

Universal Service Funding for Schools and Libraries Data

Challenges to working with E-rate Data

Factors Influencing E-rate Demand



- Number of applicants
 - › Increasing applicant counts and enrollment
- Discount rate of applicants
 - › Avg discount rate has increased 5% since 2000
- Location and type of applicant
- Changes in services and migration
- Demand shifting based on FCC Priority system

Challenges to Using E-rate Data



- Service categories a blunt classification system
- Internal Connections demand underreported
- Applicants submit multiple applications
- Applicants listed as different applicant types
- Data changes
 - › Requested amount zeroes out if FRN denied
 - › Discount rates change

Challenges to Using E-rate Data



- Applicants submit multiple applications
 - › Not all sites listed on one application
 - › Different application types
 - › Example: Miami Dade FY2012 (334 separate 471s)

Site Name	BEN	Disc.	Enroll	Priority One		Priority Two		Total	
				Pre-Disc	Requested	Pre-Disc	Requested	Pre-Disc	Requested
MIAMI SOUTHRIDGE HIGH SCH	36878	90%	2,005			238,981	265,535	238,981	265,535
MIAMI SPRINGS ELEM SCHOOL	36932	80%	657			77,082	96,353	77,082	96,353
MIAMI SPRINGS HIGH SCHOOL	36930	90%	1,846			171,195	190,216	171,195	190,216
MIAMI SPRINGS MIDDLE SCHOOL	36935	90%	1,615			161,526	179,472	161,526	179,472
MIAMI SUNSET HIGH SCHOOL	37036	80%	2,327			185,893	232,366	185,893	232,366
MIAMI-DADE COUNTY PUBLIC SCHOOLS	127722	83%	308,057	11,256,019	9,342,496	2,873,123	3,431,715	12,215,619	14,687,734
MILAM ELEMENTARY SCHOOL	36316	90%	1,129			162,484	180,537	162,484	180,537
MORNINGSIDE ELEMENTARY SCHOOL	36707	90%	452			128,021	142,246	128,021	142,246
				Total		11,294,646	9,373,398	40,621,128	47,928,762
								49,994,526	59,223,408

Challenges to Using E-rate Data



- Applicants listed as different applicant types
 - › Some sites appear on multiple applications
 - › Different application types
 - › Example: Albuquerque “Consortium” application

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Name of Eligible Entity	Entity Number AND NCES Code (for Schools) or FSCS Code (for Libraries)	Urban or Rural U or R	Total Number of Students	Number of Students Eligible for NSLP	Percent of Students Eligible for NSLP (Col. 5 / Col. 4)	Disc. from Disc. Matrix	New Construction	Admin Entity or NIF	Alt Disc Mech	Weighted Product for Calculating Shared Discount (Col. 4 x Col. 7)	Insert appropriate codes(s): P= pre-K, H = Head Start, A = Adult Education, J = Juvenile Justice, E = ESA, D = Dormitory	Entity Number of School District in which Library Outlet/Branch is Located	Discount of Member Entity	Shared Discount
ALL ENTITIES			SCHOOLS AND LIBRARIES							Schools with shared services	Schools	Library Outlet/Branch	Consortia	
ALBUQUERQUE SCHOOL DISTRICT	143253	U	0	0	0.000%	75				0			75	
SOUTH VALLEY ACADEMY	209847 35 00060 00809	U	253	236	93.281%	90	N	N	N	22770			90	
ROBERT F. KENNEDY CHARTER HIGH SCHOOL	228734 35 00060 00823	U	211	211	100.000%	90	N	N	N	18990			90	
NATIVE AMERICAN COMMUNITY CHARTER SCHOOL	16064571 35 0000 00000	U	382	334	87.435%	90	N	N	N	34380			90	

Albuquerque School District (FY2013)



- Uses consortium application
- Increases discount rate from 75% to 86%
- Telecomm/Internet: \$16.5M pre-discount
 - › 75% discount: \$12.4M request
 - › 86% discount: \$14.2M request
- Per Student: \$187 pre discount
 - › 75% discount: \$140 requested
 - › 86% discount: \$161 requested

Funding Requested Per Student



Top 18 Mega School Districts (FY2012)

Applicants	Per Student \$ Requested	Total Requested	Applicants	Per Student \$ Requested	Total Requested
New York City	\$340/student	\$329.9 million	Philadelphia	\$98/student	\$14.1 million
Houston	\$560/student	\$107.3 million	Prince George	\$112/student	\$13.9 million
San Diego	\$753/student	\$98.6 million	Broward County	\$53/student	\$11.9 million
Los Angeles	\$143/student	\$86.0 million	Hillsborough	\$48/student	\$9.2 million
Dallas	\$395/student	\$62.6 million	Memphis	\$86/student	\$8.7 million
Miami-Dade	\$162/student	\$50.0 million	Charlotte NC	\$38/student	\$5.4 million
Chicago	\$129/student	\$46.1 million	Montgomery	\$35/student	\$5.2 million
Orange County	\$96/student	\$16.4 million	Clark County	\$16/student	\$4.9 million
Palm Beach	\$88/student	\$14.7 million	Duval County	\$27/student	\$3.2 million

Funding Requested Per Student

Top 18 Large School Districts (FY2012)



Applicants	Per Student \$ Requested	Total Requested	Applicants	Per Student \$ Requested	Total Requested
Santa Ana	\$466/student	\$26.0 million	Saint Paul	\$444/student	\$16.1 million
Collier County	\$596/student	\$25.6 million	Glendale CA	\$599/student	\$15.8 million
El Paso	\$346/student	\$22.2 million	Newark	\$395/student	\$14.0 million
Knox County	\$354/student	\$20.5 million	Mobile AL	\$234/student	\$14.0 million
Richmond GA	\$635/student	\$19.5 million	Laredo	\$536/student	\$13.6 million
Detroit	\$329/student	\$19.0 million	Corpus Christi	\$345/student	\$13.3 million
Washoe NV	\$292/student	\$18.0 million	St. Louis	\$498/student	\$13.2 million
Jefferson KY	\$172/student	\$16.3 million	Bakersfield	\$430/student	\$12.6 million
Nashville	\$210/student	\$16.1 million	Berkeley SC	\$376/student	\$11.4 million

Funding Requested Per Student



Top 18 Moderate School Districts (FY2012)

Applicants	Per Student \$ Requested	Total Requested	Applicants	Per Student \$ Requested	Total Requested
Hemet CA	\$1,098/student	\$23.9 million	Idea TX	\$1,042/student	\$8.8 million
Norwalk CA	\$1,046/student	\$23.7 million	Franklin CA	\$900/student	\$8.7 million
Jurupa CA	\$1,025/student	\$21.3 million	Ozark MO	\$1,528/student	\$8.2 million
Val Verde CA	\$839/student	\$17.1 million	Bridgeport CT	\$355/student	\$7.7 million
Bibb Cnty GA	\$654/student	\$16.2 million	So. San Antonio	\$768/student	\$7.4 million
Yakima	\$974/student	\$14.2 million	Huntsville AL	\$315/student	\$7.2 million
Central CA	\$816/student	\$11.9 million	Decatur IL	\$731/student	\$6.3 million
Ceres CA	\$900/student	\$11.9 million	Alvord CA	\$311/student	\$6.2 million
Bellflower CA	\$713/student	\$10.0 million	Denton TX	\$238/student	\$5.9 million

Funding Requested Per Student

Top 18 Small School Districts (FY2012)



Applicants	Per Student \$ Requested	Total Requested	Applicants	Per Student \$ Requested	Total Requested
Camino Neuvo Chrtr CA	\$7,480/student	\$20.1 million	Lower Yukon AK	\$2,284/student	\$4.5 million
Lower Kuskokwim AK	\$4,392/student	\$17.4 million	Yes Prep SE TX	\$1,005/student	\$4.3 million
Duarte CA	\$1,771/student	\$7.1 million	Worth Cnty GA	\$1,301/student	\$4.2 million
Green Cnty GA	\$3,324/student	\$6.8 million	Kingsville TX	\$1,095/student	\$4.0 million
Whiteriver AZ	\$2,367/student	\$5.2 million	Penn Hills PA	\$880/student	\$3.8 million
Green Cnty KY	\$2,112/student	\$4.7 million	Tolleson AZ	\$1,299/student	\$3.8 million
Fitchburg MA	\$964/student	\$4.7 million	Coolidge AZ	\$988/student	\$3.7 million
Cassopolis MI	\$3,939/student	\$4.6 million	Responsive Ed Sol'n TX	\$912/student	\$3.7 million
Perspectives Charter IL	\$1,979/student	\$4.6 million	Cahokia IL	\$903/student	\$3.6 million

Evaluating NYC 2013 Request



	NYC FY2013 Requested Amount	% of FY2013 Funding Cap	Student Count	% of all U.S. Students	
Priority One (83% disc.)	\$ 204,360,297	8.7%	968,530	1.8%	\$211 per student
Priority Two					
90% disc.	\$ 250,792,824	10.7%	543,758	1.0%	\$461 per student
Below 90% disc.	\$ 112,496,173	4.8%	424,772	0.8%	\$265 per student
Overall	\$ 567,649,294	24.3%	968,530	1.8%	\$586 per student

