

Federal Communications Commission



2021
Budget-In-Brief
February 2020

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INTRODUCTION AND SUMMARY OF REQUEST

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INTRODUCTION AND SUMMARY OF REQUEST

The Federal Communications Commission (FCC or Commission) is pleased to present its fiscal year (FY) 2021 budget request.

The FCC is an independent regulatory agency of the United States Government. The FCC is charged with regulating interstate and international communications by radio, television, wire, satellite, and cable. The Commission also regulates telecommunications and advanced communication services and video programming for people with disabilities, as set forth in various sections of the Communications Act.

As specified in section 1 of the Communications Act of 1934, as amended, the FCC's mission is to "make available, so far as possible, to all the people of the United States, without discrimination on the basis of race, color, religion, national origin, or sex, rapid, efficient, Nation-wide, and world-wide wire and radio communication service with adequate facilities at reasonable charges."¹ In addition, section 1 provides that the Commission was created "for the purpose of the national defense" and "for the purpose of promoting safety of life and property through the use of wire and radio communications."²

The FCC is directed by five Commissioners appointed by the President and confirmed by the Senate for five-year terms, except when filling the unexpired term of a previous Commissioner. Only three Commissioners can be from the same political party at any given time. The President designates one of the Commissioners to serve as Chairman.

The FCC's vision is to develop a regulatory environment to encourage the private sector to build, maintain, and upgrade next-generation networks so that the benefits of advanced communications services are available to all Americans. The FCC will work to foster a competitive, dynamic and innovative market for communications services through policies that promote the introduction of new technologies and services and ensure that Commission actions promote entrepreneurship and remove barriers to entry and investment. The Commission will also strive to develop policies that promote the public interest, improve the quality of communications services available to those with disabilities, and protect public safety. Furthermore, in FY 2021, the FCC will continue to implement its Agency Reform Plan to deliver on the needs of today and the future in a more proactive and efficient manner. Through these reform efforts, the Commission will develop and implement reforms that focus the Commission on effectively and efficiently leveraging human capital to deliver on programs that are the highest need to citizens and where there is a unique Federal role.

For FY 2021, the Commission is requesting the budget and personnel amounts that are summarized in the bullets and a table below:

- The Commission requests \$343,070,000 in budget authority from regulatory fee offsetting collections. This request represents an increase of \$4,070,000 or 1.2 percent from the FY 2020 appropriated level of \$339,000,000.

¹ 47 U.S.C. § 151.

² *Id.*

- The Commission requests \$134,495,000 in budget authority for the spectrum auctions program. This request represents an increase of \$1,956,000 or 1.5 percent from the FY 2020 appropriated level of \$132,539,000. To date, the Commission’s spectrum auctions program has generated over \$117 billion for government use; at the same time, the total cost of the auctions program has been less than \$2.1 billion or 1.7 percent of the total auctions’ revenue.
- In creating a lean, accountable, and efficient Commission that works for the American people, the Commission requests 1,448 Full Time Equivalents (FTEs) funded by budget authority from both regulatory fee offsetting collections and the spectrum auctions program. This FTE level is the same as the level enacted for FY 2020. With this FTE level, the Commission will continue to meet its mission demands in FY 2021.

(Dollars in Thousands)

	FY 2020		FY 2021		Change in Request	
	FTEs ¹	Enacted	FTEs ¹	Estimates to Congress	FTEs ¹	Amount
Budget Authority - Offsetting Collections:						
Regulatory Fees - Commission	1,388	\$327,894	1,388	\$331,743	0	\$3,849
Regulatory Fees - Office of Inspector General (OIG)	60	\$11,106	60	\$11,327	0	\$221
Subtotal - Offsetting Collections²	1,448	\$339,000	1,448	\$343,070	0	\$4,070
Budget Authority - Other Offsetting Collections:						
Economy Act Reimbursable Agreements		\$4,000		\$4,000		\$0
Auction Cost Recovery Reimbursement - Commission		\$132,402		\$134,355		\$1,953
Auction Cost Recovery Reimbursement - OIG		\$137		\$140		\$3
Subtotal - Other Offsetting Collections		\$136,539		\$138,495		\$1,956
Subtotal: Offsetting Collections	1,448	\$475,539	1,448	\$481,565	0	\$6,026
Other Budget Authority:³						
Credit Program Account ⁴		\$25		\$25		\$0
Universal Service Fund Oversight - OIG ⁵		\$4,549		\$0		-\$4,549
Subtotal: Other Budget Authority		\$4,574		\$25		-\$4,549
Total Gross Proposed Budget Authority	1,448	\$480,113	1,448	\$481,590	0	\$1,477

¹The FTE numbers include auctions FTEs. Refer to page 48 for a breakdown of FTEs between non-auctions (Regulatory Fees) and auctions.

²The FY 2021 total request does not include funding to implement the requirements of the Preventing Illegal Radio Abuse Through Enforcement Act (PIRATE Act) passed by Congress on January 8, 2020 and signed into law on January 24, 2020 (P.L. 106-109).

³The Middle Class Tax Relief and Job Creation Act of 2012 (2012 Act) mandated that the Commission reimburse reasonable channel relocation costs incurred by those qualified TV Broadcasters that will be affected by spectrum relocation. The 2012 Act also gave the Commission the authority to use \$1.75 billion from Incentive Auction revenues to reimburse TV Broadcasters for relocation costs. Additional authority totaling \$1 billion was provided to the Commission for this and for other purposes by the Consolidated Appropriations Act, 2018, Public Law 115-141. The TV Broadcaster Relocation Fund (TVBRF) is capped at \$2.75 billion. This budget authority is not represented in the above schedule to provide a better historical comparison of the components of the FCC’s regular budgetary requests.

⁴A permanent indefinite appropriation for credit reform that becomes available pursuant to a standing provision of law without further action by Congress.

⁵Represents unused carryover funds from prior fiscal years.

In furtherance of these objectives and the FCC's mission, the FY 2021 budget request will be used to support the following Strategic Goals for FY 2021:

Strategic Goal 1: Closing the Digital Divide

Develop a regulatory environment to encourage the private sector to build, maintain, and upgrade next-generation networks so that the benefits of advanced communications services are available to all Americans. Where the business case for infrastructure investment doesn't exist, employ effective and efficient means to facilitate deployment and access to affordable broadband in all areas of the country.

Strategic Goal 2: Promoting Innovation

Foster a competitive, dynamic, and innovative market for communications services through policies that promote the introduction of new technologies and services. Ensure that the FCC's actions and regulations reflect the realities of the current marketplace, promote entrepreneurship, expand economic opportunity, and remove barriers to entry and investment.

Strategic Goal 3: Protecting Consumers and Public Safety

Develop policies that promote the public interest by providing consumers with freedom from unwanted and intrusive communications, improving the quality of communications services available to those with disabilities, and protecting public safety.

Strategic Goal 4: Reforming the FCC's Processes

Modernize and streamline the FCC's operations and programs to increase transparency, improve decision-making, build consensus, reduce regulatory burdens, and simplify the public's interactions with the agency.

Additional Useful Information to Better Understand the Budget Request

Below is some additional useful information for readers to better understand the information presented in the Commission's budget request:

- FY 2019 numbers presented are actual numbers.
- FY 2020 numbers presented are appropriated and enacted numbers.
- There is no change in the total FTE level from the enacted FTE level for FY 2020 to the requested FTE level for FY 2021.

Fiscal Year 2021 Proposed Appropriation Language

For necessary expenses of the Federal Communications Commission, as authorized by law, including uniforms and allowances therefor, as authorized by 5 U.S.C. 5901–5902; not to exceed \$4,000 for official reception and representation expenses; purchase and hire of motor vehicles; special counsel fees; and services as authorized by 5 U.S.C. 3109, \$343,070,000, to remain available until expended: *Provided*, That \$343,070,000 of offsetting collections shall be assessed and collected pursuant to section 9 of title I of the Communications Act of 1934, shall be retained and used for necessary expenses and shall remain available until expended: *Provided further*, That the sum herein appropriated shall be reduced as such offsetting collections are received during fiscal year 2021 so as to result in a final fiscal year 2021 appropriation estimated at \$0: *Provided further*, That, notwithstanding 47 U.S.C. 309(j)(8)(B), proceeds from the use of a competitive bidding system that may be retained and made available for obligation shall not exceed \$134,495,000 for fiscal year 2021: *Provided further*, That, of the amount appropriated under this heading, not less than \$11,326,800 shall be for the salaries and expenses of the Office of Inspector General.

Legislative Proposals

The Administration is proposing legislative changes in the President's FY 2021 Budget that pertain to the FCC. These proposals are designed to improve spectrum management and represent sound economic policy.

Spectrum License Fee Authority

To promote efficient use of the electromagnetic spectrum, the Administration proposes to provide the FCC with new authority to use other economic mechanisms, such as fees, as a spectrum management tool. The FCC would be authorized to set user fees on unauctioned commercial spectrum licenses based on spectrum-management principles. Fees would be phased in over time as part of an ongoing rulemaking process to determine the appropriate application and level for fees. Fee collections are estimated to begin in 2021 and total \$4.0 billion through 2030.

Spectrum Auctions

The Spectrum Pipeline Act of 2015 requires 30 MHz of spectrum to be reallocated from Federal use to non-Federal use or shared Federal and non-Federal use, or a combination thereof; requires the FCC to auction this spectrum by 2024; and extends the FCC's auction authority only to allow auction of this spectrum. To facilitate this, the Act also authorizes the use of funds from the Spectrum Relocation Fund for research and development and planning activities by Federal entities that are expected to increase the probability of relocation from or sharing of Federal spectrum and that meet other requirements. The Budget proposes to require the auction of additional spectrum by 2030 and further extend the FCC's auction authority solely to allow this auction to proceed. Additional net auction proceeds are expected to exceed \$1 billion through 2030.

Auction or Assign via Fee 1675-1680 Megahertz

The Budget proposes that the FCC either auction or use fee authority to assign spectrum frequencies between 1675-1680 megahertz for flexible use by 2022, subject to sharing arrangements with Federal weather satellites. Currently, the spectrum is being used for radiosondes (weather balloons), weather satellite downlinks, and data broadcasts, and the band will also support future weather satellite operations. The National Oceanic and Atmospheric Administration (NOAA) began transitioning radiosondes operations out of the band in 2016 as part of the Advanced Wireless Services 3 (AWS-3) relocation process. If this proposal is enacted, NOAA would establish limited protection zones for the remaining weather satellite downlinks and develop alternative data broadcast systems for users of its data products. Without this proposal, these frequencies are unlikely to be auctioned and repurposed to commercial use. The proposal is expected to raise \$355 million in receipts over 10 years.

Summary of FYs 2019 - 2021 FTEs and Funding by Bureaus and Offices

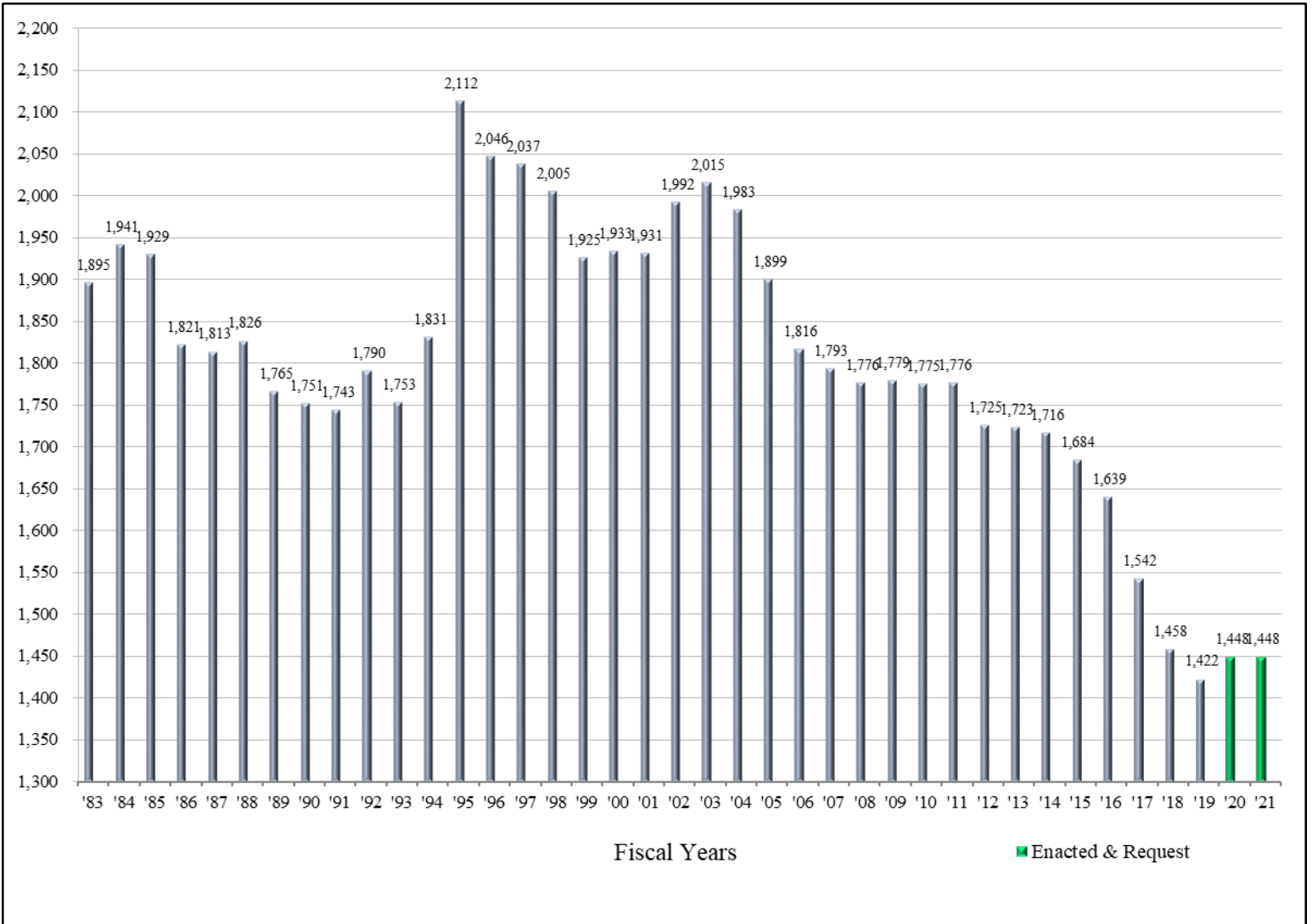
(Dollars in Thousands)

