



ReConnect Engineering Requirements 101

USDA RUS ReConnect Program

Announcements

- Funding window has been extended to allow applicants to access technical assistance provided by USDA
- Final funding windows were announced in a notice in the Federal Register on February 25, 2019
- Applications for the 100% Grant funding category will be accepted through May 31, 2019
- Applications for the 50/50 Loan/Grant Combination funding category will be accepted through June 21, 2019
- Applications for the 100% Loan funding category will be accepted through July 12, 2019



Bring high-speed
broadband to
rural areas that
lack access.



Fuel long-term
economic
development in
rural America.



Enable
technologies
critical to rural
communities.



Support improved
access to education
and healthcare in
rural communities.



2018
Consolidated
Appropriations
Act

**ReConnect
Program**

Pilot program that
provides loans and
grants to extend
broadband service
to rural areas.

\$600 million
in funding

Assist rural areas that do
not have sufficient access
(10/1) to broadband.

Minimum requirements:
25Mbps down/3Mbps up

Dec. 13, 2018

A New Way Forward

ReConnect Program and funding opportunity announced by Sec. Perdue.

Dec. 14, 2018

Officially Released

ReConnect Program Funding Opportunity Announcement released in the Federal Register.

March 2019

Check reconnect.usda.gov

The date that applications will start being accepted will be announced.

Feb. 25, 2019

Get Started

Application deadlines released in notice in the Federal Register.

May 31, 2019

100 Percent Grant

Applications will be accepted through May 31, 2019.

June 21, 2019

50/50 Loan/Grant Combo

Applications will be accepted through June 21, 2019.

July 12, 2019

100 Percent Loan

Applications will be accepted on a rolling basis through July 12, 2019.





