The National Telecommunications and Information Administration (NTIA): An Overview of Programs and Funding

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Summary

The National Telecommunications and Information Administration (NTIA), an agency of the Department of Commerce, is the executive branch's principal advisory office on domestic and international telecommunications and information policies. Its statutory mission includes providing greater access for all Americans to telecommunications services; supporting U.S. efforts to open foreign markets; advising the President on international telecommunications negotiations; and funding research for new technologies and their applications. It is also responsible for managing spectrum use by federal agencies.

Title VI of the Middle Class Tax Relief and Job Creation Act of 2012 (P.L. 112-96), also known as the Spectrum Act, gives the NTIA responsibilities for improving public safety communications. The act required NTIA to assist with the development of the First Responder Network Authority (FirstNet), created by Congress to deploy a nationwide public safety broadband network. NTIA is also required to assist in planning and funding for Next Generation 9-1-1 (NG 9-1-1) services, which refers to the transition to digital, Internet-based systems to replace existing analog systems that are currently prevalent throughout the United States. The Spectrum Act also gave the NTIA new responsibilities and requirements for spectrum management, especially regarding the reallocation of federal spectrum. The Spectrum Pipeline Act of 2015 (P.L. 114-74, Title X) added further requirements for actions by the NTIA, including identification of additional spectrum for nonfederal use.

The NTIA also plays a central role in representing U.S. interests in the Internet internationally, including an active role in the Internet Corporation for Assigned Names and Numbers (ICANN). ICANN is an international entity that develops policies to support the Internet worldwide. NTIA participates in ICANN as a member of the Governmental Advisory Committee, which provides advice to ICANN.

Between FY2010 and FY2011, the NTIA's total budget appropriations increased by 4% to $41.6 million. During that same time, Congress defunded NTIA's Public Telecommunications Facilities Program (PTFP, funded at $20 million in FY2010), and more than doubled the budget for administration, salaries, and expenses, from $20.0 million to $41.6 million. This increase was largely attributed by the NTIA to its responsibilities in administering grants for broadband network deployment, as required by the American Recovery and Reinvestment Act (ARRA, P.L. 111-5). Enacted amounts remained above $40 million until FY2015.The Obama Administration's budget request for FY2015 was $51.0 million, and the enacted amount was $38.2 million. For FY2016, the enacted budget amount for the NTIA was $39.5 million, compared to a request for $49.2 million.

The Obama Administration's budget request for FY2017 was $50.8 million. As reported by the Senate, S. 2837 would have provided a total of $39.5 million to NTIA for FY2017. As reported by the House, H.R. 5393 would have provided $36.3 million. The Further Continuing and Security Assistance Appropriations Act, 2017 (P.L. 114-254), provides funding at about 99.8% of the FY2016 funding level for the NTIA through April 28, 2017. For FY2018, the budget blueprint released by the White House in March 2017 signaled support for NTIA's role in multi-stakeholder forums on Internet governance and digital commerce and agency efforts on efficient use of federal spectrum. No funding cuts were specified in the blueprint for NTIA, though an overall decrease of $1.5 billion from the FY2017 continuing resolution level was proposed for the Department of Commerce.

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Overview

The National Telecommunications and Information Administration (NTIA) is an agency of the U.S. Department of Commerce (DOC) with a statutory mission to facilitate domestic and international telecommunications and information policy activities. The NTIA works with other executive branch agencies to develop the Administration's position on key policy matters. NTIA further acts as a representative of the Administration in policy areas that include international negotiations regarding global agreements on the Internet and spectrum management, and domestic use of spectrum resources by federal agencies.

NTIA is headed by the Assistant Secretary of Commerce for Communications and Information, who is appointed by the President and acts as a principal advisor to the President on telecommunications and information policy matters; is the principal executive branch spokesman to Congress, the industry, state and local governments, and the public on such matters; is the key coordinator of the federal government's own communication systems; and is responsible for assisting in the formulation of the nation's overall telecommunications and information policy.[1]

The NTIA receives funding from both appropriations and reimbursable obligations, including sources such as fees charged to federal agencies for spectrum management services and reimbursable projects in telecommunications technology research. For budget appropriations purposes, the NTIA organizes its programs into four major program categories for salaries and expenses: Domestic and International Policies, Spectrum Management, Advanced Communications Research, and Broadband Programs. Its budget report to Congress also includes information about NTIA obligations to support public safety, notably for the administration of the First Responder Network Authority (FirstNet), an entity established by Congress in 2012 as an independent agency within the NTIA.

