RUS Electric Program

DOE CCUS Review Meeting – Pittsburg, PA

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Christopher A. McLean
Assistant Administrator
RUS Electric Program

USDA Rural Development
U.S. DEPARTMENT OF AGRICULTURE

Topics:

- RUS Electric Program Overview
- Consolidated Appropriations Act, 2019
- FY 2018 Accomplishments & FY 2019 Status
- Outlook for FY 2020 and Beyond
- RUS Underwriting History of CCUS Projects
- FY 2020 Outlook

Consolidated Appropriations Act, 2019
RUS RE Act Electric Program

Electric Infrastructure Loans

- $5.5B in FFB Guaranteed Loans Appropriated for FY 19
- Treasury + 1/8%
- Up to 35 years

RE Act Sec. 317 Authority

- Renewable and Hydro serving rural and non-rural consumers
- 2nd year Congress gave authority to use FFB funds under Sec. 317

High Energy Cost Grants

- 275% of national average energy cost Typically $10 million per year
- Typically $10 million per year - Alaska, Hawaii, Pacific and Tribal typical awardees

Consolidated Appropriations Act, 2019
RUS RE Act Electric Program

RE Act Sec. 313A Guaranteed Underwriter Loans

- $750M Appropriated for FY 19
- Treasury + 1/8% + 3/10% (adder supports REDLG)
- CFC & CoBank are borrowers

RUS Standards

- Used by borrowers and non-borrowers
- Important tool for risk and liability protection
- List of approved materials maintained for distribution borrowers
- Agency Buy American Requirements Apply

Rural Energy Savings Program (RESP) Act

RESP

- $100 + million available now for energy efficiency relending!
- NOFA open through this FY
- Reg being drafted
- 0% interest to borrower
- Up to 5% interest to consumer
- Program expanded (storage, on-grid/off-grid renewables, charging stations, manufactured homes)
- Significant Hill Interest
- Frequent statutory refinements
- Compelling opportunity
- Drawing new and returning borrowers

Electric Portfolio Size

RUS EP serves nearly 700 borrowers and grantees in 40+ states

Total Electric Loan Portfolio:	$43B+/-
313A Obligations:	$8B+
Active HECG projects:	$28.8M unadvanced for 29 Grantees
Cushion of Credit: (on the eve of the Farm Bill enactment for Telecom & Electric)	$8.5B+

RUS RE Act Electric Program

RUS Makes Loans and Loan Guarantees (7 CFR § 1710.100)

- To finance the construction of electric distribution, transmission and generation facilities, including system improvements and replacements.
- For the purpose of furnishing and improving Electric Service in Rural Areas.
- In conformance with the Rural Electrification Act of 1936, as amended (RE Act) and 7 CFR chapter XVII.
- Includes making direct loans and loan guarantees (FFB), as well as grants and other energy project financing to electric utilities (wholesale and retail providers of electricity) that serve customers in rural areas.

RUS RE Act Electric Program

- **New Electric Generation Units** [Fossil (NG & Oil), Renewables & Hydro]
- **Upgrades & System Improvements to Existing Electric Generation Units** [Nuclear, Fossil (Coal, NG & Oil), Renewables & Hydro]
- **New Transmission & Distribution Facilities** [HVTL to residential connections, Smart Grid & Cybersecurity]
- **Upgrades & System Improvements to Existing T&D Facilities**
- **Energy Efficiency & Demand-side Management** [On or Off-Grid]
- **Acquisitions** [New and Used Facilities]

Money Sale!

