say industry experts. According to the Federal Information Processing Standard Publication 94, nearly 80 percent of "no-fault found" problems on computers are due to unseen power problems. Mike Burns, president of Ibox Corp., a reseller in Rochester, N.H., says "at least 75 percent of the service calls we get are power related." If you want to make a big dent in your customers' computer problems – and the amount of service you must provide – get your customers to use UPSs, surge suppressors, and the like.

Higher Close Ratio: As a power protection guru, you enjoy an enhanced professional image while offering a truly complete solution. Rather than just pushing boxes, you're adding real value, and customers

respond. For these reasons, your ability to close sales will improve.

Mark Waller, an independent power consultant in La Canada, Calif., and author of *PC Power Protection* (Indianapolis, Ind.: Howard W. Sams & Co.), says: "If VARs are aggressive in selling power protection, and educate themselves, there is a lot of money to be made. Every time a computer goes out the door, it's going into a building where that computer needs some form of protection. Every customer contacted is an opportunity for multiple sales."

Market Potential

The power protection market is moving along like the Energizer Bunny on amphetamines, making this one of the more promising markets for the reseller community. Venture Development Corp., a Natick, Mass.-based market research firm, estimates that in the office automation, business systems, and data processing industries, sales of online UPSs were \$408 million in 1992, and will grow at a compound annual rate of 13.7 percent between now and 1996. The prospects for off-line UPS product lines is even better. Totalling \$349 million in 1992, the sales of these should grow 21.6 percent each year until 1996. About \$192 million in surge suppressors were sold in 1992, a market which Venture Development thinks will increase 12.5 percent annually until 1996. Other power protection products, including power-line conditioners, line voltage regulators, and isolation transformers are expected to expand much slower, about 3 percent a year, compounded.

Overall, Venture Development expects the industry to enjoy a 13.9 percent compound annual growth rate. Remember, this is revenue, not unit sales, so it takes into account expected price declines. Nor does it cover the entire industry, such as the market for computers in the home and overseas sales.

Any way you look at it, power protection is an industry destined to

enjoy burgeoning sales over the next several years, and probably longer.

Factors For Power Protection Growth

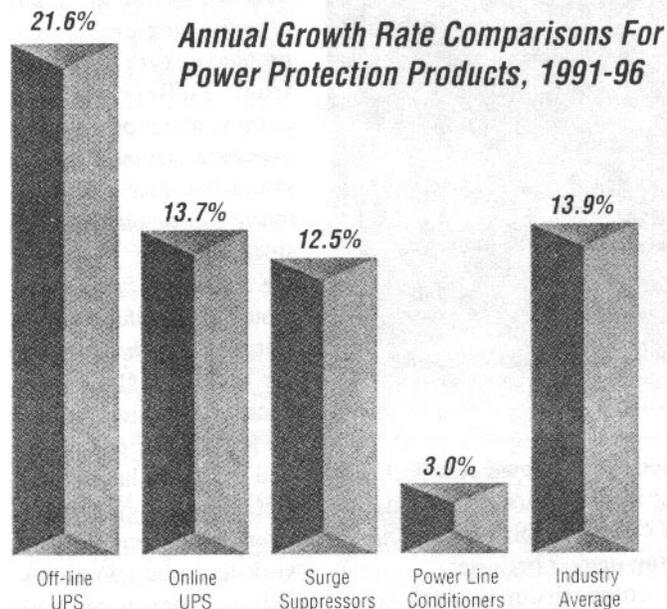
Several factors account for such growth. As with just about every other computer-related product, power protection devices have seen their prices drop during the past couple of years. Overall, according to one observer, prices have declined about 30 percent. On the low end, they've dropped even more. The least expensive UPS two years ago retailed for about \$400; today you can buy a UPS for \$139, maybe less. Declining prices mean users are willing to install UPSs in places where they previously didn't make economic sense, as with network nodes, point-of-sale systems and telephone systems.