Programs and Policies

The NTIA fulfills many roles. As the agency responsible for managing spectrum used by federal agencies, the NTIA often works in consultation with the Federal Communications Commission (FCC) on matters concerning spectrum access, technology, and policy. The FCC regulates private sector, state, local, and tribal spectrum use. Because many spectrum issues are international in scope and negotiated through treaty-making, the NTIA and the FCC collaborate with the Department of State in representing American interests. The NTIA also participates in interagency efforts to develop Internet policy and coordinate Internet-focused initiatives across the federal government. The NTIA and the National Institute of Standards and Technology (NIST) have adjoining facilities on the DOC campus in Boulder, CO, where they collaborate on research projects with each other and with other federal agencies, such as the FCC.

Beginning in 2009, the NTIA administered $4.7 million in broadband grants funding provided by the American Recovery and Reinvestment Act (ARRA, P.L. 111-5)[2] through its Broadband Technology Opportunities Program (BTOP). The NTIA collaborated with NIST, the FCC, and the Department of Homeland Security in providing expertise and guidance to grant recipients using BTOP funds to build new networks for broadband communications. NTIA is scaling down

[1] Duties of the Assistant Secretary as described in a job posting for Executive Director of FirstNet on USAJobs, https://www.usajobs.gov/GetJob/ViewDetails/389363200.

[2] For additional information on broadband awards supported by ARRA, see CRS Report R41775, *Background and Issues for Congressional Oversight of ARRA Broadband Awards*, by Lennard G. Kruger.

administration of its BTOP grants through 2020 and ramping up its BroadbandUSA program, through which NTIA advises and assists communities with broadband deployment.

In performing its various roles, the NTIA administers policies and programs through six main offices.[3]

The Office of Spectrum Management (OSM). OSM formulates and establishes plans and policies focused on the effective, efficient, and equitable use of spectrum both nationally and internationally. Through the development of long-range spectrum plans, OSM works to address future federal government spectrum requirements, including public safety operations. The OSM also handles the assignment of spectrum to meet the needs of federal agencies, provides spectrum certification for new federal agency telecommunication systems, and supports efforts to repurpose federal spectrum for nonfederal use.

The Office of Policy Analysis and Development (OPAD). OPAD is the domestic policy division of the NTIA. OPAD supports NTIA's role as principal adviser to the executive branch and the Secretary of Commerce on telecommunications and information policies by conducting research and analysis and preparing policy recommendations.

The Office of International Affairs (OIA). OIA develops and implements policies to enhance U.S. companies' ability to compete globally in the information and communications technology (ICT) sectors. In consultation with other U.S. agencies and the U.S. private sector, OIA participates in international and regional fora to promote policies that open ICT markets and encourage competition. OIA supports the DOC's Internet Policy Task Force and NTIA's work with the Internet Corporation for Assigned Names and Numbers (ICANN) and Internet policies with international scope.

The Institute for Telecommunication Sciences (ITS). ITS is the research and engineering laboratory of the NTIA. ITS provides technical support to NTIA in advancing telecommunications and information infrastructure development, enhancing domestic competition, and promoting more efficient and effective use of the radio spectrum. Current areas of focus include research, development, and testing of technologies to support first-responder communications; test and demonstration networks for emerging communications devices; and resolution of interference issues.

The Office of Telecommunications and Information Applications (OTIA). OTIA administers grant programs that further the deployment and use of technology in America, and the advancement of other national priorities. In the past, OTIA awarded grants from the Public Telecommunications Facilities Program, which was terminated by Congress in FY2011. The OTIA was also responsible for administering BTOP grants.

The Office of Public Safety Communications (OPSC). OPSC was created by the NTIA at the end of 2012 to administer some provisions of the Middle Class Tax Relief and Job Creation Act of 2012 (P.L. 112-96), Title VI, also known as the Spectrum Act. The office also provides administrative and other support functions for FirstNet.

FY2017 Budget and Appropriations Actions

The Obama Administration's FY2017 budget request for the NTIA was $50.8 million for salaries and expenses across the four major program categories: Domestic and International Policies,

[3] See http://www.ntia.doc.gov/about.