Bureaus and Offices	FY 2019		FY 2020		FY 2021	
	FTEs ¹	Actual	FTEs ¹	Enacted	FTEs ¹	Estimates to Congress
Chairman and Commissioners	22	\$4,585	22	\$5,453	22	\$5,290
Consumer & Government Affairs Bureau	113	\$21,342	114	\$22,977	114	\$23,428
Enforcement Bureau	180	\$36,371	190	\$37,920	190	\$38,782
International Bureau	87	\$16,872	85	\$16,928	85	\$17,239
Media Bureau	137	\$21,520	131	\$21,813	131	\$22,206
Public Safety & Homeland Security Bureau	90	\$17,584	95	\$18,777	95	\$19,186
Wireless Telecommunications Bureau	155	\$13,289	150	\$14,504	148	\$14,814
Wireline Competition Bureau	142	\$27,398	138	\$28,187	138	\$28,703
Office of Administrative Law Judges	3	\$405	4	\$625	4	\$633
Office of Communications Business Opportunities	8	\$1,558	8	\$1,612	8	\$1,633
Office of Economics and Analytics	79	\$12,062	96	\$15,506	99	\$17,139
Office of Engineering & Technology	74	\$14,604	73	\$15,322	73	\$15,658
Office of General Counsel	73	\$15,180	70	\$16,037	70	\$16,338
Office of Legislative Affairs	8	\$1,521	8	\$1,594	8	\$1,611
Office of Managing Director	185	\$113,942	185	\$107,072	184	\$105,454
Office of Media Relations	14	\$2,579	13	\$2,579	13	\$2,621
Office of Workplace Diversity	7	\$935	6	\$989	6	\$1,008
Subtotal	1,377	\$321,747	1,388	\$327,894	1,388	\$331,743
Office of Inspector General	45	\$7,296	60	\$11,106	60	\$11,327
TOTAL	1,422	\$329,043	1,448	\$339,000	1,448	\$343,070

¹The FTE numbers include the spectrum auctions program FTEs.

The Commission is responsible for the overall management, oversight, and administration of the Universal Service Fund (USF), including all USF policy decisions. All USF related activities are currently funded by regulatory fees. The Universal Service Fund Activities and Costs section on pages 23 through 28 provides more details related to the Commission's USF activities and related costs.

FTEs - Historical and Estimated Fiscal Years 1983 – 2021



Summary of Changes - Regulatory Fees (Offsetting Collections)

(Dollars in Thousands)

Regulatory Fees - Offsetting Collections:	FY 2020	FY 2021	TOTAL NET	
	Enacted	Estimates to Congress	Amount	Percent
Commission	\$327,894	\$331,743	\$3,849	
Office of Inspector General (OIG)	\$11,106	\$11,327	\$221	
Total Spending Authority - Offsetting Collections¹	\$339,000	\$343,070	\$4,070	1.2%
Full-Time Equivalents (FTEs) - Commission ²	1,388	1,388	0	
FTEs - Office of Inspector General	60	60	0	
Total Full-Time Equivalents	1,448	1,448	0	0.0%
Explanation of Changes - Regulatory Fees (Offsetting Collections)				
FY 2020 Total Request		\$335,660		
FY 2020 Appropriated & Enacted Above Total Request		\$3,340		
FY 2020 Appropriated & Enacted			\$339,000	
Reversal of FY 2020 One-Time Investment Requests:				
IT - Cloud Services and <u>Systems</u> Modernization		-\$926		
IT - Cloud Services and <u>Applications</u> Modernization		-\$2,266		
Subtotal			-\$3,192	
Base Pay Increase Starting in Calendar Year (CY) 2020:		\$6,634		
Base Pay Increase Applicable to FY 2020			\$4,975	
FY 2020 Base			\$340,783	
FY 2021 Reduction To Base - New Headquarters Rent Savings			-\$6,880	-2.0%
FY 2021 Adjustments to Base:				
Base Pay Increase in CY 2020 Applicable to FY 2021		\$1,658		
1 Percent Increase in Across-the-board Base Pay		\$858		
2 Percent Non-Salary Inflationary Increase to Base		\$1,653		
Additional Awards for Non-SES/SL/ST FTEs		\$1,893		
Mapping - Geographic Information System		\$150		
Computational Power System		\$375		
Subtotal - FY 2021 Adjustments to Base			\$6,588	
FY 2021 Adjusted Base Before One-Time Investment Requests			\$340,491	
FY 2021 - One-Time Investment Requests:				
IT - Cloud Services and <u>Systems</u> Modernization - COSER		\$1,022		
Mapping - Geographic Information System		\$420		
Computational Power System		\$263		
Enterprise Level Data Architecture		\$525		
On-Line Market Surveillance Tool		\$350		
Subtotal - FY 2021 One-Time Investment Requests			\$2,579	
FY 2021 Total Request¹			\$343,070	
TOTAL NET CHANGE			\$4,070	1.2%

¹The FY 2021 total request does not include funding to implement the requirements of the Preventing Illegal Radio Abuse Through Enforcement Act (PIRATE Act) passed by Congress on January 8, 2020 and signed into law on January 24, 2020 (P.L. 106-109).

²Includes spectrum auctions program FTEs.

Narrative Explanation of Changes - Salaries and Expenses - Regulatory Fees

Personnel Compensation and Benefits and Non-Salaries Inflationary Increase to Base: (\$4,169,180)

A. Personnel Compensation and Benefits (\$2,516,000):

1. Base Pay Increase in Calendar Year 2020 Applicable to Fiscal Year 2021 (\$1,658,000) – This estimated amount represents one quarter of the across-the-board pay raise that took effect in January 2020.
2. One Percent Across-the-Board Base Pay Increase (\$858,000) – Pursuant to OMB’s guidance, this estimated amount represents a one percent across-the-board base pay increase for FY 2021.

B. Non-Salary Inflationary Increase (\$1,653,180) – This request provides expected inflationary increases for phones, utilities, printing and reproduction services, contractual services, supplies, travel, training, and other expenses. The total non-salary increase includes related increases for the Office of Inspector General (OIG), which total \$34,740. This increase is developed using an estimated inflationary rate of approximately two percent.

FY 2021 Base Increases & One-Time Requests for New Investments: \$3,104,300

A. Base Increases (\$525,000)

1. **Mapping - Geographic Information System (GIS) (\$150,000)** – Geospatial analysis and the publication of maps have become an integral part of the Commission’s work, affecting everything from licensing to monitoring the Commission’s progress toward meeting Universal Service goals to analyzing markets. The FCC already creates and maintains interactive maps offering easy-to-use visualizations such as maps of nationwide LTE coverage, fixed broadband deployment, frequency coordination within the United States and cross-border, over-the-air DTV coverage, and weather-related service outages. These maps are often complex to build, yet easy to use by the public and policymakers. The Office of Economics and Analytics (OEA) will need to grow and maintain its GIS resources including both local and cloud-based hardware and software, as well as third-party geospatial datasets to meet the increasing demand for geospatial analysis in policymaking, policy implementation, and public safety. In addition to the FY 2021 One-Time Requests for New Investments listed below for GIS, the FCC is requesting these funds as an adjustment to the FCC’s base for the sustainment of GIS once the GIS is put into operation.
2. **Computational Power System (\$375,000)** – In order to fulfill its responsibilities, OEA needs to complete complex analyses on very large data sets. OEA requires a range of computational resources, platforms, and scientific computing support in order to process large data sets and perform empirical microeconomic research in performing the following responsibilities:

- Preparing a rigorous, economically grounded cost-benefit analysis for every rulemaking deemed to have an annual effect on the economy of \$100 million or more, and
- Reviewing and commenting on all significant issues of economic and data analysis raised in connection with actions proposed to be taken by the Commission, including the review of transactions before the Commission, and providing advice to the Commission regarding such issues.

The current computer structure and resources are inefficient to keep up with the demand for computational power. For example, completing a large-scale merger simulation on a newer powerful system may take three hours compared to older systems at the FCC where the same simulation may take one to three days to complete. Similarly, downloading of broadband speed test data may take three times as much time on the older systems compared to new more powerful systems. The FCC is requesting these funds as an adjustment to the FCC's base for the sustainment of its request below for a Computational Power System in the FCC's FY 2021 One-Time Requests for New Investments.

B. One-Time Requests for New Investments (\$2,579,300)

1. Information Technology (IT) Modernization & Implementation (\$1,021,800)

The Commission has made tremendous strides in modernizing its IT infrastructure and legacy dependent applications to better meet its mission as mandated by Congress; however, many of the Commission's systems and applications are still relying on outdated legacy technologies and aging physical infrastructure. Many of the technologies these systems and applications are built on are no longer supported by vendors, leaving the requisite skillsets and expertise to operate and maintain this outdated technology both costly and difficult to find. Furthermore, the highly-customized nature of these systems and applications makes any necessary enhancements expensive, cumbersome, slow to implement, and resource intensive, resulting in a high total cost of ownership. Continued use of IT systems and applications built on outdated technology also significantly increases cybersecurity risks and increases risks to the FCC's ability to deliver on its mission in a timely manner.

Since FY 2014, the Commission has modernized several of its outdated legacy-based systems, and the following systems are most recently in the progress of being modernized: Equipment Authorization System (EAS), Integrated Spectrum Auction System (ISAS), International Bureau Filing System (IBFS), and Universal Licensing System (ULS). These modernization efforts are resulting in dramatic technology shifts which will allow the Commission to move away from on premises and custom developed systems to cloud-based platform solutions. Additionally, these efforts will also empower the Commission by employing modern technology solutions to transform outdated legacy-based applications into more resilient, secure, and highly available cloud-based applications.

Building on these efforts, the momentum of the FCC's IT modernization will continue to better meet the Commission's mission needs. By continuing to modernize and/or migrate outdated technology-based systems and applications to cloud-based environments, the Commission will reduce its operations and maintenance (O&M) costs, reduce time and

resources required to make application changes and enhancements, and provide the ability to scale to meet increased demand loads such as public filing surges. In addition, security vulnerabilities that currently exist in these outdated systems will largely be eliminated as they are moved to modern cloud-based technology platforms.

Other key benefits of modernizing and/or moving outdated technology-based systems and applications to modern cloud-based technologies include:

- Reuse of enterprise services and solutions to reduce development and maintenance costs;
- Improved cycle time for system enhancements or changes required to keep pace with the Commission's rules and industry needs by leveraging Platform as a Service (PaaS) and Software as a Service (SaaS) capabilities;
- Quickly adapting to changing network requirements;
- Reducing the Commission's dependence on physical desktops with potential reduction in hardware, software licensing, and support costs;
- Creation of core enterprise services to reduce development time and O&M costs for future data collection efforts; and
- Ability to scale application capacity up or down to balance demand and cost factors.