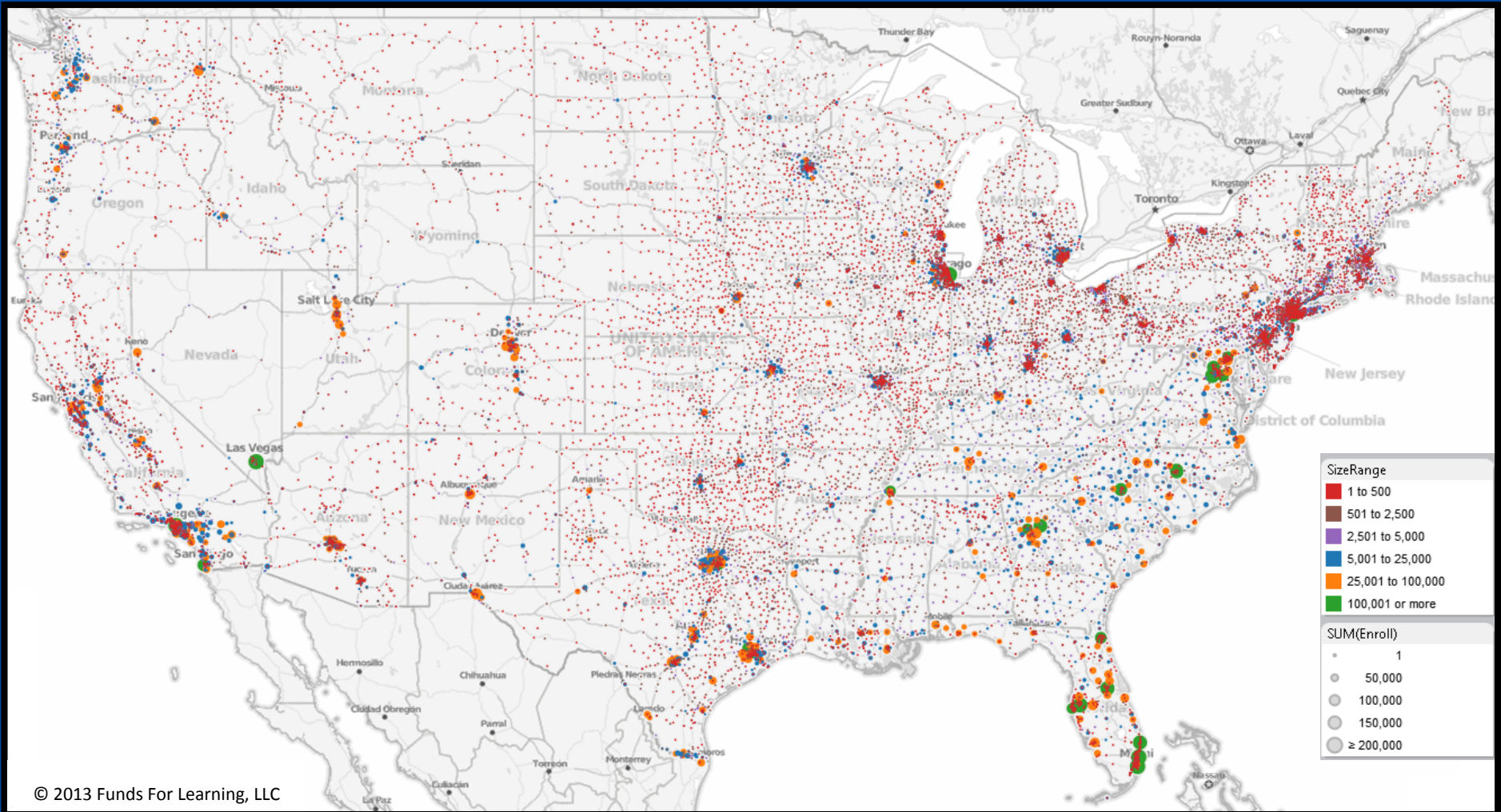
Effectiveness of E-rate Applicants



- Utilization of funding commitments
 - › Putting services to use in school/library
 - › Getting no more/no less they can effectively use
- Parity between telecomm/Internet and internal connections infrastructure
 - › Buying when it makes sense to buy
 - › Maintaining when it makes sense to maintain
 - › Making cost-effective decisions across service categories

E-rate Supports 52.2 Million Students

Applicants by Enrollment and Location

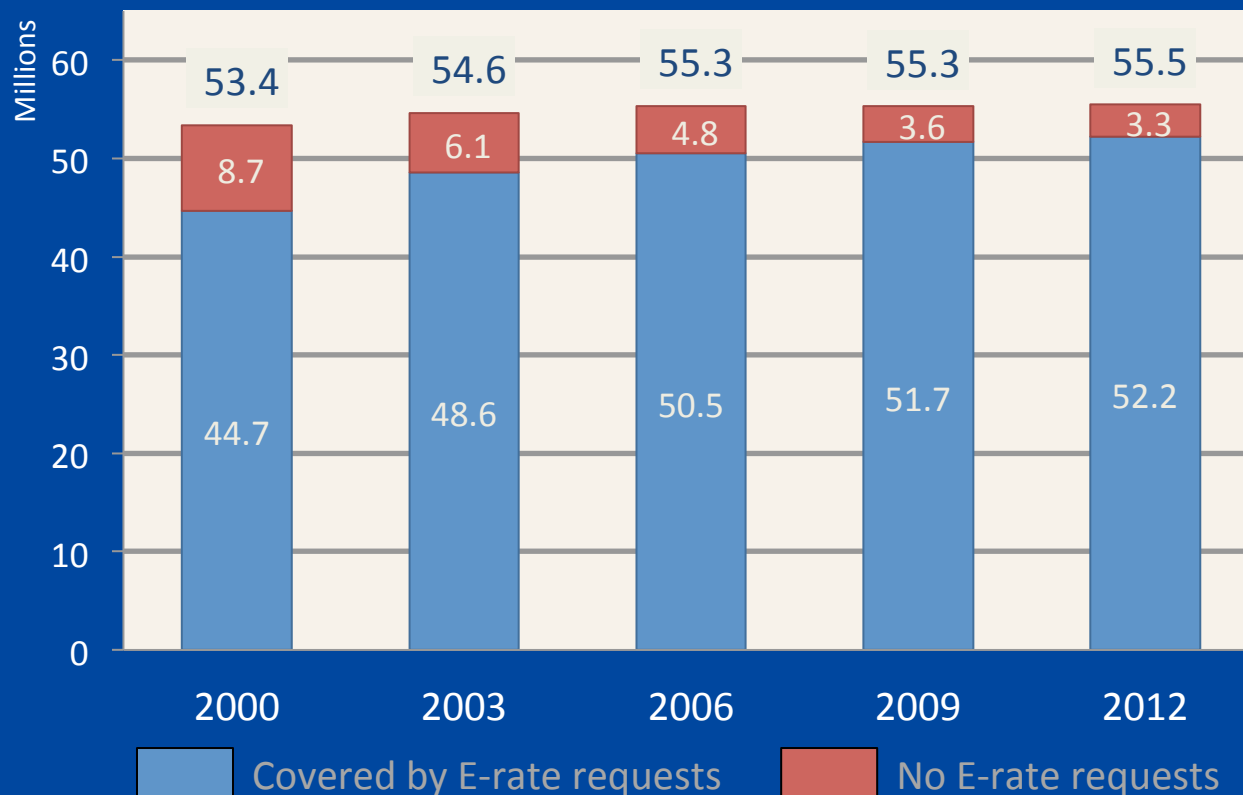


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E-rate impacts 95% of students



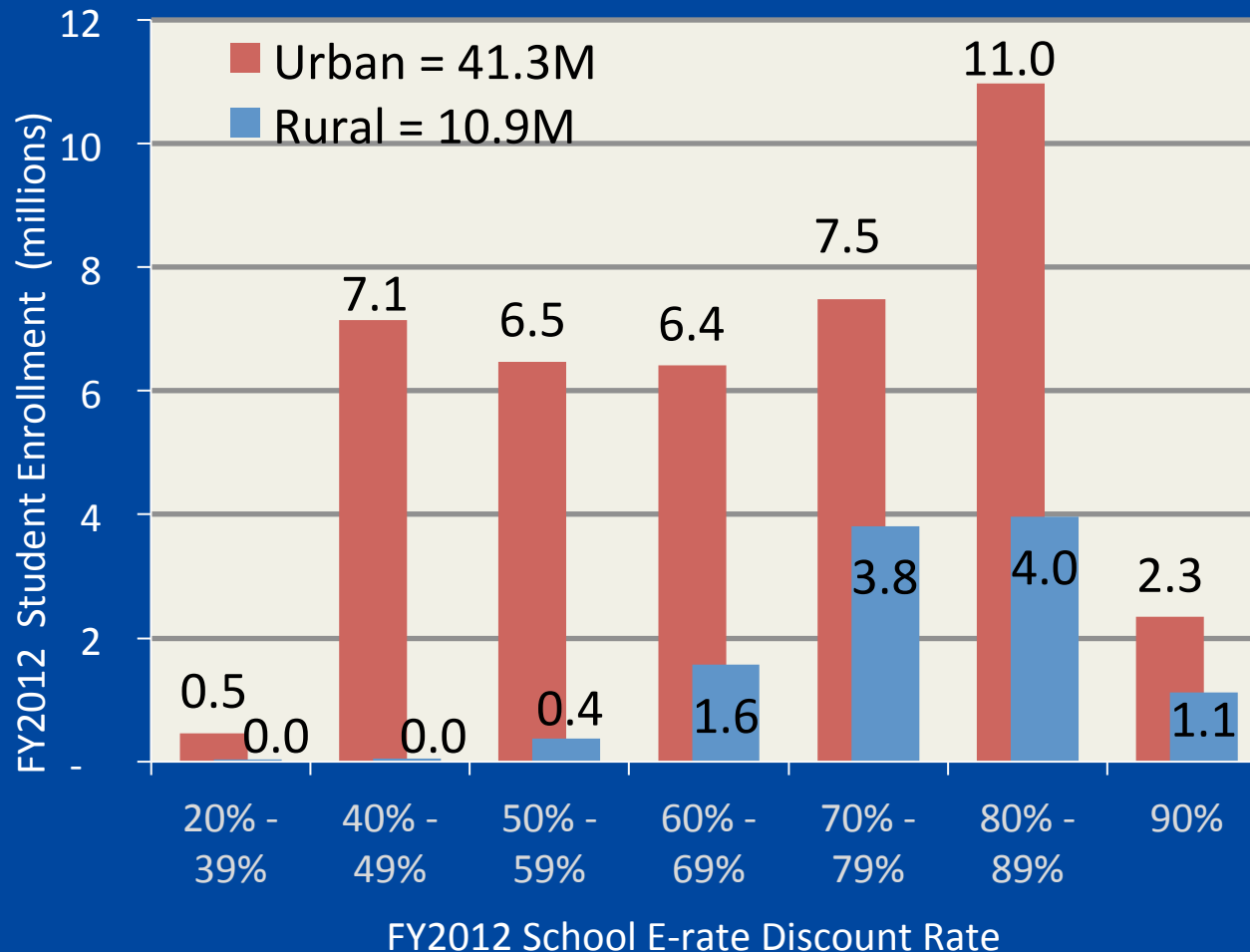
K-12 Public and Private Enrollment (Source: NCES¹)



- 55.5M K12 students
 - › Public
 - › Private
- 95% directly impacted by E-rate applications
- Every corner of country touched by E-rate dollars

¹ http://nces.ed.gov/programs/digest/d10/tables/dt10_002.asp?referrer=list; National 2012 enrollment projected using 2007-2010 enrollment

