ReConnect Program

ReConnect Application Deep Dive: Network

USDA Rural Development
U.S. DEPARTMENT OF AGRICULTURE

Agenda

- Definitions
- Application Interdependencies
- Requirements
- Application System
- Network Design
- Buildout Timeline and Milestones
- Capital Investment Workbook
- Capital Investment Schedule
- Network Documents
- Wrap-Up
- ReConnect Resources
- Q&A

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Introduction

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Definitions

Key Definitions

- **Proposed Funded Service Area (PFSA):** means the area (whether all or part of an existing or new service area) where the applicant is requesting funds to provide broadband service
- **Non-Funded Service Area (NFSA):** means any area in which the applicant offers broadband service or intends to offer broadband service during the forecast period but is not a part of its proposed funded service area
- **•Capital Investment Workbook (CIW):** the portion of a ReConnect application where the applicant provides all of the cost information for the project
- **Capital Investment Schedule (CIS):** the portion of a ReConnect application where the applicant apportions all project costs and requested funding over the buildout period
- **Unexpended Prior Loan Funds (UPLF):** Active loans from other RUS Telecommunications that the applicant will expend during the ReConnect 5-year buildout period

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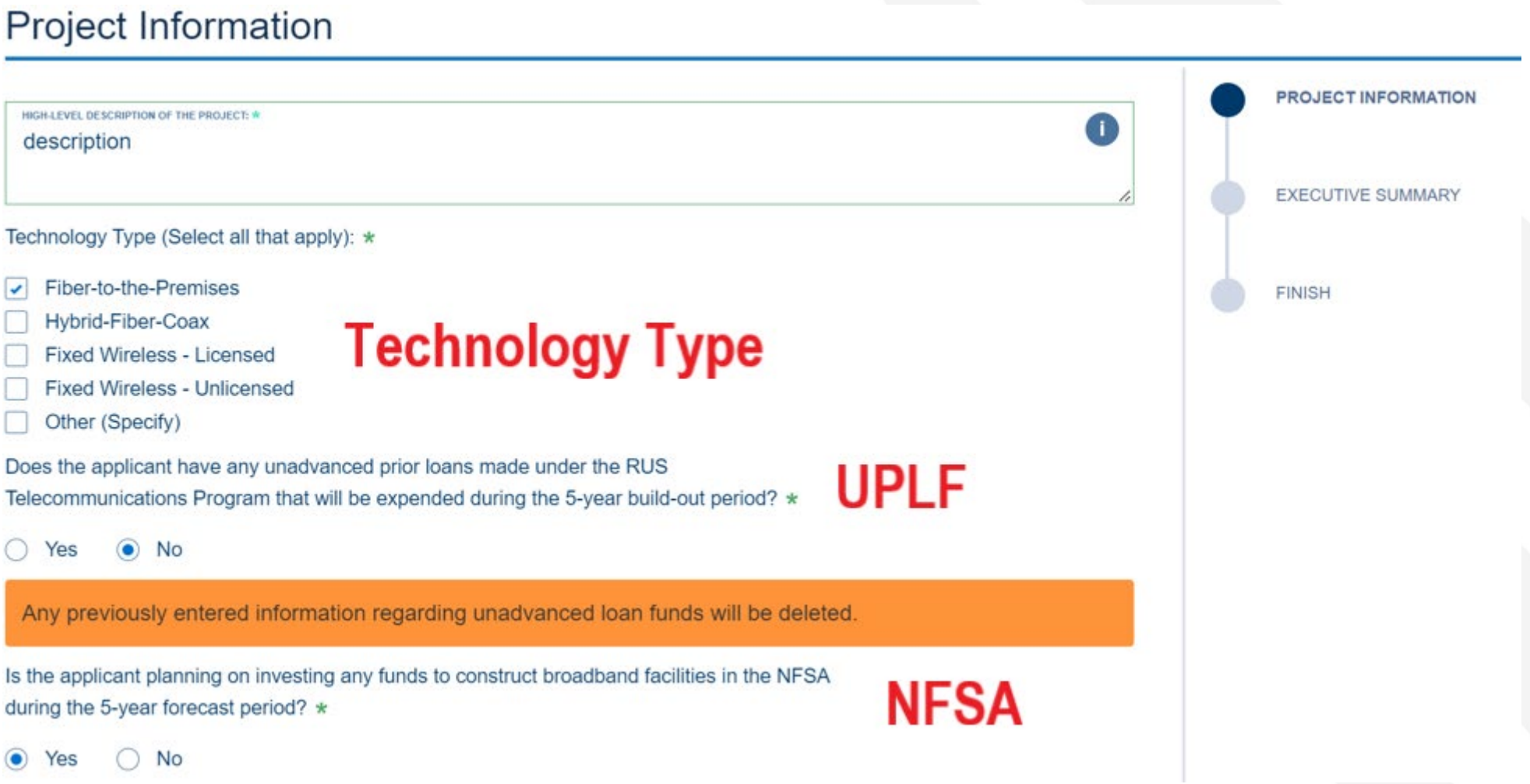
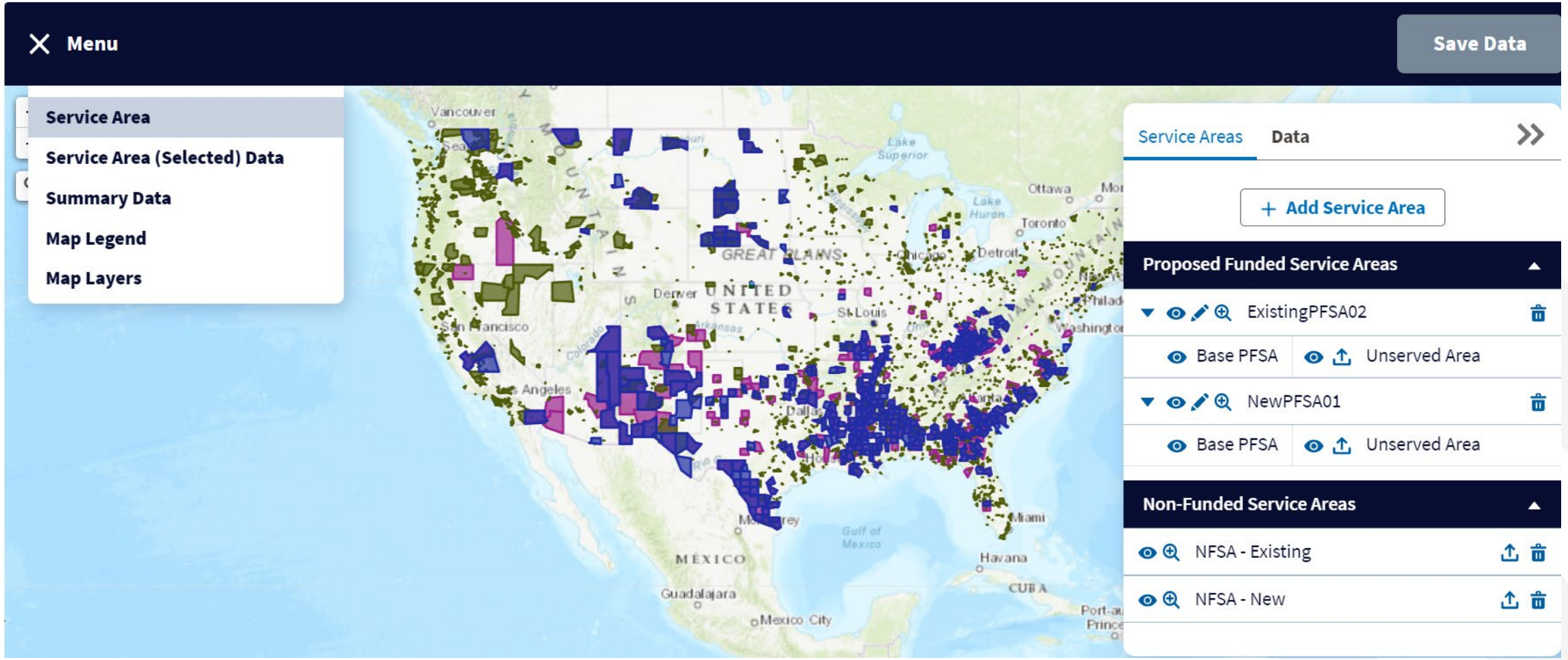
Application Interdependencies