To realize these benefits, the Commission requests a new one-time funding for the following Canadian Co-Channel System (COSER). The COSER system allows for coordination between Industry Canada and the FCC during the establishment of broadcast/telecommunications facilities along a predefined area (Line C) of the United States/Canadian border. COSER also allows for technical changes to existing facilities that may cause harmful interference to existing stations along the Line C area.

- 2. Mapping - Geographic Information System (GIS) (\$420,000)** – Geospatial analysis and the publication of maps have become an integral part of the Commission's work, affecting everything from licensing, to monitoring the Commission's progress toward meeting Universal Service goals, to analyzing markets. The FCC already creates and maintains interactive maps offering easy-to-use visualizations such as maps of nationwide Long-Term Evolution (LTE) coverage, fixed broadband deployment, frequency coordination within the United States and cross-border, over-the-air Digital TV (DTV) coverage, and weather-related service outages. These maps are often complex to build, yet easy to use by the public and policymakers. OEA will need to grow and maintain its GIS resources—including both local and cloud-based hardware and software, as well as third-party geospatial datasets—to meet the increasing demand for geospatial analysis in policymaking, policy implementation, and public safety.
- 3. Computational Power System (\$262,500)** – In order to fulfill its responsibilities, OEA needs to complete complex analyses on very large data sets. OEA requires a range of computational resources, platforms, and scientific computing support in order to process large data sets and perform empirical microeconomic research in performing the following responsibilities:
 - Preparing a rigorous, economically-grounded cost-benefit analysis for every rulemaking deemed to have an annual effect on the economy of \$100 million or more.

- Reviewing and commenting on all significant issues of economic and data analysis raised in connection with actions proposed to be taken by the Commission, including the review of transactions before the Commission, and providing advice to the Commission regarding such issues.

The current computer structure and resources are inefficient to keep up with the demand for computational power. For example, completing a large-scale merger simulation on a newer powerful system may take three hours compared to older systems at the FCC where the same simulation may take one to three days to complete. Similarly, downloading of broadband speed test data may take three times as much time on the older systems compared to new more powerful systems.

- 4. Enterprise Level Data Architecture (\$525,000)** – In accordance with the Foundations for Evidence-Based Policymaking Act of 2018 (P.L. 115-435), which includes the Open, Public, Electronic, and Necessary (OPEN) Government Data Act, the FCC is required to publish a Strategic Information Resources Plan in 2020. This document will include, among other things, the OPEN Data Plan for the FCC which will address how the FCC will create systems and implement processes and procedures that make all new data collection mechanisms available in an open format (“Open by Default”) for users within the FCC and by the general public. The Strategic Information Resources Plan will need to be implemented during FY 2021.

New investments in the Commission’s hardware and software, i.e. Enterprise Level Data Architecture, will be needed in FY 2021 for the Commission to fulfill its obligations to implement the OPEN Government Data Act. These obligations include: the creation of best practices for the Commission’s data governance; the design, creation and implementation of data catalogues; and supporting the FCC in data-based policy making. Enterprise Level Data Architecture allows data in the numerous databases at the Commission to be maintained in a usable format and accessible for analysis across and within bureaus and offices as well as by the general public.

- 5. On-Line Market Surveillance Tool (\$350,000)** – The Enforcement Bureau pursues entities that market noncompliant radio frequency devices on the Internet that have the potential to cause interference to other devices. Performing manual searches across the Internet is time-consuming and often results in the discovery of these devices only after they are in use. This funding request would be used to create an automated online tool with adaptive learning capabilities to perform key word and picture searches to find entities that are marketing these devices. This automated tool would provide the Enforcement Bureau with the ability to discover violations more quickly, detect trends, and identify recidivist entities.

President’s Management Agenda

The President's Management Agenda (PMA) lays out a long-term vision for modernizing the Federal Government supported by strategies and specific milestones that will improve the ability of agencies to deliver mission outcomes, provide excellent service, and steward taxpayer dollars effectively on behalf of the American people.

The following details FCC activity in certain of the priority areas as outlined in the Cross-Agency Priority (CAP) Goals contained in the PMA:

IT Modernization:

The Commission continues to make significant progress in modernizing its information technology (IT) capabilities and delivering secure, scalable, and reliable systems for both internal Commission business as well as for its public facing systems. The FCC's IT team prioritizes IT improvements as follows: 1) modernization and enhancements specifically authorized and funded by Congress; 2) systems with performance or security shortcomings; 3) systems that the Commission's leadership has identified for updates; and 4) systems with simple cloud migration paths. More than thirty systems have been modernized or are identified for modernization by Fiscal Year (FY) 2021. Examples of these systems include: Electronic Document System (EDOCS), Universal Licensing System (ULS), Consolidated Database System (CDBS), Canadian Co-Channel System (COSER), Electronic Comment Filing System (ECFS), and the International Bureau Filing System (IBFS).

Data, Accountability and Transparency:

The Commission has continued to increase the availability and quality of data by implementing improved Data Analytics, Visualization, and Business Intelligence capabilities. By partnering with the newly created Office of Economics and Analysis, FCC IT has been using technology tools to increase the effectiveness of agency-wide data practices and policies. The Commission has delivered on an open data platform for public consumption, which includes accountability and transparency at the core of its functionality. In addition to the 87 datasets currently available, a dedicated open government website has been created that provides links to all of the tools available. A variety of application programming interfaces have been published, as well as a Geographic Information System (GIS) tool which provides open data services in a map-centric model for visualizing a broad variety of Commission data.

People: Developing a Workforce for the 21st Century:

The Commission is taking steps to promote the 21st Century Workforce Priority Goals including, improving employee performance management and engagement, and reskilling and redeploying human capital resources.

The Commission implemented a plan to maximize employee performance and design a workforce to meet current and future needs. The FCC's plan supports managers and supervisors in managing employee performance and addressing conduct and performance issues. The Commission identified and implemented actions to consolidate support functions, reduce costs and increase efficiency across the agency. These workforce actions enable the FCC to redirect resources to other mission critical areas.

The FCC created the Office of Economics and Analytics to coordinate the contributions of economists and data professionals from around the FCC and better incorporate their analysis into the FCC's policymaking process.

The Commission has also transferred the audit and enforcement responsibilities associated with its Equal Employment Opportunity (EEO) rules from the Media Bureau Policy Division to the

Enforcement Bureau Investigations and Hearings Division. The Commission determined it was appropriate to make this organizational change to more efficiently deploy Commission audit and enforcement resources and enhance industry-wide oversight of compliance with EEO rules. In addition, the Commission created a Fraud Division within the Enforcement Bureau, comprised of existing staff, that is dedicated to taking enforcement actions against fraud in the Universal Service Fund and other funding programs that the Commission oversees.

Improving Customer Experience:

The Commission has made huge strides toward improving the customer experience for internal and external customers. By migrating Call Center support systems to the cloud and automating the updates and notification processes, timely responses are now available across nearly all aspects of customer interactions, questions, complaints, and general inquiries. Within FCC IT, the organizational strategic plan now includes specific targets for initial customer engagement and timeliness of issue resolution. Both targets are being exceeded on a monthly basis and performance continues to increase as additional improvements are made. The Commission has continued to improve the customer experience as systems are modernized by including customer friendly features such as improved interfaces, better search and reporting tools, simple GIS and mapping functions, and accessibility from mobile devices.

Acquisition Modernization:

The Commission has taken concrete steps to improve and modernize its acquisition strategies. In specific, the FCC has worked to leverage common contract solutions while meeting small business and other statutory socio-economic goals, including efforts to initiate and establish Agency policy to make greater use of small business programs such as Alaskan Native 8(a) program, Indian Tribes, Service Disabled Veteran Owned, HUBZone, 8(a), and Woman-Owned, and other socio-economic programs. Some of the common contract options that the FCC is using include: General Services Administration (GSA) Federal Supply Schedule (FSS), GSA Governmentwide Acquisition Contracts (GWAC), National Aeronautics and Space Administration (NASA) Scientific and Engineering Workstation Procurement (SEWP), and Government-wide acquisitions to expedite the Agency's procurements.

The FCC has also developed effective vendor management strategies to improve communication with vendors by actively engaging in events designed to promote and improve communications with vendors by informing them of upcoming procurements and encouraging fair and open competition. In addition, to help strengthen procurement strategies and to invite industry feedback, the Commission plans to significantly utilize the Request for Information as a part of its procurement and acquisition processes.

Further, the Commission has implemented best practices to eliminate inefficient purchasing and consumption behaviors by focusing on developing Agency-wide Indefinite Delivery and Indefinite Quantities (IDIQ) and Blank Purchase Agreements (BPAs) to eliminate inefficient and duplicate purchasing. In addition, the FCC plans to implement an Agency-wide survey to promote best-value procurements and further eliminate unnecessary purchases.

Finally, the FCC shares transactional data from across the Federal Government by utilizing the Federal Business Opportunities and GSA e-buy to share procurement information.

Agency Reform Plan

Plan to Maximize Employee Performance under OMB Memo - 17-22, Comprehensive Plan for Reforming the Federal Government and Reducing the Federal Civilian Workforce.

The Commission implemented a plan to maximize employee performance and design a workforce to meet current and future needs. The Commission undertook a comprehensive and on-going effort to:

- Review and update formal agency policy.
- Provide transparency around the performance improvement plan process.
- Ensure managers and supporting human resources staff are appropriately trained.
- Ensure accountability in manager performance plans and establish real-time manager support mechanisms.

The FCC's plan supports managers and supervisors in managing employee performance and addressing conduct and performance issues. In doing so, the Commission:

- Reviewed steps for addressing poor performance and limits the use of administrative leave.
- Ensures clear guidance is provided on the use of performance improvement plans (PIPs) and maintains data on PIPs, including the number of employees placed on them and the number who successfully improve performance.
- Strengthened training on employee relations, performance and conduct for supervisors and managers.
- Automated the performance management system and provided clear guidance to enhance accountability within the FCC's pass/fail and supervisory performance plans.
- Ensured that the Labor and Employee Relations team is adequately staffed to provide prompt and expert guidance and support and develop templates to facilitate the taking of action for performance and/or conduct based issues.

Workforce Actions

The Commission identified and implemented actions to consolidate support functions, reduce costs and increase efficiency in the provision of Human Resources and administrative services across the agency. In FY 2018, the Commission offered a voluntary early retirement authority (VERA) to all staff, as well as VERA and voluntary separation incentive payments (VSIP) for certain staff, and 19 staff took these offers. We again offered VERA and VSIP to administrative staff in FY 2019 and in early FY 2020 expanding the offer to include additional occupations. A total of 14 staff took these offers. These Workforce Actions are intended to identify cost savings and reduce administrative and other staff that are duplicative and redirect resources to other mission critical areas.

High Level Agency Reform Plan

In December 2018, the FCC established the Office of Economics and Analytics to coordinate the contributions of economists and data professionals from around the FCC and better incorporate their analysis into the FCC's policymaking process. By ensuring that economic analysis is

incorporated into policy work throughout the decision-making process, including the earliest stages, the Commission is now better able to ensure that it assesses the costs and benefits of its proposed actions and is able to establish a mechanism to measure the ongoing effectiveness of adopted approaches. The new Office is charged with conducting Regulatory Impact Analysis and informing FCC policymaking as well as undertaking long-term research on emerging market conditions and advances in communications technology, including implications for innovation and effects on the economy. The new Office will streamline the FCC's information collection procedures and uses of data and identify duplicative collections, thus substantially reducing financial and human capital burdens associated with unnecessary collections. We entered into a Memorandum of Understanding with the union, received the necessary Congressional approvals, and established the Office officially on December 7, 2018, when the reorganization was published in the Federal Register.

The Commission has also completed the transfer of the audit and enforcement responsibilities associated with its Equal Employment Opportunity (EEO) rules from the Media Bureau Policy Division to the Enforcement Bureau Investigations and Hearings Division. Shifting the EEO team to the Enforcement Bureau will improve operations and result in more effective enforcement of the Commission's EEO rules. The key objectives of this organizational change are to more efficiently deploy Commission audit and enforcement resources, enhance industry-wide oversight of compliance with EEO rules, improve cross-Commission consistency in audit-based enforcement, and rationalize and modernize our organizational structure. We received Congressional approvals and completed the reorganization on March 15, 2019, when the reorganization was published in the Federal Register.

The Commission has created a Fraud Division within the Enforcement Bureau, comprised of existing staff, that are dedicated to taking enforcement actions against fraud in the USF and other funding programs that the Commission oversees. The Fraud Division works cooperatively with other law enforcement entities, including the Office of Inspector General, where appropriate. The creation of the Fraud Division capitalizes on and enhances the Commission's expertise in rooting out fraud in programs over which the Commission has jurisdiction. We received Congressional approvals and completed the reorganization on August 12, 2019, when the creation of the Fraud Division was published in the Federal Register.