Declining prices of computers and peripherals has affected demand for power protection. Buyers usually work from a budget. The dramatic drop in CPU prices in the past year has left many of these budgets with unspent money. Resellers are having an easier time convincing users that getting valuable power protection for

The emergence of networks – local area, wide area, and enterprise wide – has really boosted demand for power protection in recent years. More and more mission-critical data resides on PC-based networks. The more vital the network is, the greater the cost of downtime, and this makes users increasingly receptive to buying power protection equipment.

Not only have networks motivated users to protect their hardware, but the types of equipment that can justifiably need power protection have grown, too. Hubs, concentrators, and other mission-critical links in the network, of which there were few a short while ago, are now common-place, creating markets for power protection that didn't exist until recently.

The newer operating systems are pushing growth, too. Windows, OS/2 and Unix are multitasking environments. When users used one application at a time, a system crash had limited data-loss potential. Now that users regularly have several things going on at once, the potential for losing valuable data increases multi-fold. The more multitasking is



their investment is worthwhile, especially since they were planning to spend the money anyway.

used, the faster the customer's return on investment in UPSs and other power protection devices.



Problematic Power

Lots of technical mumbo-jumbo accompanies power protection. It can, admittedly, be a complex field, which is why many universities offer bachelor's degrees and doctorates in such fields as electrical engineering. That said, you don't have to be a technical genius to provide good power-protection advices to your customers. The manufacturers publish lots of literature on the subject, most of the equipment is plug-and-play, and the software is easily installed. When a power problem hits, though, finding the cause can be tricky, but the electric utility is usually helpful in these situations.

Some basics about power problems are worth knowing, including:

- **Blackout:** When the power drops to practically or absolutely nothing, it's a blackout. Blackouts are what most customers think about when considering power protection.

"There's a real simple understanding among customers of battery backup – it works when the power goes off," says Hutchins of Pro Systems.

Though resellers hyping the needs to protect against blackouts may sell UPSs, it truth this is rarely a major problem. In an oft-quoted Bell Labs study done in the late 1970s, outages were found to account for only 4.7 percent of total power disturbances. An IBM study looked at five major causes of power disturbances and outages ranked last in importance, accounting for only 1 percent of the total. UPSs are the only devices that deal with blackouts.

- **Brownout:** A temporary reduction in power which lasts from a few

seconds to possibly hours is called a brownout or sag. Among power gremlins, this is the most significant. The Bell System study found that brownouts caused 87 percent of power troubles. Overloaded circuits, as when too many devices are plugged into the same power line, frequently cause brownouts. During peak-demand periods, electric utilities may purposely create a brownout condition so there's enough juice for everyone to get a little.

Unlike blackouts, these are not always obvious. Lights and clocks may do fine while the computer is starved for power. A telltale sign of a brownout problem is if the office lights and clocks keep going but the system reboots several times a day. Power conditioners and UPSs with power conditioning features handle brownout situations.

Frequency of Power Disturbances

Type of Disturbance	Number of Disturbances	Average Days Between Disturbances
Under-voltage	1569	2.1
Overvoltage	103	32.2
Outages	65	51.0
Switching disturbances	2831	1.2
Impulses	1676	2.0
Total	6244	0.5

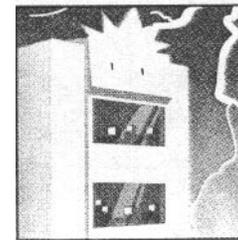
Source: IBM

- **Surge:** A surge is a transient increase in power for more than a small fraction of a second and less than about 2.5 seconds. Surges can cause a power supply to generate heat and, as you probably know, heat is a major cause of equipment failure. Faulty wiring is one common cause of surges. Despite their names, surge suppressors do not suppress surges; they suppress spikes. A power conditioner or UPS with power conditionery deals with surges.

- **Spikes:** A spike is an intense increase or decrease in voltage. It is

more extreme than a surge and of shorter duration. Starting a sizable motor, such as an arc welder or even a copy machine, can create a spike. Mother Nature sets off spikes when she flings lightning bolts in the direction of power lines. Spikes can jam up a computer's instructions, causing it to go a bit bonkers or crash altogether. In the worst cases, it can melt things you don't want melted, such as wiring. Surge suppressors protect against spikes.

