HVAC Trends over the Years

The HVAC industry seems to be in constant flux. In recent years HVAC has witnessed several ups and downs.

According to a Today’s Facility Manager article, in 2002 four trends primarily affected the market:

- The critical need for energy efficiency, reliability, and flexibility
- The urgency of indoor environmental quality, including air quality, comfort, and sound levels
- Demand for open-protocol controls
- The importance of maintenance and retrofit options

The picture changed a bit in 2003 as forecasts predicted a good year for HVAC personnel. Demand was expected to be robust, and it was. In fact, according to a ThomasNet article by Katrina C. Arabe, 2003 was the “second straight year of record shipments of central air conditioners and heat pumps as low inflation, low interest rates, and gradually increasing employment all support[ed] demand.”

As in 2002, light commercial and residential equipment accounted for most of the shipments in 2003.

“The economy’s toll on commercial and industrial markets [was] seen in declining shipments. Large unitary shipments fell by about 14% in 2002, compared to a 1% drop in 2001,” adds Arabe.

According to a Buildings.com article by Robin Suttell, in 2006 “changes to ASHRAE standards, the new federal Energy Policy Act, and the ongoing evolution of equipment and controls continued to shape the way facilities managers select[ed], maintain[ed], and operat[ed] HVAC equipment in commercial buildings. While energy efficiency and sustainability remain[ed] in the forefront of [the year’s] HVAC-related trends, the overall environment play[ed] a strong supporting role.”


“The act, which goes into effect on Jan. 1, 2010, provides incentives for traditional energy production as well as newer, more efficient energy technologies and conservation,” says Suttell. “More than 1,700 pages long, the act has hundreds of provisions that could affect the commercial, industrial, and residential sectors.”

HVAC systems also became more complex in 2006 with respect to control strategies, an area in which it was important for facilities professionals to remain knowledgeable in order to achieve maximum efficiency benefits. “The complicated world of controls” became more simplified, however, as a result of “emerging control protocols and standards such as the Open Building Information Exchange (oBIX) and BACnet,” according to Suttell.

In 2007 the figures underwent slight changes. The employment rise was projected to be 1.4%, while there was only a minor 0.4% increase in wages. Building equipment contractors provided the most employment for HVAC technicians and engineers, with 179,980 HVAC people under their canopy. But the top-paying industry was the electric power generation industry, which provided an annual mean wage of $56,140. The disappointing part, though, was that the sector employed only 310 HVAC personnel.

In 2008 saving energy has become more critical than ever, with many industries eagerly anticipating the introduction of greener products.

According to an article posted on the blog CR4, “the green technology most readily embraced by architects at present is high-efficiency HVAC systems. Recently 64% of the polled architects specified high-efficiency HVAC on more than half their projects. Only 16% specified high-efficiency HVAC on less than 10% of their projects. This marks a tremendous increase over the 36% of architects who recalled specifying the systems five years ago.”

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The green movement is sure to affect mechanical design and contracting businesses, and though it might not be as profitable, it is sure to hit the bottom line.

Additional, the National Association of Manufacturers (NAM) reports that the US government’s economic stimulus program “includes increased deductions for companies looking to purchase capital equipment. It also provides for accelerated depreciation, allowing manufacturers to take up to a 50% tax write-off for new equipment in the first year.”

Whether the stimulus plan will provide a needed boost to industry remains to be seen.