Broadband Update and PSFA Broadband Procurement Progress

Public School Capital Outlay Oversight Task Force

October 25, 2021

PSFA Presenters:

Martica Casias, Director (Interim)
Ovidiu Viorica, Broadband and Technology Program Manager



Partnering with New Mexico's communities to provide quality, sustainable school facilities for our students and educators.

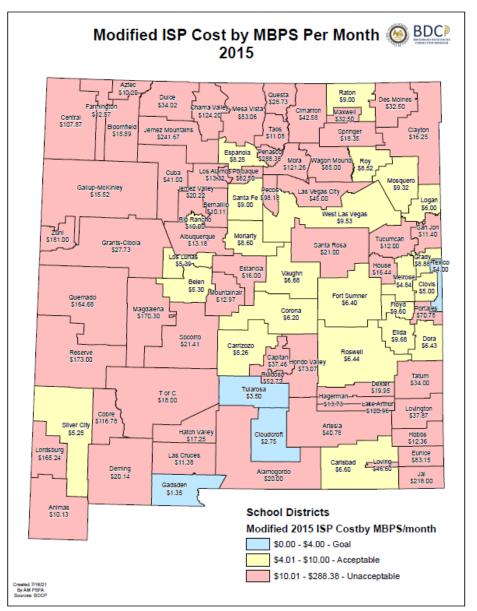
Agenda

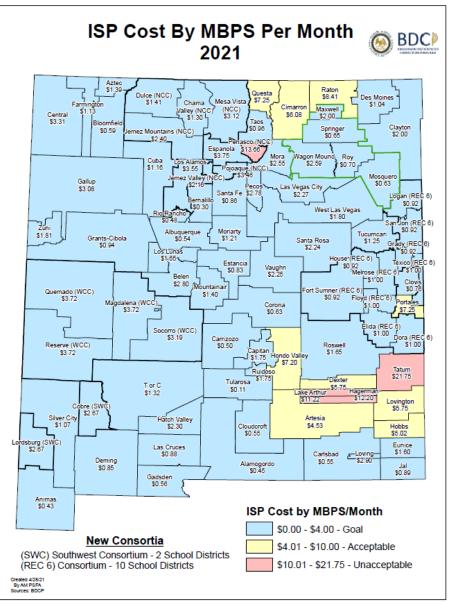
- PSFA Broadband Program Background.
- SB144 What is it?
 - 1. Student Connectivity.
 - 2. Statewide Education Network.
- Preliminary Framework.
- Next Steps / Timeline Review.
- Questions.

PSFA Broadband Program Background

- Number of projects: 270 (2016 2020).
- Value of upgrades: ~\$100M / 88% E-rate.
- NM K12 Rank Nationwide (E-rate): Top 3/5.
- NM K12 Broadband unit price reduction: 80%.
- Increase in average K12 broadband speed: 6X.

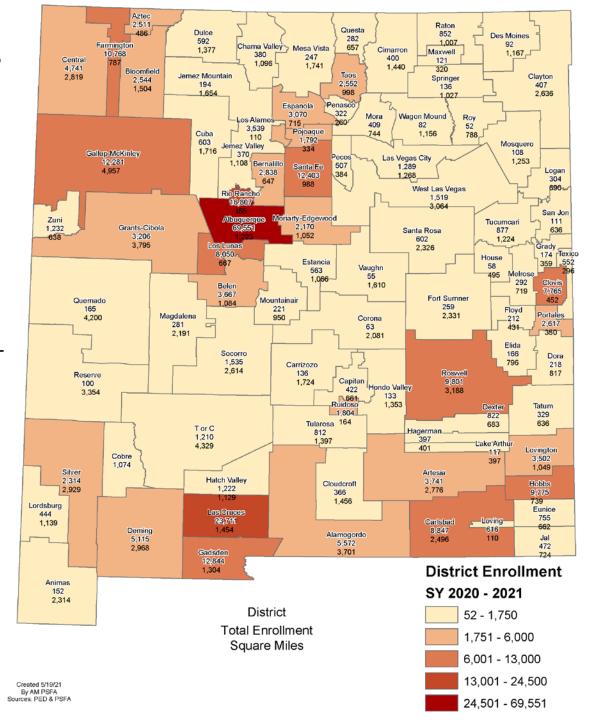
PSFA Broadband Program: Progress





NM School Districts Enrollment Heat Map

- Most of NM is remote, rural, and sparsely populated.
- IT expertise (qualified manpower) is not uniformly available.
- Large geographic areas with few locations purchasing highspeed internet is a challenge for market providers of network connectivity, services, and equipment.
- Statewide technology infrastructure network will provide better connectivity and expert network management services to all areas of NM.





SB144 - Broadband / Ed Technology

1. Connect students and teachers wherever they are (home).

- Create a Statewide Education Network (SEN).
 - "The council shall develop guidelines for a statewide education technology infrastructure network that integrates regional hub locations for network services and the installation and maintenance of equipment."



