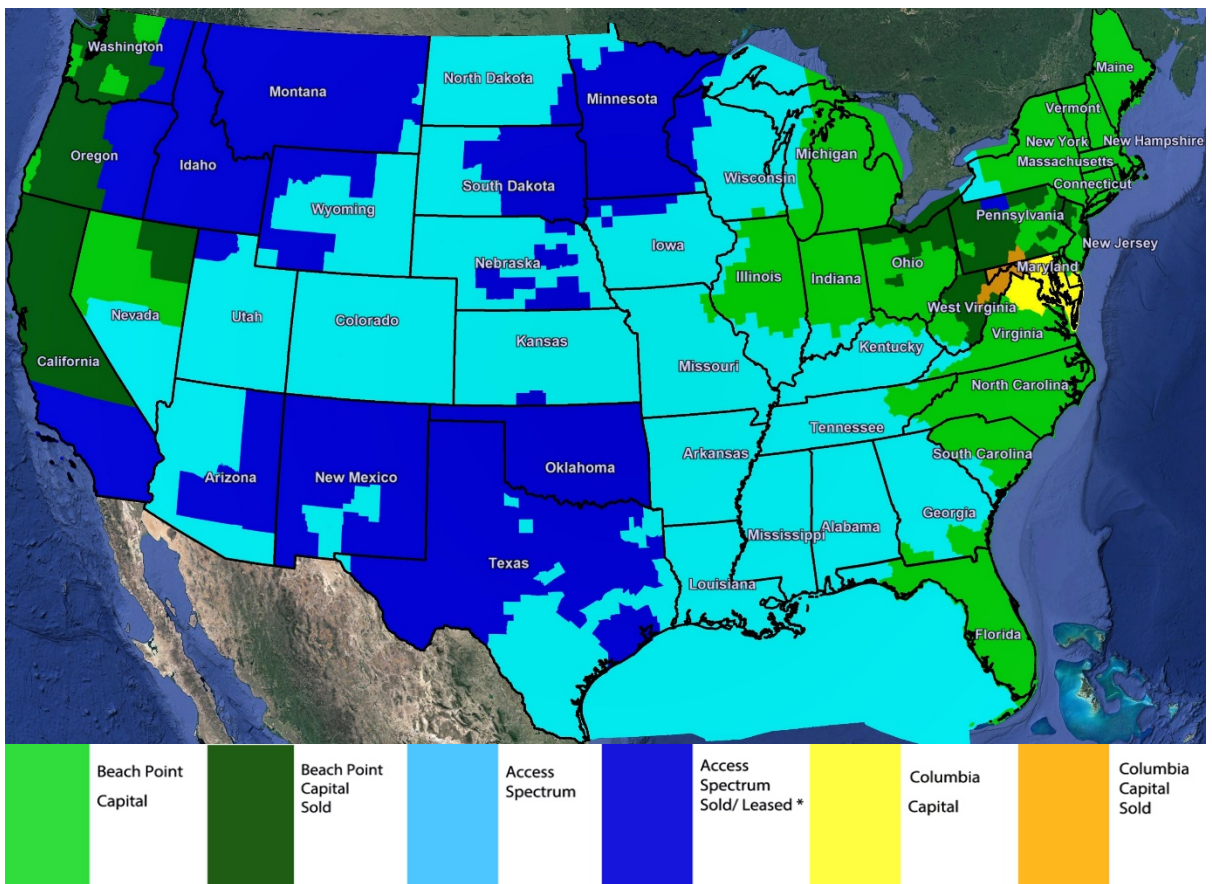


## Wireless Spectrum Licenses in the Upper 700 MHz A Block Band Ideal for LTE NB-IoT, SCADA, LMR, and Rail Safety Applications Available Nearly Nationwide

Select Spectrum represents Beach Point Capital (BPC) which holds 2 x 1 MHz of **Upper 700 MHz A Block FCC licensed spectrum** in key markets across the Great Lakes and East Coast Regions, with select offerings remaining on the West Coast. To date, BPC has sold to organizations such as FirstEnergy, Idaho Power Company, Portland General Electric, Puget Sound Energy, Avista Corporation, National Grid and the California High Speed Rail Authority.