Spectrum Management, Advanced Communications Research, and Broadband Programs (see **Table 1** at the end of this section). This request was $1.6 million more than the FY2016 request of $49.2 million, and $11.3 million more than the FY2016 enacted amount of $39.5 million.

For FY2017, as reported by the Senate Committee on Appropriations, S. 2837, the Commerce, Justice, Science, and Related Agencies Appropriations Act, 2017, would have provided $39.5 million for salaries and expenses, equal to the FY2016 funding level.[4] As reported by the House Committee on Appropriations, H.R. 5393, the Commerce, Justice, Science, and Related Agencies Appropriations Act, 2017, would have provided $36.3 million.[5] The Further Continuing and Security Assistance Appropriations Act, 2017 (P.L. 114-254), provides funding at about 99.8% of the FY2016 funding level for the NTIA through April 28, 2017.

For FY2018, the White House's March 2017 budget blueprint signaled support for NTIA's role in multi-stakeholder forums on Internet governance and digital commerce, and agency efforts on efficient use of federal spectrum. The blueprint does not specify any funding cuts for NTIA, though an overall decrease of $1.5 billion from the FY2017 level authorized by P.L. 114-254 is proposed for the Department of Commerce.[6]

Domestic and International Policies

The Obama Administration's FY2017 budget request for Domestic and International Policies was $15.8 million, a $6.7 million (74.1%) increase over the FY2016 enacted amount of $9.1 million. The request also included an increase in staff from 35 full-time equivalents (FTEs) to 45 FTEs, primarily to deepen expertise for initiatives in Internet policy and the digital economy.

Proposed uses of the requested funds spanned a range of activities, including support for the Obama Administration's Digital Economy Leadership Team (DELT), created in 2015; international representation in the ICANN Governmental Advisory Committee and global Internet Governance Forums; the formulation of domestic Internet policy; and facilitation of federal communications networks' transition to technologies using the Internet Protocol (IP).

The Digital Economy

The term digital economy, alternatively the Internet economy, refers in general to the impact of digital technologies and communications on business and the economy. During the Obama Administration, the Department of Commerce established a Digital Economy Agenda that focuses on four areas:

- promoting a free and open Internet worldwide;
- promoting trust online;
- ensuring access to fast broadband for all; and
- promoting innovation.[7]

[4] S.Rept. 114-239.

[5] H.Rept. 114-605.

[6] Office of Management and Budget, *America First: A Budget Blueprint to Make America Great Again*, March 2017, pp. 13-14, https://www.whitehouse.gov/sites/whitehouse.gov/files/omb/budget/fy2018/2018_blueprint.pdf.

[7] Department of Commerce, "The Commerce Department's Digital Economy Agenda," November 9, 2015, https://www.commerce.gov/news/blog/2015/11/commerce-departments-digital-economy-agenda.

In support of this agenda, the Department created a Digital Economy Board of Advisors, with members of the inaugural board announced on March 29, 2016,[8] to which the NTIA will provide assistance.

On April 6, 2016, the NTIA initiated a notice and request for public comment on "The Benefits, Challenges, and Potential Roles for the Government in Fostering the Advancement of the Internet of Things [IoT]."[9] After analyzing the comments, the NTIA issued a green paper that identifies key issues affecting deployment of these technologies, potential benefits and challenges, and ways in which the federal government could partner with the private sector to foster the advancement of IoT technologies.[10] In January 2017, the NTIA requested public comment on the green paper to inform the Department's approach and future actions regarding IoT.[11]

Internet Leadership

Along with the Executive Office of the President, the Office of the Secretary of Commerce, NIST, and the International Trade Administration (ITA), NTIA participates in the Internet Policy Task Force, created in 2010 by the Secretary of Commerce. The task force was established to review policy regarding privacy, copyright, cybersecurity, the global free flow of information, and innovation in the Internet economy.[12] The FY2017 budget request included support for NTIA as the executive secretariat for the task force to coordinate efforts across a range of issues in the Internet economy, including policy, economic analysis, trade, and technical standards.