Office of Inspector General Narrative

The Office of the Inspector General's (OIG or the Office) workload continues to increase in all mission-critical areas. The Office keeps focus on increasing mission responsibilities and ensuring appropriate staff levels to keep pace with the workload. OIG has increased its Full-Time Equivalent (FTE) staff over the past few budget years and this recruitment effort has permitted the Office to engage in a greater number of, and more complex, audits and investigations. We anticipate further growth in the coming year. We hope to hire at least two criminal investigators (general schedule series 1811) in FY 2020 to begin a program of proactive investigations into E-rate and Lifeline providers and recipients and to provide additional law-enforcement capabilities we currently lack. Ideally, we would like to hire an additional two criminal investigators in FY 2021. Three senior level audit positions are vacant, and we plan to fill those positions during the current budget cycle. Regardless, we are continually mindful of budget constraints and attempt,

to the best of our ability, to gauge the relative merits of any audit and investigation prior to expending valuable resources.

The OIG FY 2021 budget request of \$11,326,800 reflects a \$221,100 net increase over the FY 2020 appropriated level of \$11,105,700. The net increase is attributable to a decrease in rent cost of \$123,850 and pay and non-salary inflationary increases.

OIG Office of Audit (OA) conducts or contracts for the performance of independent and objective audits, inspections, evaluations and related projects, designed to promote economy, effectiveness and efficiency in FCC programs and operations, and to prevent and detect fraud, waste and abuse. OA completed 8 projects in FY 2019, and an additional 10 projects were in process at the end of the FY. OA plans to complete more than 50 audits, inspections and evaluations over the next five years, not including any unforeseen Congressional requests or special projects.

OIG Office of Investigation (OI) matters cover a wide range of topics touching on myriad aspects of the FCC's mission and programs. Most significantly, our investigations often address allegations of criminal misconduct or civil fraud in the Commission's Universal Service programs. We deal with complex investigations, large criminal conspiracies, and matters involving complex financial transactions throughout the United States and its territories. As of September 30, 2019, OI had 53 open cases. Working with the Department of Justice, in recent years, OI and has recovered many tens of millions of dollars of government funds and saved the government hundreds of millions of additional dollars, resulting from criminal and civil fraud cases that have been successfully prosecuted or settled.

In compliance with the IG Reform Act of 2008, this FCC OIG FY 2021 budget request includes:

- A fair share ratio in the amount of \$30,582 for contribution to the Council of the Inspectors General on Integrity and Efficiency (CIGIE),
- Funds to support IGSNet Management Services, and
- Training funds in the amount of \$87,118.

Universal Service Fund Activities and Costs

The Commission is responsible for the overall management, oversight, and administration of the Universal Service Fund (USF). The Commission develops policies for the USF, and the Universal Service Administrative Company (USAC) collects and delivers funding through four programs – Schools and Libraries (E-Rate), Rural Health Care, Lifeline, and High Cost – focused on places where broadband and connectivity needs are critical. These programs serve people in rural, underserved, and difficult-to-reach areas.

The Commission works with USAC, as administrator of the USF, to review USAC's administrative expenses and also to oversee the effectiveness of USAC's internal controls around USAC's program management, procurements, information technology projects, and personnel processes. The descriptions below provide additional information about how the Commission's various Bureaus and Offices work together as the agency carries out its USF management and oversight responsibilities.

Office of Managing Director. The Office of Managing Director (OMD) is responsible for all USF management and administrative activities, including finance, accounting, procurement, information technology, and audits of beneficiaries and contributors. OMD provides instruction and oversight to USAC on these issues.

Wireline Competition Bureau. The Wireline Competition Bureau (WCB) oversees USF policy and provides guidance on the applicability and interpretation of the Commission's USF rules, orders, and directives to USAC and to stakeholders. WCB also is primarily responsible for USF rulemaking proceedings, appeals of USAC decisions, requests for waivers of the Commission's USF rules, petitions for USF declaratory rulings, interactions with the Federal-State Joint Board on Universal Service, and preparation and publication of USF information in the Universal Service Monitoring Report.

Wireless Telecommunications Bureau. The Wireless Telecommunications Bureau (WTB), in coordination with WCB, develops policy and procedures concerning the Mobility Fund, a universal service support mechanism dedicated exclusively to mobile wireless services.

Office of Economics and Analytics. The Office of Economics and Analytics (OEA), in coordination with WCB, oversees reverse auctions policy and implementation for distributing Mobility Fund and Connect America Fund universal service support.

Office of General Counsel. The Office of General Counsel (OGC) oversees issues relating to litigation and settlements and serves as the Commission's chief legal advisor, including on issues pertaining to USF matters.

Enforcement Bureau. If USAC or a Commission Bureau or Office identifies a possible violation of the Communications Act or a Commission rule, order, or directive, the matter is referred to the Enforcement Bureau (EB) for possible investigation and administrative enforcement action, including issuing forfeitures. EB pursues potential investigations of USF-related matters from other sources of information as well. In addition, EB is authorized to suspend and debar persons from participating in the universal service mechanisms upon a criminal conviction of or civil judgment for fraud against a USF program.

Office of Inspector General. The Office of Inspector General (OIG) conducts audits, evaluations, and inspections of USF programs and operations, as well as program service providers and beneficiaries designed to prevent and detect fraud, waste, and abuse. These oversight activities and related initiatives help promote economy, effectiveness, and efficiency of the USF.

USF Activities

Since 2017, the Commission has focused the USF on closing the digital divide. In early 2017, the Commission adopted rules for the Connect America Fund (CAF) Phase II auction, which aims to advance fixed voice and broadband service to unserved areas across the country. The auction was held in 2018, and on August 28, 2018, the Commission announced that there were 103 winning bidders in the auction, with the 10-year support amount totaling \$1.488 billion covering 713,176 locations in 45 states. Using an auction to allocate support for rural broadband is an efficient way to target limited resources where they are needed most. As of December 2019, the Commission

has authorized funding totaling \$1.2 billion over the ten-year term to support almost 550,000 locations in 45 states in the CAF Phase II auction.

In January 2020, the Commission approved a Report and Order establishing the Rural Digital Opportunity Fund, which will direct up to \$20.4 billion to expand broadband in unserved rural areas over 10 years through a reverse auction to support up to gigabit-speed networks. Phase I of the auction is targeting around six million rural homes and small businesses that lack modern broadband service. To implement the Rural Digital Opportunity Fund proposal, the FCC is planning to conduct an initial auction in 2020 and then hold an additional auction later.

In December 2019, Chairman Pai announced that he intends to establish the 5G Fund, which would make up to \$9 billion in USF support available to carriers to deploy advanced 5G mobile wireless services in rural America. This major investment in rural America would be allocated through a reverse auction and would target hard-to-serve areas with sparse populations and/or rugged terrain. The \$9 billion 5G Fund also would set aside at least \$1 billion specifically for deployments facilitating precision agriculture needs.

The 5G Fund would replace the Mobility Fund Phase II (MF-II), which was the subject of an FCC staff report that was also released in December 2019. The report described the staff's investigation of 4G LTE coverage maps submitted by providers to establish the areas that would be eligible for MF-II funding. Based on staff speed testing and review of other information gathered in the investigation, the report concluded that coverage maps submitted by certain carriers likely overstated their actual coverage. The report recommended that the Commission terminate the challenge process and take other steps to ensure that the coverage data the Commission and the public rely on are accurate.

Furthermore, to help facilitate and coordinate the FCC's rural broadband initiatives, the Commission formed a Rural Broadband Auctions Task Force, drawn from senior leaders across the agency, including OMD, WCB, WTB, and OEA. The Task Force is overseeing universal service support auctions, including the newly adopted Rural Digital Opportunity Fund.

In addition, the Commission also continues to work to close the digital divide through other initiatives focused on small, rural carriers, known as rate-of-return carriers, serving high-cost areas. Specifically, in March 2018, the Commission adopted rules providing an additional \$500 million in funding to assist rate-of-return carriers in expanding broadband deployment in rural America and sought comment on reforms for rate-of-return carriers generally. In December 2018, the Commission continued those efforts by providing rate-of-return carriers with additional support in exchange for providing at least 25/3 Mbps service to rural homes and businesses, while combatting waste and seeking further comment on additional reforms. And in August 2019, the Commission authorized over \$4.9 billion in support for rate-of-return carriers for maintaining, improving, and expanding broadband in rural areas over the next decade. This support will ensure the broadband access to approximately 455,334 homes and businesses served by 171 carriers in 40 states and territories, including 44,243 locations on Tribal lands.

Moreover, in May 2018, the Commission established the Uniendo a Puerto Rico Fund ("Bringing Puerto Rico Together") and the Connect USVI Fund to make additional universal service support available to rebuild fixed and mobile voice and broadband networks damaged in the 2017 hurricane season. In September 2019, the Commission approved \$950 million in Stage 2 funding

to improve, expand, and harden communications networks in Puerto Rico and the U.S. Virgin Islands. To accomplish these goals in Puerto Rico, the Commission is allocating more than \$500 million over ten years in fixed broadband support and more than \$250 million over three years in mobile broadband support. In the U.S. Virgin Islands, the FCC is allocating more than \$180 million over ten years in support for fixed networks, and \$4 million over three years for mobile networks. Fixed broadband support will be awarded through a competitive process, in which service providers will bid to serve every location in each covered area with up to gigabit speeds. Support for mobile services will be awarded to providers that were offering mobile services in the Territories prior to the hurricanes in order to expand and harden 4G LTE networks and deploy next-generation 5G networks.

Through the E-Rate program, the Commission continues to help schools and libraries obtain affordable broadband. In January 2020, in order to lower barriers to broadband infrastructure investment, the Commission adopted a Report and Order permanently eliminating a requirement that applicants amortize over three years high-dollar funding requests, including special construction requests. In December 2019, the Commission adopted a Report and Order making permanent the category two budget approach, which consists of five-year budgets for schools and libraries that provide a set amount of funding to support internal connections—primarily used for Wi-Fi, which has enabled the transition from computer labs to one-to-one digital learning. The Report and Order also simplifies and streamlines the category two budget approach to allow applicants to make more effective use of category two funding and to reduce administrative burdens; provides more equitable, consistent support for small, rural schools and libraries within the existing category two services budget; and makes permanent the eligibility of managed internal broadband services, caching, and basic maintenance of internal connections. Finally, to ensure timely review of applications and issuance of funding commitments, the Commission continues to oversee USAC’s administration of the E-Rate program. To this end, USAC has continued to issue funding commitments and disbursements at a faster pace each year since 2017.

Through the Rural Health Care program, the Commission provides support for the telecommunications and broadband services that eligible health care providers need to deliver critical health care services to rural and remote parts of America. In June 2018, the Commission increased the annual budget for the program from \$400 million to \$571 million, indexed the budget for inflation, and created a mechanism for unused funds from prior funding years to be carried forward for use in future years. As a result of these efforts, the annual program funding cap for funding year 2018 was increased to \$581 million, and the annual funding cap for funding year 2019 was further increased to \$594 million, with \$83.22 million in unused funds from prior funding years available to cover additional demands in funding year 2019. In August 2019, the Commission approved a Report and Order overhauling the Rural Health Care program by streamlining and simplifying the way health care providers apply for and calculate universal service support amounts, promoting transparency and predictability in the program, and taking new steps to guard against waste, fraud, and abuse.

The Commission is also taking steps to explore the creation of an experimental program to support the delivery of advanced telehealth services to low-income Americans. In July 2019, the Commission adopted a Notice of Proposed Rulemaking that proposes to establish the Connected Care Pilot program, which would provide up to \$100 million of USF support over three years to health care providers to defray the costs of broadband service to enable low-income patients and

veterans to access telehealth services, with a focus on services delivered directly to patients beyond the doors of brick-and-mortar health care facilities.

Through the Lifeline program, the Commission seeks to increase access to communications services, including broadband Internet access service, for low-income Americans. The Commission and USAC continue to take steps to address waste, fraud, and abuse in the program to ensure that limited USF dollars are directed only toward qualifying low-income consumers. These steps include closing loopholes that allow some participating carriers to enroll ineligible subscribers and establishing the National Lifeline Eligibility Verifier, which provides a unified interface that independently processes eligibility, verification, and recertification of subscribers. In October 2019, the Commission adopted a Fifth Report and Order to strengthen the Lifeline program’s enrollment, recertification, and reimbursement processes. These reforms included, among others, prohibiting participating carriers from paying commissions to employees or sales agents based on the number of consumers who apply for or are enrolled in the Lifeline program with that carrier; requiring participating carriers’ employees or sales agents involved in enrollment to register with USAC; codifying a rule that strengthens prohibitions barring Lifeline providers from claiming “subscribers” that are deceased; and taking additional steps to better identify duplicate subscribers, prevent reimbursement for fictitious subscribers, and better target carrier audits to identify potential FCC rule violations. The Commission also continues to oversee USAC’s work to deploy the National Verifier. As of the end of December 2019, the National Verifier has been soft launched in all 56 states and territories and fully launched in 37 states and territories as well as the District of Columbia.