The Bell System survey predicted that 50 percent of Bell sites could expect 25 sags of significance and four power failures annually. That works out to one important power problem about every two weeks. And the IBM study predicts a power disturbance twice a day! (These are the kinds of statistics your customers should know about.)



Levels Of Power Protection

Surge Suppressors

The most important technology involving surge suppressors centers around metal-oxide varistors (MOVs). These sense when a surge or spike is present and redirect the impulse away from the power line. Critics of MOVs say they are not durable enough to offer reliable protection. Not only that, but MOVs supposedly become less effective with each surge they do battle with. Supporters of MOV-based surge suppressors claim some products have been poorly made, but that is no reason to condemn them all. They also say MOVs don't degrade over time; rather, they get hit by

impulses beyond their ratings and this causes degradation.

Another technology used is silicon avalanche diodes, which are semiconductor devices that direct impulses off the power line. Reportedly, avalanche diodes don't degrade over time.

Some makers use an MOV or avalanche diode and combine it with another device, such as a "gas tube" which can absorb large amounts of energy.

How do you decide which is the best? Check manufacturer specs. Does the manufacturer provide an insurance policy against equipment damage? Power consultant Mark Waller recommends that surge suppressors have International Association of Electrical and Electronic Engineers (IEEE) 587 and Underwriter's Laboratories (UL) 1449 approval. As with many things, you usually get what you pay for. Don't expect a \$20 suppressor to be as effective as one costing \$100.

Uninterruptible Power Supplies (UPSs)

The UPS comes in three types: 1) Online. This UPS continuously draws current from the power line and, in turn, the computer gets all its power from the UPS. 2) Off-line or standby. Here, the UPS sits and waits for a problem, such as a drop in power, and kicks in when the power falls below a specified level. 3) Line interactive. This has become popular only recently. It's a hybrid of the other two types. The UPS is always online but the computer draws very little power from it, relying instead on the power line except when there's a problem – that's when the line interactive UPS kicks in. A regulating transformer provides power during the switch from the AC power line to battery so there's no period when the computer isn't getting juice.

Which is the best UPS? Basically, they're all good. Online ones may be a bit more reliable in that there is an instant between when the

power drops and the UPS starts supplying power. If you're ever on a hospital life support system, ask for an online backup. Standbys have a different kind of reliability in that their batteries don't wear out as quickly as the onlines (because they're not running continuously). Line interactive perhaps have the best features of both. But the major manufacturers today build solid UPSs and which type of technology is "best" is largely moot.

Onlines were once deemed the best because the switching capabilities of standbys were slow enough that a quick power drop could crash a system. That's no longer the case. "You don't need an online unit anymore," says Matt Heuer, president of Matt Heuer and Associates, a reseller in Juno Beach, Fla. "If there's a fluctuation, brownout, surge, or any inappropriate power, the standby switches to battery power and there's no problem.

ACTION CHECKLIST Benefits of UPS Software

- Initiates automatic shutdown of PC or network
- Diagnoses power quality and problems
- Tests UPS regularly
- Controls remote servers
- Logs power interruptions
- Helps with network UPS management
- Reports on battery status

There are differences in UPS product features, the most important being surge suppression and line conditioning capability, battery replacement warning signals, test switches, ease of battery replacement and, very recently, the introduction of modular UPSs. Other features include audible alarms, visual indicators, site wiring fault indicators, voltage meters, and other niceties.

Though UPSs are the most versatile power protection devices,

there are other segments of the market worth mentioning.

• **Line voltage regulators** are one. These protect against voltage fluctuations. While suppressing some types of problems, such as surges and sags, they don't handle others, including noise disturbances, spikes, and blackouts. UPSs have been supplanting line voltage regulators in the marketplace because they provide more complete power protection.

• **Isolation transformers** protect equipment from the electrical noise found on power lines. These are used with industrial process control systems, computers, and communications systems. Fewer computer VARs sell them. An estimated 8 percent of isolation transformers are used in business systems applications.

• **A power line conditioner** is a combination of a line voltage regulator, isolation transformer, and surge suppressor. It protects against surges, electrical noise, and voltage fluctuations, but not blackouts, which UPSs do.