52.2 million Students Supported FY 2012 by Location and Discount Rate

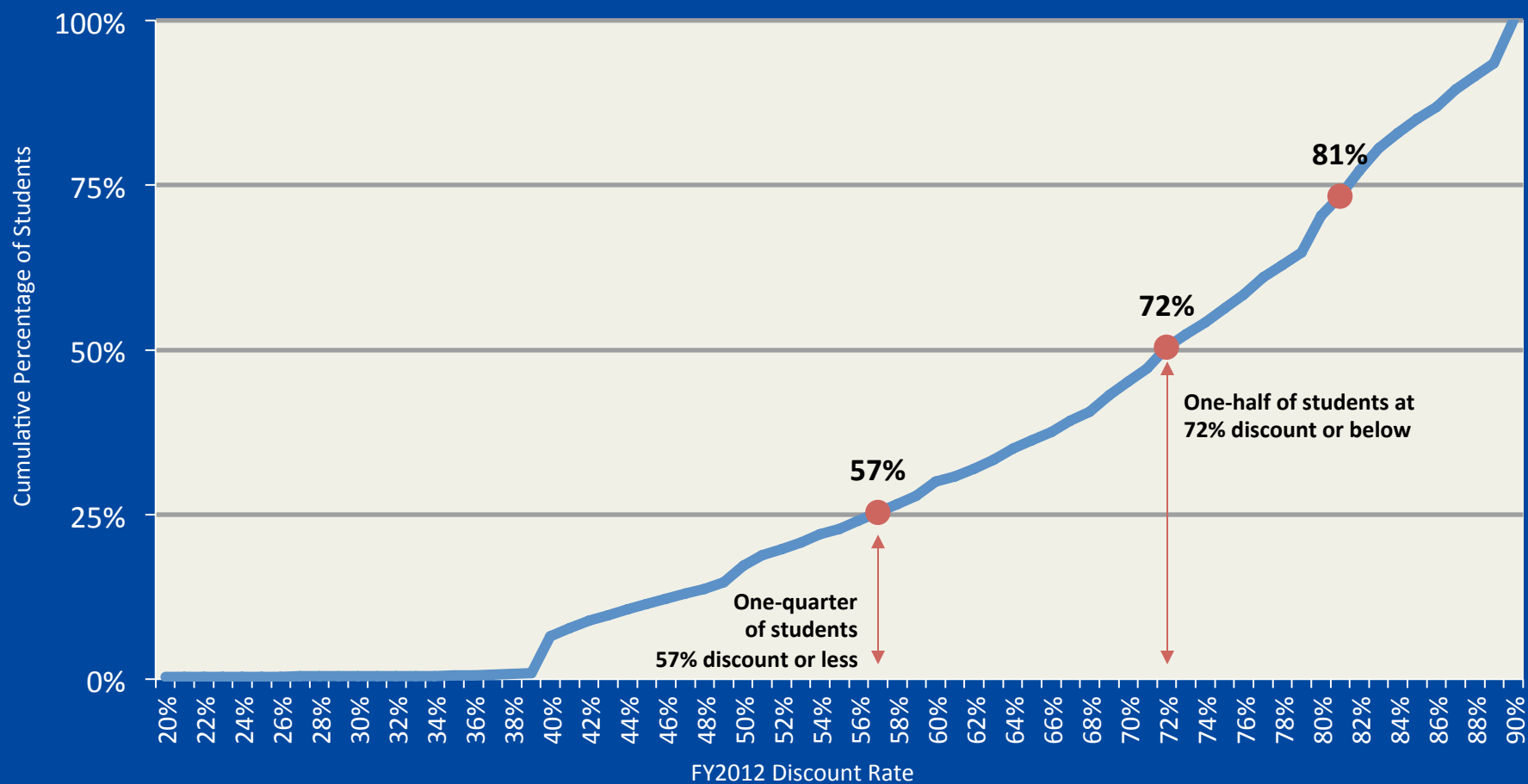


- 90%-disc schools
 - › 6.5% of all students
- 80%-89% disc
 - › 27% of urban enroll
 - › 37% of rural enroll
 - › In these schools, majority of students on NSLP

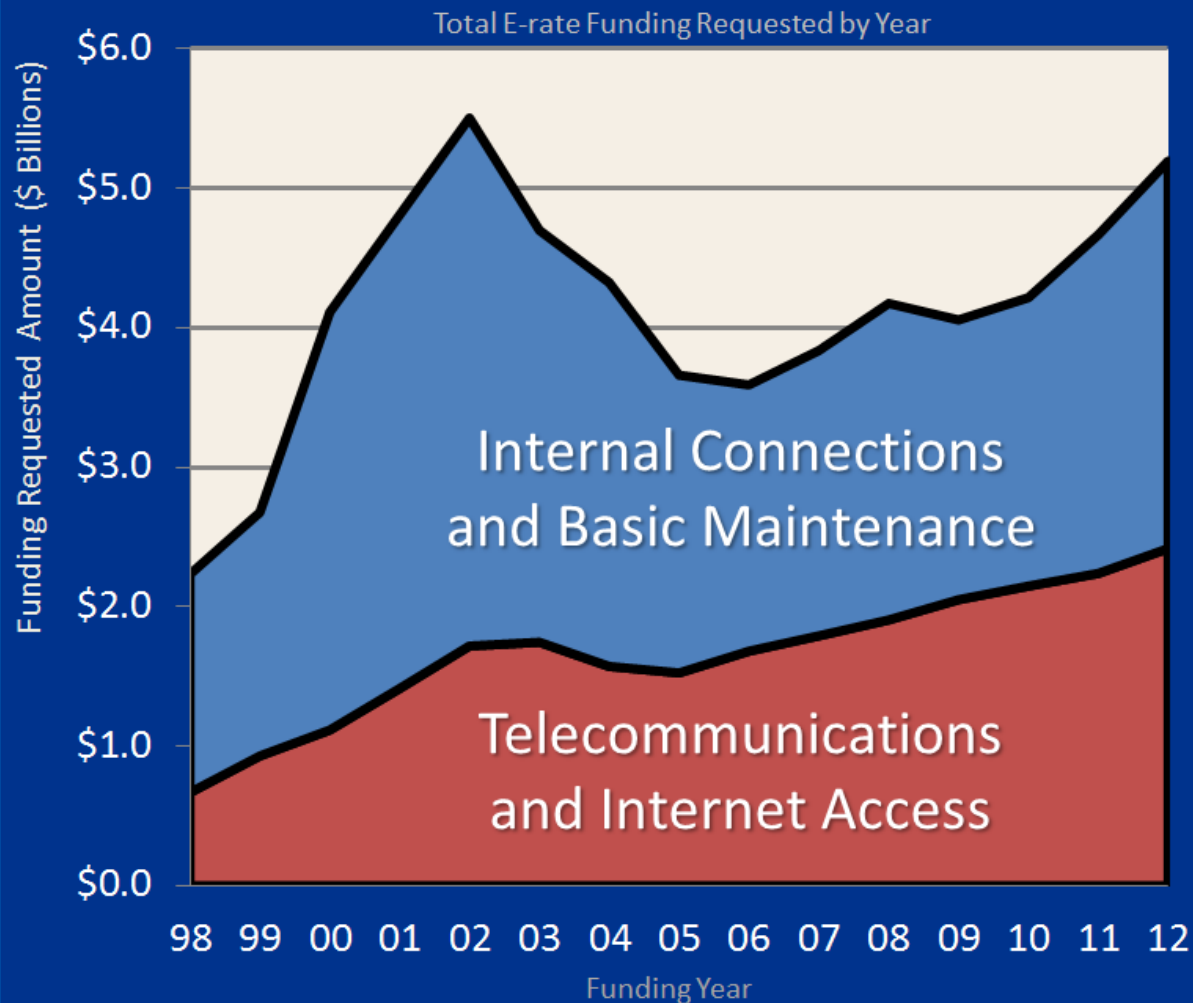
72% Median Discount Rate



Cumulative Percentage of Student Enrollment by Discount Rate of School (from 20% to 90%)



2012 E-rate Demand \$5.2 billion



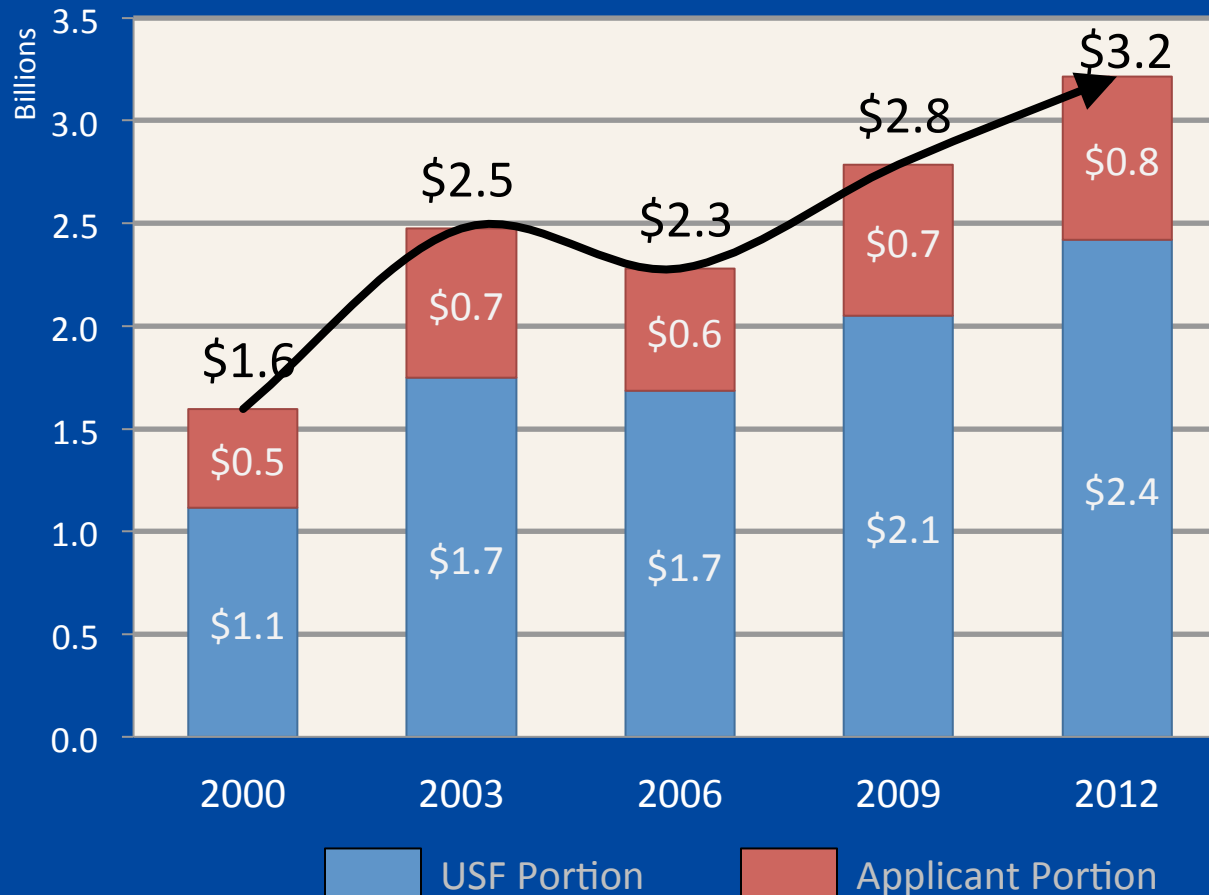
Straining E-rate

- FY2012: applicants requested \$5.2 billion
 - › \$2.4B Internet/Telco
 - › \$2.7B Int. conn/maint

Looking forward

- FY2013
 - › Limited funding for internal connections
- FY2014
 - › Telecomm and Internet funding reductions or discount thresholds