Interdependencies – Project Information

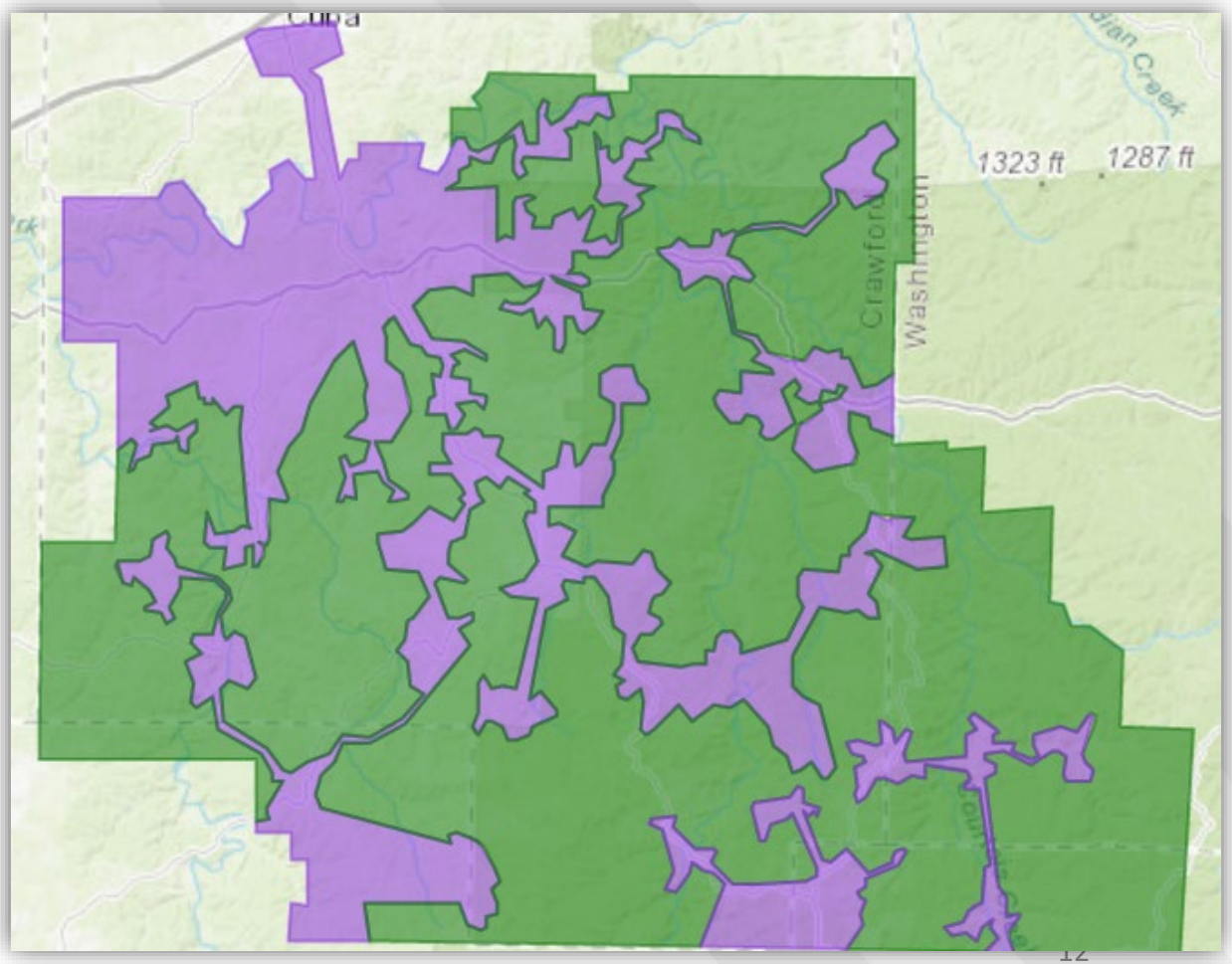


Interdependencies – Service Areas



Interdependencies – PFSAs and NFSAs

- PFSA (Green): Area(s) identified under Service Area Tab.
  - Existing: Area(s) applicant asks for funding where they currently offer broadband service
  - New: Area(s) applicant asks for funding where they currently have no last-mile broadband facilities
- NFSA (Purple): Area identified under Service Area Tab.
  - Existing: Current service
  - New: Planned expansion not funded by ReConnect



Interdependencies – Service Areas (cont.)

- For **EACH** PFSA, CIW sections are required:
  - Itemized Service Area costs
  - Itemized, prorated Common Network Facilities costs
  - Itemized Other Costs
- Plus, a PFSA summary for all PFSAs

- For **UPLF**, CIW sections are required:
  - Itemized Service Area costs
  - Itemized Other Costs
- Plus, a PFSA summary for UPLF

- For **EACH** NFSA, CIW sections are required:
  - Itemized Service Area costs
  - Itemized, prorated Common Network Facilities costs
  - Itemized Other Costs
- Plus, a PFSA summary for all NFSAs

PLAN ACCORDINGLY

Interdependencies – Financial

- Financial Tab relies on data from:
  - Network: CIW Summary
  - Network: Annual Capital Investment Page

- Composite Economic Life (CEL) generated in the Financial Tab relies on Network Tab data
  - CEL helps determines service obligation and loan repayment periods

- Descriptions and costs in the Network section must inform the financial statements' pro-forma out-years

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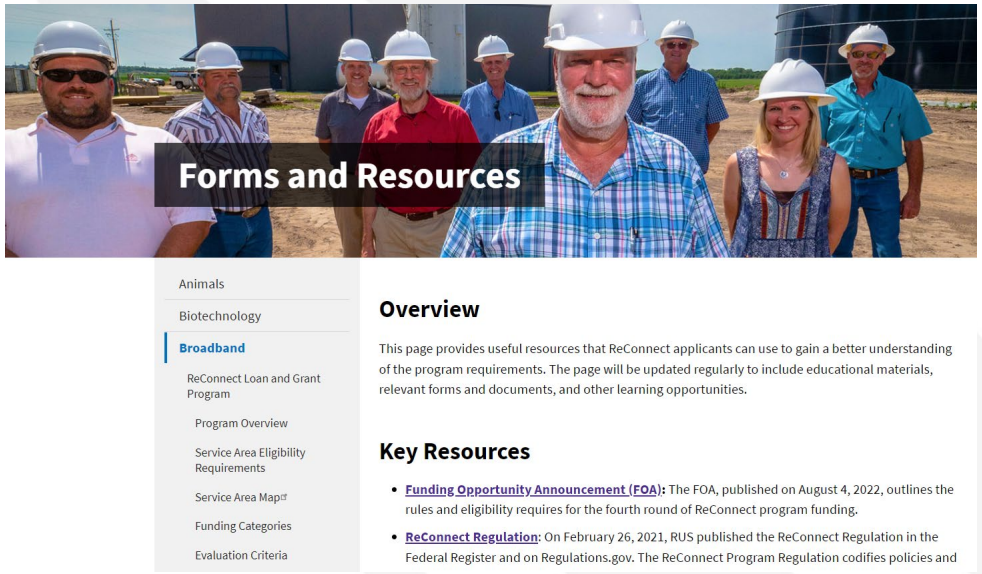
Requirements