Finally, the Commission continues its efforts to safeguard the security and integrity of the nation’s communications networks by barring the use of universal service funding to purchase equipment and services from companies that pose a national security threat. In November 2019, the Commission adopted a Report and Order initially designating Huawei Technologies Company and ZTE Corp. as companies covered by this rule and establishing a process for designating additional covered companies in the future. In an accompanying Further Notice of Proposed Rulemaking, the Commission proposed to require eligible telecommunications carriers to remove and replace existing equipment and services from covered companies and sought comment on how to pay for such removal and replacement. Additionally, the FCC will conduct an information collection to aid in the design of a removal and replacement program.

The chart below shows the estimated costs that the Commission will incur in overseeing USF activities, which includes costs incurred by the OIG.

(Dollars in Thousands)

Fiscal Years	FY 2019	FY 2020	FY 2021
FCC's USF Activities Cost¹	\$18,065	\$18,427	\$18,795
Full-Time Equivalent (FTEs)	94	94	94

¹ Estimated amounts based on actual costs.

The chart below shows the estimated number of Commission FTEs working on USF activities by bureau and office for FY 2019 based on extrapolated data.

Number of FCC FTEs Working On USF Activities By Bureau and Office	FTEs
Wireline Competition Bureau	53
Office of Economics & Analytics	12
Office of Inspector General	10
Enforcement Bureau	8
Wireless Telecommunications Bureau	4
Office of General Counsel	4
Office of the Managing Director	3
Total FTEs	94

Crosswalk of USF Outlays to FCC Strategic Goals

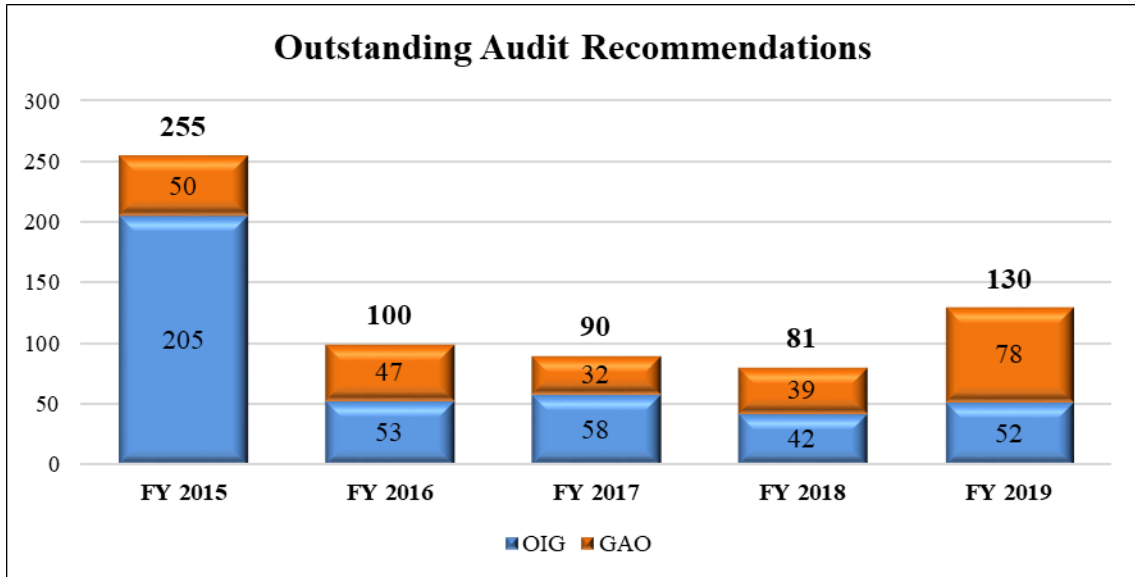
In FY 2019, USF made outlays totaling almost \$8.715 billion. These outlays were allocated to the following FY 2019 strategic goals:

(Dollars in Millions)

Applicable FY 2019 Strategic Goals	Outlay Amount	Percent
Closing the Digital Divide	\$7,067	81.1%
Promoting Innovation	\$1,648	18.9%
Total	\$8,715	100.0%

Overall Status of Audit Recommendations

The chart below shows the number of audit recommendations outstanding from various audits conducted by FCC's Office of Inspector General (OIG) and the Government Accountability Office (GAO) at the end of each fiscal year. The numbers shown below exclude those recommendations for which the Commission has already submitted information to GAO and OIG requesting closure of the recommendation. The count also excludes those recommendations that the Commission has determined to close as not implemented.



Status of FCC Headquarters Move

The Commission's headquarters (HQs) lease for the Portals II building at 445 12th Street SW, Washington, DC expired on October 15, 2017. In June 2018, GSA executed a lease extension for the HQs at the Portals II building that expires on November 30, 2020.

In 2015, Congress approved a prospectus for a replacement lease for a 15-year term that would reduce FCC headquarters square footage by approximately 30 percent and lower the overall rental expense. It is estimated that the move will provide up to \$119 million in total net savings over the 15 years of the new lease. Subsequently, the GSA conducted a competitive lease procurement and awarded the contract to a new lessor. The new lease will require the Commission to move to a newly built facility in FY 2020. The Commission's obligation to pay rent at the new headquarters building commences when the construction is substantially complete.

GSA estimated that the total cost for the headquarters move would be \$70,971,489. In FYs 2016 and 2017, as part of the Commission's budget request, the Commission requested a total amount of \$51,358,497 and \$19,612,992, respectively, from both regulatory fees and auctions program funds. Congress appropriated a total amount of \$68,225,489 from both regulatory fees and auctions program funds. The Commission intends to move to the new headquarters building in June 2020.

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SPECTRUM AUCTIONS

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Spectrum Auctions Program - Explanation of Requested Change

The Federal Communications Commission requests \$134,495,000 for the Spectrum Auctions Program for FY 2021, as detailed below. This level of funding will enable the Commission to continue its efforts to make more spectrum available for 5G and reimburse full power and Class A stations, multichannel video programming distributors (MVPDs), Low Power TV (LPTV), TV translator stations, and FM broadcast stations for reasonable relocation costs incurred because of the Commission's broadcast incentive auction.

(Dollars in Thousands)

	FY 2020 Enacted	FY 2021 Estimates to Congress	TOTAL NET CHANGE	
			Amount	Percent
Spectrum Auctions Program Cost Recovery	\$132,539	\$134,495	\$1,956	1.5%
Explanation of Changes - Spectrum Auctions Program Cost Recovery				
FY 2020 Request to Congress			\$132,539	
FY 2020 Appropriated, Enacted			\$132,539	
Base Pay Increase Starting in Calendar Year (CY) 2020:		\$1,024		
Base Pay Increase Applicable to FY 2020			\$768	
FY 2020 Base			\$133,307	
FY 2021 - Reduction To Base - New Headquarters Rent Savings			-\$1,120	-0.8%
FY 2021 Adjustments To Base:				
Base Pay Increase in CY 2020 Applicable to FY 2021		\$256		
1 Percent Increase in Across-the-board Base Pay		\$281		
2 Percent Non-Salary Inflationary Increase to Base		\$1,771		
Subtotal - FY 2021 Adjustments to Base			\$2,308	
FY 2021 Total Request			\$134,495	
TOTAL NET CHANGE			\$1,956	1.5%

Spectrum Auctions Program

The Omnibus Budget Reconciliation Act of 1993, P.L. 103-66 (Act), required the Commission to auction licenses for portions of the electromagnetic spectrum used for certain services, replacing the former lottery process. The Act further requires the Commission to ensure that small businesses, women, minorities, and rural telephone companies have an opportunity to participate in the competitive bidding process. The Commission initiated regulations implementing the spectrum auction authority granted by the legislation and conducted its first round of auctions in July 1994.

As of December 2019, the total amount collected for broader government use and deficit reduction since 1994 exceeds \$117 billion. The original spectrum auction authority was scheduled to expire in FY 1998; however, it was extended through FY 2007 in the Balanced Budget Act of 1997, P.L. 105-33; extended through FY 2011 by the Deficit Reduction Act of 2005, P.L. 109-171; extended through FY 2012 by the DTV Delay Act (2012), P.L. 111-4; and extended through FY 2022 by the Middle Class Tax Relief and Job Creation Act of 2012, P.L. 112-96. Furthermore, the Commission's authority to conduct auctions was further extended until September 30, 2025, in the Spectrum Pipeline Act of 2015 (included as Title X in the Bipartisan Budget Act of 2015, P.L. 114-74), with respect only to electromagnetic spectrum identified under section 1004(a) of that Act.

The Commission is authorized to retain funds from auction revenues to develop, implement, and maintain the auctions program. These funds cover the personnel and administrative costs required to plan and execute spectrum auctions; operational costs to manage installment payments and collections activities; development, implementation, and maintenance of all information technology systems necessary for auctions operations, including development of a combinatorial bidding system; and a proportional share of the general administrative costs of the Commission. This budget submission assumes that the auctions program will continue to recover the costs of conducting auction activities from spectrum license auction receipts as the Commission continues to use auctions as a licensing mechanism for spectrum-based communications services.

For FY 2020, Congress capped the auctions program obligations at \$132.539 million. The Commission's request of \$134.495 million for FY 2021 is a net increase of \$1.956 million from the FY 2020 capped level that includes a decrease to base of \$1.12 million from rent savings as a result of moving the headquarters to a new facility to significantly reduce space consumption, which is offset by increases in uncontrollable non-payroll inflationary increase of about 2 percent, or \$1.771 million, and pay increases of \$0.537 million.

Funding at this level will enable the Commission to continue post-broadcast incentive auction (BIA) work related to repacking and reimbursing broadcasters and MVPDs for their relocation costs to implement the results of the BIA, as well as expand that program to include new requirements included in the Reimbursement Expansion Act (REA) as related to the universe of TV and radio stations eligible for reimbursement from the TV Broadcaster Relocation Fund (TVBRF); upgrade and improve its auctions program infrastructure in preparation for future auctions; conduct additional auctions to make more spectrum available for next-generation wireless services including the 2.5 GHz band; and continue implementing the Spectrum Pipeline Act of 2015 by, for example, taking the steps necessary to promote use of the 3.5 GHz band as well as taking other steps necessary to implement the RAY BAUM'S Act, including the Mobile Now provisions regarding identifying and making available, including through auctions, spectrum for mobile and fixed mobile broadband use in, among other bands, the 3.7 GHz – 4.2 GHz range. In addition, as

the demand for spectrum for new technologies extends to spectrum bands previously assigned for legacy applications, creative approaches must be found to accommodate existing licensees and operations while expanding opportunities for access by new users.

Post-Broadcast Incentive Auction Transition Work

In the Incentive Auction Closing and Channel Reassignment Public Notice, released on April 13, 2017, the Commission announced the completion of the first-ever spectrum incentive auction and publicly released the results of the reverse auction, the forward auction, the assignment phase, and the channel reassignments for full power and Class A television stations that are required to change their TV channels during the 39-month relocation process that commenced as of the release of that Public Notice. The licensing process for the winning bidders for new flexible-use wireless spectrum licenses also commenced with the release of that public notice.

After the post-auction transition by full power and Class A TV stations to their new channels is complete, the BIA will have made available 84 megahertz of low-band spectrum for commercial and unlicensed wireless use by repurposing a portion of the broadcast TV band. The total net winning bids of approximately \$19.3 billion from the auction placed it second among all Commission auctions in terms of the amount of total winning bids. The auction proceeds from winning bidders of new spectrum licenses were used, among other things, to pay winning broadcast bidders in the reverse auction and, as directed in the Middle Class Tax Relief and Job Creation Act of 2012, to fund the TVBRF with \$1.75 billion to reimburse full power and Class A broadcast stations and MVPDs for their reasonable expenses incurred as a result of stations being involuntarily relocated to new channels.

