North American Industrial Battery Forecast Report: 2005-2009

By Bob Cullen

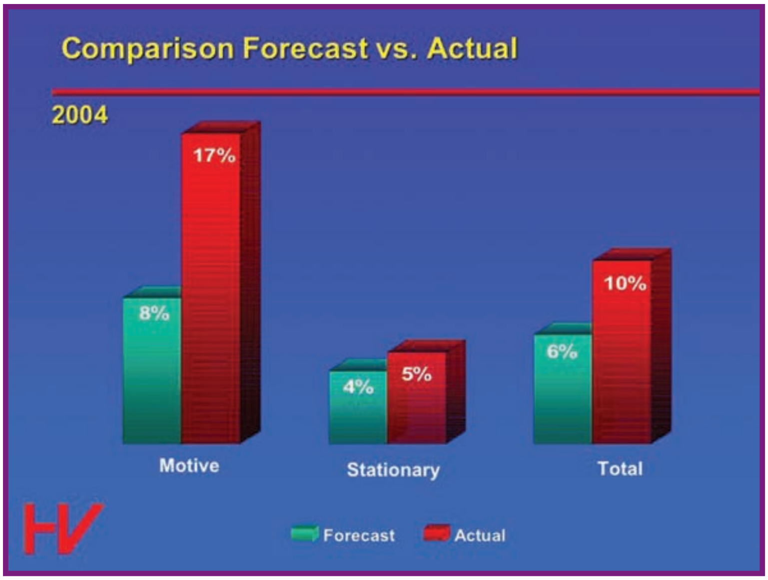

Figure 1

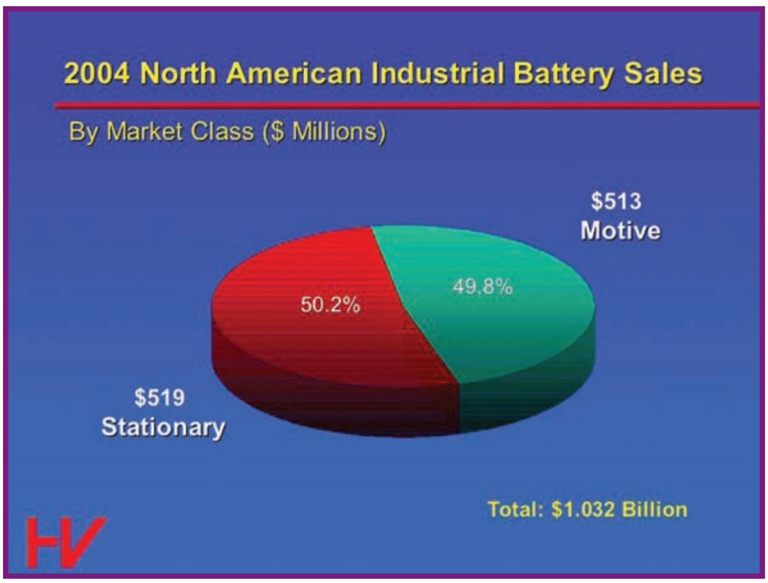

Figure 2

The industrial battery market in North America experienced a continuing recovery in 2004, in both the stationary and motive power markets, with sales up 10 percent. This was greater than the 6 percent growth predicted last year. Bob Cullen presented this report on trends in the industrial battery sector at the BCI 117th Convention in New Orleans, La. His data on sales results and forecasts comes from 11 North American BCI members responding to the survey as well as additional sources.

The economic recession technically ended in 2001, but GDP growth in 2002 was anemic at best. It was not until the second half of 2003 that we began solid growth with a third quarter 8 percent GDP growth. Couple this with the capital expenditure (cap-ex) declines in 2001-2002 and pent up demand from those years, and this results in a very strong year, in particular, for motive power in 2004. The motive power category increased 17 percent in sales, resulting in a market worth over $513 million at the end of 2004. This was primarily driven by sales of new industrial forklifts as well as the replacement market.

The stationary market continues recovery with a 5 percent growth, driven by a banner year for UPS. Once again, the decline in cap-ex spending in 2001 and 2002 resulted in pent up demand for bigger and more numerous data centers. Spending on UPS equipment reached $7.3 billion in 2004, an increase of almost 20 percent over 2003. This will continue at a 6.8 percent pace through 2009, reaching $10.1 billion.