Beginning in 1998, the NTIA played a key oversight role in ICANN, an international, not-for-profit entity that develops policies to support the Internet worldwide, notably through its coordination of the Internet naming system: the Domain Name System (DNS).[13] ICANN was previously under contract to NTIA to manage the Internet Assigned Numbers Authority (IANA) for DNS and to perform other duties. After approving ICANN's proposal to transition stewardship of IANA functions to the private stakeholder community in June 2016, [14] NTIA allowed its contract with ICANN to expire on September 30, 2016. Though NTIA no longer maintains a

[8] Department of Commerce, "U.S. Secretary of Commerce Penny Pritzker Announces Appointees to Inaugural Digital Economy Board of Advisors," March 29, 2016, https://www.commerce.gov/news/press-releases/2016/03/us-secretary-commerce-penny-pritzker-announces-appointees-inaugural.

[9] NTIA, "Request for Comments on the Benefits, Challenges, and Potential Roles for the Government in Fostering the Advancement of the Internet of Things," 81 *Federal Register* 19956, April 6, 2016, https://www.gpo.gov/fdsys/pkg/FR-2016-04-06/pdf/2016-07892.pdf. Filed comments are at https://www.ntia.doc.gov/federal-register-notice/2016/comments-potential-roles-government-fostering-advancement-internet-of-things.

[10] Department of Commerce, Internet Policy Task Force and Digital Economy Leadership Team, *Fostering the Advancement of the Internet of Things*, January 2017, https://www.ntia.doc.gov/files/ntia/publications/iot_green_paper_01122017.pdf. For more on the Internet of Things, see CRS Report R44227, *The Internet of Things: Frequently Asked Questions*, by Eric A. Fischer.

[11] NTIA, "Request for Comments on the Benefits, Challenges, and Potential Roles for the Government in Fostering the Advancement of the Internet of Things," 82 *Federal Register* 4143, January 13, 2017, https://www.gpo.gov/fdsys/pkg/FR-2017-01-13/pdf/2017-00720.pdf.

[12] See https://www.ntia.doc.gov/category/internet-policy-task-force.

[13] For a discussion of ICANN and related issues, see CRS Report R42351, *Internet Governance and the Domain Name System: Issues for Congress*, by Lennard G. Kruger. Also, see CRS Report R44022, *The Future of Internet Governance: Should the United States Relinquish Its Authority over ICANN?*, by Lennard G. Kruger.

[14] NTIA press release, "NTIA Finds IANA Stewardship Transition Proposal Meets Criteria to Complete Privatization," June 9, 2016, https://www.ntia.doc.gov/press-release/2016/iana-stewardship-transition-proposal-meets-criteria-complete-privatization. The full report can be accessed at https://www.ntia.doc.gov/report/2016/iana-stewardship-transition-proposal-assessment-report.

contract with ICANN, it retains an advisory role—along with other member nations—through its participation in ICANN's Governmental Advisory Committee.

Spectrum Management

The Obama Administration's FY2017 budget request for Spectrum Management included $8.9 million for salaries and expenses. This request was a 4.7% increase over the FY2016 enacted budget of $8.5 million, reflecting additional requirements of the Spectrum Pipeline Act of 2015 (P.L. 114-74, Title X), and an increase from 39 to 40 FTEs.

To meet growing demand for wireless connectivity, the Obama Administration and Congress previously took steps to increase the amount of radio frequency spectrum available for mobile services such as access to the Internet.[15]

As part of President Obama's Wireless Initiative, the NTIA was charged with identifying electromagnetic spectrum that might be transferred from the federal sector to commercial wireless use.[16] This spectrum could be auctioned as licenses for exclusive commercial use, made available for sharing between federal and commercial users, or repurposed in some other way that would meet the stated goal of the Wireless Initiative to add 500 MHz of spectrum for wireless broadband.[17]

Congress has also required the NTIA to take actions to release spectrum from federal to commercial use and to ensure the efficient use of federal spectrum. The Spectrum Act (P.L. 112-96, Title VI) requires the NTIA to identify federal spectrum that may be released for commercial use and to manage the transfer process for federal agencies. The Bipartisan Budget Act of 2015 (P.L. 114-74) adds additional requirements in Title X, Spectrum Pipeline Act of 2015, including NTIA coordination with the FCC to identify additional spectrum to be assigned for nonfederal use and authorization of Spectrum Relocation Fund payments to federal entities for research and development activities.

NTIA assists other federal agencies with spectrum management, analysis and operations, and related services, and charges fees for reimbursement of incurred costs. Reimbursable obligations from spectrum management fees in FY2016 totaled $57.6 million.