APPROXIMATE FFB QUARTERLY RATES

3-mo	6-mo	1-yr	2-yr	3-yr	5-yr	7-yr	10-yr	20-yr	30-yr
2.00	1.88	1.76	1.60	1.53	1.50	1.55	1.61	1.82	1.91

Plus 1/8%

8/23/19 rates (rates set daily)

RUS RE Act Electric Programs

Loans Obligated from FY 2015 thru FY 2019

	FY 19*	FY 18	FY 17	FY 16	FY 15
# of Loans	72	120	115	91	107
$ Obligated	$2.13	$3.71B	$4.23B	$3.92B	$3.40B

*obligated as of 8/19/2019

FY 2018 Accomplishments

FY 18 Total loans obligated:	**120**	**$3.71B**
FFB loans:	**119**	**$2.95B**
Distribution loans	105	$2.17B
G&T & Power Supplier loans	14	$0.78B
Note Guarantees (313A):	**1**	**$0.75B**

FY 18 loan purposes:

Transmission:	$ 382M
Generation (New & System Improvements):	$ 245M
Distribution:	$2,247M
Acquisition:	$ 68M (Inc. used coal power plant)
Smart Grid:	$ 460M (Inc. $260M for fiber - 4 loans)
Renewable Projects:	$ 77M (Inc. $73M for 4 solar projects)
RESP (Energy Efficiency):	$ 22M (4 loans)

FY 2018 Impact

Helping Rural America Thrive!

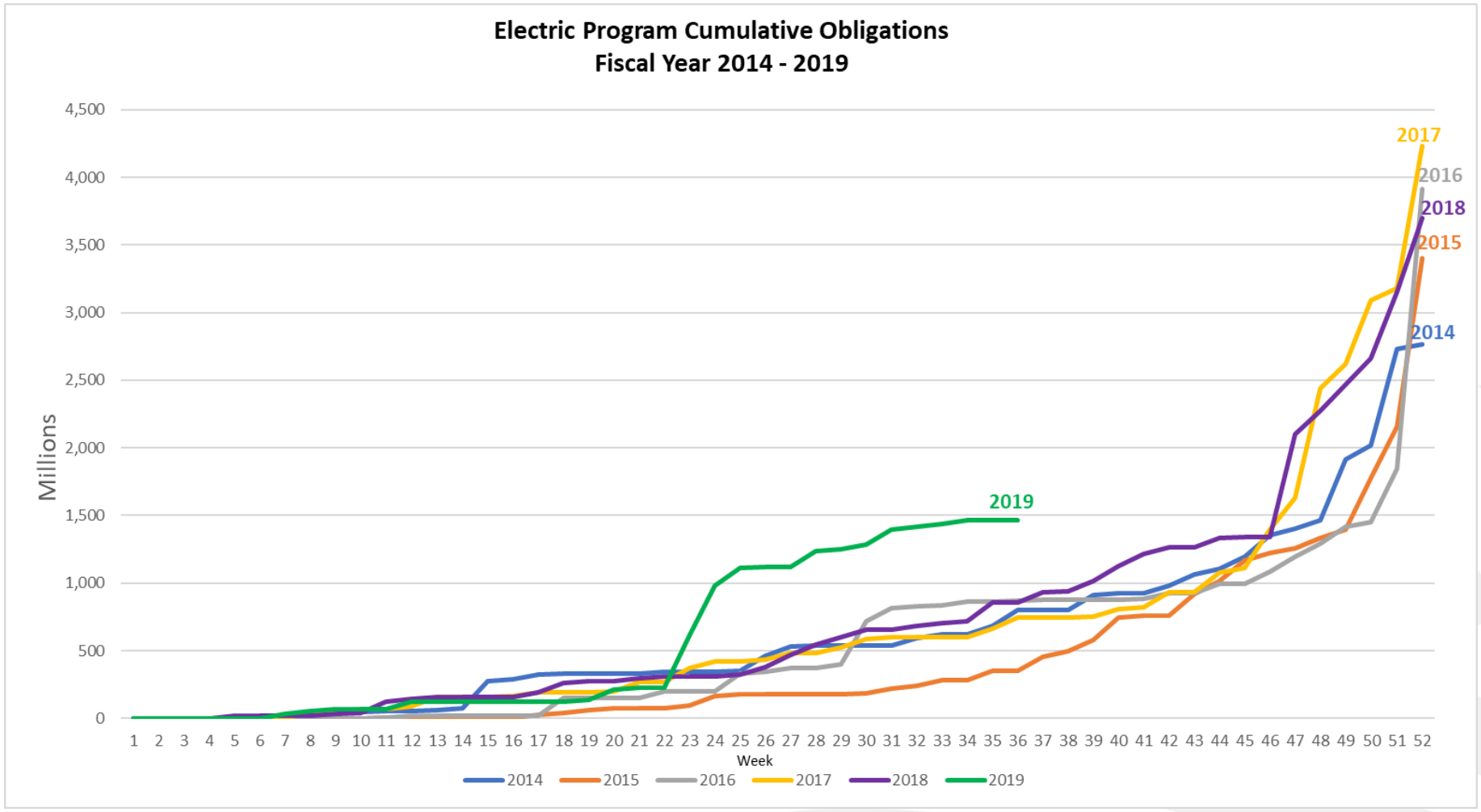
Improved electric service for:

