Why Government and Business Leaders are Talking about Two-Way Radios

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The narrowbanding mandate from the Federal Communications Commission (FCC) has businesses and government entities working to retool their two-way radio systems in the face of stiff penalties and a Jan. 1, 2013, deadline.

The FCC set forth its narrowbanding initiative in 1992 with the ultimate objective of increasing capacity and efficiency for the industrial/business and public safety radio pools in the private land mobile radio services category. In essence, the mandate requires public agencies and companies that use two-way radios to upgrade their technology. Despite years of advance warning and publicity, most users have been slow to make the conversion.

Now as the deadline approaches, the race is on, and so is the spending. The City of Dallas needs about $30 million to get into compliance. Pierce County, Wash., is committing $18.65 million. Suburban Barrow County in Georgia needs $3.75 million. Totals in most other places are smaller, but the effects of the mandate are being felt across the country. Marblehead, Mass., is spending $364,000. Six volunteer fire departments in Indiana have budgeted $741,000. Kings Mountain, N.C., is spending $344,000, and Moon Township, Pa., is spending more than $200,000.

Educational facilities are being impacted as well, as are the myriad of businesses that use two-way radios. The mandate states that all “Part 90” business, educational, industrial, public safety, and local and state government two-way radio system licensees currently operating legacy wideband (25 kHz) voice dispatch or data/supervisory control and data acquisition radio systems in the 150-174 MHz (VHF) and 421-512 MHz (UHF) bands must make the transition to the narrowband technology (12.5 kHz) by Jan. 1.

The reason for the change is simple. The VHF and UHF land mobile radio bands are so congested that often there is not enough spectrum available for licensees to expand their systems or implement new ones. Requiring licensees to convert their radio systems to operate on narrower channel bandwidths will allow additional channels to exist within the same spectrum. Picture a four-lane highway jammed with traffic. If this road can’t be widened, the only way to get more traffic on it is to make each lane narrower to make room for new lanes.

The urgency this year stems from the FCC’s deadline—Jan. 1, 2013—and the likely penalties. Two-way radio users who don’t make the switch face potential fines and even possibly the loss of their communication capabilities.

For some, the task of reprogramming or replacing their older radios is so daunting that they are asking the FCC for waivers and extensions in order to avoid the stiff

penalties for noncompliance. But waivers and extensions are far from automatic. And applying for an extension requires organizations to detail their narrowbanding efforts up to that point and commit to a new deadline.

Adding to the urgency is a rather complex and detailed conversion process that's been undertaken all over the country. It requires an assessment of the current equipment, the development of budget and funding options, the establishment of a conversion schedule, and the securing of new or modified FCC licenses.

Most radios will not need replacement. Those purchased since 1998 may already have the ability to operate in both wide and narrowband modes. They require only re-programming and re-licensing.

There is more good news. While replacing large numbers of radios is an investment, it's one that can pay off when users upgrade to two-way radios with digital technology. Digital radios offer substantial improvements in capacity, security, audio quality, and coverage.

The latest two-way radios also offer an array of new features like texting, GPS capabilities, and asset tracking that all lead to new levels of efficiency. And these days, applications aren't limited to smartphones; they're widely available in two-way radios. Apps let organizations tailor radios to best meet their specific needs.

So while the FCC's narrowbanding update has caused some consternation, it also affords an opportunity to improve communications so businesses can be more efficient and people can be made safer.

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