Boiler Facts...

The Emerging Smart Technology Thermostat Market…

George R. Carey, Jr.
Vice President, Fluid Industrial Associates
gcarey@fiainc.com   twitter: @Ask_GCarey

Wi-Fi thermostat sales have seen a continuing increase in growth year after year. In fact, in 2014, according to a consumer research company, 40% of thermostats purchased featured wireless capability. The Global Smart Thermostat market grew 123% in 2015. The technology advancement in a very short span of time has been incredible and will continue. The technology advancement is playing a major role in the breakneck speed with which the growth in this market space is occurring. The homeowner/consumer's expectations are also changing, which is impacting the direction of the HVAC market and its manufacturers. Industry analysis is expecting the Global Smart Thermostat market to exceed 40 million units by 2022. These electronic devices are responsible for regulating heating and cooling in the residential and commercial market space and are going to constitute the next generation of home automation devices that will play a significant role in a smart home. These smart thermostats have the ability to back up data to the cloud, manage this data, apply analytics to improve the thermostat's performance and some can even achieve self-learning; all of this will drive the smart thermostat market size.

Of course, some consumers and contractors have expressed concern over this data collection capability. At the end of the day, it's the homeowner/consumer who owns the data. They have the option to share this data with their contractor who can use the information to see trends or receive alerts through email or texts if something is wrong. The savvy contractor may even use this data gathering as the basis for a service contract to help monitor the client's home and maintain its integrity.

Despite these concerns, manufacturers and smart contractors know smart thermostats can lower energy costs, provide maintenance service contracts and help control the bottom line. The contractors that do not want to participate in this product category are missing out on an opportunity.

Another factor that helps drive this opportunity is the proliferation of smart phones that act as enablers towards this new energy management solution. Statistics show that at least 61% of adults have smart phones while 42% have tablets. With all this technology and instant access to anyone and anything, people are acting differently and they want to engage in a digital way. There are some consumer statistical research facts out there on baby boomers that claim 65% of them watch TV, text and surf the Internet all at the same time. They had spent a large part of their life without the Internet, yet the majority of this group has embraced all of this new smart technology. Imagine the statistics on people classified as Millennials who are from the age of approximately 18-36. Millennials have grown up on the Internet…they have always been online…once they start to participate in home ownership, their expectation levels with be even more demanding of accessing everything online.

All of the smart thermostats also come with a mobile application that the homeowners can download to their smart phone (iPhone or Android) or tablet (iPad or Samsung Galaxy, etc.). The homeowners can now wirelessly control home temperatures and energy savings via the app; they can program and operate various schedules if so inclined. Most of these apps also provide energy reports with system performance data and energy-efficiency tips that the homeowner can implement to maximize savings. Many of these thermostats provide a feature for the installing contractor to enter their contact information for the homeowner. If there is a problem, a text message or email alert is immediately sent to the contractor. This can be a nice way of maintaining a service relationship with the client. As the manufacturers continue to add capabilities, the consumer's expectations will continue to change. Think about it…if you asked someone before they had an iPhone if they needed an iPhone, they would have told you they did not need one. Now, they can't live without one. I believe that is going to happen with smart thermostats as well.

Another element driving the growth of smart thermostats is the provision of open source developer APIs, which enhances the usability and performance of these devices. An API is an acronym for Application Programming Interfaces. It is a library that assists developers in writing code that interfaces with other software. In essence, it defines a way in which a computer program communicates with another computer program. The significance is that all these smart thermostats incorporating the open source development allows several different devices to operate from one app. This has helped fuel the growth of this technology because now the homeowner can operate his/her heating and cooling set points, security cameras, door locks, garage door openers and lighting all from one app on their smart phone or tablet. Home automation systems, which historically existed in high end home (aka "McMansions") is quickly becoming accessible to anyone who has the Internet and a router in their home—meaning almost everyone!

I believe the demand for this technology will be supplemented by the growing popularity of smart home devices and the ubiquity of wireless connectivity. With Amazon's Alexa or Echo and Google's Assistant, smart home technology is only going to increase and, with it, all the other technologies like smart thermostats.

The North American smart thermostat market is expected to dominate the global industry due to the increasing demand for energy efficiency, and the utilities may start to play a role in this emerging technology. As more value is realized by the consumer on lowering their energy bills, this savings is also helping the utilities meet energy efficiency and demand-side management (DSM) requirements. Just as they have participated in the gas rebate programs for high efficiency condensing boilers and electric rebate programs for high efficiency electronically commutated motor (ECM) circulators, I would not be surprised if they take an active role in the advancement of these smart thermostats. ICM

If you have any questions or comments, e-mail gcarey@ fiainc.com, call 1-800-423-7187 or follow me on Twitter at @Ask_Gcarey.