Student and Teacher Connectivity: Immediate Solution

- 1. Connect students and teachers wherever they are (home).
 - PED is leading this effort responding to Yazzie/Martinez.
 - CTC Technology and Energy Under contract.
 - EBB: \$3.2B (Started May until money runs out) Monthly service.
 - ISP Families.
 - NM has ~800,000 households.
 - \circ 59,500 (~**7.5**%) x \$60 = ~\$3.6M / Mo.
 - 70% of NM students are eligible for EBB.
 - ECF: \$7.2B (June 30 August 13: \$67M requests) Modems & one year of service.
 - ISP Schools.
 - No forms 470: negotiated or RFP (over \$60,000).
 - E-rate pays schools or ISPs.

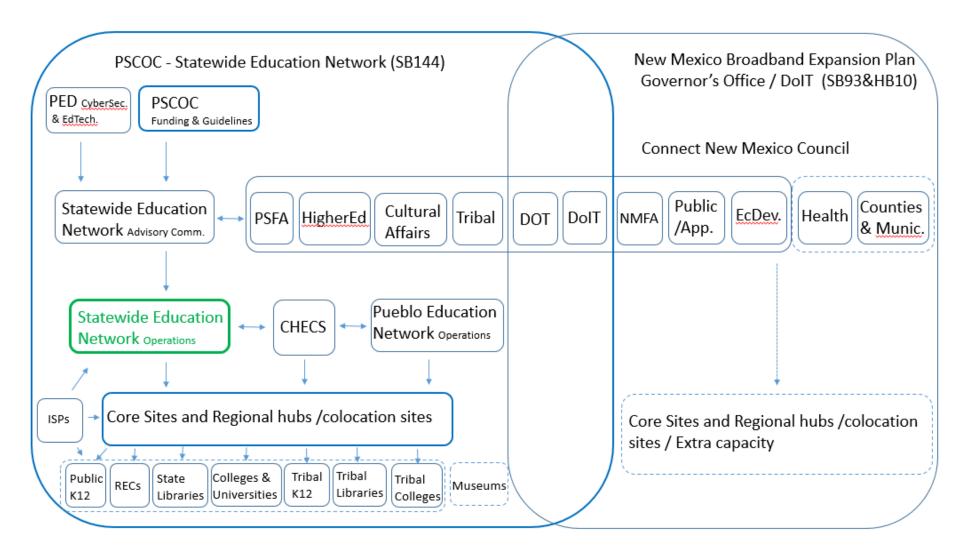


Student and Teacher Connectivity: Long-term Solution

- 2. Create a Statewide Education Network (SEN).
 - Create advisory committee.
 - PSCOC approves guidelines and state (PSCOF) funding.
 - Connect school sites together within districts and regionally.
 - Expansion of regional consortia model for internet services and network infrastructure projects.
 - Provide network management and cybersecurity expertise.
 - Phased approach to begin with ready/interested school districts.
 - Maximize access to federal E-rate funding for NM.

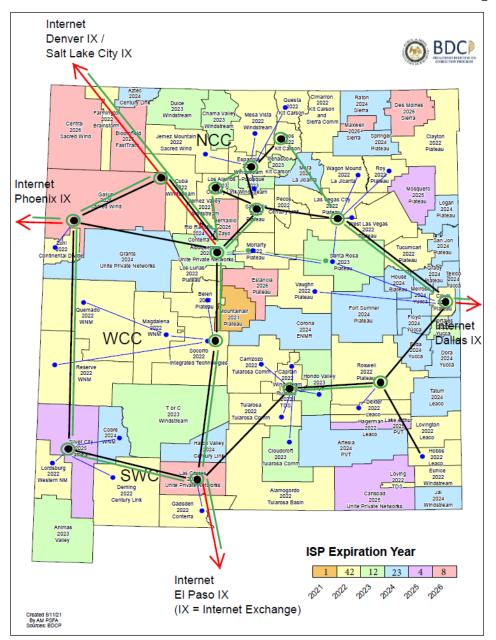


SEN: Preliminary Org Chart





SEN: Conceptual Map



Legend:

Blue dot: District Point of Presence (POP)/

Equipment Location.

Green dot: Other Point of Presence (POP)/

Equipment Location (Early Childhood, Municipality,

County, Health, Tribal etc...)

Blue line: 1+ Gbps School Circuit (E-rate).

Green line: 1+ Gbps Circuit (Extra capacity).

Black dot: Regional Network Equipment

Aggregation/ Colocation Site.

Green circle: Extra broadband capacity available at

Aggregation/Colocation Site.

Black line: 10+ Gbps Fiber Backbone (E-rate). **Green line:** 10+ Gbps Fiber Backbone (Extra

capacity).

Red Arrow: 10+ Gbps Internet Connection (E-rate).