Regulation and Funding Opportunity Announcement

- Program Regulation: 7 CFR 1740 et seq.
  - Most requirements are in the regulation
  - Recommended reading
- Current Funding Opportunity Announcement
  - Speed that determines “sufficient access to broadband” (project eligibility requirement)
  - Buildout requirement for speed
  - Eligible pre-application expenses
  - Recommended reading
- Both available on the ReConnect website



Costs (7 CFR 1740.12)

- Only **eligible costs** incurred post award, except for approved pre-application expenses
  - Any application that proposes to use award or match for ineligible costs may be rejected
    - Example: Operating costs are not eligible costs
    - Example: Vehicle purchase or lease costs generally are not eligible, the cost of a special-purpose vehicle necessary to construction is eligible
- Refer to 1740.12 as you gather your cost information
- Eligible costs must be consistent with in 2 CFR 200, Subpart E, Cost Principles
- Costs must be reasonable, allocable, and necessary to the project
- Satellite and mobile/cellular network components are not eligible expenses (not terrestrial)

Costs (7 CFR 1740.12) (cont.)

- Costs must support
  - Technology type
  - Network Design
  - Buildout milestones
  - Financial Tab

- Use reasonable estimates

Technical Feasibility (7 CFR 1740.61(c))

- MAJOR evaluation criterion
- RUS determines technical feasibility by evaluating the network design and other relevant information in the application
- If your network design, technology type and cost information don't support each other, and support your financials, your application may be rejected

Network Design (7 CFR 1740.64)

§ 1740.64 Network design.

(a) Only projects that RUS determines to be technically feasible will be eligible for an award.

(b) The network design must include a description of the proposed technology used to deliver the broadband service, demonstrating that all premises in the PFSA can be offered broadband service; a network diagram, identifying cable routes, wireless access points, and any other equipment required to operate the network; a buildout timeline and milestones for implementation of the project; and a capital investment schedule showing that the system can be built within five years. All of these items must be certified by a professional engineer who is certified in at least one of the states where there is or will be project construction. The certification from the professional engineer must clearly state that the proposed network can deliver the broadband service to all premises in the PFSA at the minimum required service level. In addition, a list of all required licenses and regulatory approvals needed for the proposed project and how much the applicant will rely on contractors or vendors to deploy the network facilities must be submitted. Note that in preparing budget costs for equipment and materials, RUS' Buy American requirements apply, as referenced in § 1740.46.

Network Design (7 CFR 1740.64) (cont.)

- Network Diagram identifying cable routes, wireless access points, other equipment
- Buildout Timeline and Milestones
- CIS
- Professional Engineer Certification
- List of all required licenses and regulatory approvals needed for the proposed project
- How much the applicant will rely on contractors or vendors to deploy the network facilities
- Buy American requirements apply

Other Considerations (FOA) – Sufficient Access

- Definition of sufficient access to broadband:
  - Households with access to 100 Mbps down, 20 Mbps (100/20)
    - One of the criteria that determine area eligibility
    - If an area already has service equal to or greater than 100/20, it's not eligible
    - Area eligibility: number of households lacking sufficient access
  - 50% households in each PFSA lack sufficient access to broadband
    - NEW funding category for areas where at least 90% of households in a PFSA lack sufficient access
      - 100% grant, no required match

Other Considerations (FOA) – Buildout Speed

- Build a network capable of providing 100/100 simultaneous service available to all premises in each PFSA
  - Just one of several project eligibility criteria
- Note: Area eligibility relies on access to high-speed internet by households, project eligibility relies on the buildout speed provided to premises (houses, farms, businesses, etc.)

Other Considerations (FOA) – Pre-Application Expenses

- Up to 5% of total award may be used for any reasonable expenses, as determined by RUS, incurred after the FOA publication date (August 4, 2022) to prepare an application or to respond to RUS inquiries about the application
- Up to 3% of total award may be used for application environmental review requirements
  - Counts as part of the overall 5% pre-application allowance
- Pre-application expenses incurred under the previous round of ReConnect, but benefit an application for this round, may be funded up to the five 5% allowance of the total award in this round

Other Considerations (FOA) – Environmental Monitoring Costs

- Required post-award environmental monitoring costs
  - Limited to 3% of federal award
  - NOT the same as pre-application expenses
  - Expenses related to any environmental monitoring required because of environmental and historic preservation reviews

Other Considerations (FOA) – Pole Attachment Costs

- Pole attachment fees associated with the construction are eligible for funding throughout the five-year construction period
- If a pole owner requires that a pole be replaced to support broadband facilities, the cost of the pole replacement is also an eligible expense