Proposals from policymakers to provide commercial mobile broadband services through the use of federal spectrum have included:

- clearing federal users from designated frequencies for transfer to the commercial sector through a competitive bidding system;
- sharing federal frequencies with commercial users;[18]

[15] For a discussion of spectrum demand, technology, innovation, and competition, see CRS Report R43595, *Mobile Technology and Spectrum Policy: Innovation and Competition*, by Patricia Moloney Figliola.

[16] The White House, Office of the Press Secretary, "Presidential Memorandum: Unleashing the Wireless Broadband Revolution," June 28, 2010, https://obamawhitehouse.archives.gov/the-press-office/presidential-memorandum-unleashing-wireless-broadband-revolution. See also "Presidential Memorandum: "Expanding America's Leadership in Wireless Innovation," June 14, 2013, https://obamawhitehouse.archives.gov/the-press-office/2013/06/14/presidential-memorandum-expanding-americas-leadership-wireless-innovatio.

[17] Spectrum is segmented into bands of radio frequencies and typically measured in cycles per second, or hertz. Standard abbreviations for measuring frequencies include kHz—kilohertz or thousands of hertz; MHz—megahertz, or millions of hertz; and GHz—gigahertz, or billions of hertz.

[18] The Government Accountability Office (GAO) provided testimony on the topic of sharing: *Spectrum Management: Federal Government's Use of Spectrum and Preliminary Information on Sharing,* September 13, 2012, GAO-12-
(continued...)

- improving the efficiency of federal spectrum use and management; and[19]
- using emerging technologies that allow multiple users to share spectrum as needed.[20]

To support spectrum clearing, the NTIA, with input from the Policy and Plans Steering Group (PPSG),[21] produced a 10-year plan and timetable identifying bands of spectrum that might be available for commercial wireless broadband service. As part of its planning efforts, the NTIA prepared a "Fast Track Evaluation" to assess and recommend spectrum that might be made available in the near future.[22] In June 2016, NTIA reported that, in coordination with the FCC, 245 MHz of spectrum had been made available as of the end of FY2015.[23]

Advisory committees provide the NTIA with additional spectrum management support from within and outside of the federal government. Many decisions regarding the use of federal spectrum are made with the participation of the Interdepartmental Radio Access Committee (IRAC).[24] IRAC membership comprises representatives of all branches of the U.S. military and a number of federal agencies affected by spectrum management decisions.[25] The NTIA is also advised by the Commerce Spectrum Management Advisory Committee (CSMAC). CSMAC was created by the Department of Commerce in 2004 and is composed of experts from outside the federal government.[26] Both IRAC and CSMAC address spectrum-clearing and shared-spectrum solutions, and technology research through their committees. The Office of Management and Budget also influences agency spectrum management through budget planning and recommendations.

Advanced Communications Research

The Obama Administration's FY2017 budget request for Advanced Communications Research included $13.2 million for salaries and expenses, a $3.1 million (31%) increase over the FY2016 enacted amount of $10.1 million. The request also included an increase in FTEs from 50 to 58.

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1018T; and a report: *Spectrum Management: Incentives, Opportunities, and Testing Needed to Enhance Spectrum Sharing*, November 14, 2012, GAO-13-7.

[19] See Government Accountability Office (GAO), *Spectrum Management: NTIA Planning and Processes Need Strengthening to Promote the Efficient Use of Spectrum by Federal Agencies,* April 2011, GAO-11-352.

[20] The NTIA has made the development of spectrum-sharing methods a priority. Information on specific actions is at NTIA, "Spectrum Sharing," http://www.ntia.doc.gov/category/spectrum-sharing.

[21] The NTIA created the PPSG in response to Department of Commerce recommendations to improve spectrum efficiency through better management; see NTIA's "Fact Sheet on Recommendations to Improve Spectrum Management," http://www.ntia.doc.gov/legacy/reports/specpolini/factsheetspecpolini_06242004.htm.

[22] NTIA, "An Assessment of Near-Term Viability of Accommodating Wireless Broadband Systems in the 1675-1710 MHZ, 1755-1780 MHz, 3500-3650 MHz, and 4200-4220 MHz, 4380-4400 MHZ Bands (President's Spectrum Plan Report)," November 15, 2010, http://www.ntia.doc.gov/report/2010/assessment-near-term-viability-accommodating-wireless-broadband-systems-1675-1710-mhz-17. See also NTIA, "Sixth Interim Progress Report on the Ten-Year Plan and Timetable and Plan for Quantitative Assessments of Spectrum Usage," June 2014, http://www.ntia.doc.gov/files/ntia/publications/fourth_interim_progress_report_final.pdf.