There's more to power protection than just these hardware products, though. Increasingly, telephone line surge suppressors are being used. Impulses can come over a telephone line through a modem and into the box. In fact, because the modem provides little or no power protection, unlike the power supply of the computer, power problems coming over telephone lines can be more destructive than those traveling along the power line. End users with networks connected to telephone or data lines are prime candidates for buying telephone line surge suppressors.

The Software Component

Despite its image of being solely a hardware market, power protection does have a software component. The software exists largely to enhance a network's fault tolerance. It's also a recognition that many networks are now functioning with little or no

human supervision, such as when backups are done at night. Though Novell's NetWare and other operating systems provide a UPS interface to help protect the network, add-in software from UPS manufacturers and others can be helpful to make sure things go smoothly when there is a power snag.

At its most basic level, UPS software notifies the user when a problem exists. If the user doesn't take action and the power problem persists, the software initiates an automatic and orderly shutdown that preserves data and files. It may also restart a system when the power returns. More advanced software offers such features as:

- Sophisticated power diagnostics;
- Automatic testing of the UPS at scheduled intervals;
- Controlling remote servers;
- Real-time utility line analysis;
- Logging of power events;
- Temperature and humidity monitoring;
- Shutting down inverter;
- Network power management tools;
- Reporting on how much longer battery can maintain systems; and
- Identifying and locating power problems.

Some of these software packages are so sophisticated they can pinpoint power problems of devices outside the network but affecting it, such as air conditioners and elevators. Software features are excellent selling points.

You can find software to work with all major platforms, including Novell's Netware, Apple's Macintosh, Artisoft's LANtastic, OS/2, LAN Manager, Banyan VINES, and Unix, and sell it for about \$100. The reseller's job involves making sure the software works with the customer's system. Typically, this software is not difficult to deal with. Some vendors claim it can be installed in under two minutes.

• **Antistatic watch.** Mike Burns, president of Ibox Corp., a reseller in

Rochester, N.H., does a nice business with a class of power protection products most VARs overlook – protection against static electricity. Antistatic mats for chairs, antistatic mats for computers, wrist guards, and antistatic sprays for floors and monitors are part of this class. And one of the nice things about some of them, such as the sprays, is that they're consumables; customers keep coming back for more.

CHOOSING A UPS TO SELL

Uninterruptible power supplies provide the bulk of reseller sales for power protection products. Getting caught up in the technical mumbo jumbo isn't productive. Here are some considerations when choosing a UPS product line:

• **How long will the system run on the battery?** Manufacturers are known to make claims about battery life that defy real-world experience. A good way to find out how long a UPS will keep a system going is to pull the plug and see how long the system stays up. Check out the warranty to get an idea of the quality of the battery. A manufacturer willing to provide, say, a two-year warranty probably has more confidence in its products than one that gives a 90-day warranty. The more confidence the manufacturer has, the more you should have.

• **Service.** "If you have a problem, will you get a hassle or will the manufacturer or distributor say, 'Yes, sir,' and ship you a new unit?," asks consultant Mark Waller. Tech service and support is important.

• **Ease of maintenance.** Eventually, UPS batteries wear out. Manufacturers frequently say theirs last about five years, though some observers say battery life spans are often closer to three years. How easy is it to replace the battery? How much does a replacement cost? Make sure

you know before taking on a UPS maker's product line.

As a reseller, focus on practical issues, such as service, maintenance, and run time. These are frequently more important than esoteric technology issues.

How Much UPS Should You Specify?

Calculating what size UPS is needed isn't the stuff of rocket science, but it does take some thought. You have to decide what needs to be protected. Let's start with what doesn't – laser printers. These use lots of power and, if they stop printing during a job, so what? Nothing's lost since you can easily start printing again where the interruption took place.

Action Checklist What Equipment Needs Power Protection?

Home and Office

PCs, Peripherals (not including laser printers); Phone systems, fax machines, modems; Telephone and data lines.

Retail Outlets

Cash registers; Point-of-Sale systems.

Peer-to-Peer Networks

Servers; Clients; Peripherals (not including laser printers); Telephone and data lines.