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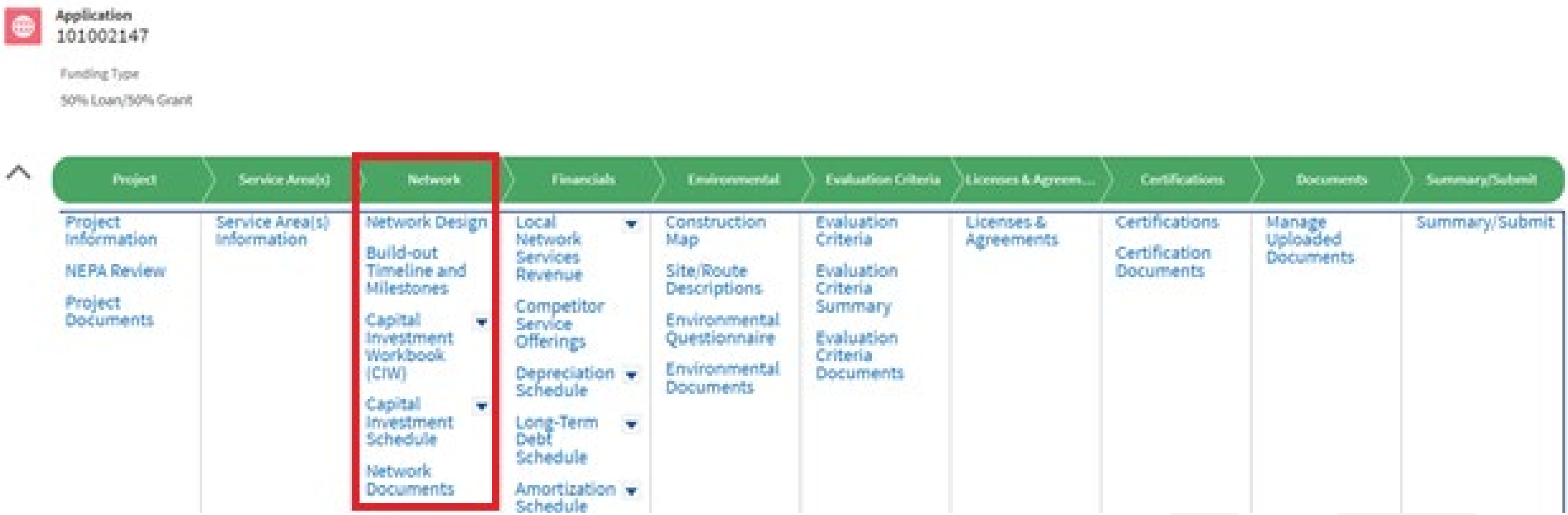
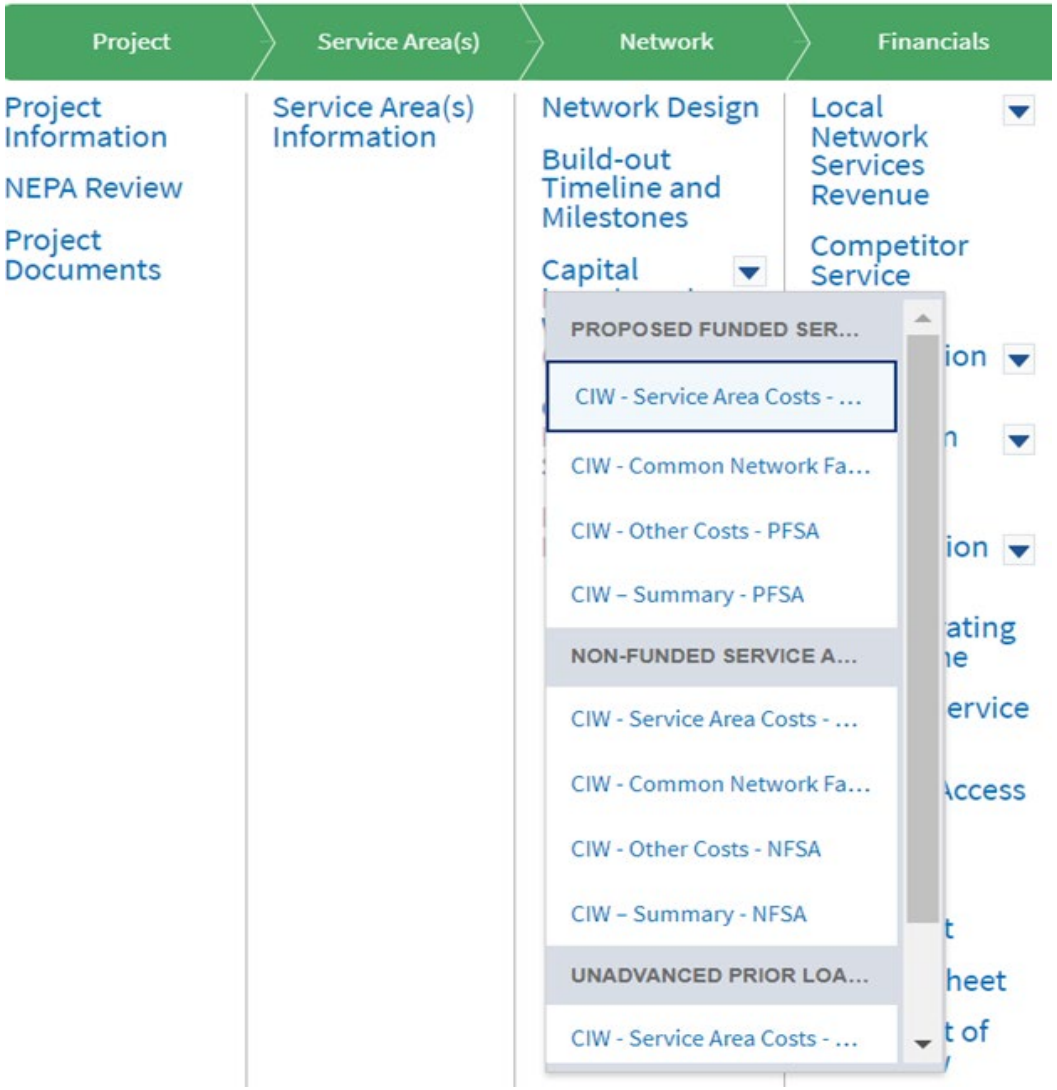
Application System

Application Navigation – Network Tab



Application Navigation – CIW Menu

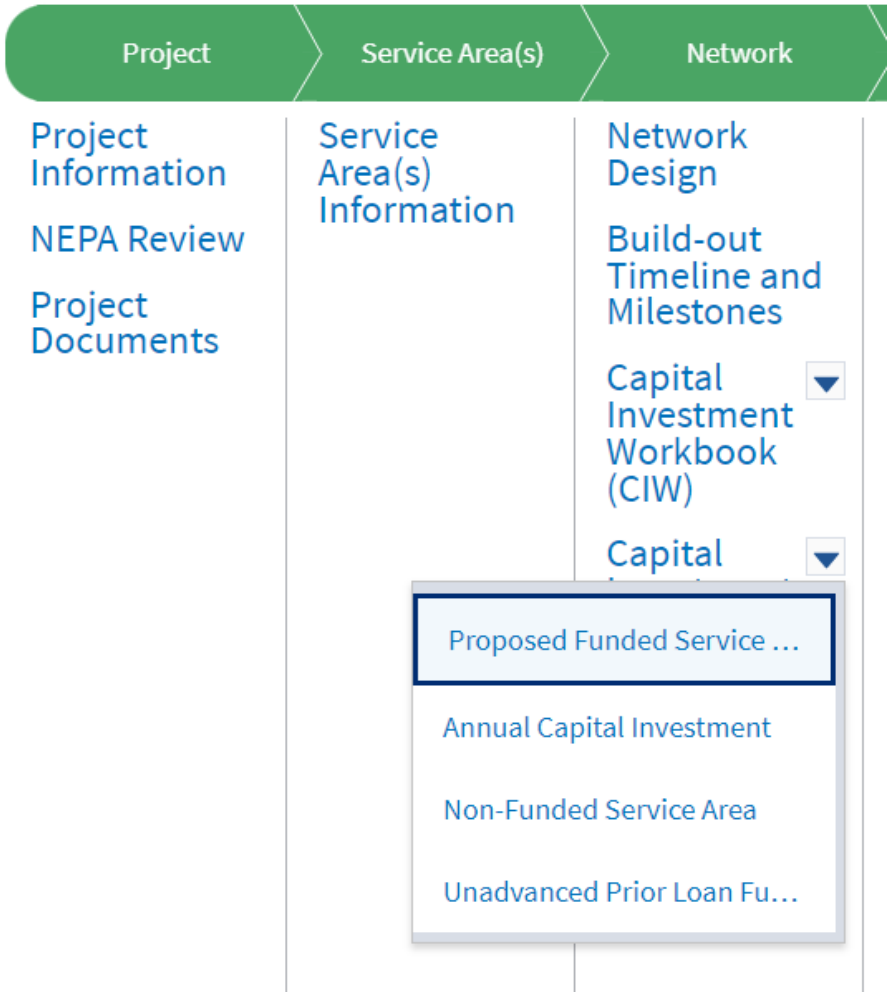


PFSA:
CIW – Service Area Costs – PFSA
CIW – Common Network Facilities – PFSA
CIW – Other Costs – PFSA
CIW – Summary - PFSA