The telecom market, still the largest segment in the stationary area, had very minor growth in 2004. The key driver behind this slow growth is the trend toward consolidation. AT&T has been purchased by Cingular; Sprint picked up Nextel, and the latest is the on-going bidding war of Verizon and Quest over MCI. Until these mergers and acquisitions settle down, many of these organizations are reducing their capital expendi-

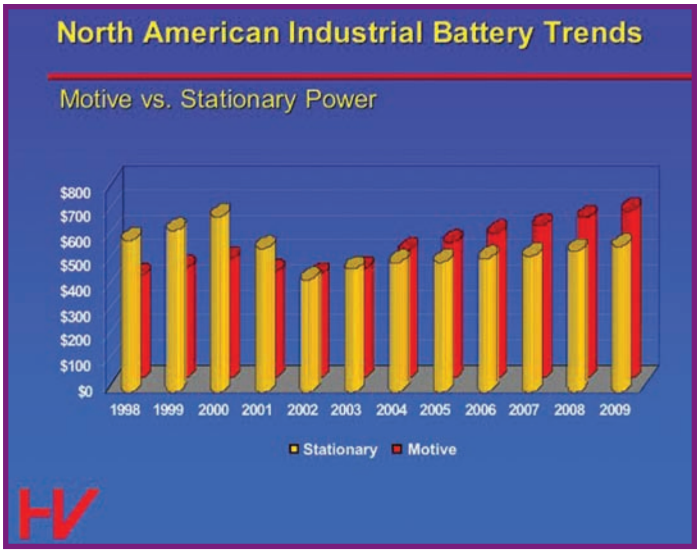

Figure 3

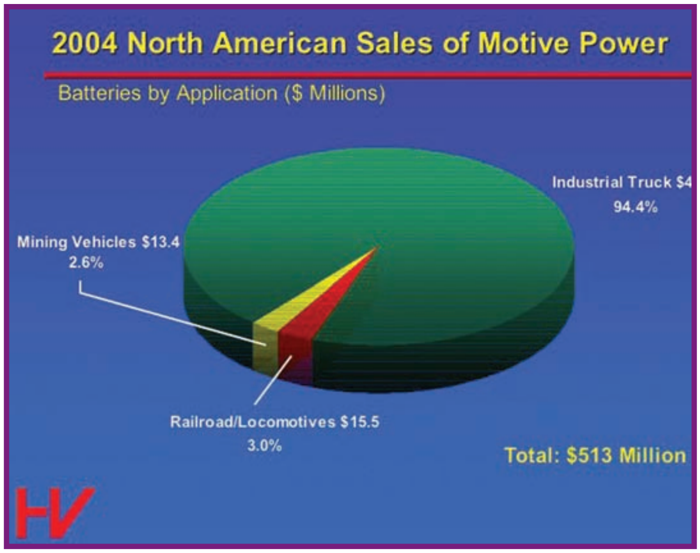

Figure 4

tures. I believe this will sort itself out in the first half of 2005, and then many programs, which had been on hold, will be implemented. Look for slow, steady growth in telecommunications going forward.

2004: Forecast Vs. Actual

Before detailing the 2005 forecast, let's review how 2004 actually stacked up against the forecast we provided last year in Palm Springs, Calif. Please keep in mind that BCI divides the industrial battery market into two major classes: motive power and stationary power.

As the graph in Figure 1 indicates, last year we forecasted 8 percent growth for motive power, and results came in at a whopping 17 percent growth. Pent-up demand from 2002 and a strong economy in 2004 contributed to a robust 2004, which continues on into 2005. Some of this growth is also due to several price increases resulting from high lead prices.

With respect to stationary power, the actual result differed only slightly from forecast, growing 5 percent, compared to our forecasted growth of 4 percent. This was mainly due to the recovery in the UPS sector. However, according to the latest forecast, stationary power will show modest growth in 2005, but real recovery should begin in 2006 and beyond.

BCI Survey Participants

The data for the North American market, including the forecasted sales figures, comes from the BCI 2005 membership survey, a compilation of sales results and forecasts from 11 North American battery manufacturers. Please note that these are sales from North American producers to North American customers. However, because of the increasing significance of imported batteries in this market, there will be a few instances where estimated import numbers and the role they play are noted.

Additional information for the motive power segment was provided by the Industrial Truck Association. For the stationary segment, information came from Verizon, Ericsson, Skyline Marketing, Morgan Stanley and Merrill Lynch Research.

Special thanks must be given to Steve McCluer and Mike Maiello of APC, Steve Graham of Cisco, Kavion Mortasian of Tyco and Sven Johannson of Ericsson.