Demand has Doubled since 2000 for Internet and Telecommunications



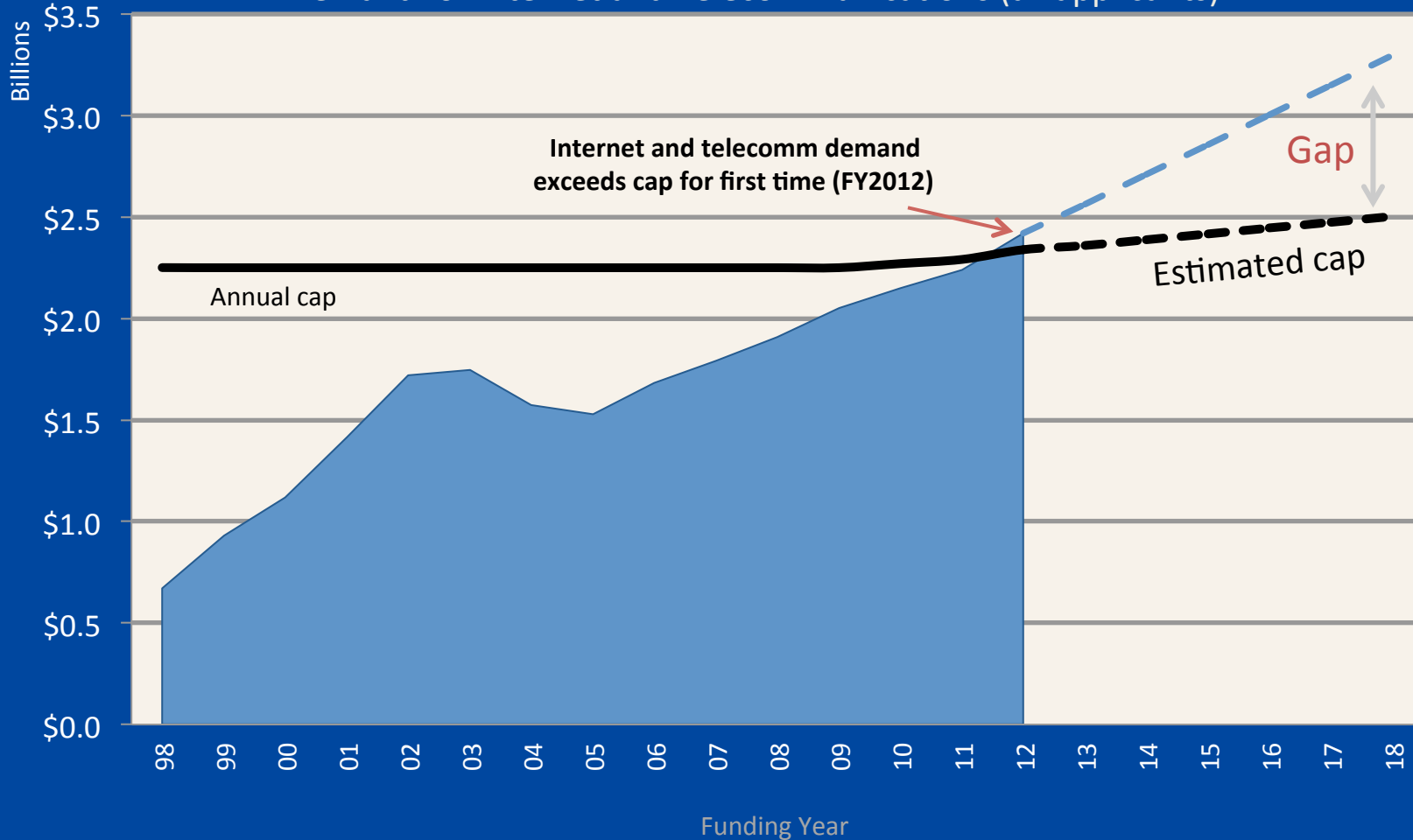
- E-rate applicants report \$3.2B Internet and telecomm (FY2012)
 - › \$2.4B USF
 - › \$0.8B Applicant
- 5% growth / year

Internet/Telco Demand Alone Exceeds Cap

Gap estimated at least \$750M+ by 2018



Demand for Internet and Telecommunications (all applicants)

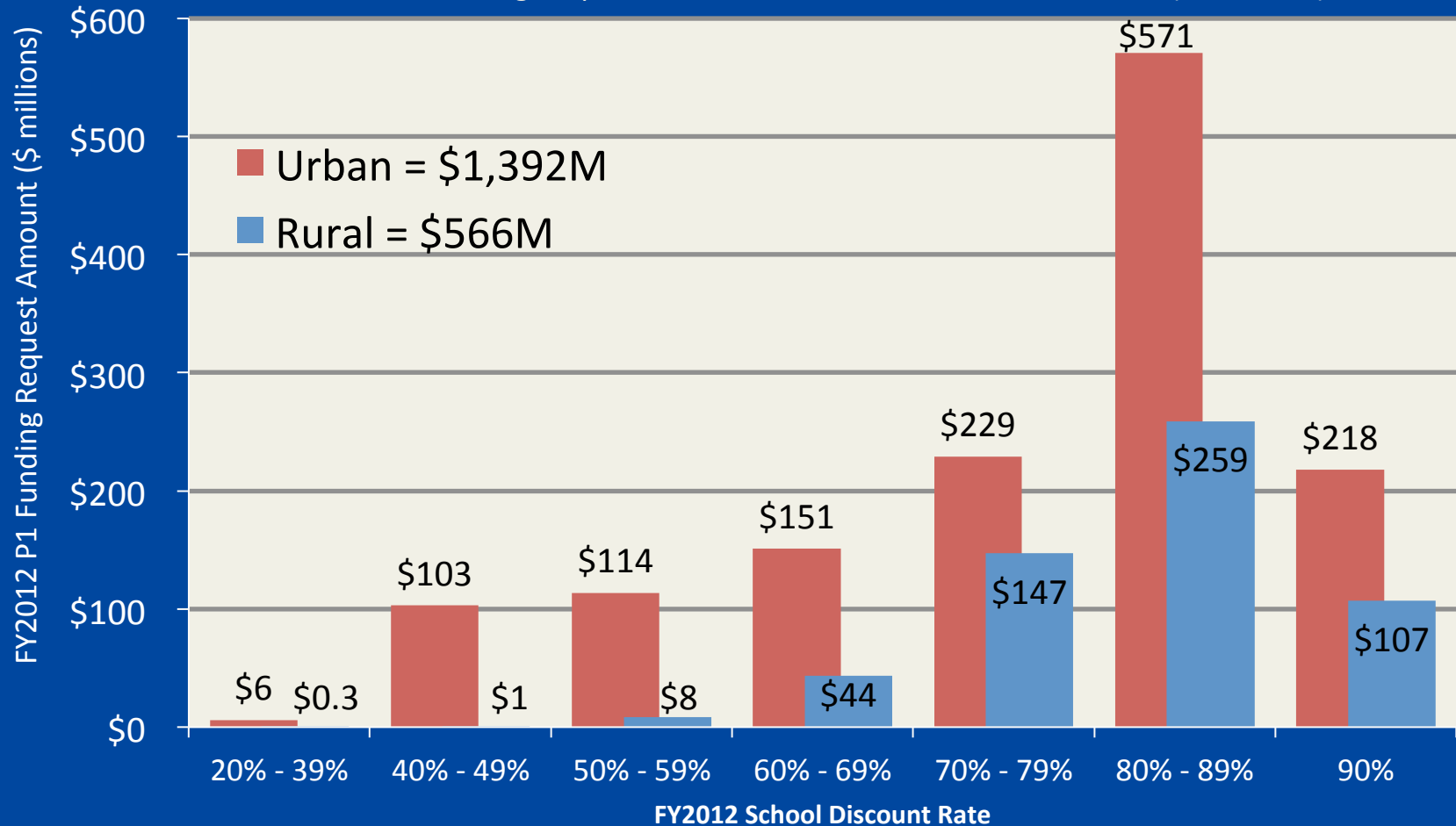


Internet/Telecomm E-rate Requests

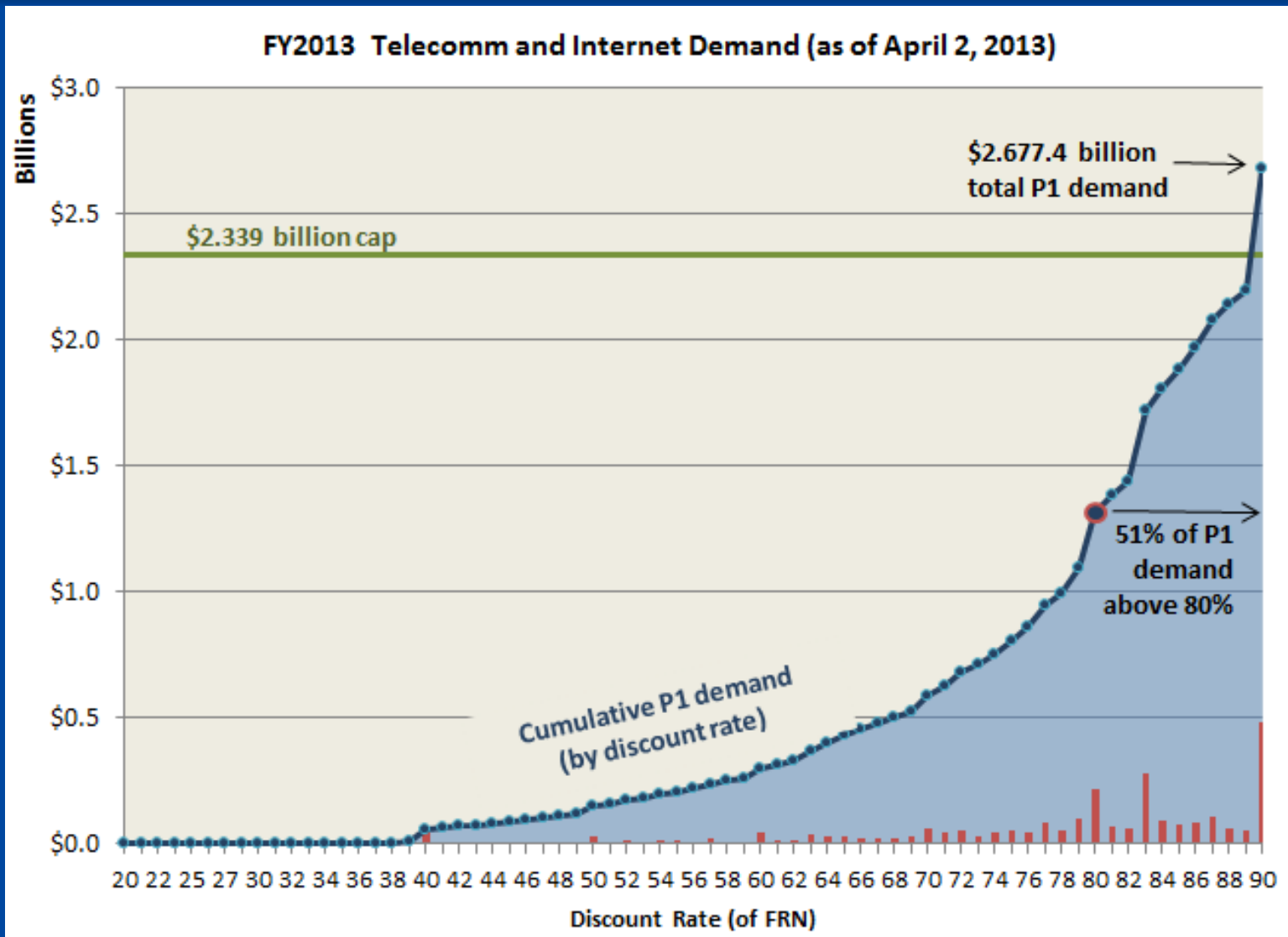
\$ millions (by Urban/Rural and Disc. Rate)



FY2012 Funding Requests for Internet and Telecommunications (all schools)



FY2013 P1 Demand



“Per Student” Analysis

Why Use Per Student Data?