Determining that the TVBRF was likely to fall short of covering the costs of the post-BIA broadcast transition, Congress subsequently appropriated \$1 billion in additional funds for the TVBRF in the 2018 REA, increasing the total to \$2.75 billion. The \$1 billion in new funding included \$600 million in FY 2018 and \$400 million in FY 2019. The REA also expanded the universe of entities eligible for reimbursement to cover the costs reasonably incurred by displaced low power TV and TV translator stations (LPTV/translator stations) to relocate or modify their facilities, and by FM radio stations (FM stations) to reasonably minimize disruption of their service due to the TV repacking process. For FY 2018, the REA provided for funding of at least \$350 million to reimburse full power and Class A stations, not more than \$150 million for LPTV/translator stations, and not more than \$50 million for FM stations. The REA also provided \$50 million in FY 2018 funds for the Commission to use for consumer education relating to the reorganization of broadcast television. The REA does not expressly delineate the use of the \$400 million FY 2019 funds among the various categories of eligible recipients. The Commission determined in the *REA Report & Order* adopted March 15, 2019, that reimbursement of full power and Class A stations and MVPDs would be prioritized over reimbursement of LPTV/translator stations and FM stations for purposes of disbursement of the FY 2019 funds. The REA permits the Commission to continue the reimbursement program until July 3, 2023, under certain circumstances, but did not extend the July 3, 2020, transition deadline for all full power and Class A television stations to have moved to their new channels.

Because of the complex nature of the post-BIA transition and the addition of new categories of broadcast stations eligible for reimbursement, the Commission will continue to engage in a significant amount of post-auction activity. For example, the results of the BIA require 987 full-

power and Class A broadcasters nationwide to relocate to create contiguous spectrum in the 600 MHz band that has been repurposed and auctioned for flexible wireless uses, and 957 of those stations are eligible for reimbursement from the TVBRF.³ Over 2,000 LPTV/translator stations received displacement construction permits to relocate to alternative channels, and on December 9, 2019, an Incentive Auction Task Force and Media Bureau public notice announced that it had received eligibility certification and cost estimate submissions from 947 of those stations who seek reimbursement of their relocation costs. That public notice also announced that 87 FM stations had been determined to satisfy requirements for eligibility to participate in the reimbursement program. The repacking of full power and Class A stations will also require some MVPDs to modify their facilities to continue to carry the station's signals, the reasonable costs of which are also reimbursable from the TVBRF.

The last phase of the 39-month channel reassignment process ends July 3, 2020, and the REA authorizes the Commission to extend the reimbursement period to July 3, 2023. This means that while all full power and Class A broadcast stations are required to vacate their pre-auction channels prior to the end of the 39-month period, some of the necessary licensing and post-transition filings for such stations and for LPTV/translator stations and FM stations will continue after that date. Final reimbursement submissions, close-out review, and, as appropriate, verification and audit processes will also continue past that date. The following are a list of highlights from the many activities that will continue to take place in FY 2021.

- Licensing for Broadcasters Being Relocated – Broadcast licensing is performed in two steps: (1) application review and grant of a construction permit (CP); and (2) application review and grant of a license to cover. The Commission will continue to process applications and licenses to cover, as well as possible technical modifications determined to be necessary once the stations transition and test their new facilities, as described in more detail below.

The Commission implemented a phased transition process in which each full power and Class A station that is being repacked is assigned one of 10 phases. By the end of its assigned phase, a station must discontinue operations on its pre-auction channels, such that all broadcasters will have ceased operation on their pre-auction channels no later than the end of the tenth phase, which will occur within 39 months after the issuance of the Closing and Channel Reassignment Public Notice.

After a broadcaster completes the construction of its new facilities, it must file an application with the Commission for its license, which will require review and approval by the Media Bureau. Processing such filings for stations in the later phases of the transition will extend beyond the end of their phase deadlines. In addition, a number of full power and class A stations are using interim facilities in order to meet their deadline to vacate their pre-auction channel while still in the process of completing construction of their permanent facilities. In such cases, stations will have met their phase deadline to cease operation on their pre-auction channel but not yet have fully transitioned to their new facilities. Construction of

³ As a result of the BIA, 987 full-power and Class A broadcast stations were assigned new channels and must be relocated during the 39-month transition period. Of those, 30 full-power stations were winning bidders in the reverse auction and are not eligible for reimbursement of relocation costs, but they nevertheless must file applications, licenses to cover, and/or waivers that will require processing by the Commission. The remaining 957 full-power and Class A stations that are being relocated are eligible for reimbursement from the TVBRF.

those new facilities, and the related Media Bureau consideration of all related applications and waivers, as well as submission of reimbursement invoices, will continue for some of those stations beyond the end of the 39-month phase schedule.

The process will therefore require Commission staff to continue to monitor broadcaster progress, identify and resolve transition-related problems and challenges, process applications, and review and verify information in FY 2021. Concluding the post-auction transition will therefore also continue to require software, cloud computing resources, and assistance from skilled computer scientists, software engineers, and technology security experts.

- Regional Coordination of Transition – The Commission’s Incentive Auction Task Force and Media Bureau have created a specialized team to assist broadcasters through the transition on a regional basis. Regional Coordinators assist with communications among the affected broadcast stations and MVPDs, function as liaisons within the Commission, and assist with coordination with other federal government agencies such as the Federal Aviation Administration as well as with Tribal governments and coordination with Canada and Mexico.
- Displaced LPTV and TV Translator Station Licensing – A Special Displacement Window closed on June 15, 2018, for operating LPTV/translator stations displaced due to the new 600 MHz wireless band and the post-auction repacking process for full power and Class A stations. More than 2,000 applications were granted. Like the full power and Class A stations identified above, broadcast licensing for LPTV/translator stations is performed in two steps: (1) application review and grant of a CP and (2) application review and grant of a license to cover. The Commission will continue to process such applications as they are filed.
- FM Station Licensing – FM spectrum was not subject to the post-Incentive Auction repacking process. Some FM stations with antennas on or near a tower supporting a repacked TV antenna may be affected if, for example, the FM antenna must be moved, temporarily or permanently. In such situations some FM stations must apply for a construction permit or special temporary authority to operate on an interim basis during a construction project on the station’s tower.
- Reimbursements to Eligible TV and FM Stations and MVPDs – Reimbursements to eligible full power and Class A broadcasters and MVPDs started in FY 2018. The Commission has expanded its reimbursement process to include LPTV/translator and FM stations pursuant to the REA. It began accepting estimates of costs purportedly eligible for reimbursement from LPTV/translator and FM stations in August 2019.
 - Fund Administration – The Commission has engaged a contractor (Fund Administrator) to assist in administering the TVBRF. The Fund Administrator has extensive experience in television broadcast engineering and federal funds management to review cost estimates. The Fund Administrator reviews the initial reimbursement estimates and the accompanying supporting documentation submitted by eligible entities to validate that the estimates reflect costs that may be reasonably incurred to relocate television service from a station’s original channel

to its reassigned channel or, in the case of MVPDs, to continue to carry the broadcast signal of a reassigned broadcast station. Requests for additional information are sent to entities where reasonableness cannot be determined, where necessary documentation appears to be missing, or where the requested reimbursement appears to be excessive.

- Reimbursement Process – The reimbursement process has two major components: (1) cost estimates and fund allocation and (2) invoice reimbursement processing.
 - Cost Estimates and Fund Allocation – The Fund Administrator and Media Bureau review the initial reimbursement estimates, and the eligibility showings of the submitting entities, and the accompanying supporting documentation submitted by LPTV/translator stations and FM stations, to validate that the estimates reflect costs that may be reasonably incurred to relocate television service from a station’s original channel to its reassigned channel or, in the case of FM stations, to reasonably minimize disruption of service during the repack. Based upon that review, an initial allocation based on such verified estimates is issued to stations found to be eligible for reimbursement. Once the initial allocation is made, the Fund Administrator reviews invoices for actual costs incurred by broadcasters and MVPDs and makes recommendations to the Commission as to their reasonableness. The Commission reviews and verifies those recommendations and pays approved invoices submitted by eligible LPTV translator stations and FM stations. The Commission may announce one or more additional allocations during the transition period, and subsequent allocations may be based on revised cost estimates.

As of December 2019, the Commission had allocated a total of \$1.89 billion to full power and Class A stations and MVPDs, and \$17.2 million to eligible FM stations, giving them access to approximately 92.5 percent of their currently estimated and verified costs.

- LPTV/TV Translator Stations – As of December 2019, the Commission had received 947 submissions from LPTV/TV translator stations and had not yet completed its review of cost estimates and eligibility certifications. Once that review is complete, an allocation will be made and reimbursements to eligible LPTV/TV translator stations for their approved actual expenses will commence.
- Invoice Reimbursement Processing – Eligible TV and FM radio stations and MVPDs may only draw upon their allocated funds upon submission of actual invoices and other supporting documentation. The Fund Administrator reviews invoices for actual costs incurred by broadcasters and MVPDs and makes recommendations to the Commission as to their reasonableness. The Commission reviews those recommendations and pays approved invoices submitted by broadcasters and MVPDs. Reimbursement payments to all of these categories of recipients will continue in FY 2021 as reimbursement-eligible entities continue to submit their invoices.

- Close Out Procedures for TV and FM Broadcasters and MVPDs – Each entity will engage in a two-step close out procedure and receive two close out letters from the Media Bureau, including (1) an “interim close-out letter” when the station has submitted evidence of all incurred costs: and (2) a “final close-out letter” after all or nearly all entities eligible for reimbursement from the Fund have entered the close-out process. The final account close-out for each entity will occur no later than July 3, 2023, the statutory end of the reimbursement period, when all entities eligible for reimbursement from the Fund must have submitted all actually incurred costs.

When an entity completes its construction project it will submit all remaining supporting documentation and requests for reimbursement to the Commission and inform the Commission that the submissions are complete. The entity will receive a financial reconciliation statement from the Fund Administrator that specifies verified, estimated amounts; allocated amounts; amounts requested for reimbursement; amounts disbursed by the Commission; and information outlining any additional amounts payable by the Commission to the entity or owed to the Commission by the entity. If an overpayment is discovered, the entity will be required to return the excess amount to the Commission and detailed instructions for prompt submission of such overpayments will be provided to the entity by the Commission. Each station will review the financial reconciliation statement for accuracy and completeness and, upon concurrence, return an executed version of the financial reconciliation statement to the Fund Administrator. The Bureau will then provide the station with an interim close-out letter and issue any payments currently due, subject to the station’s available allocation.

Because the Commission has determined that stations should be allocated a *pro rata* amount of actual costs incurred based on the total fund availability, the Commission will withhold a certain portion of potentially eligible funds until the conclusion of the program, or until such time as the Bureau can reasonably extrapolate that the total available funding will be sufficient to meet the total cost of the program. A final close-out letter will serve as the official notice of account close-out, include a summary of any financial changes that occurred during the interim closing period, and remind entities of their ongoing document retention requirements.

- Audits, Data Validations, and Disbursement Validations – Audits, data validations, and site visits are essential tools in preventing waste, fraud, and abuse, and that use of these measures will maximize the amount of money available for reimbursement. Throughout the reimbursement period, the Media Bureau together with the Fund Administrator performs disbursement validations in order to confirm that entities receiving reimbursement funding for third party services have in fact disbursed monies received from the Fund in a manner consistent with representations made to the Commission in the Reimbursement Form. Also, a third-party audit firm acting on behalf of the Commission may conduct audits of entities receiving disbursements from

the Reimbursement Fund, and these audits may occur both during and following the Reimbursement Period. The Commission has determined that Commission staff and/or a third-party auditor will continue to validate expenses after the reimbursement period ends, consistent with the Commission's obligation to recover improper payments, including after the close-out period.

- Consumer Education – The REA made \$50 million available through July 3, 2023, to the Commission for consumer education. The Commission has developed several consumer resources to provide information about what the post-auction transition will require consumers to do to continue to receive over-the-air TV signals during and after the transition. For instance, in January 2019, the Commission announced the launch of a dedicated call center to assist consumers with rescanning their televisions and any other questions related to the broadcast transition. The Commission also awarded a contract to a national public relations firm to execute a comprehensive nationwide consumer education campaign that includes social media outreach and advertising, radio, print, and online advertising, paid online search, and earned local and regional media.
- Submission of Banking Information – The Commission requires all eligible entities who will receive TVBRF payments to provide detailed banking information that is both notarized on paper form and submitted in a secure electronic system. The Commission reviews this information prior to making any payments. Eligible entities may revise their banking information throughout the reimbursement period.
- Stakeholder Outreach – To minimize disruptions and ensure an orderly transition, the Commission provides necessary stakeholder and consumer communications, education, and outreach. These efforts include providing education materials for broadcast stations, MVPDs, wireless microphone operators, and unlicensed users affected by the transition. The Commission also maintains a comprehensive website to serve as a single point of reference for all transition-related information. The Commission will continue to maintain and update these efforts.