- Existing consumers: 2,050,410
- New consumers: 91,829
- Tribal consumers: 28,028 ($31 M)
- Total counties: 1,022
- Poverty counties: 122 ($733 M)
- Outmigration counties: 215

Other infrastructure improvements:

- AMR/AMI (enabling Smart Grid): $128 M
- Headquarters: $61M
- Storm Damage: $1.2 M

FY 2019 Momentum



Requirements for RUS Electric & Telecom Loans

- **Rural Determination** - Electric facilities must provide service to “RE Act Beneficiaries.”
- **NEPA Requirements** - The review & approval of the RUS environmental staff per 7 CFR Part 1970.
- **Proven Technology –** Commercially available; new material & equipment unless otherwise approved by RUS
- **Loan Feasibility –** Reasonable assurance loan will be repaid in full as scheduled.
- **Loan Security –** Reasonably adequate security

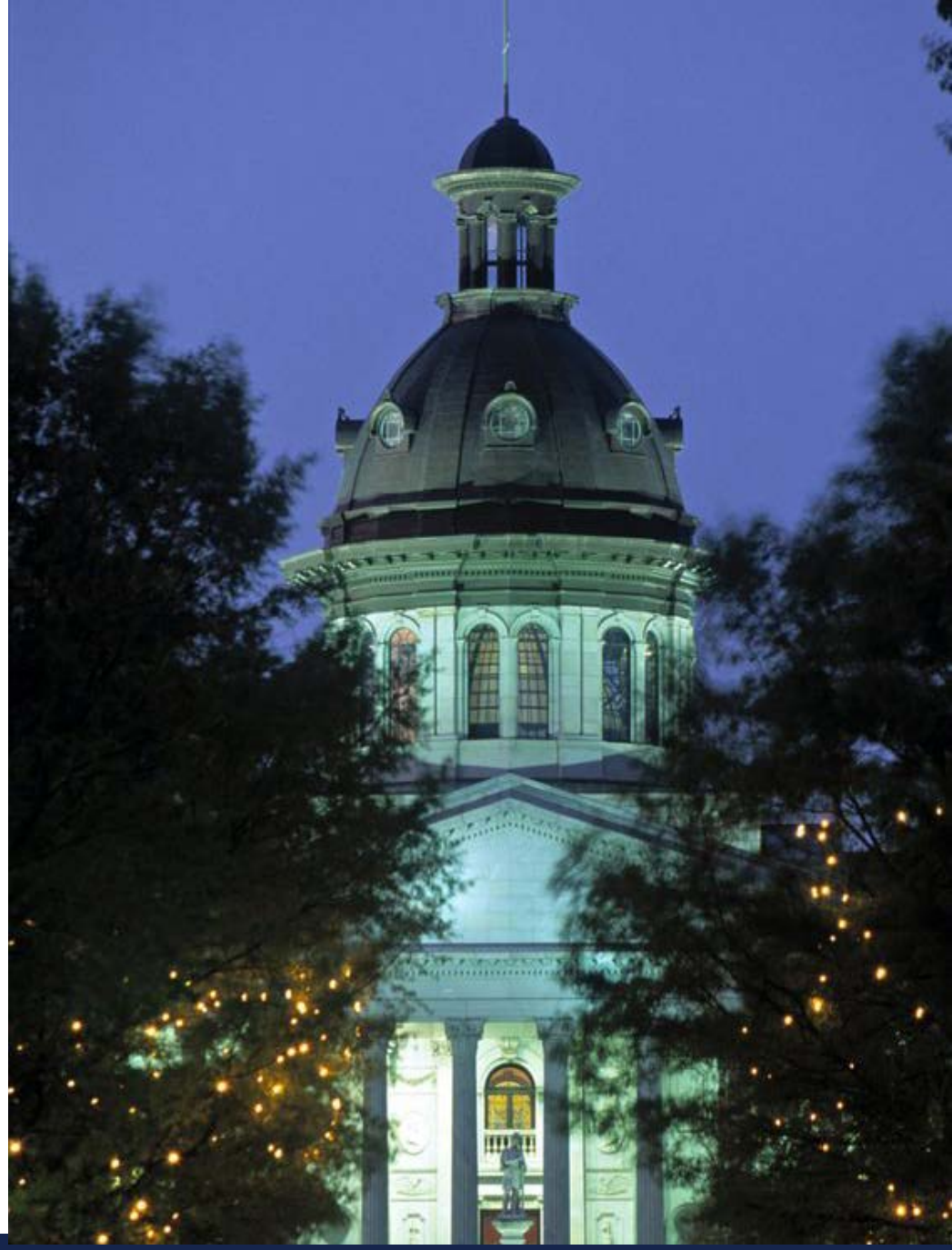
Consolidated Appropriations Act, 2019 Authorization to Fund CSUS