Client-Server Networks

Dedicated server; Clients; Peripherals (not including laser printer); Telephone and data lines

Enterprise-Wide Networks

Workgroups; Auxiliary servers; Minicomputers and DASD boxes; Internet equipment; Modems, telephone lines; Smart Hubs.

The list of equipment that needs protection will include the monitor, PC, CD-ROM, modem, tape drive, and any external devices. On the back of the equipment is probably listed watts or amps. What you want is the VA (Vlotage-Amps) power rating for the entire system.

If the power is given in watts, then calculate using the following equation:

$$VA = \text{watts} \times 1.7$$

If the power is given in Amps, then calculate using the following equation:

$$VA = \text{amps} \times 120 \text{ volts}$$

When you have the power rating for each device, add them up and choose a UPS able to handle that load. Frequently, the model name indicates the VA load. An XXX600 is a UPS that can handle a total VA load of 600.

Don't undersize. If you need a VA of 600, don't try to get away with a 450 UPS; the system will likely crash if there's a blackout.

Buying more than you need has benefits and negatives. The larger the system, the more it costs, so oversizing can waste money. Maintenance also costs more because the larger the battery, the more it costs to replace.

The benefits of oversizing are two:

- **The larger the UPS, the longer the runtime.** According to one manufacturer's specifications, a 600 VA load on a UPS rated 600 has a runtime of 5 minutes. On a 900 rated UPS, the runtime for the same load increases to 15 minutes, and reaches 25 minutes with a 1250 rated UPS.
- **Preparing for future growth.** Only recently have there been UPSs capable of being added to incrementally. Generally, though, UPS sizes are fixed, like a hard disk. If the system outgrows the capacity of the UPS, a new UPS must be purchased. A color monitor, a larger hard disk, the addition of a tape drive, all add to the system's power requirements and may require moving to the next size UPS. Leaving some leeway for growth of the system usually makes sense.

Making The Power Protection Sale

Selling points and techniques abound in the power protection market, and these can be used individually or in combination to create a compelling scenario why users should be buying your equipment. Here are some of these selling points and techniques: **Insurance:** Power protection is insurance against power problems, and should be positioned this way by resellers. Compare it to tape backups which are insurance against disk drive crashes and mistakes made when deleting files. Many small business owners and department heads have more money invested in their computer systems (hardware, software, and data) than in their cars, yet they all have car insurance while few have power insurance. Make this point clear.

Refuse to sell service contracts: As noted above, power problems account for the majority of service-related problems. Just as a doctor wouldn't take on a patient for a flat fee if that patient refused to take his or her medication, resellers shouldn't take on customers for a flat fee (which is what a service contract is) if they refuse to take prescribed medication, namely power protection. "If a customer refuses power protection, we'll refuse to maintain the equipment. Otherwise, we can't afford to maintain the service contract," is how network VAR Wylie Crawford puts it.

Offer discounts: If you are intent on selling service contracts even to those unwilling to buy power protection, offer a discount to those who do buy it.

Waiver form: Here's one of the most effective marketing tools available to VARs. If a customer of Bancroft & Masters, a Redwood City, Calif., reseller, refuses to power protect a file server, the firm, according to principal Gene Mazurek, says: "Fine. Just sign the following waiver form that says

we advised you to put a UPS on your system. You take full responsibility for any damage that may occur from a power interruption." Nobody's yet signed it.

Power Monitor: Skeptical customers become fast believers when a reseller hooks up a power monitor to their AC power line and shows, in no uncertain terms, their power problems. These monitors graph the performance of power over time, much like a printout on an EKG. The VAR plugs it into the customer's power grid and comes back several days later. Spikes, surges, brownouts, and other glitches are recorded for posterity. Once customers see how irregular their power is, they usually gladly buy power protection. Good power monitors sell for \$4,000 to \$6,000, though they can often be rented by the day and some UPS vendors lend them free or at small cost.