We would like to thank the companies that participated in the BCI membership survey, with special thanks to Moe Desmarais and the staff at BCI; Jim Rubright and Evan Wescoe of East Penn; Jerry Hoffman of North Star; John Kalmuch of C&D; Steve Vechy of EnerSys, Bruce Cole of GNB/Exide Technologies and Dave Shaffer of Fiamm, for their help in contributing to this forecast.

Industrial Battery Markets

As mentioned earlier, BCI divides the industrial battery market into two categories: motive and stationary power. As shown in Figure 2, in 2004 motive power sales were $513 million, accounting for 49.8 percent of the total industrial battery market. Stationary power sales were $519 million, which made up 50.2 percent of the market.

Trends in Industrial Battery Market. The North American industrial battery market is forecasted to grow $227 million by the year 2009, from its current $1,032 billion to an estimated $1,259 billion. During this period, the growth rate of motive batteries should continue to out-pace that of stationary power batteries, with motive eventually growing its share to 53 percent of the market (see Figure 3).

Motive Power Market Applications. Motive power consists of three main segments:

- Industrial truck batteries, including forklifts, automatic guided vehicles and airline ground equipment
- Railroad/locomotive batteries
- Mining vehicle batteries.

Motive power sales last year grew by 17 percent, to $513 million, due to a sharp uptick in the economy, which resulted in more forklift sales (see Figure 4). This market will continue a steady growth pattern for the next several years. In addition, mining batteries also appear to be on a growth trend due to higher coal prices, which is driving new mining operations.

Motive Power Battery Trends. For the period of 2005 to 2009, we are forecasting solid annual growth of 5 percent for the forklift segment. This will put motive power at $675 million by 2009, up from the current $513 million (see Figure 5). Sales of these batteries are primarily replacements and to independent distributors, i.e., through non-OEM channels.

continued from page 17

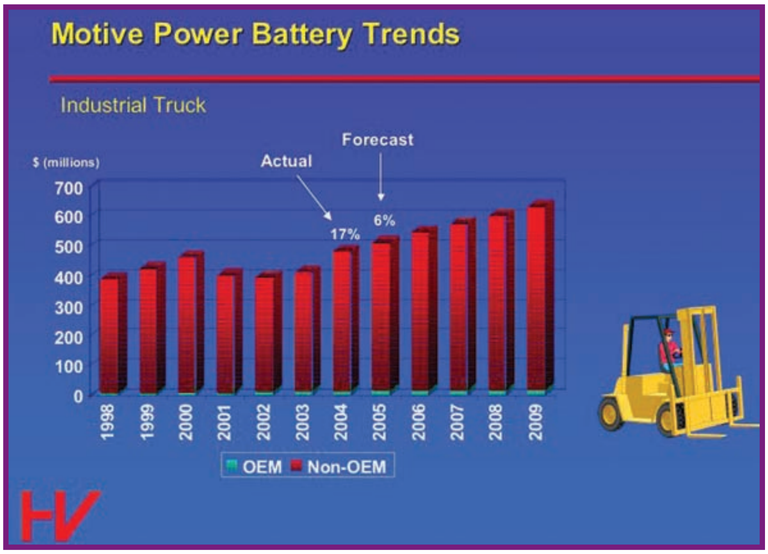

Figure 5

North American Stationary Power Market Segments

	2001	2002	2003	2004
Telecommunications	69%	57%	55%	52%
UPS	22%	27%	30%	34%
Misc. Standby	3%	5%	5%	5%
Security	2%	<1%	---	---
Control & Switchgear	4%	10%	10%	9%
Total	**100%**	**100%**	**100%**	**100%**

Figure 6

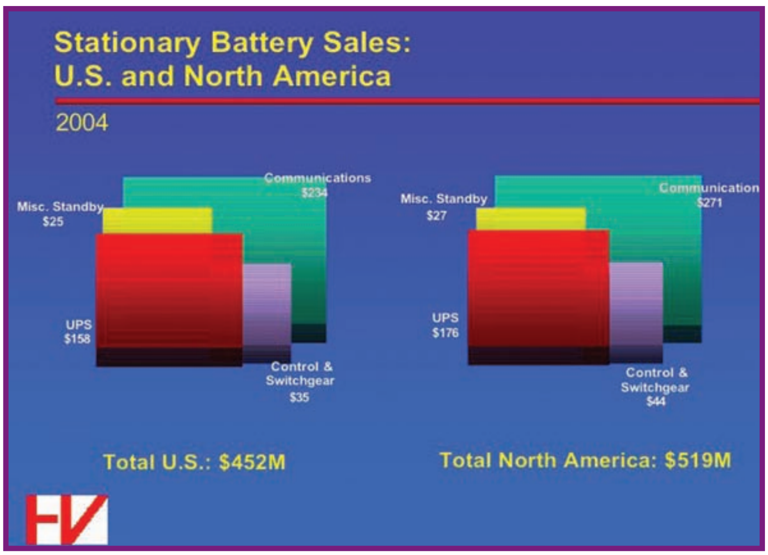

Figure 7

Railroad/locomotive and mining vehicles account for a much smaller part of motive power. Battery sales for railroad applications increased 26 percent in 2004. We anticipate a slight decline in 2004, but modest growth in 2005 and beyond. We believe there is an aberration in one of the numbers reported in this category; therefore, we forecast an overall growth rate of just 3 percent through 2009.