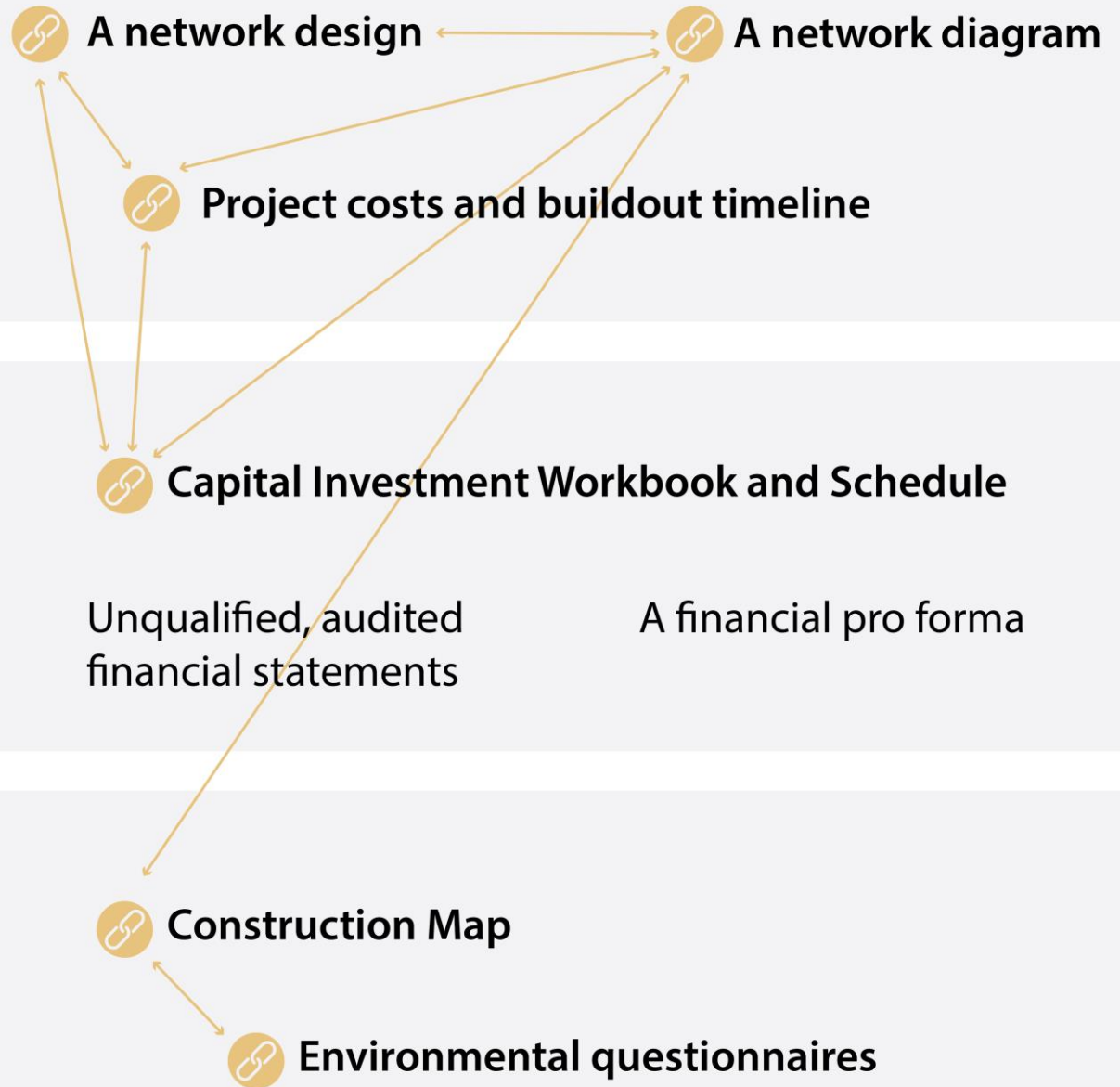
ENGINEERING



FINANCIAL



ENVIRONMENTAL



Program Design

ReConnect Products and Key Engineering Components



LOAN



COMBO



GRANT

Buildout Speed

25/3 Mbps minimum

25/3 Mbps minimum,
incentive for higher speeds

25/3 Mbps minimum,
incentive for higher speeds

Terms

Max award: \$50 million
2% Interest Rate

Max award: \$50 million
50/50 Loan/Grant
UST Rate

Max award: \$25 million
25% match

Application Review

Open (non-competitive)

Competitive Scoring

Competitive Scoring

Round 1 Federal Funds

\$200 million

\$100 million grant +
\$100 million loan

\$200 million

Key Engineering Components of the ReConnect Application

Applicants Will Need to Submit...

Engineering Requirements from the FOA:

- A network design
- A network diagram
- Project costs and buildout timeline

These requirements must be certified by a professional engineer



Applicants Must Demonstrate...

Proposed Funded Service Area (PFSA) Requirements

- For a 100% loan, the proposed funded service area (PFSA) must demonstrate that 90% of the households do not have sufficient access to broadband defined at 10/1
- For a 50% loan and 50% grant combination, the PFSA must demonstrate that 90% of the households do not have sufficient access to broadband defined at 10/1
- For a 100% grant, the PFSA must demonstrate that 100% of the households do not have sufficient access to broadband defined at 10/1

Service Area Validations

- Service Area Validations will occur in PFSA's to validate the speeds of existing services
- USDA Staff will perform Service Area Validations



Applicants Should Consider...

Technology

- The ReConnect Program is technology neutral
- Any technology or combination of technologies must meet the minimum construction requirements of 25/3 to all premises

Detailed Overview of Required Application Materials

Network Design, Network Diagram, Buildout Timeline and Milestones,
Project Costs

Required Application Materials: A Network Design

- A network design provides a plan for how a proposed network will be built to meet subscriber requirements.
- The network design must include the following and must be certified by a professional engineer:
 - Proposed technology that will be used to deliver the broadband services (ReConnect technology is neutral)
 - Existing network (if applicable)
 - Proposed network
- USDA will review the maturity of the Network Design and supporting documentation (uploads) to ensure it is developed enough to perform a cost estimate

Required Application Materials: A Network Diagram

- Network diagrams provide a way to map connections of a telecommunications network
- Applicant network diagram submissions should include the following uploads and must be certified by a professional engineer:
 - Existing network diagram (if applicable)
 - Proposed network diagram
 - Core elements
 - Distribution network elements
 - Access elements

Required Application Materials: Buildout Timeline

- A buildout timeline is considered a construction schedule for the project – Milestones represent points through the project lifecycle that identify key stages or development changes
- The buildout of the project must be completed within five years from **the date funds are made available**
- An applicant's buildout timeline and milestones must include the following:
 - Buildout milestones
 - Buildout support for reasonableness/data points for each buildout milestone
 - Any supporting documentation