Spectrum Pipeline Act of 2015, RAY BAUM'S Act, and Other Auction Program Improvements

The Spectrum Pipeline Act of 2015 (Pipeline Act) requires the Commission to auction 30 megahertz of spectrum identified by the Secretary of Commerce for reallocation from Federal use to non-Federal use, shared use, or a combination thereof. The Pipeline Act also appropriates funds from the Spectrum Relocation Fund to support activities by Federal entities to improve the efficiency and effectiveness of Federal use of spectrum in order to make Federal spectrum available for non-Federal use, shared use, or a combination thereof. The Pipeline Act requires the FCC, as part of its role on the interagency Technical Panel established within the National Telecommunications and Information Administration (NTIA), to review Federal entities' proposals for funds for these purposes.

Additionally, the Pipeline Act requires the Commission to submit four reports to Congress. In November 2018, the Commission submitted a first report with an analysis of its new rules for the innovative Citizens Broadband Radio Service in the 3550-3650 MHz band and a second report analyzing proposals to promote and identify additional bands that can be shared under such rules

and identifying at least 1 gigahertz of spectrum between 6 GHz and 57 GHz for such use. By January 1, 2022, in coordination with the Assistant Secretary of Commerce for Communications and Information, the Commission must submit a third report that identifies at least an additional 50 megahertz of spectrum below 6 GHz for potential auction. Finally, by January 2, 2024, in coordination with the Assistant Secretary of Commerce for Communications and Information, the Commission must submit a fourth report which identifies at least another additional 50 megahertz of additional spectrum below 6 gigahertz for potential auction. The latter two reports must contain an assessment of the Federal operations in such spectrum, an estimated timeline for the competitive bidding process, and a proposed plan for balance between unlicensed and licensed use.

The RAY BAUM'S Act amended the Pipeline Act to require notice and comment for certain Pipeline Act reports and required the Commission to undertake numerous rulemakings and initiatives related to potential repurposing, reallocation, sharing, or auction of spectrum bands, including a requirement to work with NTIA to identify 255 additional megahertz of spectrum for mobile and fixed wireless use by 2022.

To fulfill these statutory requirements and enhance the Commission's ability to execute upcoming auctions, auctions funding will also be used for the following that include major amounts of work to be performed during FY 2021:

- 3.5 GHz Auction and Post-Auction Implementation – The Commission has updated its rules for issuing certain licenses in this band that will be subsequently auctioned late in the third quarter of FY 2020. Due to the characteristics of and use cases for licenses in this band, this auction will have a novel set of requirements that will require the Commission to develop new auctions procedures and software. Much of the work will take place in FY 2020, but statutorily required work, including post-auction licensing and monitoring of the novel licenses to be awarded, will by necessity continue into FY 2021 and possibly beyond. For example, depending on when the auction concludes, winning bidders will not file their long form license applications until late in the fourth quarter of FY 2020 or early in FY 2021. Commission staff must then undertake the statutorily required process to evaluate and grant such applications, where warranted; such work will extend into FY 2021. In addition, the Commission will have an ongoing need to interface with the Spectrum Access Administrators (SASs), which manage the dynamic spectrum sharing environment in the 3.5 GHz band, as well as the Environmental Sensing Capability operators, which facilitate federal incumbent protection in the band. The Commission also will have an ongoing need to test and verify the operational capabilities of current and future SASs. Successful implementation of the unique sharing model adopted in the band will provide the American consumer with access to additional spectrum resources.
- 3.7-4.2 GHz Auction and Post-Auction Implementation – The Chairman intends to commence an FCC-run auction of flexible-use licenses for 280 MHz of spectrum in this band, with bidding to start before the end of calendar year 2020. Following that auction, Commission staff would then undertake the statutorily required process to evaluate and grant such applications, where warranted. The Commission would also need to oversee the process of transitioning incumbent Fixed Satellite Services (FSS) out of the 280 MHz that has been auctioned in order to enable new flexible-use licensees to deploy. Under all of the transition proposals currently in the record, overseeing this process would involve Commission staff resources in FY 2021 and beyond.

- Other Auction Development and Implementation – The Commission needs to make additional changes to the auction bidding system for other planned auctions that could include an AWS-3 re-auction, auction of bands made available for flexible terrestrial use in the Spectrum Frontiers proceedings, auction of the 2.5 GHz band, potential auctions of licenses for mid-band spectrum (including 3.7-4.2 GHz), as well as other bands identified by the Mobile Now Act and the 30 megahertz required by the Pipeline Act. In particular, substantial Commission staff resources in FY 2019 were dedicated to preparation for auctions related to Spectrum Frontiers bands and potential mid-band auctions, which may involve novel requirements related to sharing with federal users and/or transitioning incumbents out of specific frequencies, tracking satellite earth station placements, and other issues. This work has continued into FY 2020 and the Commission expects a substantial amount of activity will occur in FY 2021 as well.
- SAS/ESC Testing for 3.5 GHz and Beyond – The Spectrum Access System (SAS)/Environmental Sensing Capability (ESC) are necessary components to facilitate additional non-federal access to spectrum in the 3.5 GHz band and are necessary to protect incumbent Federal operations. These systems will be launched first for the 3.5 GHz band and may have additional applications in the future. Because the SASs will work as dynamic frequency coordinators for a complex ecosystem of devices, we need to ensure they operate properly and consistently with the FCC’s rules prior to approval. Once the SASs and ESCs are approved for use in the 3.5 GHz band, the Commission will continue to monitor and analyze their operations to ensure compliance with the rules and identify opportunities for improving non-federal access to the 3.5 GHz band and, potentially, other spectrum bands. The Commission will engage in additional research (e.g., spectrum monitoring) to refine its understanding of the spectral environment and facilitate more robust and efficient use of spectrum resources.
- Optimization for New Spectrum Opportunities – The optimization team will help the Commission analyze and study options for using complex mathematical optimization techniques for making new spectrum licenses available through new auction formats including overlay licenses, transitioning incumbents out of repurposed spectrum bands while assuring continued service to their customers, and other ways to implement spectrum sharing scenarios, to ensure we are maximizing the amount of useful commercial spectrum. They will develop optimal band plans accommodating incumbent uses and demonstrate the value of additional clearing or sharing as necessary. This research will also provide statistical and technical computation, analysis, simulation, and modeling, including geographic data and mapping, related to auctions.
- Spectrum Visualization Tools – Public Facing and Internal – Commission will develop spectrum visualization tools to provide the public and government agencies with insights into how spectrum utilization could be modified to meet growing demand for wireless broadband services, including through licenses assigned by auction. These tools will help satisfy the public’s significant interest in understanding who has licensed rights to different spectrum bands at different locations and provide the ability to manipulate and analyze this data. Federal agencies also would benefit from this information as they consider sharing/relocation options. Additionally, it is critical for internal Commission teams to have robust data, including mapping, to understand coverage and operations across the country.

- Auction Application System (formerly known as Integrated Spectrum Auctions System (ISAS)) Enhancement/Modernization – The Commission must modify the application forms for participation in each auction in response to the auction’s unique requirements. Work to modernize the auction application system will provide for new implementations of the primary auctions application software, including providing the ability to customize the form to support future auctions based on novel license eligibility requirements and auction formats.
- Universal Licensing System (ULS) Modernization – The Commission must modernize its licensing database and infrastructure to implement complex new service rules, as well as eliminate the use of outdated technology and improve reliability, security, and access to data. The system modernization efforts will allow the FCC to better support new auctions, inventory existing auction licenses, and re-auction spectrum. Early in FY 2020, the Commission awarded a two-year contract to develop a modernized system for market-based licensing and gather requirements for the site-based and personal radio services. It is currently estimated that this modernization effort will take approximately four to five years to complete.

Pursuant to 47 U.S.C. §309(a), the Commission must provide its authorizing and appropriations committees in Congress with a detailed report of the FCC’s obligations in support of the auctions program for each fiscal year of operation. The following table shows available auction cash for recent fiscal years.

Spectrum Auctions Activities

Dollars in Thousands					
	<u>FY 2015</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>	<u>FY 2019</u>
Beginning Cash Balance as of October 1	\$317,931	\$513,456	\$2,980,154	\$8,620,648	\$3,508,741
Current Year Net Cash	11,115,179	2,777,519	7,728,932	(3,929,722)	2,598,061
Less:					
Deferred Revenue as of September 30 ¹	(10,919,416)	(308,607)	(2,064,903)	(1,158,650)	(2,725,948)
Deposit Liability - Refunds as of September 30 ²	(238)	(2,214)	(2,214)	(2,214)	(2,214)
Accounts Payable ³	0	0	(21,321)	(21,321)	0
Available Cash as of September 30⁴	<u>\$513,456</u>	<u>\$2,980,154</u>	<u>\$8,620,648</u>	<u>\$3,508,741</u>	<u>\$3,378,640</u>

¹Cash associated with licenses that have not been granted as of stated date.

²Upfront auction deposits not refunded as of stated date.

³Remaining amount owed to the Incentive Auction Reverse Auction Winners.

⁴The FY 2017 amount includes approximately \$7 billion for deficit reduction when all the licenses from the incentive auction are granted. As of February 4, 2019, the Commission transferred a total of \$7.05 billion of earned auctions revenue from the incentive auction to the Public Safety Trust Fund.

Summary of Distribution of Resources - Spectrum Auctions Program

SPECTRUM AUCTIONS COST RECOVERY REIMBURSABLE AUTHORITY INCLUDING OFFICE OF INSPECTOR GENERAL

(Dollars in Thousands)

<u>Object Classification Description</u>	<u>FY 2019 Actual</u>	<u>FY 2020 Enacted</u>	<u>FY 2021 Estimates to Congress</u>
Personnel Compensation & Benefits:			
Full-time & Other than full-time Permanent (11.1 & 11.3)	\$27,330	\$28,394	\$29,386
Personnel benefits (12.0)	8,258	8,739	9,051
Subtotal - Personnel Compensation & Benefits	\$35,588	\$37,132	\$38,437
Other Expenses:			
Benefits for former personnel (13.0)	\$8	\$8	\$9
Travel & transportation of persons (21.0)	229	403	411
Transportation of things (22.0)	10	9	9
Rent payments to GSA (23.1)	5,961	6,175	5,150
Communications, utilities, & misc. charges (23.3)	2,179	2,751	2,803
Printing and reproduction (24.0)	174	184	187
Other services from non-Federal sources (25.2)	23,275	39,159	39,889
Other goods & services from Federal sources (25.3)	518	1,902	1,938
Operation & maintenance of equipment (25.7)	49,373	40,185	40,944
Supplies and materials (26.0)	3,832	4,492	4,579
Equipment (31.0)	1,006	131	134
Land and structures (32.0)	0	0	0
Insurance claims & interest (40.0)	34	5	5
Subtotal - Other Expenses	\$86,601	\$95,407	\$96,058
Total - Auctions Cost Recovery Reimbursable Authority	<u>\$122,189</u>	<u>\$132,539</u>	<u>\$134,495</u>

Spectrum Auctions Expenditures Report

Section 309(j) of the Communications Act permits the Commission to use funds raised from auctions to fund its auctions program, including contracts for services and costs related to personnel performing work in support of Commission auctions authorized under that section. The FCC's Office of General Counsel (OGC) and Office of Managing Director (OMD) provide direction to FCC employees attributing hours for this purpose. The House of Representatives and Senate Appropriations Committees review and set a yearly cap for the spectrum auctions program. The requested cap level for FY 2021 is \$134,495,000 to fund the following activities: further the objective of making more spectrum available for commercial use; continue post-BIA work to include the new additional requirements from the REA related to the TVBRF; upgrade and improve auctions infrastructure in preparation for future actions; and continue implementation of the Spectrum Pipeline Act of 2015 and certain provisions of the RAY BAUM'S Act. In addition, as the demand for spectrum for new technologies extends to spectrum bands previously assigned for legacy applications, creative approaches must be found to accommodate existing licensees and operations while expanding opportunities for access by new users.

The Commission's spectrum auctions program supports efficient licensing while also contributing significant funds to the U.S. Treasury for deficit reduction and providing direct support to other government programs. In particular, in the Middle-Class Tax Relief and Job Creation Act of 2012, Congress directed that proceeds from certain spectrum auctions, including auctions of licenses covering spectrum offered in the H-Block, AWS-3, and BIA, fund certain public safety-related programs and contribute to deficit reduction. Specifically, Congress directed that the net proceeds from these auctions, in addition to being used to reimburse Federal agencies for costs incurred as a result of sharing or relocating Federal spectrum assignments and to reimburse the relocation expenses of full power and Class A broadcast stations being repacked in the new TV Band following the BIA, be distributed as follows: \$135 million for a state and local First Responder Network Authority (FirstNet) implementation fund; \$7 billion for FirstNet build out; \$115 million for 911, E911, and NG911 implementation; \$300 million for public safety research; and \$20.4 billion plus any additional proceeds for deficit reduction.