Capitalize on Mother Nature: At least one vendor tracks where lightning storms strike around the country. It then contacts its dealers in the affected area for the names and addresses of their clients, and sends out a direct mail piece suggesting they need power protection. Just as when an earthquake or hurricane hits, earthquake and hurricane insurance sales zoom up, power protection equipment sales jump after Mother Nature plays havoc with a customer's power. This vendor has found that normal direct mail campaigns generate a 1 percent response from those contacted, but when contacted following a weather disturbance, the response jumps to 4 to 6 percent.

Return on investment: Probably one of the strongest sales arguments a reseller can make is that power protection can quickly pay for itself. It's a classic return-on-investment strategy. Usually, two items of value are lost when a system goes down: data and employee time. It's hard to put a dollar value on unrecoverable data, but it's easy to see that much is lost if customer orders go unfilled and accounts receivable go unbilled because the system crashed.

Calculating the dollar value of lost employee time is easier. For example, assume a network has 20 users, each earning \$15 per hour. The network crashes and, say, 30 minutes worth of work is lost per employee. To make up for the loss, 30 more minutes per employee must be spent recreating the data. (Actually, more time is often required because recreating lost data is frequently more time consuming than creating it in the first place.) The cost is 1 hour per employee (30 minutes for the work lost plus 30 minutes to recreate what was lost) or \$15; \$15 x 20 gives a total cost of \$300. The customer earns back the cost of the investment with one or two power incidents (assuming the UPS costs \$300 to \$600).

Inclusive sale: As noted earlier, power protection is usually not a standalone sale, it is typically part of a package. To make a power-protection sale, be sure to include it with all system quotes.

Lend a UPS: If a customer is having problems that you think are power related but the customer doesn't, don't argue the point, just lend the customer a UPS for a week or two. When the problems disappear, the customer won't let that UPS leave the premises.

Use it yourself: If you don't use power protection in your own business, don't expect customers to take your sales pitch seriously.

Listen to your customers: As you discuss a customer's needs, listen for comments that can be used later to sell power protection. These highlight a customer's concerns. Examples: "This data is extremely valuable. It contains the essential information we need to run our business"; "We rely heavily on this computer system. If it went down, the company would grind to a halt"; "Did you see that thunder and lightning yesterday? One day it's going to hit this building directly"; "You'd think the power company could get its act together. The power here is always being interrupted"; "The one disadvantage of this building is that it's old, and the

electrical system hasn't been updated in who knows how long. "

The easiest sale is to current customers: It's an axiom in the world of marketing that your current customers are your best sales prospects. Send them information about exciting new power-protection products being introduced or special deals. Ask vendors if they'll pay part of the cost of such a marketing campaign.

The second easiest sale is to past customers: Another marketing axiom is that previous customers are second only to current customers as sales prospects. Stay in touch with your previous customers. They may have expanded their systems bit by bit over time and have not thought about their need for more power protection until you remind them. Keep a high profile so when the battery runs dry, they think of you first for service.

ACTION CHECKLIST

Closing The Power Protection Sale

- Bundle power protection with system sales
- Emphasize the ROI argument
- Refuse to sell service contracts without protection
- Make customers sign a waiver
- Explain that problems probably will cease after protection
- Highlight that power protection is inexpensive insurance

Be prepared for objections:

Before going on a sales call, prepare yourself against customer objections. Here's a common one: "I don't need power protection." Counter this by: 1) Reviewing the statistics cited earlier on the frequency of power problems; 2) Demonstrating the quick return on investment this equipment provides; 3) Leaving a power monitor on site for a week or two to demonstrate the frequency of power problems; 4) Showing how much data

and labor will instantly be lost when the power fails; 5) Pointing out that every site eventually experiences power problems.

Another common objection: "It's not worth the cost." Counter this by:

1) Giving a return-on-investment analysis; 2) Pointing out that the cost of today's power protection devices are but a small percentage of the total cost of a system; 3) Asking what they expected to pay for a system and then showing that, because of price declines in CPUs and other equipment, they can probably get power protection without overstepping their budget; 4) making clear that power protection is insurance -- when thousands of dollars are spent on a system, it makes sense to spend a few hundred dollars more to protect it.

Becoming a successful power protection reseller is not hard. Most VARs don't pay it much attention. To be successful just takes some, but not much, time and effort. Those who make the investment find it provides ample rewards.