



National Telecommunications and Information Administration
U.S. Department of Commerce
1401 Constitution Avenue NW
Room 4725
Washington, DC 22030

Attn: IOT RFC 2017

VIA EMAIL

March 13, 2017

Re: Comments of EchoStar in Response to the Internet of Things Green Paper

Dear Sir or Madame:

EchoStar¹, the largest commercial operator of geostationary satellites in the United States and the largest global and U.S. satellite broadband provider, provides this response to the Request for Comment on the Department of Commerce’s (“Department”) Green Paper, titled *Fostering the Advancement of the Internet of Things* (the “Green Paper”). EchoStar supports the Department’s recognition that the benefits of the Internet of Things (“IoT”) are not dependent on any particular communication technology and that satellite systems will be a contributor to the IoT. Accordingly, as the government looks at ways to incent development and deployment of IoT, including possible funding programs, it must be technology neutral.

While terrestrial fiber and wireless networks are critical to the success of IoT, satellite plays an important, complementary role. Satellite services have **unique and necessary** characteristics:

- Global broadband coverage
- Economical for rural connectivity
- Important supplement to urban services
- Resilient for public safety services

The IoT/5G ecosystem requires **ubiquitous, resilient, seamless** services for the end user. This can only be achieved when satellite integrates with and complements other terrestrial technologies.

¹ EchoStar refers collectively to EchoStar Satellite Operating Corporation and Hughes Network Systems, LLC (Hughes).



Today, EchoStar and other satellite service providers support numerous IoT applications, including:

- Collecting, relaying, and analyzing data from oil facilities, including rigs, mines, and pipelines where terrestrial infrastructure is not available or cost-prohibitive.
- Environmental monitoring in remote or environmentally sensitive areas.
- Smart Grid and Smart Metering monitoring of critical network assets spread across a utility's service region, no matter where they are located, allowing reaction to issues in real time.
- Maritime data collection and tracking of assets on ships, including highly sensitive or hazardous cargo.

These are just a few examples. As IoT continues to develop, we can expect satellite to play an increasingly important role in a number of additional areas as well, including connected cars, backhaul, tracking and fleet management, and hybrid media networks, among others.

In order to ensure the best regime for continued development of the IoT network, EchoStar supports the Department's recommendation to adopt a multistakeholder approach in which industry is encouraged and allowed to innovate with government support but without undue government interference. Industry should lead in the IoT area with regard to the development of standards, investment and policy. Only when and if necessary is government involvement warranted. In addition, technology neutrality is a critical element of any IoT policy, which will ensure that users can use the technology that is most appropriate for their use.

We look forward to continuing to work with the Department establish a technology-neutral, supportive environment for the Internet of Things, and the infrastructure and jobs that IoT will support.

Respectfully Submitted,

/s/ Jennifer A. Manner

Jennifer A. Manner
Senior Vice President, Regulatory Affairs
EchoStar Satellite Operating Corporation
Hughes Network Systems, LLC
11717 Exploration Lane
Germantown, MD 20876
(301) 428-5893