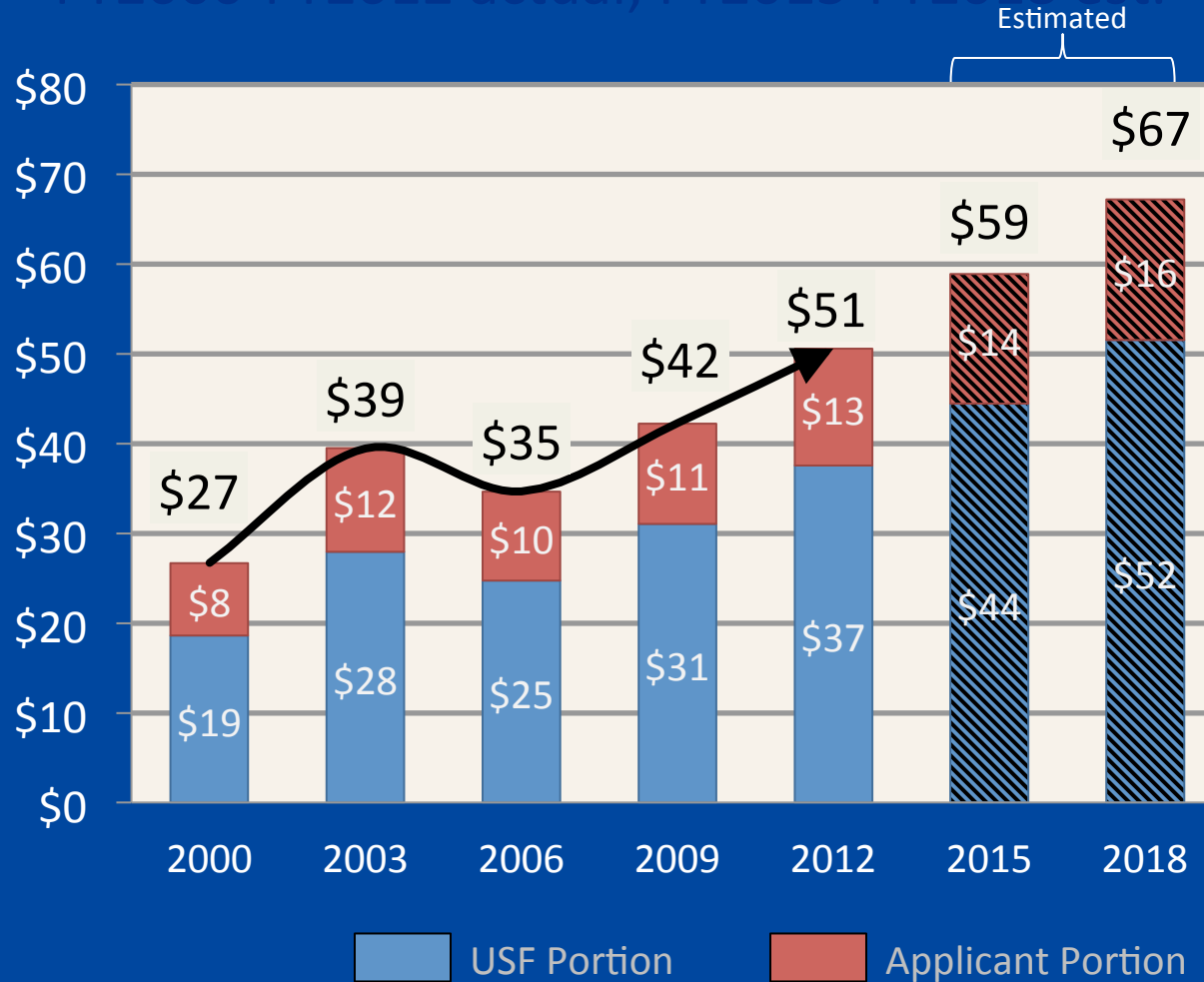


- Normalizes demand data by reducing impact of applicant size on statistics
- Easier to compare applicants
- Use of pre-discount per student amount yields clearest picture
- Provides a frame of reference to overall availability of funding

Internet-Telco Demand Per Student



FY2000-FY2012 actual; FY2015-FY2018 est.

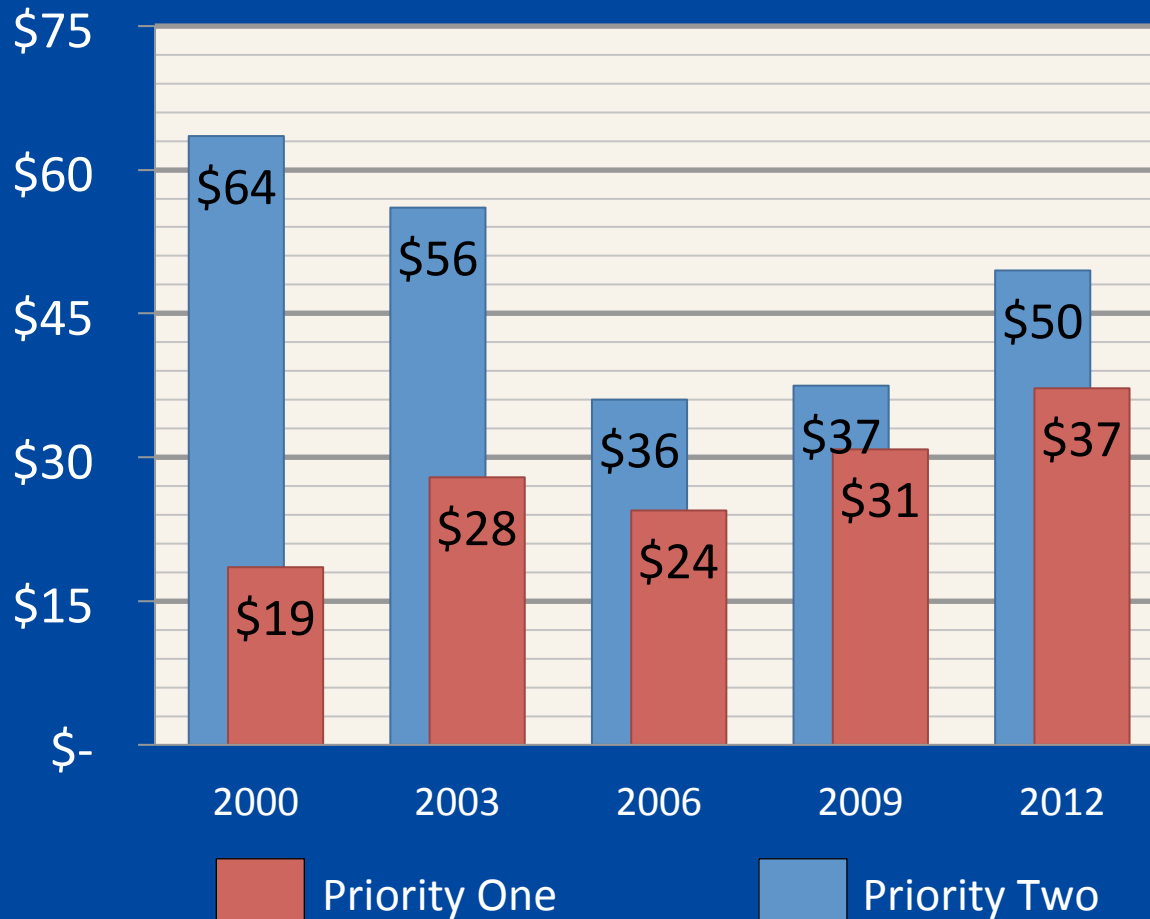


- FY2012 Avg \$51 per student:
 - › E-rate request \$37 per student
 - › Avg P1 E-rate disc 74.2% (for schools)
- From 2006-2009, P1 spending per student rises \$2.65/student per year

