All Silver.

ΛM	MENDMENT NO	Calendar No	
Pui	urpose: To require the Comptro States to study Federal spec Federal spectrum technology.		
IN	IN THE SENATE OF THE UNITED STATES—114th Cong., 2d Sess.		
	S. 2644		
То	o reauthorize the Federal Comm fiscal years 2017 and 2018, a		
R	Referred to the Committee on ordered to be	orinted and	
	Ordered to lie on the table	e and to be printed	
1	AMENDMENT intended to be pro himself and Mr. (
Viz	z:		
1	At the appropriate place, i	nsert the following:	
2	SEC FEDERAL SPECTR	UM TRANSPARENCY AND	
3	VALUE.		
4	(a) Spectrum Opportun	NITY COST STUDY AND RE-	
5	5 PORT.—		
6	(1) IN GENERAL.—N	ot later than 2 years after	
7	the date of enactment of	this Act, and every 2 years	
8	thereafter, the Comptrol	er General of the United	
9	States shall submit to the	appropriate committees of	
10	Congress a report on the	annual opportunity cost of	

1	each specific Federal spectrum band assigned to, or
2	otherwise allocated for use by, Federal entities.
3	(2) Scope.—Each report submitted under
4	paragraph (1) shall cover all federally allocated spec-
5	trum bands between 150 megahertz and 6000 mega-
6	hertz, inclusive.
7	(3) REQUIREMENTS.—Each report submitted
8	under paragraph (1) shall—
9	(Λ) define the term "opportunity cost" as
10	the value of the spectrum, in dollar terms, as
11	if such spectrum were to be reallocated on a li-
12	censed or unlicensed basis to the highest com-
13	mercial alternative use that currently does not
14	have access to that spectrum;
15	(B) take into account the national security
16	implications, including mission effectiveness, of
17	the potential transfer of Federal spectrum and
18	the ability of Federal entities to move to new
19	bands or share existing bands, and any limita-
20	tions on such moving or sharing;
21	(C) take into account the time required to
22	relocate and the cost of any potential relocation
23	or sharing of spectrum;
24	(D) take into account observed market
25	valuations from spectrum auctions, secondary

1	spectrum trading, and other market indicators
2	of spectrum value; and
3	(E) determine the opportunity costs of
4	spectrum assigned or otherwise allocated to
5	Federal entities on an exclusive or shared basis.
6	(b) Spectrum Technology Study.—
7	(1) In General.—Not later than 2 years after
8	the date of enactment of this Act, and every 5 years
9	thereafter, the Comptroller General of the United
10	States shall—
11	(A) examine the technologies and equip-
12	ment used by Federal entities operating on
13	Federal spectrum allocations; and
14	(B) determine whether such technologies
15	and equipment are the most spectrum-efficient
16	available compared to existing technology to as-
17	sist in efficient use of spectrum.
18	(2) Scope.—Each study conducted under para-
19	graph (1) shall cover all federally allocated spectrum
20	bands between 150 megahertz and 6000 megahertz,
21	inclusive.
22	(3) Considerations.—In conducting each
23	study under paragraph (1), the Comptroller General
24	shall take into account—

1	(A) limitations on the acceptance of new
2	technology and equipment such as design char-
3	acteristics of national security programs and
4	acquisition challenges associated with intro-
5	ducing new technologies into complex defense
6	programs with unique requirements, including
7	national security satellite programs; and
8	(B) the impact of accepting new technology
9	and equipment on mission effectiveness.
10	(4) CERTAIN DETERMINATIONS MADE.—If any
11	study required under paragraph (1) determines that
12	the technologies and equipment of Federal entities
13	operating on Federal spectrum allocations are not
14	the most spectrum-efficient available, the Comp-
15	troller General shall determine—
16	(A) what the costs would be to upgrade
17	such systems to more up-to-date and readily
18	available systems;
19	(B) what benefits would be gained from
20	upgrading, particularly any cost savings or in-
21	creases in spectrum utilization efficiency; and
22	(C) whether there are any potential prob-
23	lems with upgrading to more up-to-date sys-
24	tems.

1	(5) Reports.—The Comptroller General shal
2	submit to the appropriate committees of Congress a
3	report on each study required under paragraph (1)
4	(c) Sunset.—This section shall terminate on the
5	date that is 10 years after the date on which the first
6	report is submitted under subsection (a).
7	(d) Appropriate Committees of Congress De-
8	FINED.—For purposes of this section, the term "appro-
9	priate committees of Congress" means—
10	(1) the Committee on Commerce, Science, and
11	Transportation of the Senate;
12	(2) the Committee on Armed Services of the
13	Senate;
14	(3) the Select Committee on Intelligence of the
15	Senate;
16	(4) the Committee on Energy and Commerce of
17	the House of Representatives;
18	(5) the Committee on Armed Services of the
19	House of Representatives; and
20	(6) the Permanent Select Committee on Intel-
21	ligence of the House of Representatives.