"…*Provided*, That up to $2,000,000,000 shall be used for the construction, acquisition, design and engineering or improvement of fossil-fueled electric generating plants (whether new or existing) that utilize carbon subsurface utilization and storage systems."

Potential Ways to Fund CCUS Projects

- As a System Loan to an existing borrower.
- As a System Loan to a subsidiary that is 100% owned by an existing borrower(s). The output (electricity/CO_2) would be sold to the existing borrower or entity that serves rural consumers.
- As a Project Financing Loan to a new borrower & for-profit entity that will own & operate the facility but would sell output to an existing borrower or to an entity that serves rural consumers. Minimum 25% Equity Required.

Certain conditions would be placed on the release of loan funds based on the technology, type of loan & characteristics of borrower & off taker.



CCUS Underwriting Experience

CO_2 Capture & Compression Project at Antelope Valley Station in Baulah, ND:

- **Amount Obligated:** $300M to Basin Electric Power Cooperative, Inc. (Basin), a G&T and at the time an existing RUS Electric Program borrower.

Kemper County IGCC Project (Plant Ratcliffe) in MS:

- **Amount Obligated:** $480M on LATER to South Mississippi Electric Power Association (SMEPA), a G&T and an existing RUS Electric Program borrower.

Neither project resulted in funds being drawn. One not built. One modified. Both projects experienced significant cost increases.

Future CCUS Projects?

RUS is optimistic

RUS must be prudent with loan funds

Grants/co-lenders welcome in capital stack

Technological & financial risks must be understood and mitigated

Experienced engineering & financial staff ready

- **Proven Technology** - Commercially available
- **Loan Feasibility** – Reasonable assurance loan will be repaid in full as scheduled
- **Loan Security** – Reasonably adequate security

FY 2020 Outlook and Beyond

Infrastructure "R US!"

- Continued Investments needed to address aging plant
- Carbon Capture, Usage & Sequestration emerging
- Energy Efficiency and Demand Response interest rising
  - 12/2018 milestone: 1 M electric vehicles on the road
  - Beneficial electrification creates growth and consumer savings
- Smart Grid essential to modern electric infrastructure
- Coops are applying for ReConnect broadband loan and grant funding
- Electric reliability essential with growth of renewables
- Grid Resiliency needed to address natural disasters, cyber and human threats
- Microgrids, Energy Storage, Enhanced Control Systems

Thank You!

Christopher.McLean@usda.gov

Rural Development

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