As of December 2019, the Commission had raised over \$117 billion in auctions revenues since initiating the auctions program in 1994. During this period, auctions program expenses have been less than two percent of the Commission's total auctions revenues. The Commission operated the auctions program for nine years at \$85 million annually without any increase in funding, including increases for inflation. The FCC received increases in FYs 2013 through 2020 to fund the implementation costs for the BIA, REA and Spectrum Pipeline Act of 2015, and in FY 2016 to fund the necessary expenses associated with a headquarters move to a new facility to significantly reduce space consumption.

Spectrum auction planning, development, and implementation is performed agency-wide and is very information technology (IT) intensive, as reflected in our Auction Expenditure Justification Reports. For example, the Incentive Auction Task Force has drawn upon the resources and expertise of staff from across the Commission, including the Wireless Telecommunications Bureau, Media Bureau, International Bureau, Bureau of Consumer and Governmental Affairs, Office of Engineering and Technology, OMD, and OGC. Auctions funds also cover the program's share of Commission operating expenses. The Commission uses these funds to enable successful auctions and expends them in a manner consistent with statutory requirements.

Every auction is different and has specific requirements, which require careful attention to detail and planning. Since auction activities are performed agency-wide and are unique, allocating the appropriate amount of cost and overhead related to the auctions program is a challenge. In addition, the complexity of spectrum auctions has increased steadily as the Commission works through more difficult technical and policy issues. Preparation for spectrum auctions generally requires sufficient time to design, develop, and implement secure, reliable, and effective auction application, bidding, and post-auction licensing systems.

In the practice of cost accounting, costs are identified as one of the following: (1) direct cost, (2) indirect cost, or (3) generally allocated cost. The methodology for deriving the proportional share of generally allocated administrative costs to be charged to the auctions program is based on the Commission's time reporting system and Generally Accepted Accounting Principles. The allocation is based on the percentage of actual hours that employees worked to support the auction program plus the same proportional share of the employee's indirect hours (leave hours). This full time equivalent (FTE) rate is applied to costs that benefit the Commission as a whole. The items that are allocated by the FTE rate include Commission-wide IT systems, guard service, administrative facility services, supplies, furniture, equipment, and human resources training activities. The FCC has maintained an average of 14 percent for this purpose, with minor deviations.

A significant Commission auction focus in FY 2021 will be to continue post-broadcast incentive auction implementation. This work includes continuing to relocate (or "repack") 987 full power and Class A television stations and over 2,000 LPTV/translator stations with minimum disruption to the viewing public. We will also continue to make disbursements from the TVBRF to repacked full power and Class A TV stations and MVPDs, and, pursuant to the REA, to LPTV/translator stations and FM stations impacted by the post-auction repack that have become eligible for reimbursement as a result of the REA. The repacked full power and Class A television stations must vacate their pre-auction channels by July 2020, but there will be considerable continuing application review, cost reimbursement, and other transition processing required after that time for both full power and Class A stations, MVPDs, and LPTV/translator and FM stations. For example, LPTV/translator stations are not subject to the same construction deadlines as full power and Class A Stations, and a number of the full power and Class A stations who vacate their pre-auction channels are moving to interim facilities while they continue to construct their permanent facilities. Moreover, the reimbursement period for costs associated with the repack of full power and Class A stations and MVPDs, and the reimbursement of LPTV/translator stations and FM stations, is authorized by Congress to extend up to July 3, 2023.

Repacking involves reorganizing and assigning channels to the remaining broadcast television stations to create contiguous blocks of cleared spectrum suitable for flexible wireless use. The scope of the repacking component of this auction has made it a unique and computationally complex challenge that will continue to require substantial resources and engagement from the Commission until all stations are operating on their permanent facilities and the reimbursement process has been completed. Such active oversight of the process will continue to require Commission staff resources to coordinate with broadcasters to monitor broadcaster progress, identify and resolve transition-related problems and challenges, process applications, review and verify information, undertake and complete the ongoing reimbursement program and, as appropriate, conduct subsequent verifications and audits of the reimbursements. The transition also requires continued engagement of the Fund Administrator, which is overseen by Commission

staff, to administer the reimbursement of up to \$2.7 billion to the eligible broadcasters, MVPDs, LPTV/translator stations, and FM stations by reviewing cost estimates and invoices to prevent waste, fraud, and abuse.

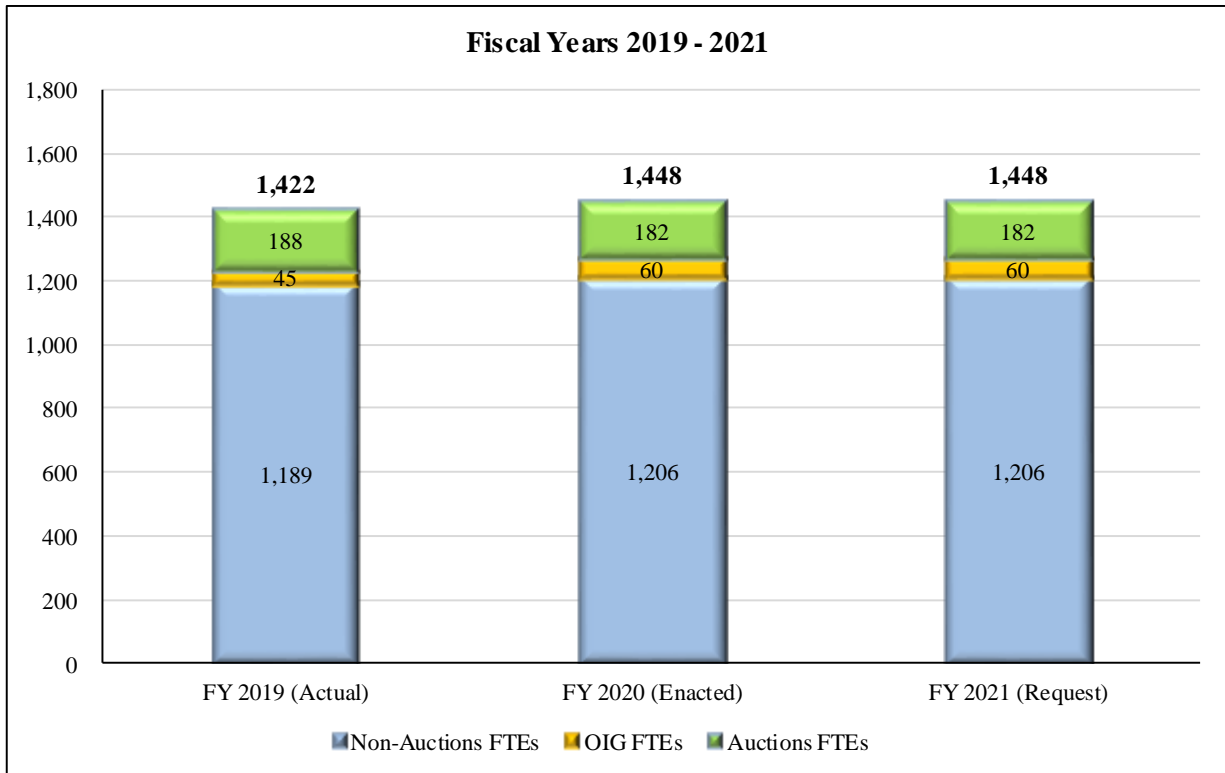
In FY 2021, the Commission also will continue to focus on communications, education, and outreach efforts to all stakeholders in the BIA. The Incentive Auction Task Force, together with the Media Bureau and the Consumer and Governmental Affairs Bureau, will continue to provide informational materials and data for broadcast stations, MVPDs, wireless microphone operators, and unlicensed users affected by the transition. The Commission will also maintain troubleshooting guides for the Commission's existing consumer call center staff, and Consumer Q&As and Consumer Guides in multiple languages. For example, the Commission will maintain and update the comprehensive "Post-Auction Transition" section of its website that will serve as a single point of reference for all transition information for stakeholders and a "TV Rescan" landing page on its website that provides resources to assist consumers with rescanning their TVs, a consumer-friendly overview of the transition, answers common questions, and links to additional consumer resources. These efforts will continue to be maintained and updated throughout both the transition period ending in 2020 and reimbursement period ending no later than July 3, 2023.

In addition to these post-BIA efforts, the Commission continues to plan for future auctions, most notably planned and potential auctions related to reallocating bands made available in the Spectrum Frontiers proceeding to terrestrial wireless use, new auctions for Citizens Broadband Radio Service (CBRS) (3.5 GHz band) licenses and overlay licenses for white spaces in the 2.5 GHz band, possible reallocation of and auctions of licenses for a portion of the 3.7-4.2 GHz band licenses that may be made available under the Mobile Now Act, and auction of the spectrum required by the Spectrum Pipeline Act of 2015. Other auctions that may continue to be a focus for the Commission in FY 2021 include re-auctions of certain licenses previously offered and not won or returned to the Commission (including AWS-3 and unsold 600 MHz licenses from the BIA). The Commission will also continue to leverage auctions expertise and infrastructure to support reverse auctions that allocate Universal Service funding in an efficient and effective manner. Specifically, the Commission is planning to make available up to \$20.4 billion in the Rural Digital Opportunity Fund to bring fixed broadband to unserved locations and has announced a plan to make available up to \$9 billion in the 5G Fund to support deployment of mobile broadband in unserved areas. In addition, the Commission is continually working to update and modernize its auction bidding and application systems to improve their speed, flexibility, reliability, and security to support timely new auctions when additional spectrum that could be made available is identified.

In addition, in FY 2021, the Commission will continue implementation of the RAY BAUM'S Act, including working with NTIA to identify 255 megahertz of additional spectrum (subject to certain frequency and use requirements) for mobile and fixed broadband use; preparing annual reports on upcoming systems of competitive bidding; and coordinating with NTIA on initiatives related to incentivizing Federal agencies to share spectrum allocations, bidirectional sharing, and potential commercial wireless use in the 3100-3550 MHz bands; and monitoring post-auction operations in bands subject to spectrum sharing and/or transition to new flexible uses.

The actual and estimated FTE levels for the spectrum auctions program for FYs 2019 through 2021 are shown below.

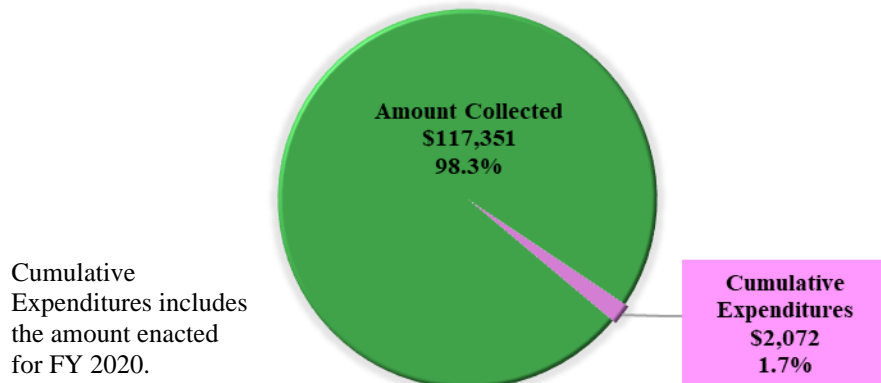
FTEs by Resource Category



The following two schedules provide some details of the spectrum auctions program since its inception in 1994. These schedules also provide some perspective into how much money was collected for the U.S. Treasury or for broader government use and the total cost for running the Commission’s spectrum auctions program.

Spectrum Auctions Program – Collections vs. Expenditures

Fiscal Years 1994 through December 2019
(Dollars in Millions)



Spectrum Auctions and Collections

Fiscal Years 1994 through December 2019

Fiscal Year	Number of Auctions	Number of Licenses Won	Amount Collected
1994	2	604	\$652,954,213
1995	2	129	8,234,321,194
1996	6	2,026	2,019,376,024
1997	4	1,614	2,205,922,232
1998	2	1,388	860,878,576
1999	6	1,693	499,598,688
2000	8	4,403	1,335,043,185
2001	4	3,447	583,599,901
2002	7	7,036	135,630,842
2003	7	3,144	77,121,620
2004	5	267	126,790,232
2005	6	2,803	2,208,332,556
2006	5	1,284	13,834,978,827
2007	5	293	163,429,971
2008	3	1,144	18,988,396,013
2009	2	115	5,695,861
2010	3	4,788	25,973,019
2011	3	126	31,493,200
2012	1	93	3,878,133
2013	2	3,197	5,783,780
2014	2	186	1,564,597,176
2015	2	1,611	41,756,297,008
2016	0	0	0
2017	1	2,776	19,306,458,498
2018	2	41	805,757
2019	3	5,880	2,723,513,065
Totals	93	50,088	\$117,350,869,571