Amendment To Current Approved Construction Work Plan

Amendment #:	2021-1
Borrower Designation:	KY 65
Work Plan Period:	2020-2024

Change Proposed

Add code 616 - Smart Grid Fiber

Build fiber optic cable plant along distribution lines to provide high speed communication for system operation and control. The entire Project will extend fiber throughout Kenergy service area which includes approximately 7,478 miles from 49 substations. The build includes the design and installation of fiber optic cable, distribution boxes, splices, terminations, drops, network terminal units, communication huts, and other ancillary fiber plant equipment plus all attachments and hardware required for installation.

<u>Reason(s) for Change(s)</u>: Kenergy must have high speed communication across the system to optimize its electric system operation and control. Before fiber, the cooperative used radio communication that is not completely reliable to stations and no downline communication. With reliable fiber communications, Kenergy will improve system monitoring, system security, and system operation. Smart grid applications can be implemented and intelligent controls can be placed into service throughout the system. Distributed resources and smart home devices can be integrated into the system. Load management, voltage control and other power supply strategies can be implemented to reduce power costs. System losses can be reduced. The benefits to Kenergy will only grow as new technologies are implemented to better serve members. All (14) of Kenergy served counties would be affected: Daviess, Henderson, Hancock, Ohio, Webster, McLean, Hopkins, Muhlenberg, Union, Breckinridge, Crittenden, Caldwell, Lyon and Livingston.

Kenergy will also use the fiber to make broadband internet available to its members. Internet availability will transform the Kenergy service territory, maintaining and increasing load through growth in residential development and new business locations. Broadband internet communications in today's world are as critical to quality of rural life as electricity in the 1930's.

Method of Financing	Loan Funds General Funds Contributions		
Status of Borrowers Environmer	<u>ntal Report:</u> Atta	ched	
Estimated Cost \$143,825,35	55		
Engineering Support Attached	NA		
Engineer Rob Vice Pres. Of Eng	gineering	<u>19340</u> P.E. Number	_Date: 9-17-2021
Requested By ///////////////////////////////////	ha	_ Date: 9-17-20)21
Approved By: <u>Mike Norman</u> RUS, GFR		D	ate: 9-17-2021
Subject to BER approval? Yes	X No		
Status of Construction: Propose	ed 2022		