Funding Requested per Student



Average of Schools and School Districts



FY2012
P1 \$37/student
P2 \$50/student

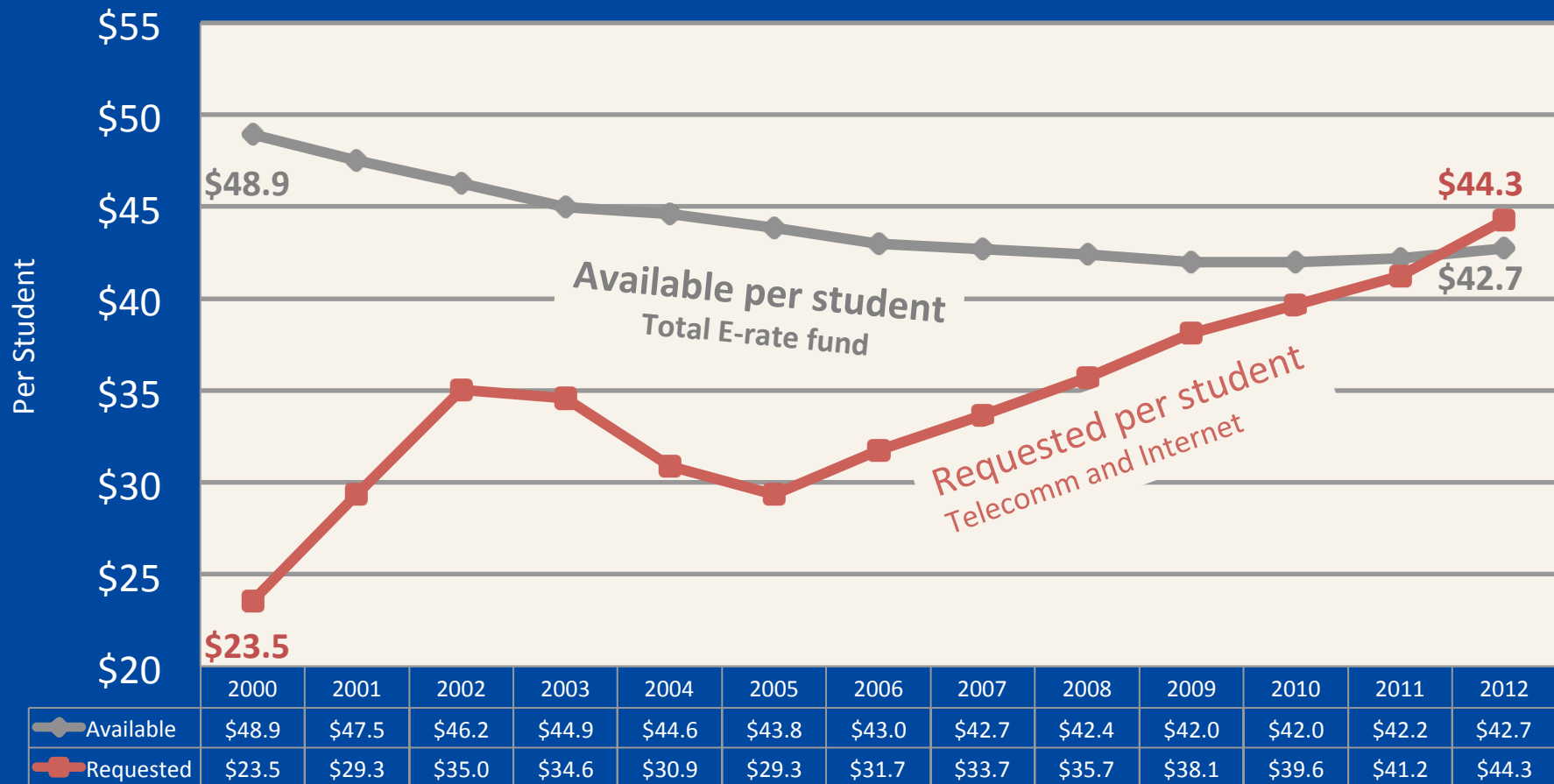
**Total \$87/
student**

Per Student E-rate Funding

Available vs Requested (Telecomm and Internet)



Includes consortia demand; Available amount calculated after subtracting library demand



USF provides \$43 per Student¹ with rollover \$63 per student



FY2012

- 52.5 million students listed
- \$2.339 billion indexed cap
 - > \$43 per student
- \$3.389 billion with rollover
 - > \$63 per student

¹ Available dollars calculated after subtracting library demand from cap. Average annual library demand: \$98.3 million.

Per Student Funding Request

FY2012 School Telecomm and Internet



By Enrollment

Applicant Disc. Rate	Applicant Enrollment					Overall
	1 to 500	501 to 2,500	2,501 to 5,000	5,001 to 25,000	25,001 or more	
20% - 39%	\$15.28	\$13.37	\$12.38	\$11.66	\$12.13	\$12.72
40% - 49%	\$18.84	\$19.68	\$13.79	\$12.41	\$11.96	\$14.39
50% - 59%	\$29.69	\$22.42	\$17.63	\$17.72	\$14.81	\$17.80
60% - 69%	\$40.87	\$29.13	\$27.30	\$24.14	\$20.74	\$24.46
70% - 79%	\$69.94	\$41.80	\$39.82	\$35.66	\$24.07	\$33.30
80% - 89%	\$98.60	\$64.59	\$67.44	\$50.62	\$49.89	\$55.58
90%	\$168.70	\$118.45	\$85.52	\$60.51	\$39.72	\$93.69
Overall	\$85.61	\$47.13	\$38.56	\$32.28	\$31.45	\$37.50

Excludes libraries and most consortia

Per Student Funding Request

FY2012 School Telecomm and Internet



By Location

Applicant Disc. Rate	CGCS	Other Urban	Rural excl. remote	Remote Rural*	Overall
20% - 39%		\$12.88	\$11.25	\$14.07	\$12.72
40% - 49%		\$14.41	\$14.24	\$44.51	\$14.39
50% - 59%		\$17.25	\$19.86	\$34.48	\$17.80
60% - 69%	\$24.59	\$23.49	\$26.05	\$49.04	\$24.46
70% - 79%	\$26.38	\$32.75	\$37.74	\$43.49	\$33.30
80% - 89%	\$55.77	\$49.64	\$59.10	\$124.01	\$55.58
90%		\$87.83	\$104.87	\$173.51	\$93.69
Overall	\$46.41	\$33.34	\$39.71	\$88.25	\$37.50

Excludes libraries and most consortia

Telecomm and Internet Requests FY2012 by Discount Rate and Location



FY2012

Applicant Disc. Rate	CGCS	Other Urban	Rural excl. remote	Remote Rural*	Total
20% - 39%		\$5,736,707	\$554,529	\$18,302	\$6,309,538
40% - 49%		\$84,083,483	\$19,301,364	\$131,692	\$103,516,539
50% - 59%		\$94,815,337	\$26,689,805	\$509,601	\$122,014,743
60% - 69%	\$10,383,212	\$137,127,785	\$41,280,065	\$6,212,628	\$195,003,690
70% - 79%	\$43,704,818	\$224,268,424	\$87,230,829	\$21,090,177	\$376,294,248
80% - 89%	\$252,709,976	\$365,425,691	\$150,434,834	\$61,479,288	\$830,049,789
90%		\$240,928,603	\$63,401,256	\$20,283,795	\$324,613,654
Grand Total	\$306,798,006	\$1,152,386,030	\$388,892,682	\$109,725,483	\$1,957,802,201

* Remote rural based on Department of Education locale designation "43"

School Telecomm and Internet Per Student Funding Request



By discount rate of applicant and location type
 FY2012 funding requests for schools and school districts

Applicant Disc. Rate	Urban	Rural excl. remote	Remote Rural*	Overall
20% - 39%	\$12.88	\$11.25	\$14.07	\$12.72
40% - 49%	\$14.41	\$14.24	\$44.51	\$14.39
50% - 59%	\$17.25	\$19.86	\$34.48	\$17.80
60% - 69%	\$23.56	\$26.05	\$49.04	\$24.46
70% - 79%	\$31.51	\$37.74	\$43.49	\$33.30
80% - 89%	\$51.98	\$59.10	\$124.01	\$55.58
90%	\$87.83	\$104.87	\$173.51	\$93.69
Overall	\$35.44	\$39.71	\$88.25	\$37.50

* Remote rural based on Dpmt of Education locale designation "43"

Excludes libraries and most consortia

Per Student Funding Request

FY2012 School Telecomm and Internet



By Enrollment

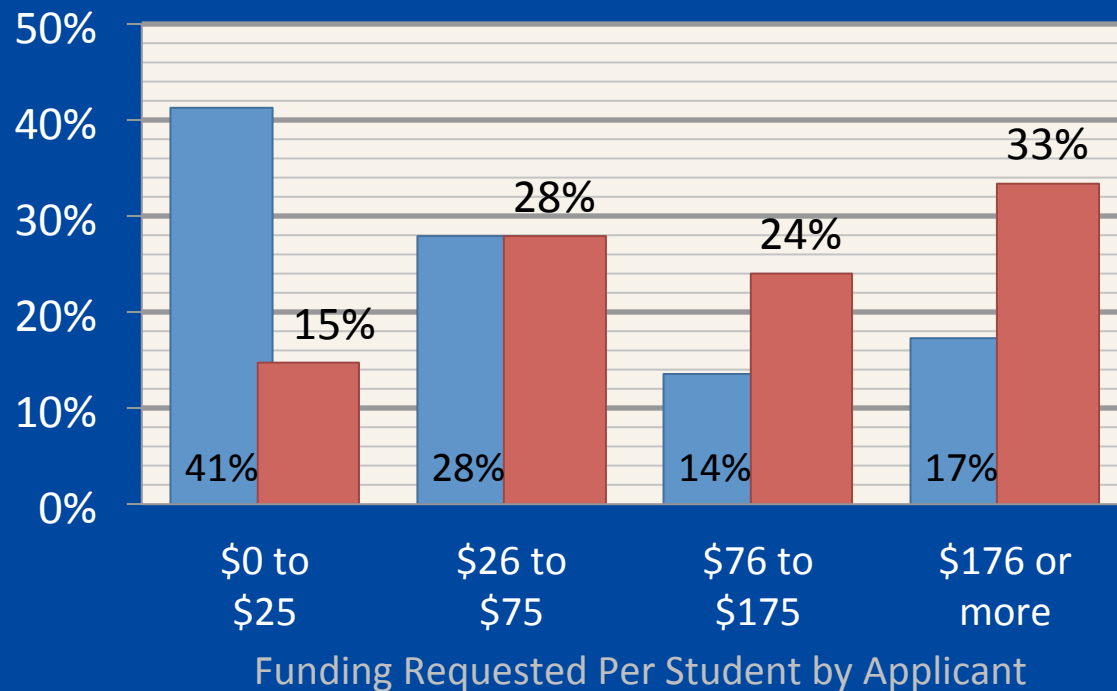
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40% - 49%	\$18.84	\$19.68	\$13.79	\$12.41	\$11.96	\$14.39
50% - 59%	\$29.69	\$22.42	\$17.63	\$17.72	\$14.81	\$17.80
60% - 69%	\$40.87	\$29.13	\$27.30	\$24.14	\$20.74	\$24.46
70% - 79%	\$69.94	\$41.80	\$39.82	\$35.66	\$24.07	\$33.30
80% - 89%	\$98.60	\$64.59	\$67.44	\$50.62	\$49.89	\$55.58
90%	\$168.70	\$118.45	\$85.52	\$60.51	\$39.72	\$93.69
Overall	\$85.61	\$47.13	\$38.56	\$32.28	\$31.45	\$37.50

Excludes libraries and most consortia

High “Per Student” Requests Equal One-third of P1 Requests



FY2012



- 17% of applicants request \$176 per student or more
- These applicants represent 33% of P1 \$ request

