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INTERNET PROTOCOL TRANSITION

FCC Should Strengthen Its Data Collection Efforts to Assess the Transition's Effects

GAO Highlights

Highlights of GAO-16-167, a report to congressional requesters

Why GAO Did This Study

The communications sector is essential to the nation's economy and government operations and for the delivery of public safety services, especially during emergencies. As the sector transitions from legacy networks to IP-based networks, consumer and public safety groups and others have raised concerns about how the communications networks will function during times of crisis.

GAO was asked to examine the reliability of the nation's communications network in an IP environment during times of crisis. GAO examined (1) the potential challenges affecting IP networks in times of crisis and how the challenges may affect end users, and (2) the actions FCC, DHS, and other stakeholders have taken to ensure the reliability of IP communications. GAO reviewed FCC and DHS documents as well as FCC proceedings and comments filed with FCC on the IP transition and emergency communications. GAO assessed FCC's efforts to collect data on the effect of the IP transition. GAO interviewed officials from FCC and DHS, and representatives from the three largest telecommunications carriers, industry associations, and public interest and consumer advocacy groups.

What GAO Recommends

FCC should strengthen its data collection efforts to assess the IP transition's effects. FCC did not agree or disagree with the recommendation and stated it has a strategy in place to oversee the IP transition. However, GAO continues to believe FCC should strengthen its data collection efforts.

View GAO-16-167. For more information, contact Mark Goldstein at (202) 512-2834 or GoldsteinM@gao.gov.

What GAO Found

As the nation's telecommunications systems transition from legacy telephone networks to Internet Protocol (IP)-based networks, telecommunications carriers can face challenges during times of crisis that affect end users' ability to call 911 and receive emergency communications. These challenges include (1) preserving consumer service and (2) supporting existing emergency communications services and equipment. For example, during power outages, consumers with service provided over IP networks and without backup power can lose service. The Federal Communications Commission (FCC) is working to address this issue by adopting rules that will require carriers to provide information to consumers on backup power sources, among other things. Another challenge is that IP networks may not support existing telecommunications "priority" services, which allow key government and public-safety officials to communicate during times of crisis.

FCC, the Department of Homeland Security (DHS), and telecommunications carriers have taken various steps to ensure the reliability of IP communications, for example:

- FCC proposed criteria—such as support for 911 services, network security, and access for people with disabilities—to evaluate carriers' replacement of legacy services when carriers seek to discontinue existing service.
- DHS coordinated the development of the *Communications Sector Specific Plan* to help protect the nation's communications infrastructure.
- Carriers told GAO they build resiliency and reliability into their IP networks as part of business operations and emergency planning.

FCC is also collecting data on the IP transition, but FCC could do more to ensure it has the information it needs to make data-driven decisions about the transition. FCC has emphasized that one of its statutory responsibilities is to ensure that its core values, including public safety capabilities and consumer protection, endure as the nation transitions to modernized networks. FCC stated that fulfilling this responsibility requires learning more about how the transition affects consumers. FCC plans on collecting data on the IP transition primarily through voluntary experiments proposed and run by telecommunications carriers. However, it is unclear if FCC will be able to make data-driven decisions about the IP transition because of the limited number and scale of the proposed experiments. In particular, there are only three proposed experiments that cover a very limited number of consumers; none of the experiments covers consumer services in high-density urban areas or includes critical national-security or public-safety locations. FCC also sought comment on how to supplement its data-gathering process; however, soliciting comments may not necessarily result in a change in FCC's existing policies. GAO found FCC lacks a detailed strategy that outlines how it will address its remaining information needs. Developing a strategy for collecting information about how the IP transition affects public safety and consumers would help FCC make data-driven decisions and address areas of uncertainty as it oversees the IP transition.