[23] NTIA, "Sixth Interim Progress Report on the Ten-Year Plan and Timetable," June 2016, https://www.ntia.doc.gov/files/ntia/publications/ntia_6th_interim_progress_report_on_ten-year_timetable_june_2016.pdf.

[24] See http://www.ntia.doc.gov/category/irac.

[25] Members are listed at http://www.ntia.doc.gov/page/irac-functions-and-responsibilities.

[26] See http://www.ntia.doc.gov/category/csmac.

The Institute for Telecommunication Sciences (ITS), located in Boulder, CO, is the research and engineering arm of the NTIA. The ITS provides telecommunications research and engineering services to evaluate and promote new technology deployment, advanced telecommunications and information services, and more efficient use of spectrum.

In 2013, NIST and the NTIA, through the ITS, jointly established a Center for Advanced Communications (CAC) in Boulder. A key focus of the CAC is to promote interdisciplinary research, development, and testing in wireless technology and spectrum sharing for public safety and commercial broadband communications. The Center also provides test beds for advanced communications technologies.

Activities highlighted in the FY2017 budget request included developing technologies to support spectrum sharing, conducting collaborative research with FirstNet and NIST through the CAC, and influencing the development of domestic and international communications standards. In addition to activities conducted through direct obligations, the ITS provides research services to other federal agencies and private entities on a reimbursable cost basis. Reimbursable project obligations for telecommunication sciences research in FY2016 totaled $10.8 million.

Broadband Deployment

The FY2017 budget request for broadband programs was $12.9 million, an increase of $1.1 million (9%) over the FY2016 enacted amount of $11.8 million. The number of FTEs would have remained constant at 36.

Managing broadband programs and grants required by the American Recovery and Reinvestment Act (ARRA, P.L. 111-5), including the BTOP grants, was a major thrust of the NTIA's broadband deployment programs after the law was enacted in 2009.[27] NTIA is scaling down administration of its BTOP grants through 2020.[28]

In January 2015, the NTIA announced that it would consolidate its efforts to assist community broadband deployment under a new advisory and assistance program, BroadbandUSA.[29] This program supports new initiatives for expanding and improving broadband deployment, as announced by the White House on January 13, 2015.[30] Among other steps, the NTIA has held four regional workshops and released a public-private partnership primer, which provides a basic introduction to a variety of partnership models for communities considering new broadband projects.[31]

The FY2017 requested increase would have gone primarily to enlarge the BroadbandUSA program, which would also have benefited from $3.2 million redirected from the BTOP grant program. Ongoing program features highlighted in the budget request include continued oversight

[27] For a discussion of grant programs and broadband deployment, see CRS Report R41775, *Background and Issues for Congressional Oversight of ARRA Broadband Awards*, by Lennard G. Kruger.

[28] Funding was initially required to be closed out and uncommitted funds returned to the U.S. Department of the Treasury by September 30, 2015. The Continuing Resolution Act of 2016 (P.L. 114-53), section 121, extended the availability of already-obligated BTOP funding through FY2020.

[29] NTIA Blog, "NTIA Announces BroadbandUSA Effort to Assist Communities with Broadband Plans," January 13, 2015, http://www.ntia.doc.gov/blog/2015/ntia-announces-broadbandusa-effort-assist-communities-broadband-plans.

[30] The White House, Office of the Press Secretary, *Fact Sheet: Broadband That Works: Promoting Competition and Local Choice in Next-Generation Connectivity*, January 13, 2015, https://obamawhitehouse.archives.gov/the-press-office/2015/01/13/fact-sheet-broadband-works-promoting-competition-local-choice-next-gener.

[31] NTIA, "BroadbandUSA: An Introduction to Effective Public-Private Partnerships for Broadband Investments," January 2015, http://www.ntia.doc.gov/files/ntia/publications/ntia_ppp_010515.pdf.

of the BTOP grants during the grant closeout period, community outreach to improve digital literacy and broadband adoption, and the documentation and sharing of best practices and tools for deploying broadband in communities.