Batteries for mining vehicles grew at a 10 percent pace in 2004, largely due to the increased mining activity for coal, as an alternative to more expensive fuels. We see this trend continuing for the foreseeable future as coal is selling around $80 per ton. Mining batteries are forecasted to grow about 23 percent in 2005.

Motor Power Growth/Drivers. To understand what drives this $513 million segment, all one needs to do is look at the industrial truck segment, which accounted for 94 percent of sales in motive power. The current economic growth will continue at a 3.6 percent GDP pace and this will continue to drive orders of forklift trucks. As a result, we are forecasting a 6 percent growth in sales in 2005.

Stationary Batteries. The second major class in the industrial battery market is stationary. Stationary now accounts for 50 percent of this $1,032 billion market and, up until 2000, was growing at an 8 percent annual rate, compared to motive power's 3.4 percent. Based on current consolidation trends in telecommunications, stationary will account for 47 percent or $584 million of the market by 2009.

Stationary Power Market Segments. The stationary power market consists of the following segments: telecommunications, UPS, miscellaneous standby, security and control and switchgear (see Figure 6).

As you can see from Figure 6, telecom was picking up a larger and larger percentage of the stationary market until it hit a brick wall in 2001 and now has dropped back to 52 percent. UPS did not suffer as badly and has regained some of its prominence in 2001. Control and switchgear grew as utilities expanded due to the rolling blackouts in California; but lack of new grid growth in 2004 has dropped this category to 9 percent.

Stationary Power Sales by Battery Size. We all know that most "under 25 amp hour" batteries are no longer manufactured in North America. They are sourced from China, Korea and Taiwan and sold by Asian manufacturers to North American companies. Additionally, there are non-BCI members who manufacture in China and sell imports into the UPS, emergency lighting and security markets. BCI no longer officially counts this category. However, our estimate is that there is approximately $125-150 million in batteries imported to North America.

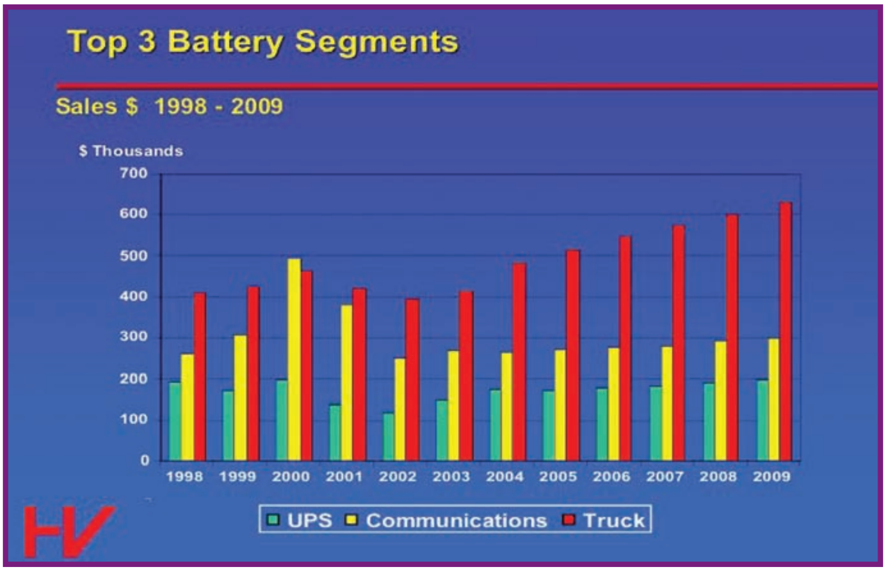

Figure 8

2004 Battery Sales by Market Segment. In the stationary power segment, the two dominant applications are telecom with $271 million and UPS with $176 million (see Figure 7). Telecom and UPS account for 86 percent of the stationary segment, with the large batteries expected to grow at a 4 percent pace in 2005.