USDA will review an applicant's buildout timeline for feasibility and reasonableness given the technology and resources estimated

Required Application Materials: Project Costs*

- Project costs are provided via the Capital Investment Workbook (CIW), a detailed list of costs associated with the project
- The CIW must include the following network design or project financing components:
 - Proposed funded service areas (PFSA)
 - Non-funded service areas (NFSA)
 - Unadvanced prior loan funds (UPLF)
- USDA will review the CIW in order to assess technical feasibility and to determine that Applicants have thoroughly thought through the proposed network design

** Additional project cost information provided on the following slides*

Required Application Materials: Project Costs (continued)

- The applicant must input information below for the service areas and common network facilities for the three categories listed on the previous slide
 - Project asset category
 - Project asset type
 - Description
 - Quantity
 - Measure unit
 - Associate project asset cost per unit
- Cost projections will be needed for each of the assets input as part of the capital investment schedule

Project Asset Categories and Examples of Asset Types

- Project asset categories:
 - Outside plant – Conduit systems
 - Buildings – New construction, pre-fab huts
 - Towers – Guyed towers, tower improvements
 - Customer premises equipment – Smart meters
 - Network and access equipment – Routing equipment
 - Non-depreciable assets – Right-of-way procurement
 - Support assets – Construction vehicles
 - Professional services – Engineering, environmental
 - Other expenditures
- All project assets must comply with 7 CFR part 1788 and 7 CFR part 1970, any successor regulations found on the Agency's website, and any other guidance from the Agency

Capital Investment Workbook (CIW)

Capital Investment Workbook (CIW)

Proposed Funded Service Area

CIW - Service Area Costs

Project Asset Category	Project Asset Type	Description	Quantity	Measure Unit	Associated Project Asset Cost per unit	Total Cost
Outside Plant	Copper Cable - Underground	TEST	600	Route Miles	\$6,000	\$3,600,000
Outside Plant	Fiber - Buried	TEST	100	Route Miles	\$1,000	\$100,000
Outside Plant	Cabinets/underground vaults	TEST	400	Unit	\$4,000	\$1,600,000
Outside Plant	Conduit Systems	TEST	300	Route Miles	\$3,000	\$900,000
Outside Plant	Conduit Systems	TEST	400	Route Miles	\$4,000	\$1,600,000
Outside Plant	Cabinets/underground vaults	TEST	400	Unit	\$4,000	\$1,600,000
Outside Plant	Copper Cable - Buried	TEST	200	Route Miles	\$2,000	\$400,000
Outside Plant	Coaxial Cable - Aerial	TEST	200	Route Miles	\$2,000	\$400,000
Outside Plant						\$10,200,000
Buildings	New Construction	TEST	500	Site	\$5,000	\$2,500,000

Capital Investment Schedule

Capital Investment Schedule

Capital Investment Schedule (PFSA)

Asset Type	Asset Sub Type	CW Summary Amounts	2019	2020	2021	2022	2023	2024
Network and Access Equipment	Switching Equipment	580,000	0	116,000	116,000	116,000	116,000	116,000
Network and Access Equipment	Professional Services	0	0	0	0	0	0	0
Network and Access Equipment	Transport Equipment	2,500,000	0	500,000	500,000	500,000	500,000	500,000
Network and Access Equipment	Routing Equipment	500,000	0	100,000	100,000	100,000	100,000	100,000
Network and Access Equipment	Power Equipment	3,400,000	0	680,000	680,000	680,000	680,000	680,000
Network and Access Equipment			\$0	\$1,396,000	\$1,396,000	\$1,396,000	\$1,396,000	\$1,396,000
Outside Plant	Fiber - Buried	100,000	0	20,000	20,000	20,000	20,000	20,000
Outside Plant	Professional Services	0	0	0	0	0	0	0

Construction Map

Construction Map Interface

Route 1 Description

Is the proposed route located on or does it cross Tribal Land(s) as identified in the Tribal Lands layer of the construction map?

- Yes
 No

Does the proposed route located on or does it cross Federally Managed Land(s) as identified in the Formally Classified Federal Lands layer of the construction map?