Table 1. NTIA Discretionary Funding by Program Category, FY2014-FY2017

(budget authority in millions of dollars)

				FY2017			
Program Category	**FY2014 Actual**	**FY2015 Actual**	**FY2016 Enacted**	**Request**	**House Committee-Reported (H.R. 5393)**	**Senate Committee-Reported (S. 2837)**	**Enacted**
Domestic and International Policies	$6.5	$7.6	$9.1	$15.8	n/s	n/s	
Spectrum Management	8.0	8.0	8.5	8.9	n/s	n/s	
Advanced Communications Research	6.8	7.2	10.1	13.2	n/s	n/s	
Broadband Programs	24.7	15.4	11.8	12.9	n/s	n/s	
Total, NTIA	**$46.0**	**$38.2**	**$39.5**	**$50.8**	**$36.3**	**$39.5**	

Source: Annual NTIA budget requests to Congress for FY2014-FY2017. H.R. 5393 as reported by the House Committee on Appropriations, and H.Rept. 114-605; and S. 2837, as reported by the Senate Committee on Appropriations, and S.Rept. 114-239.

Notes: The term "n/s" means "not specified." Totals may not add due to rounding. The Further Continuing and Security Assistance Appropriations Act, 2017 (P.L. 114-254) provides funding at about 99.8% of the FY2016 funding level for the NTIA through April 28, 2017.

Public Safety Trust Fund

Proceeds from auctions of spectrum licenses as specified in the Spectrum Act are directed first into the Public Safety Trust Fund (the Fund), created by the act. Some revenue in the Public Safety Trust Fund is designated for specific purposes, primarily public safety.[32]

The Spectrum Act gives the NTIA responsibilities to support FirstNet in planning, building, and managing a new, nationwide broadband network for public safety communications. The law provides for specific transfers from the Fund for various uses, including up to $2 billion for establishing FirstNet.[33] The law also provides $115 million from the Fund for NTIA and the National Highway Traffic Safety Administration to carry out the Next Generation 9-1-1 Implementation Grants program.

All of the funding obligations of the Spectrum Act have been met with proceeds from auctions held in 2014-2015. Balances remaining in any fund created by the act are to revert to the Treasury in 2022 to be used "for the sole purpose of deficit reduction."[34]

[32] P.L. 112-96, §6413, 126 Stat. 235.

[33] P.L. 112-96, §6207, provided NTIA with the authority to borrow up to $2.0 billion from the U.S. Department of the Treasury prior to the deposit of auction proceeds into the Fund. Per P.L. 112-96, §6413(b), NTIA is to reimburse the Treasury for amounts borrowed using amounts deposited in the Fund. This subsection also specifies additional, prioritized authorized uses of the Fund.

[34] P.L. 112-96, §6413, 126 Stat. 236.

Appropriations and Budget Request History

Enacted budget amounts for FY2010-FY2016 and the FY2017 request are listed in **Table 2**. In FY2010, the Public Telecommunications Facilities Program (PTFP) represented half of the NTIA's budget appropriations, receiving $20.0 million in funding to support broadcast and non-broadcast projects.[35] Congress terminated grant funding for the PTFP in FY2011. The NTIA FY2011 budget request to Congress proposed supporting public broadcasters through the Corporation for Public Broadcasting in lieu of continuing the PTFP.[36] Though funding for the PTFP was eliminated, the total enacted budget appropriations amount for the NTIA in FY2011 increased by 4% to $41.6 million; the total amount supported administrative expenses and salaries. According to the NTIA, the increase of $21.6 million from FY2010 to FY2011 in funding for salaries and expenses was largely attributable to the costs of administration of the $4.7 billion program for broadband deployment, as required by the American Recovery and Reinvestment Act of 2009 (P.L. 111-5).[37]

Between FY2012 and FY2015, NTIA's funding requests related to broadband grant programs administration declined by over half. In FY2012, requests for funding to administer grant programs totaled $32.3 million, 70% of the budget request. For FY2013, $25.8 million in funding was requested to administer BTOP. The FY2014 request for broadband grant program oversight declined slightly to $24.7 million, roughly 40% of the total budget request. And in FY2015, the requested appropriation for broadband programs was halved from the FY2014 requested amount to $12.2 million.