NFSA:
CIW – Service Area Costs – NFSA
CIW – Common Network Facilities – NFSA
CIW – Other Costs – NFSA
CIW – Summary - NFSA

UPLF (partially visible):
CIW – Service Area Costs – UPLF
CIW – Other Costs – NFSA
CIW – Summary - NFSA

Application Navigation – CIS Menu



If your application doesn't have NFSAs or UPLF, those menu options will not be visible

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Network Design

Network Design – Technology Description

- Describe the proposed technology used to deliver broadband service which demonstrates that all premises in the PFSA can be offered 100/100 broadband service simultaneously
  - Required narrative
- Thorough discussion of the chosen technology(ies), why chosen
  - Detailed and complete so RUS understands how the network investments will provide the required buildout network capacity
  - Satellite and mobile/cellular network components are not eligible expenses
    - If the network is based on a cellular network, RUS doesn't consider it Fixed Wireless
- Include standards-based information concerning the proposed technology
  - References detailing the technology (Standards bodies, White papers, Internet sites)
  - If the technology isn't typically found in existing deployments, provide several references explaining the technology
  - Consider including relevant diagrams, licenses (fixed wireless), agreements, preliminary studies that support your claim

Network Design – Existing Network Description

- Optional field but if you have an existing network and fail to describe it, the technical review of your application will be adversely affected
- Detailed description of applicant's existing network (narrative)
  - Same level of detail as the proposed network description (covered next)
- Include the primary elements of the network layers (Access, Distribution, and Core)
- Indicate how existing network will be leveraged to support the proposed network
- Include existing load information
- Interconnection(s) with the proposed network, as well as any other significant connections such as Internet Service Providers (ISPs).

Network Design – Existing Network Description – Tips

- Thoroughly discuss the interconnection between the existing and proposed networks
- Fully demonstrate how the existing network would allow you to meet the buildout requirements for the proposed network:
  - Access to 100/100 service simultaneously to all premises in the PFSA
- If the existing network is under construction, explain how and when it will be ready to connect proposed network
- Fixed Wireless proposed projects: If planning to use existing network access points to deploy service to PFSA(s)
  - Put lease and land documents in the agreement section
  - Upload licenses if claiming the use of licensed spectrum
  - Provide extensive detail about the key, existing network access points and type of current equipment

Network Design – Proposed Network Description

- Thorough description of proposed network
- Include the primary elements of the network layers (for example, Access, Distribution, and Core)
- Considerations concerning how the proposed network will support the proposed network requirements, for example
  - Speeds
  - Coverages
  - Subscriber counts
  - Services
  - Premises
- Description of the interconnection with the existing network (if any) and any other significant connections such as ISPs
- Discuss your use of outside contractors and vendors to implement or manage the project
- Other relevant information supporting Technical Feasibility and Build-out requirements

Network Design – Proposed Network Diagram

- Comprehensive diagram showing proposed traffic, Network Operation Centers, physical locations for major network components and all aspects of network
  - You won't be able to submit the application without uploading this diagram
  - High level, block diagrams are not sufficient. Be specific and detailed
- Fully show interconnections (type, distance, capacity, location)
- Show network electronics locations and typical distance to customer
  - Ok to provide maximums or minimums or ranges for distances
- Ensure the design architecture is consistent with proposed network description and CIW
  - Aspects of the Network portion of the application should harmonize and support each other
- Common Facilities (existing, proposed, capacity, location, type, etc.)

Network Design – Professional Engineer Certification

- Use the sample on the ReConnect website under forms and resources
- What your PE certifies:
  - The proposed network will be designed and constructed to deliver 100/100 broadband services to all the premises in the proposed funded service area
  - As designed, the network can meet the proposed build-out timeline, milestones and construction schedule within the costs specified in the application
- The engineer must be LICENSED in one of the states where your construction will take place
- Not a vendor-certified technician
- Must be qualified to review network technology
- Applicant may use in-house engineer if the engineer is licensed in the state in which ReConnect project construction will take place

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Buildout Timeline and Milestones

Buildout Timeline and Milestones – Timeline

- The Technology Type you select on **Project Information** determines the number of milestones here
  - Quarterly
    - Fixed Wireless – Licensed
    - Fixed Wireless – Unlicensed
    - Combination of value types
  - Annual (list)
    - Fiber-to-the-Premises
    - Hybrid-Fiber Coax
    - Other (Specify)
- Buildout Milestone: concise description of activity/progress achieved

Buildout Timeline and Milestones – Timeline (cont.)

- Project buildout must be completed within five years from the date funds are made available
- Bridge Year plus years one through five of buildout period
  - Bridge Year is the year before construction starts
  - Different from the CIS which requires values for only the construction years
- If your CIS shows $1 million of incurred cost in year 1, the Timeline must show work in year 1
- Every milestone is required
  - If your construction is complete before the end of Year 5, provide something in the remaining milestones even if it's "loan repayment starts" or "regular maintenance" or "continue to add subscribers"

Buildout Timeline and Milestones – Support for Reasonableness

- Support For Reasonableness/Data Points: required justification for the reasonableness of the milestone
- Reasonableness: refers to satisfying interdependencies that support system requirements (e.g., speeds, coverages, subscriber counts, services, premises, etc.)
  - Expected capabilities and limitations of technology and equipment, network element distances, type of backhaul, coverages and coverage topography, construction and deployment expectations and issues, projected costs and timelines, and teams
- **Tip:** Consider assumptions regarding personnel, contractors, licensing, and permitting timelines within a project lifecycle approach which includes four phases (Planning, Design, Deployment, and Operations)
- Remember: Ensure your cost, subscriber and financial projections support your milestones and vice versa.

