



Schneider Electric Weather  
11400 Rupp Drive  
Burnsville, MN 55337

June 15, 2016

Federal Communications Commission  
Ms. Marlene Dortch, Secretary  
445 12<sup>th</sup> Street, S.W.  
Washington, DC 20554

RE: Letter in response to RM-11681 Petition for Rulemaking: Ligado's Request to Allocate the 1675-1680 MHz band for Terrestrial Mobile Use Shared With Federal Use

Dear Ms. Dortch:

Schneider Electric's Weather division provides weather information to over 100,000 businesses and government organizations in the United States, including over 1,000 Emergency Management organizations, who use our weather information in the daily operation of their businesses. These users and their downstream applications are valued at well over \$500M in impact to the economy.

Our company utilizes the direct broadcasts from the Geostationary Operational Environmental Satellite (GOES) and will use the direct broadcasts from GOES-R series satellites in the 1675-1695 MHz radio spectrum. This GOES data is used by our customers, so the timely and reliable reception of data from NOAA's geostationary satellites is a very important component of the information needed to create products and services. We currently rely on our own satellite earth stations that currently receive GOES Variable (GVAR) broadcasts direct from NOAA's operational satellites. We believe that radio frequency interference that can be generated from strong terrestrial downlinks, which share the same spectrum as the relatively weak signals from GOES in space, would have a devastating impact on our customers.

Warnings to protect lives and property must be issued as rapidly as possible and be available under all conditions and situations. Although we may depend upon more than one means to acquire data, we know that cellular networks and Internet capabilities are often taxed to their maximum during severe weather and natural disasters, whereas the GOES / GOES-R direct broadcasts are always there and have very little infrastructure that is subject to failure during stressing conditions.

As noted in a Washington Post Capital Weather Gang<sup>1</sup> guest post on May 6, 2016:

"[T]he choice of which spectrum bands are shared should not endanger the reliability or the effectiveness of public safety meteorological and hydrological data flow from NOAA satellites. We note that the Presidential Memorandum [ ] on the wireless broadband revolution in 2010 directed that spectrum repurposing must ... "take into account the need to ensure no loss of critical existing and planned Federal, State, local and tribal government capabilities."

While we understand the FCC's interest in advancing technology, Schneider Electric knows that the dissemination of life saving weather information to the nation done every day by its

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<sup>1</sup> <https://www.washingtonpost.com/news/capital-weather-gang/wp/2016/05/06/opinion-commercial-interests-may-block-transmission-of-vital-weather-data-we-cant-allow-it/>

members is important and interference would endanger the reliability and the effectiveness of public safety meteorological and hydrological data flow. We applaud the transmission of weather warnings via smartphones and tablet computers, but it is critical to note that Federal data received from NOAA satellites contributes substantially to the content developed by Schneider Electric that are made available on wireless broadband devices in the first place.

The weather enterprise is on the verge of launching a new generation of GOES satellites. GOES-R series satellites are a giant leap forward in technology. These satellites will offer more and different types of data products that will be more accurate, of higher resolution and greater quantity than the current system. And that data will be available faster than the current satellite – in large part attributable to the direct broadcast downlink and the environmental/hydrological data relay in 1675-1695 MHz band.

Today's NEXRAD weather radar data is routinely available over approximately five-minute intervals and are essential to forecast meteorologists. However, the higher resolution, faster data that will be available from GOES-R is likely to make comparable cloud top data taken at 5-minute rapid intervals a new tool to compliment this weather radar data. The new products that may be possible from these two time-comparable sources are only now under consideration by the weather enterprise. **This transition to GOES-R will be a generational change in meteorology and hydrology; why would we want to handicap the fastest and most reliable means of disseminating this new satellite capability before the \$8.5 billion dollar satellite series is even brought into use?** The satellites<sup>2</sup> are already designed and the first and second ones are either built or under construction, using the 1675-1695 MHz spectrum in their transmitters.

The interference caused by the sharing of the 1675-1680 megahertz band will significantly threaten the distribution of crucial weather information by the larger weather enterprise that the nation relies on to respond immediately with the highest quality information to dangerous weather like tornados, hurricanes and wildfires.

Schneider Electric] recommends that this spectrum not be shared with commercial interests. Thank you for the opportunity to share our views in this matter.

Sincerely,  
  
James H Block  
Chief Meteorological Officer

CC:  
The Honorable John Thune, Chairman, Senate Commerce, Science and Transportation Committee

The Honorable Bill Nelson, Ranking Member, Senate Commerce, Science and Transportation Committee

The Honorable Marco Rubio, Chairman, Subcommittee on Oceans, Atmosphere, Fisheries, and Coast Guard

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<sup>2</sup> GOES-R and GOES-S satellites under construction showing L-band transmit antennas  
[http://farm2.staticflickr.com/1493/23884245579\\_32ac3a2311\\_b.jpg](http://farm2.staticflickr.com/1493/23884245579_32ac3a2311_b.jpg)

The Honorable Cory Booker, Ranking Member, Subcommittee on Oceans, Atmosphere, Fisheries and Coast Guard

The Honorable Richard Shelby, Chairman, Commerce, Justice, Science, and Related Agencies Subcommittee

The Honorable Barbara Mikulski, Vice Chairwoman, Senate Appropriations Committee

The Honorable Fred Upton, Chairman, House Energy and Commerce Committee

The Honorable Frank Pallone, Jr, Ranking Member, House Energy and Commerce Committee

The Honorable Greg Walden, Chairman, Communications and Technology Subcommittee

The Honorable Anna G. Eshoo, Ranking Member, Communications and Technology Subcommittee

The Honorable Jim Bridenstine, Chairman, Subcommittee on Environment, House Science, Space and Technology Committee

The Honorable Suzanne Bonamici, Ranking Member, Subcommittee on Environment, House Science, Space and Technology Committee

The Honorable John Fleming, Chairman, Subcommittee on Water, Power and Oceans, House Natural Resources Committee

The Honorable Jared Huffman, Ranking Member, Subcommittee on Water, Power and Oceans, House Natural Resources Committee

The Honorable John Culberson, Chairman, Commerce, Justice, Science and Related Agencies Subcommittee

The Honorable Mike Honda, Acting Ranking Member, Commerce, Justice, Science and Related Agencies Subcommittee

The Honorable Lawrence E. Strickling, Assistant Secretary for Communications and Information and NTIA Administrator, Department of Commerce

The Honorable Dr. Kathryn D. Sullivan, Under Secretary of Commerce for Oceans and Atmosphere and NOAA Administrator