IX: Internet Exchange



SEN: Preliminary Financial Plan

SB144 (Statewide Education Network) - Implementation
Preliminary financial plan
(All projected amounts in \$Millions)

		Α	В		С		D		E		F	G		н		
	Year															
	FY22			FY23		FY24		FY25		Y26	Total State five years	Potential E-rate		Total		
Number of member districts	25		30		20		7		7					89		
1 Statewide Education Network Initial setup and operations (100% State)*	\$	0.5	\$	0.5	\$	0.5	\$	0.5	\$	0.5	\$ 2.5	\$	-	\$	2.5	1
2 Backbone fiber construction (State share of E-rate match)**	\$	2.0	\$	2.0	\$	0.5	\$	-	\$	•	\$ 4.5	\$	30.0	\$	34.5	2
3 IA and Data Transport Cost including pre-K (State share of E-rate match)***	\$	1.0	\$	1.5	\$	2.0	\$	2.0	\$	2.0	\$ 8.5	\$	56.7	\$	65.2	3
4 Aggregation hub development**** (100% State)	\$	0.5	\$	1.0	\$	1.0	\$	-	\$		\$ 2.5	\$	-	\$	2.5	4
5 Equipment replacement (State share for potential E-rate match)	\$	0.5	\$	0.5	\$	1.0	\$	2.0	\$	2.0	\$ 6.0	\$	40.0	\$	46.0	5
6 Network Management (State share for potential E-rate match - shown @ 50%)	\$	1.5	\$	2.0	\$	2.5	\$	3.0	\$	3.0	\$ 12.0	\$	24.0	\$	36.0	6
7 Cybersecurity* (\$1.5M PED match and potential future appropriations)	\$	1.0	\$	-	\$	-	\$	-	\$	-	\$ 1.0	\$	-	\$	1.0	7
8 BDCP regular projects (Cat1 & Cat2 upgrades - State share for E-rate match)	\$	2.0	\$	2.0	\$	2.0	\$	2.0	\$	2.0	\$ 10.0	\$	66.7	\$	76.7	8
9 Contingency	\$	1.0	\$	0.5	\$	0.5	\$	0.5	\$	0.5	\$ 3.0	\$	-	\$	3.0	9
10	\$	10.0	\$	10.0	\$	10.0	\$	10.0	\$	10.0	\$ 50.0	\$	217.3	\$	267.3	10

^{*} Includes: Non-profit setup and contract engineering, procurement support etc...

^{**} Fiber construction to connect Aggregation sites without other options

^{***} Provide the E-rate match for IA and Data transport as incentive for participants

^{****} Aggregation hubs remodel to ensure power, cooling, security



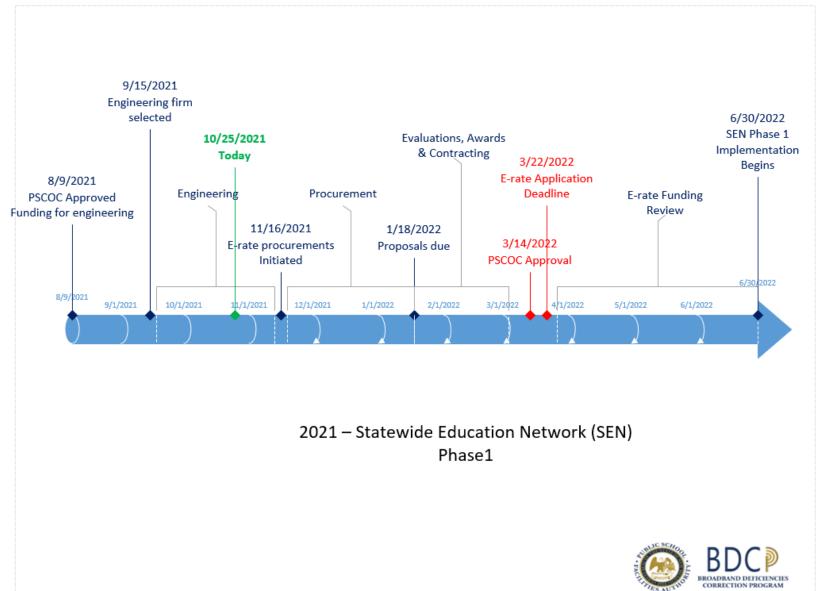
SEN: Next Steps

Timeline – First Phase:

- August October 2021: High-level, statewide engineering and procurement development.
- November 2021 January 2022: Procurement for E-rate eligible services and projects.
- January February 2022: Contracting for E-rate eligible services and projects.
- March 2022: E-rate funding application deadline.
- July 2022: Begin implementation of Phase 1 contracts for services and projects.



SEN: Next Steps



Questions

Martica Casias

Director (Interim), PSFA mcasias@nmpsfa.org

PSFA Broadband team:

Ruth Bingham - PSFA rbingham@nmpsfa.org

Jerry Smith - PSFA jsmith@nmpsfa.org

Chris Martinez - PSFA cmartinez@nmpsfa.org

Ovidiu Viorica

Broadband and Technology Program Manager, PSFA 505-270-1355

oviorica@nmpsfa.org

Thank You!