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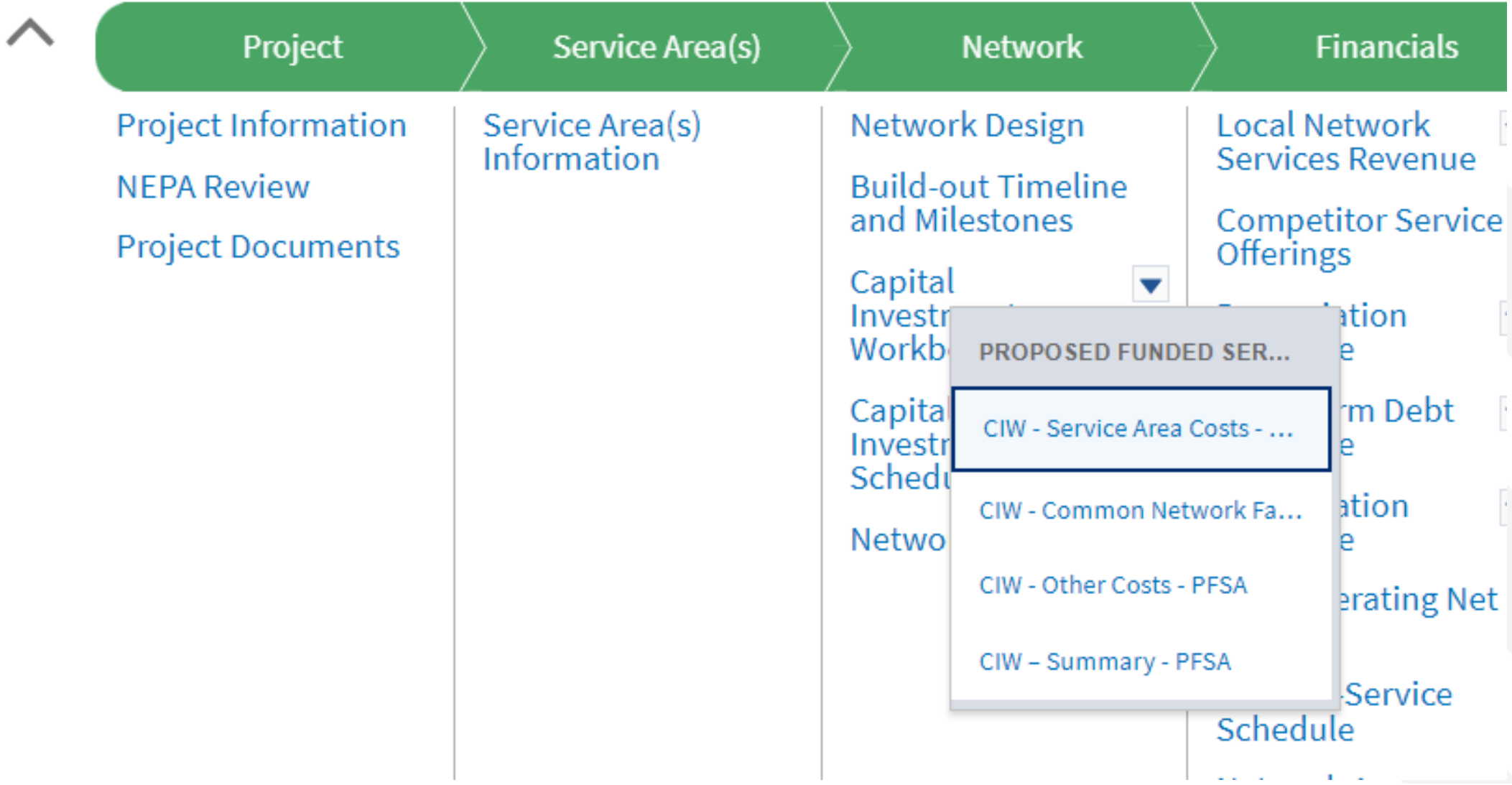
Capital Investment Workbook

Capital Investment Workbook (CIW) – General Tips

- CIW will produce the project budget
  - System will generate totals for each asset type and service area
- Costs represented within the CIW are the limit of assistance for the project under a ReConnect award
  - If a project's actual costs exceed the budgeted costs, awardees must cover the additional cost
- Make sure your CIW captures the expected costs of the project
  - Build in reasonable, defensible future cost increases over the 5-year buildout
  - Account for contingencies such as potential environmental costs, construction issues, inflation, etc.
- Provide documentation for the reasonableness of your cost increase assumptions

CIW Sections



CIW – Service Area Assets – General Comments

- These line items drive the Composite Economic Life (CEL) calculation in the Financials
- Provide concise, thorough descriptions of assets so that reviewers understand the assets
  - At minimum you must identify Aerial and Buried assets
- Consider establishing separate costs for conduit and poles because of longer depreciation (increasing CEL)
- Each asset category has an “other/explain” option for uncategorized items

CIW – Service Area Assets – General Comments (cont.)

- In each service area, you'll input the item name, description, quantity and unit cost for every asset
  - Each PFSA
  - Each NFSA
  - UPLF
- If you have the same 8 or 9 items for each PFSA, you'll enter those same items in every PSFA
- If you have 15 PFSAs, you'll enter comprehensive cost information for each one
- The same level of effort is required for NFSAs (and UPLF)

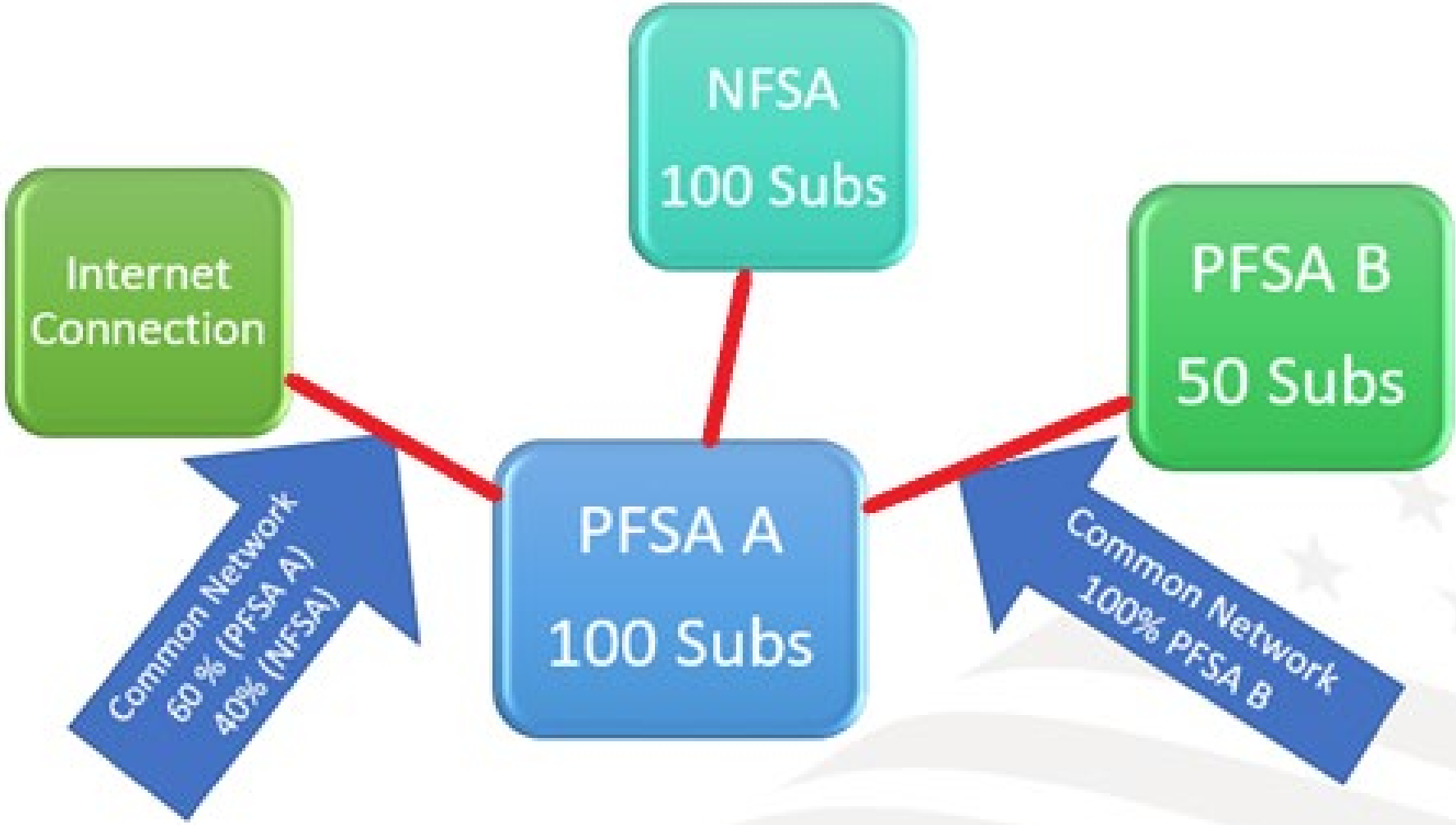
CIW – Service Area Costs – Asset Categories