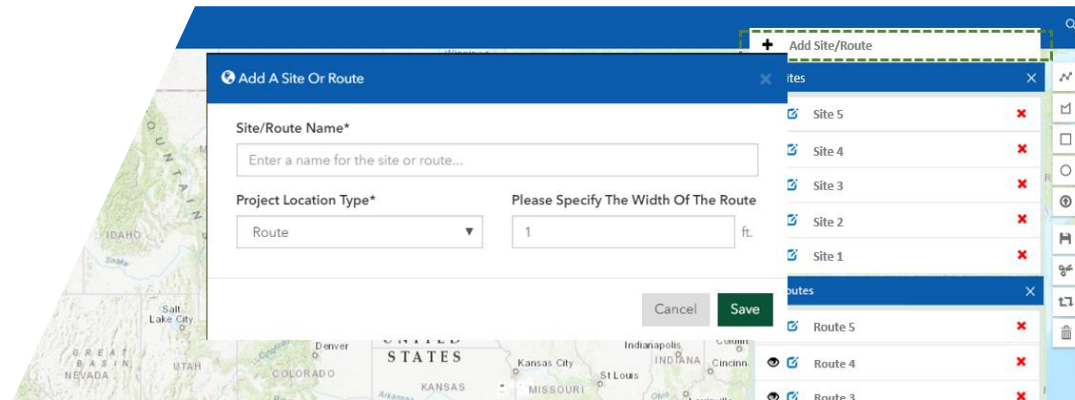
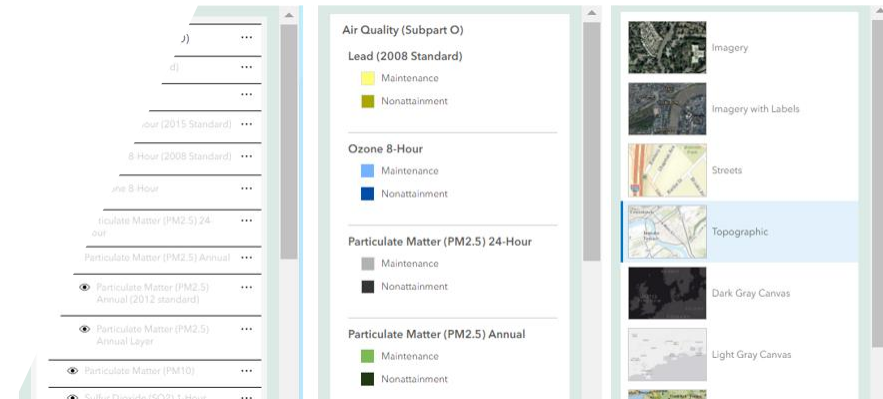
- Yes
 No

Is the route New or Upgrading / rebuilding existing telecommunication facilities? (Select either or both)

- New
 Upgrading/Rebuilding

Is the route in a previously-developed, existing right-of-way? (Select all that apply)

- Yes. The Route will be in a previously-developed, existing Right-of-Way
 No, a new right-of-way or easement will be required
 No, but area is already in or committed to urbanized development as characterized by a highly disturbed environment with human-built features



Post-Award Considerations

Post-Award Engineering Reporting Considerations

Awardees will need to submit:

- Annually updated service area maps through the USDA mapping tool showing the areas where construction has been completed and premises are receiving service
- A service area map indicating that all construction has been completed as proposed in the application
- Semiannual reports for 3 years after completion of the project, which must include the following technical items:
 - Types of facilities constructed and installed
 - The speed of the broadband services being delivered
 - The broadband adoption rate for each proposed service territory, including the number of new subscribers generated from the facilities funded



Available Resources

What resources are available and how you can get help during the application process

Available Resources

- Workshops
 - Multiple Workshops to be held across the country
 - Schedule is on the ReConnect website under “Events”
 - RD experts and detailed application information
- Webinars
 - Multiple Webinars to be held
 - Schedule is on the ReConnect website under “Events”
 - RD experts and detailed application information
- Resources
 - ReConnect Website <https://reconnect.usda.gov>
 - Electronic application intake system
 - Program FAQs
- OneRD Coordination
 - Resources across RD
 - Help Desk
 - Technical Assistance and support to Applicants



For help or questions contact us at

ReConnect Support Desk

<https://reconnect.usda.gov>