Other notable segments within stationary are control and switchgear and miscellaneous standby, which consist of photovoltaic and rail signal. Sales of control and switchgear batteries, which are mainly sold to utilities, fell 8 percent in 2004 and we forecast a flat year again in 2005 mainly due to a lack of new utility growth in the U.S.

It might be interesting to take a look into the future for a moment at the same market segmentation we just analyzed and see how this might look five years from now. It becomes readily apparent that while most categories experience solid growth, two segments, namely telecom and UPS, continue to be the dominant players in stationary, just as industrial truck dominates motive. Let's take a peek at what these three categories alone will look like in 2009.

Trends Toward 2009

If the forecasted trends are correct, the top three battery segments will grow at a 4.2 percent rate over the next five years and will account for $1,137 billion or almost 90 percent of a $1,259 billion marketplace (see Figure 8). Let's take a look at what is driving these markets.

Telecommunications. We have already pointed out that the telecommunications market hit a brick wall and declined by 21 percent in 2001 and another 33 percent in 2002. Much of this was due to lower spending on equipment for a new infrastructure. Cap-ex declined from $120 billion in 2000 to $75 billion in 2001, $68 billion in 2002, and expenditures are forecasted to hit only $55 billion this year. Beyond 2005, cap-ex is projected to grow at least 3 to 5 percent annually. These expenditures are the result of a worldwide telecommunications infrastructure that is being built and redefined by the advent of new technologies in fiber optics, wireless Internet and broadband communications systems.

Many competitors have fallen, or merged with traditional Baby Bells. Some of the traditional telephone companies, such as AT&T, Verizon, SBC Communications and Bell South, are being joined in this competitive marketplace by cable companies, the Internet arena and the world of wireless. All are

continued from page 19

pushing new and lower cost vehicles for major businesses to transmit voice and data over wireless or cable lines versus the traditional wired phone lines used to transmit voice-ony messages. The latest trend, and it is expected to grow to almost one third of the market, is VOIP—or Voice Over the Internet Protocol.

This is primarily a North American-based forecast. However, when discussing the telecom marketplace, you cannot ignore the fact that this is truly a global business. There are aggressive companies bent on becoming the dominant data and voice carriers throughout the world. All indications are that the mergers and partnerships that have occurred in North America over the past few years will continue on a worldwide basis for the foreseeable future. What is enticing these North American companies is the rapid build-up of foreign telecom operations.

China has now divided its telecom monopoly into four units and, by joining in a pact with North America, has opened up its $80 billion market to American companies. China has added millions of phone lines in 2004 and will spend $20 billion a year updating its many large investments on new telecom structures.

What all of these telecom players are after is the exploding business of transmitting data and wireless access to the Internet. The new data networks under construction are expected to carry a seven-fold increase in data traffic between 2003 and 2009. Annual global spending on telecom services, already over $2 trillion today, will continue growing at a 9 percent pace through 2010. Much of that spending will be on data information.

UPS. The second major segment in stationary power, after telecommunications, is UPS. Large UPS battery growth is forecasted at about 4 percent annually from 2005 to 2009, after a modest decline in 2005. Spending on UPS equipment is expected to reach $10.1 billion. This, in turn, is expected to grow 6 percent yearly, according to market research from Business Communications Inc.

Obviously, the reason for the tremendous growth is the computer industry and its critical applications demanding complete reliability of data. The latest driver in this market is the explosive growth of the Internet and network servers.

Motive Power Trends. The last of the "big three" segments is industrial trucks. This segment will have steady growth with occasional upward and downward swings, which is impacted directly by a strong and weak economy. We are forecasting an average growth rate of 4 percent over the next five years, increasing sales from its current $484 million to $633 million by the year 2007.

The growth of industrial trucks, as mentioned previously, comes from the $5.4 billion being spent on forklifts and handling equipment, and which is projected to grow by 4 percent annually. This segment remains particularly sensitive to overall economic trends.

Summary

The North American industrial battery market interrupted its 10-year growth patterns in 2001 by posting a 15 percent decline. All three major categories continue to have difficulty in 2002 due in part by the recession in the North American and the cap-ex slowdown in the telecom and UPS markets. In 2003, we posted a 5 percent growth in motive power and a 10 percent growth in stationary, driven by increases in telecom and control and switchgear. Beginning in 2004, as the economy continued to improve and the telecom debt loads worked down to a reasonable level, we began to see increased spending on infrastructure again and should enjoy a 3 to 5 percent growth trend through 2009. •

Bob Cullen is the vice president of sales and marketing, Battery Separator Products, for Hollingsworth & Vose Company, East Walpole, Mass.