The FY2015 request of $51.0 million for NTIA would have been an increase of $5 million over the enacted FY2014 budget amount of $46.0 million. The requested increase was attributed by the NTIA to an increased focus on policy oversight in two key areas: formulating domestic and international policies and expanding the availability of broadband communications. New programs identified in the FY2015 budget request included the Center for Advanced Communications, a cooperative effort with NIST to advance spectrum sharing and innovation. Further, the NTIA proposed $7.5 million to fund an Internet Policy Center to provide analysis and recommendations related to all aspects of the Internet. For FY2015, Congress appropriated $38.2 million for NTIA salaries and expenses; however, that amount was supplemented by $4.7 million in unobligated balances carried forward from the previous year, allowing for a FY2015 budget of nearly $42.9 million.

Significant increases were also proposed for Advanced Communications Research and for Domestic and International Policies in the FY2016 budget request, though enacted funding amounts did not reach requested levels. For Advanced Communications Research, the FY2016 budget request of $12.6 million would have increased funding by $4.8 million (61.5%) over the FY2015 enacted budget and included eight new FTEs in the Center for Advanced

[35] Approximately half of the PTFP grant monies went to public radio and television stations to replace equipment. Another 25% of grant funds were awarded to bring radio and television services to unserved or underserved communities. Other awards included grants to 16 public television and radio stations to cover costs of converting from analog to digital broadcasting. These grants helped the Public Broadcasting Service to maintain and improve its role in the Emergency Alert System (EAS) and support new initiatives for Wireless Emergency Alerts (also known as commercial mobile alerts).

[36] U.S. Department of Commerce, National Telecommunications and Information Administration, *FY2011 Budget as Presented to Congress*, February 2010, p. NTIA-4. https://www.ntia.doc.gov/legacy/budget/NTIA_FY2011_Congressional_Budget.pdf.

[37] This amount was later reduced by Congress to $4.4 billion.

Communications. FY2016 enacted funding was $10.1 million, a 30% increase over the FY2015 enacted budget. The request for Domestic and International Policies in FY2016 was $15.2 million, double the FY2015 enacted amount of $7.6 million. The enacted amount for FY2016 was $9.1 million, a 35.8% increase over the FY2015 enacted level.

Table 2. NTIA Appropriations, FY2010-FY2017

(in millions of current dollars)

	FY2010 Enacted	FY2011 Enacted	FY2012 Enacted	FY2013 Enacted	FY2014 Enacted	FY2015 Enacted[a]	FY2016 Enacted	FY2017 Requested[b]
Salaries and Expenses	$20.0	$41.6	$45.6	$42.8	$46.0	$38.2	$39.5	
PTFP	20.0	0	0	0	0	0	0	
NTIA total	**$40.0**	**$41.6**	**$45.6**	**$42.8**	**$46.0**	**$38.2**	**$39.5**	**$50.8**

Source: FY2010 to FY2017 annual NTIA budget requests to Congress.

Notes: PTFP is the Public Telecommunications Facilities Program, for which funding was terminated in FY2011.

a. The enacted amount for FY2015 was supplemented by $4.7 million in unobligated balances carried forward from the previous year, allowing for a FY2015 budget of nearly $42.9 million.

b. The Obama Administration requested $50.8 million for salaries and expenses for FY2017. The Further Continuing and Security Assistance Appropriations Act, 2017 (P.L. 114-254) provides funding at about 99.8% of the FY2016 funding level for the NTIA through April 28, 2017.

Reimbursable funding. In addition to appropriations listed in the tables, the NTIA receives funding from reimbursable obligations, including sources such as fees charged to federal agencies for spectrum management services and reimbursable projects in telecommunications technology research. Reimbursable funding for FY2015 was reported as $36.1 million (139 FTEs), with $29.3 million for spectrum management fees. FY2016 estimates for reimbursable funding totaled $57.7 million (160 FTEs), with almost $47.0 million from spectrum management fees. According to NTIA's FY2017 budget request, reimbursable funding for FY2017 is projected to be $44.1 million (170 FTEs), with $35.6 million from spectrum management fees. The Senate committee report (S. 239) on appropriations for FY2017 would have required the NTIA to submit a report to the committee "detailing the collection of reimbursements from other agencies."

Personnel. For FY2017, projected employment for all programs—using both appropriated funds and reimbursable obligations—would have been 347 FTEs if fully funded. This would have been an increase over the total number of 320 total FTEs for all NTIA programs in FY2016, and 260 total FTEs in FY2015. For program positions funded through appropriations, the FY2017 budget request included 177 FTEs, compared to 160 FTEs in FY2016 and 121 FTEs in FY2015.

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