The other two license holders in the band are Dominion 700, which Select Spectrum also represents, and Access 700. All three license holders are offering held licenses for sale or lease, and to date have made combined transactions to utility, critical infrastructure, and rail organizations covering nearly 105 million people, (approximately 32% of the total U.S. population, with the remaining 68% available for purchase). **All three license holders will partition the licenses to match buyer/lessee requirements to the county level.**

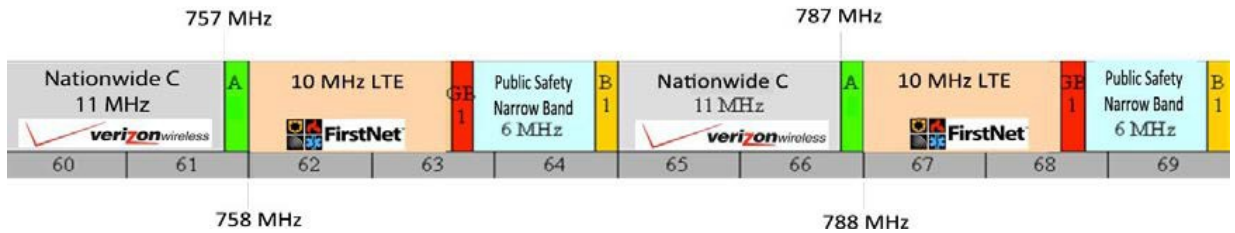


**Contact: Robert Finch, [rfinch@selectspectrum.com](mailto:rfinch@selectspectrum.com), (571) 287- 8720**

Visit our website at <http://selectspectrum.com> to learn more

The Upper 700 MHz A Block is shown with neighboring service groups below:

FCC Upper 700 MHz Band Plan  
Available A Block License Shown in **Green**



**Upper 700 MHz A Block spectrum has excellent propagation and can be used for a broad range of applications including fixed & mobile data, voice, and video.** Licenses are in use by, and recommended for, utility, rail, Oil/Gas, Unmanned Aerial Vehicle “UAV” (drone), and critical infrastructure communications. Such uses include Private LTE NB-IoT, Surveillance Control and Data Acquisition (SCADA), Distribution Automation (DA), Land Mobile Radio (LMR). Networks may employ point-to-point, point-to-multipoint (tall site) and/or cellular architectures. Engineers recommend small-cell deployments for superior building penetration.

Maximum downlink power is 1000 Watts ERP at 1000 feet, and maximum uplink power is 30 Watts ERP. Maximum out of band emissions limits of  $43 + 10\log(P)$  dB apply to the A Block and the adjacent 11 x 11 MHz Upper 700 MHz C Block where Verizon operates a nearly nationwide 10 MHz paired LTE network. The A Block, located between 757-758 MHz / 787-788 MHz, is similarly protected from interference from the adjacent FirstNet/AT&T channels at 758-768 MHz and 788-798 MHz.

In total, one passenger rail-line, one energy company, two commercial UAV operators and eighteen utilities have acquired or leased spectrum rights. The **California High Speed Rail Authority** found 700 MHz ideal to support rail safety applications, and **Enterprise Products** has acquired the spectrum for its Oil/Gas operations. **Praxis Aerospace** and **Northern Plains Unmanned Aircraft Systems** have leased the spectrum for UAV applications. **Great River Energy** of Minnesota is currently using the band for point-multipoint data collection and **Northwestern Energy** has deployed point-to-point links across Montana, North and South Dakota. Other utility buyers that have acquired spectrum and will deploy networks include **FirstEnergy**, **Portland General Electric**, **Puget Sound Energy**, **Avista Corporation**, and **National Grid**.

Pt-Multipoint and Pt-Pt Wireless Equipment for this band is made by Ondas Networks [www.ondas.com](http://www.ondas.com), 4RF [www.4rf.com](http://www.4rf.com), GE MDS [www.gedigitalenergy.com](http://www.gedigitalenergy.com), XetaWave [www.xetawave.com](http://www.xetawave.com), ABB [www.abb.com/](http://www.abb.com/), MiMOMax [www.mimomax.com](http://www.mimomax.com), Cambium [www.cambiumnetworks.com](http://www.cambiumnetworks.com), PowerTrunk [www.powertrunk.com/](http://www.powertrunk.com/), Redline Communications [rdlcom.com](http://rdlcom.com) and Tait Communications [www.taitradio.com](http://www.taitradio.com). Puloli [www.puloli.com/](http://www.puloli.com/) will customize its LTE Narrowband-IoT offering for the Upper 700 MHz A Block. Other manufacturers are considering upgrading their existing lines of equipment to make use of this band.

The licenses are valid through June, 2019 when they will be renewed by the FCC. To be eligible for renewal, license holders must show they meet the FCC’s Substantial Service guidelines, which require a limited threshold of use of the licenses be met or exceeded.

Contact: Robert Finch, [rfinch@selectspectrum.com](mailto:rfinch@selectspectrum.com), (571) 287- 8720

Visit our website at <http://selectspectrum.com> to learn more