Percentage of applicants who request this amount per student

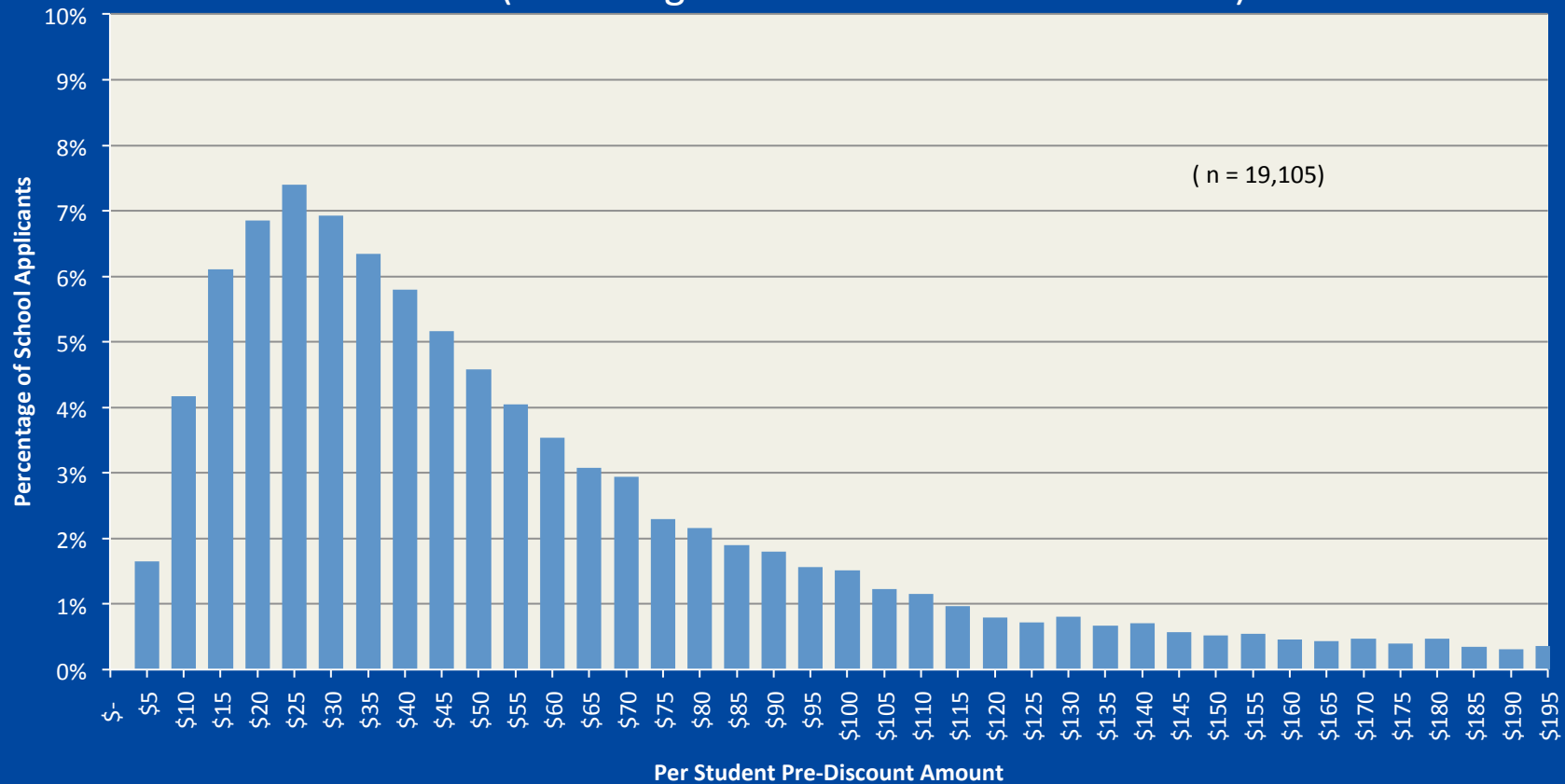
Percentage of P1 funding requested by applicants who request this amount per student

Distribution of School Funding Requests Per Student Basis

Distribution of Applicants Based on Per Student Expenditures



Pre-Discount Telecommunications & Internet Expense
Percentage of Applicants Based on Per Student Dollar Amount
 All Schools (excluding schools with enrollment <100)

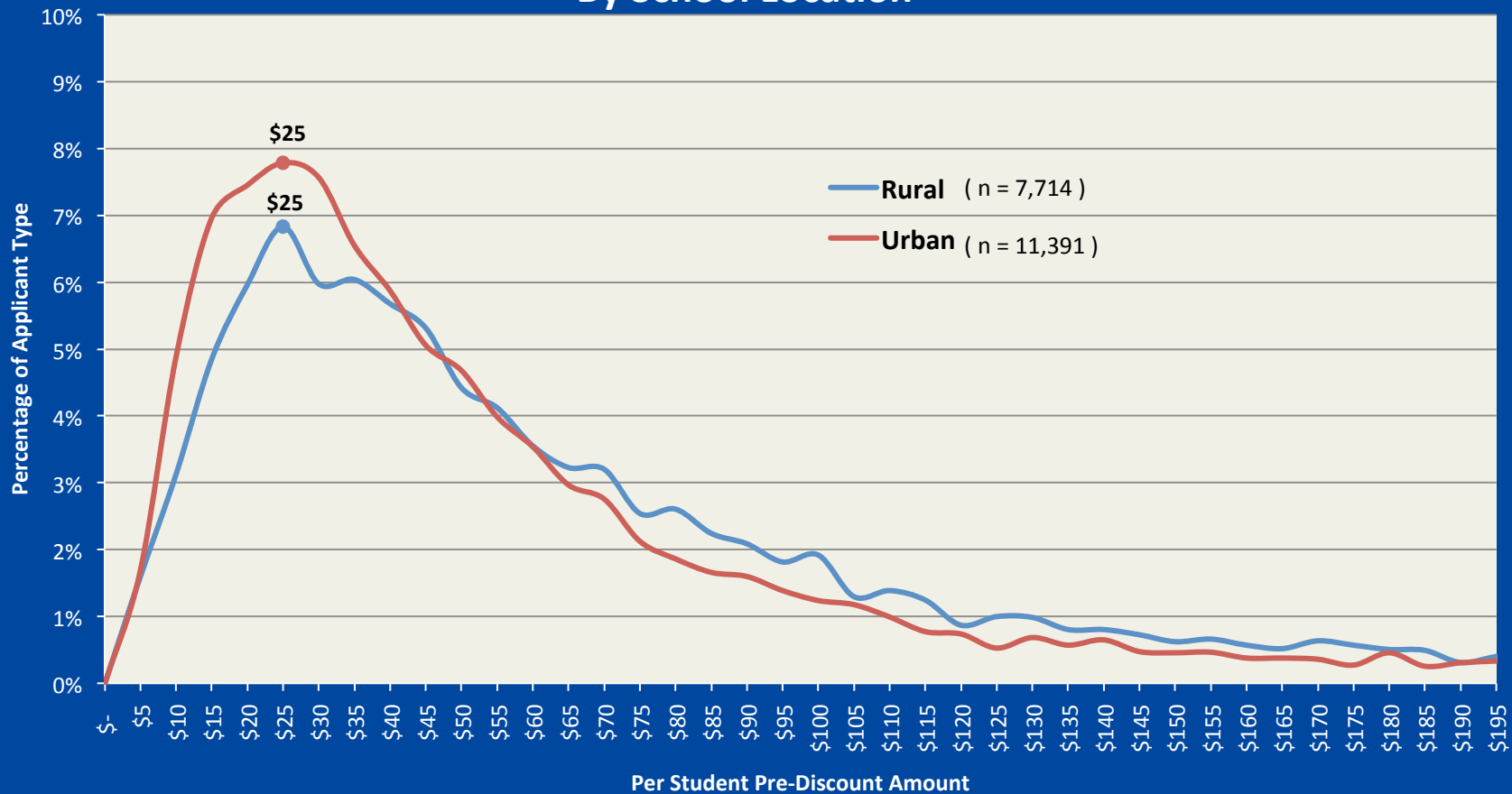


Based on FY2012 E-rate Applications for Schools and School Districts, excluding applicants with fewer than 100 students

Distribution of Applicants Based on Per Student Expenditures



Pre-Discount Telecommunications & Internet Expense
**Percentage of Applicants Based on Per Student Dollar Amount
 By School Location**

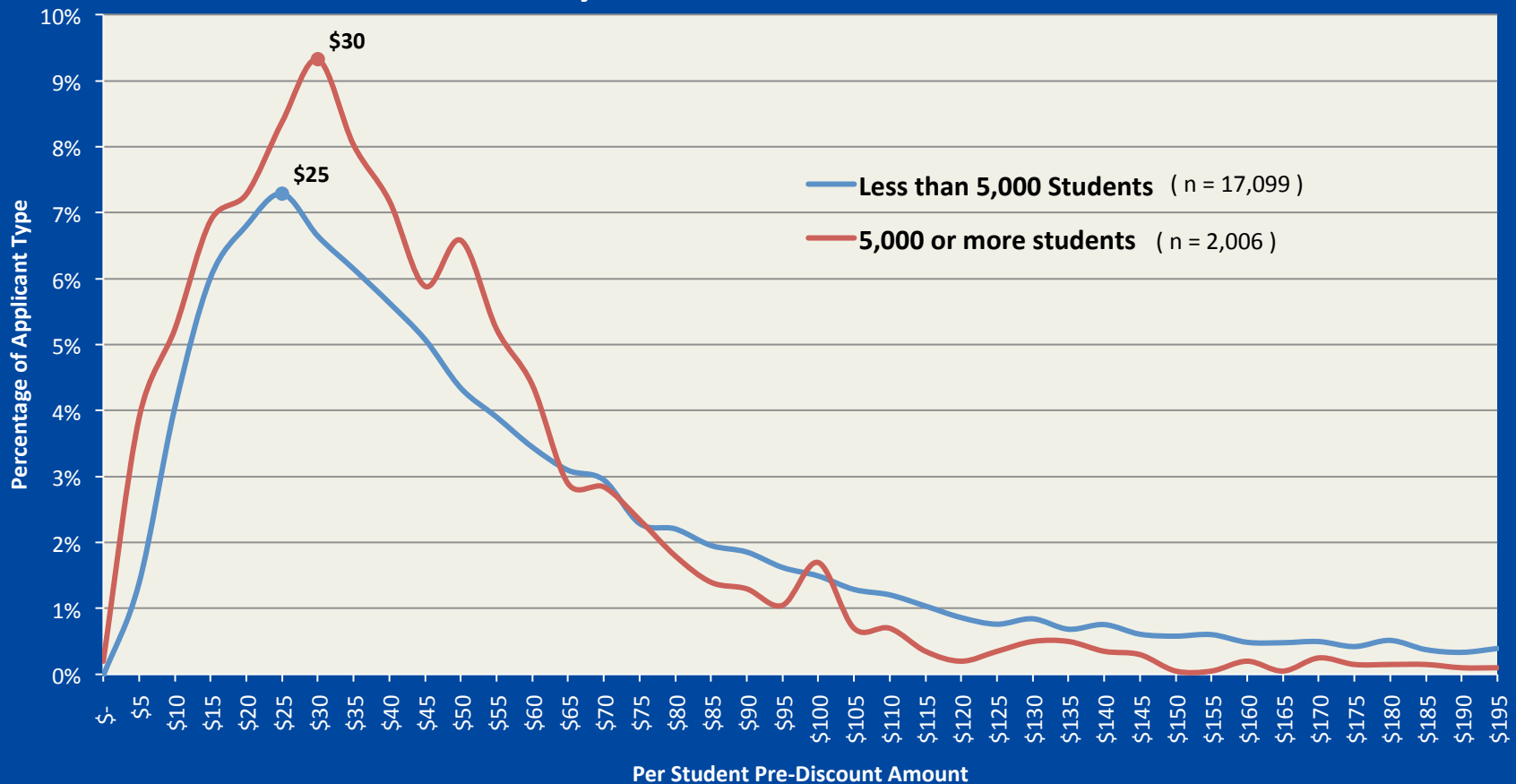


Based on FY2012 E-rate Applications for Schools and School Districts, excluding applicants with fewer than 100 students