Asset Category	Specific Asset Type	
Network & Access Equipment	• Switching Equipment • Routing Equipment • Transport Equipment	• Video Equipment • Power Equipment • Satellite Equipment • Other (specify)
Outside Plant	• Copper Cable – Aerial, Buried, Underground • Coaxial Cable – Aerial, Buried, Underground • Fiber Cable – Aerial, Buried Underground • Fiber – Submarine Cable • Conduit Systems	• Ducts (Vacant) • Cabinets/Underground Vaults • Poles • Make-ready • Other (specify)
Buildings	• New Construction • Pre-Fab Huts	• Improvements • Other (specify)
Towers	• Improvements • Guyed Towers • Lattice Towers	• Monopole/Self-Supporting Tower • Wood Poles • Others (specify)
Customer Premises Equipment	• Video Set Top Boxes • Modems and Routers • Inside Wiring	• Multi-Terminal Adapter (VoIP) • Smart Meters • Other (specify)
Non-Depreciable Assets	• Land • Right-of-way Procurement	• Others (specify)

CIW – Service Area Assets – Categories

- Use the correct asset category; CIW establishes post-loan budget categories
  - Use category that best describing and item's function and how it's procured
  - Ex: pre-fab building equipped with racking components and required power equipment
    - include all purchase, labor, install costs under Buildings
    - Put the racking components and power equipment under Network & Access
- Engineering costs
  - Record as Professional Services under the Other Costs section
  - Do not include engineering within the Asset Categories
- Tower costs:
  - Structure install/ upgrade purchase and installation costs: Tower asset category
  - Equipment for tower: Network & Access
- May provide information about assets at a high level rather than breaking assets down by specifics

CIW – Common Network Facilities (CNF)



CIW – CNF Assets and Costs

- Just like a Service Area cost, enter the item name, description, quantity and unit cost
  - Provide sufficient description to show the percentage of the prorated cost and to identify it
- Prorate costs between total PFSAs and total NFSAs as appropriate
  - Enter the portion of CNF cost allocable to any/all PFSAs in the PFSA CNF
  - Enter the portion CNF cost allocable to any/all NFSAs in the NFSA CNF
- Method of proration
  - Number of subscribers in PFSAs served by the CNF asset is common
  - Use a defensible method and provide an explanation
- Remember, you can attach documents to the Network section of the application to document and justify any of your assumptions and methods

CIW – Other Costs – Asset Categories

Asset Category	Specific Asset Type	
Support Assets	• Construction Vehicles • Construction Equipment • Special Purpose Vehicles • Office Equipment • Office Furniture	• Billing System • Test Equipment • Portable Generators • Tools • Other (specify)
Other Expenditures	• Pre-application Expenses • Acquisition • Other (Specify)	
Professional Services	• Engineering Services • Architectural Services • Environmental Services	• Project Management Services • Other (specify the type of service)

CIW – Other Costs – Support Assets

- NO OPERATING COSTS
- If the cost isn't 100% allocable to the ReConnect project, it's not eligible
  - Ex.: Existing billing system that will incorporate new services and customers due to the ReConnect project is NOT eligible
- Support Assets are only eligible if asset will be required for the installation or operating need of the network

CIW – Other Costs – Other Expenditures

- Pre-application expenses (may not exceed 5% of federal award)
  - List pre-application environmental reviews or costs on a separate line and note as Environmental
  - Environmental pre-application costs are limited to 3% of the federal award, and are part of the overall 5% allowance
- Acquisition (100% Loan applications ONLY)
- Costs of required post-award environmental monitoring
  - Monitoring required to mitigate environmental impacts
  - Fully capitalize these costs as part of the project
  - Include them as Professional Services
    - Describe as Environmental Construction Monitoring
  - Limited to 3% of federal award (NOT the same as pre-application expenses)
- Other (specify) – provide a clear succinct description

CIW – Other Costs – Professional Services

- Slide 51 provides the list of service types (“other” for uncategorized services)
  - If a service affects more than one service area (PFSA or NFSA), record the service once, showing the total for all affected service areas
  - This is the total for that service across ALL project years
- Engineering costs associated with the project assets and construction will be under this Cost Category
  - NOT under an asset category
  - Record costs of in-house engineering here. Note this cost as In-House Engineering in the description
- Include required post award environmental monitoring costs here (up to 3% of award)

CIW – Summary

- Captures all of project costs grouped by asset category (PFSAs and NFSAs; UPLF)
- Required: PFSA Funding Information section
  - Enter loan request, grant request or both, according to the funding type selected when you created the application
    - If requesting a 50/50 loan-grant combination, you may enter a cash substitution amount for all or part of the loan request here as well
  - The system calculates the match (if required) and any other costs that you'll have to cover outside of an award
  - System will validate the math on pre-application expenses, acquisition costs, etc.
- **NOTE:** application must show how you will cover all project costs: loan request, grant request, other funds for any additional project costs. Provide documentation of sources of funds for any required match and any other costs

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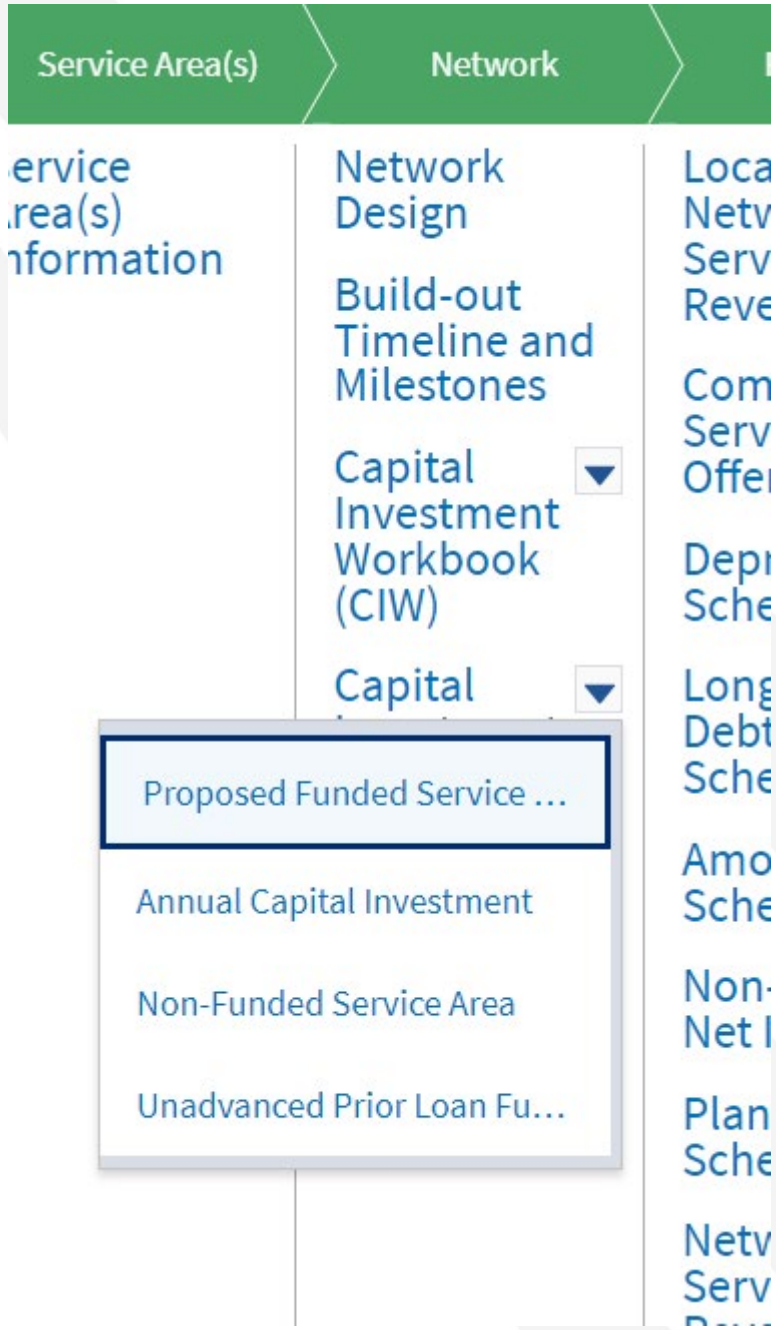
Capital Investment Schedule (CIS)