Distribution of Applicants Based on Per Student Expenditures



Pre-Discount Telecommunications & Internet Expense
**Percentage of Applicants Based on Per Student Dollar Amount
 By School Enrollment**

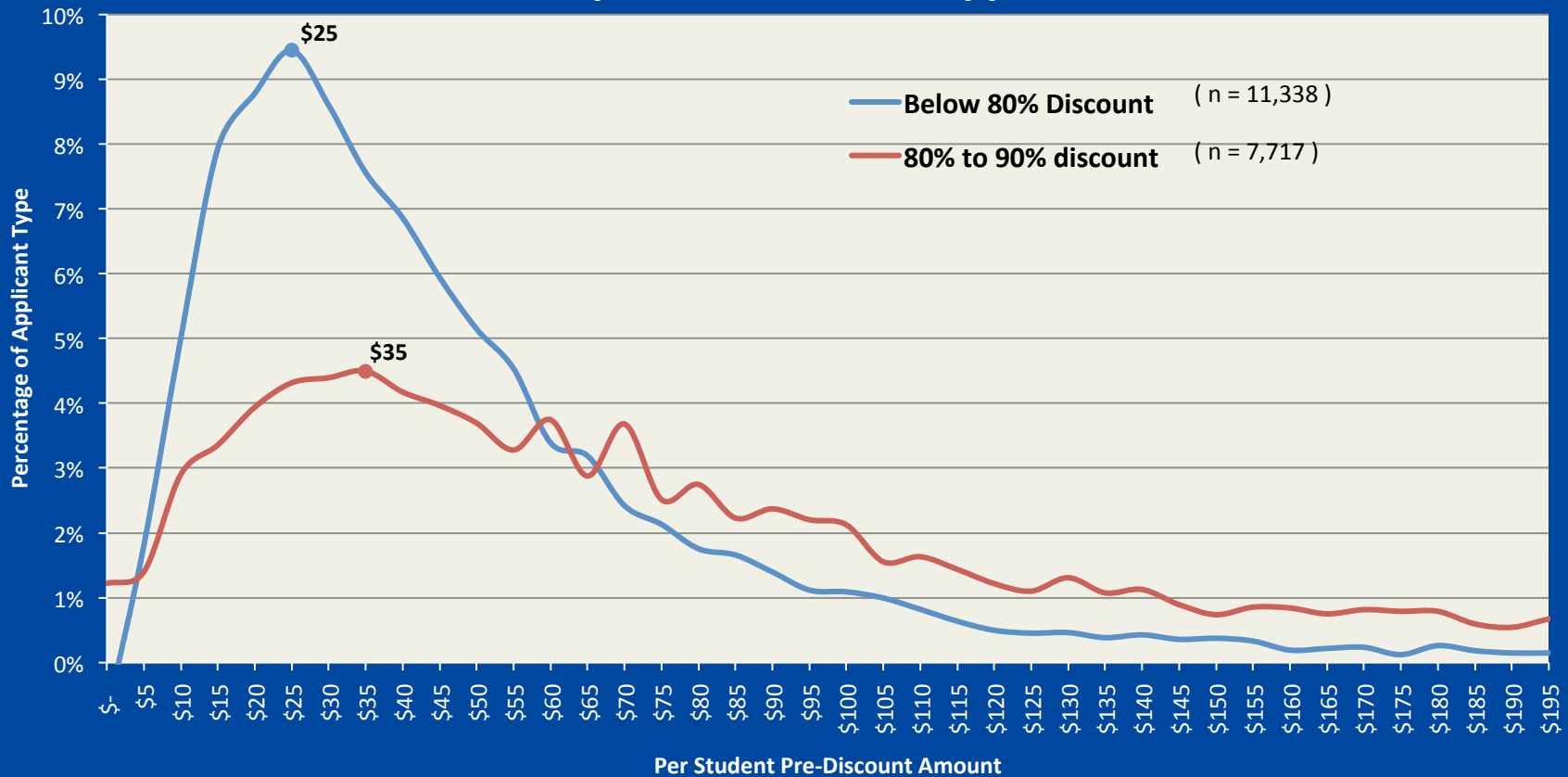


Based on FY2012 E-rate Applications for Schools and School Districts, excluding applicants with fewer than 100 students

Distribution of Applicants Based on Per Student Expenditures



Pre-Discount Telecommunications & Internet Expense
**Percentage of Applicants Based on Per Student Dollar Amount
 By Discount Rate of Applicant**



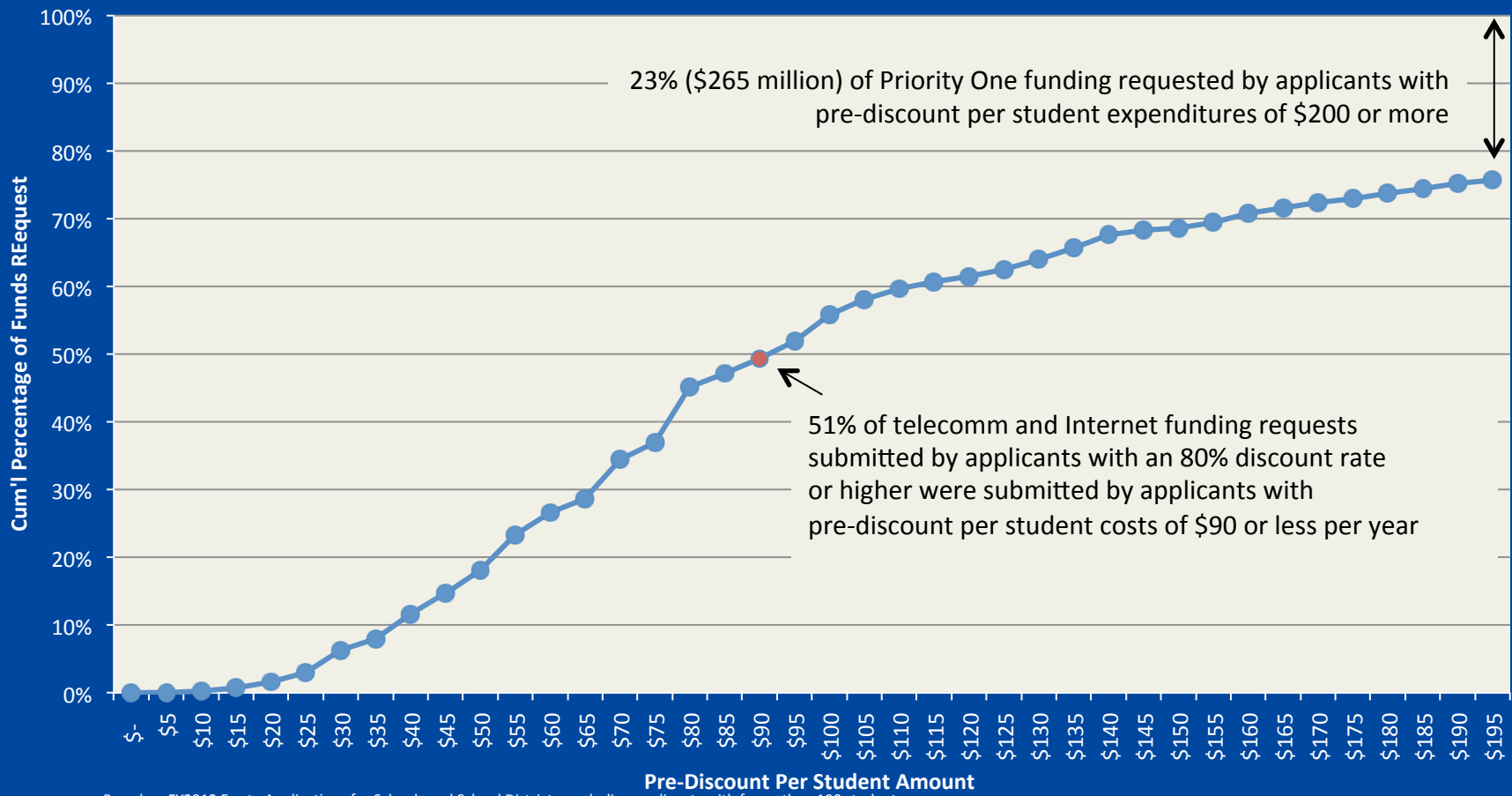
Based on FY2012 E-rate Applications for Schools and School Districts, excluding applicants with fewer than 100 students

\$1.15 Billion Telecomm and Internet Requested by Applicants 80%+ Discount



FY2012 Telecommunications & Internet Funding Requests

Cum'l % of Funds Requested by Applicants (80% Disc or higher) By Applicant Pre-Discount Per Student Telecomm and Internet Expense



Based on FY2012 E-rate Applications for Schools and School Districts, excluding applicants with fewer than 100 students

Reviewing Demand based on Service Provider Type

Growth in Telecomm and Internet 2008 vs 2012



		2008	2012	Difference	Change
Traditional Carriers	Pre-Discount Amount	\$1,586,737,659	\$1,880,368,956	\$293,631,297	+19%
	Funding Requested	\$1,133,509,663	\$1,409,792,526	\$276,282,863	+24%
	Applicant Count	12,199	14,622	2,423	+20%
	Student Count	47,675,512	52,212,395	4,536,883	+10%
	Per Student Pre-Discount Cost	\$33.28	\$36.01	\$2.73	+8%
Cellular Service	Pre-Discount Amount	\$238,280,974	\$372,280,952	\$133,999,978	+56%
	Funding Requested	\$170,095,943	\$286,039,543	\$115,943,600	+68%
	Applicant Count	11,418	13,380	1,962	+17%
	Student Count	44,907,196	50,074,019	5,166,823	+12%
	Per Student Pre-Discount Cost	\$5.31	\$7.43	\$2.13	+40%
Other Providers	Pre-Discount Amount	\$96,068,065	\$155,760,246	\$59,692,181	+62%
	Funding Requested	\$70,802,685	\$117,074,086	\$46,271,401	+65%
	Applicant Count	2,570	3,676	1,106	+43%
	Student Count	8,250,739	10,146,355	1,895,616	+23%
	Per Student Pre-Discount Cost	\$11.64	\$15.35	\$3.71	+32%
E-mail / Web Hosting Service	Pre-Discount Amount	\$25,899,194	\$45,909,382	\$20,010,188	+77%
	Funding Requested	\$19,422,858	\$36,022,661	\$16,599,803	+85%
	Applicant Count	1,995	4,208	2,213	+111%
	Student Count	9,718,919	16,260,968	6,542,049	+67%
	Per Student Pre-Discount Cost	\$2.66	\$2.82	\$0.16	+6%

Growth in Telecomm and Internet

2008 vs 2012



Growth in Per Student Telecommunications and Internet Expenses
School Expenditures 2008 vs 2012