Capital Investment Schedule (CIS)

- Complete a CIS for
  - PFSAs
  - NFSAs
  - UPLF
- If no NFSA or UPLF, those options will not appear on this menu



CIS Example

Capital Investment Schedule (PFSA)

Towers

		BRIDGE YEAR	FORECAST YEARS						
ASSET TYPE	CIW SUMMARY AMOUNTS	2023	2024	2025	2026	2027	2028	TOTAL	AMTS FULLY DISTB?
Improvements	$100,000	$0	$0	$0	$0	$0	$0	$0	No
Total Capital Investment ...			**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	

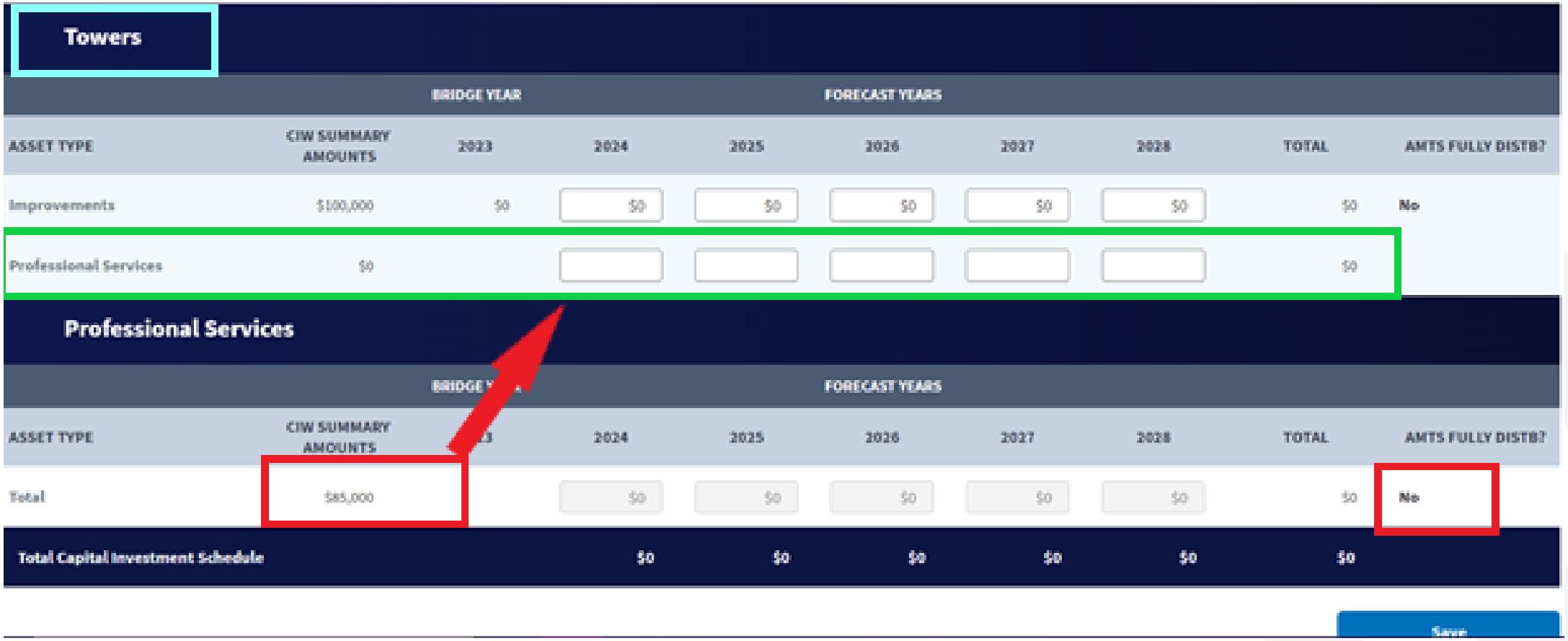
Save

CIS Tips

- Complete the entire CIW before starting the CIS. It uses data from the CIW
- Should harmonize with the buildout timeline
  - If you propose a milestone for tower construction in year 2 in the Buildout Timeline, the CIS should reflect those costs in year 2 as well
- Should be reflected in the pro forma financials
  - Ex.: Increases in inventory costs for your equipment or supplies costs reflected in the correct year of the pro forma financial statements to correspond to the CIS

CIS Professional Services Example

Capital Investment Schedule (PFSA)



Towers

ASSET TYPE	CIW SUMMARY AMOUNTS	BRIDGE YEAR 2023	FORECAST YEARS 2024	2025	2026	2027	2028	TOTAL	AMTS FULLY DISTB?
Improvements	$100,000	$0	$0	$0	$0	$0	$0	$0	No
Professional Services	$0							$0	

Professional Services

ASSET TYPE	CIW SUMMARY AMOUNTS	BRIDGE YEAR 2023	FORECAST YEARS 2024	2025	2026	2027	2028	TOTAL	AMTS FULLY DISTB?
Total	$85,000		$0	$0	$0	$0	$0	$0	No

Total Capital Investment Schedule	$0	$0	$0	$0	$0	$0

Save

CIS Annual Capital Investment

Annual Capital Investment

Annual Capital Investment

	2024	2025	2026	2027	2028	TOTAL
Total Proposed Funded Service Area Costs	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
Cash Substitution Amount for Loan Portion	$0	$0	$0	$0	$0	$0
Total Loan Amount	$0	$0	$0	$0	$0	$0
Total Grant Amount	$0	$0	$0	$0	$0	$0
Other Funds	$0	$0	$0	$0	$0	$0
Annual Capital Investment	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**

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Network Documents

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Wrap-Up

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ReConnect Resources

Available Resources for Application Help

- **Technical Assistance**
  - Register for upcoming workshops/webinars https://www.usda.gov/reconnect/events
  - Subscribe to receive updates about upcoming events on the ReConnect website
- **Resources**
  - ReConnect website https://www.usda.gov/reconnect
  - FOA: https://www.govinfo.gov/content/pkg/FR-2022-08-04/pdf/2022-16694.pdf
  - Regulation: https://www.govinfo.gov/content/pkg/FR-2021-02-26/pdf/2021-03443.pdf
  - Updated Application Guide
  - Updated Frequently Asked Questions (published once the FOA is released)
- **Contact Us**
  - When working **inside** the application, use the “Contact Us” button on your screen. **Outside** of the application system, use https://www.usda.gov/reconnect/contact-us
  - Contact your General Field Representative (GFR): https://www.rd.usda.gov/contact-us/telecom-gfr/all

Q&A

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