Rural Utilities Service

January 28, 2020
Infrastructure Financing

RUS is the successor to the Rural Electrification Administration (REA + FmHA W&S = RUS)

$60 Billion Loan Portfolio: $44 Billion Electric; $13 Billion Water; $3 Billion Telecom

Electric Program includes financing for coal fired power plants

RUS Electric loan Program has a negative subsidy in the federal budget- no delinquencies

Other than S&E, loan levels do not require budget authority

Appropriators approve an annual Program Level (PL) – over $5 Billion

RUS also makes loans and grants for rural

Water and Sewer - $1.4 Billion annually

Broadband, Distance Learning & Telemedicine Projects -- over $700 million first round

ReConnect

New round of funding to open January 31, 2020 -- $550 million in Budget Authority
Electric and Beyond!

RUS can provide low cost financing to virtually any element of electric infrastructure serving rural America.

Distribution
Transmission
Generation
Smart Grid
Energy Efficiency
Cyber/Grid Security
Renewables
CCUS

Focused on hard asset lending.

Projects must be eligible, feasible and secured.
Incentive Lender Open to All Electric Utilities Serving Rural Areas

Incentive Lender

Not Lender of Last Resort

Infrastructure lending

System & Project Loans

First Lien or Shared First Lien on assets (pledge of revenues possible for tribal/muni)

While Coops are RUS’ largest customer base, program open to
  • IOU
  • Municipal
  • Tribal
833 distribution and 62 generation & transmission cooperatives

Power

56% of the nation’s landmass.

Source: NRECA
The Electric Program obligated $5.77 billion in loans and grants in FY 19:

**Electric Infrastructure Loan Program**
- 104 loans were obligated for a total of $4,996,130,472
- Approximately 7.6 million rural residents will receive new/improved electric facilities
- Dollars Leveraged, $1.77 billion

**313A Loan Guarantee Program**
- 2 loans were obligated for a total of $750,000,000

**Rural Energy Savings Program (RESP)**
- 6 loans were obligated for a total of $34,200,000
- Serving 94,228 rural residents

**High Energy Cost Grant (HECG) Program**
- 6 grants were obligated for a total of $11,668,431; $3.9 million non-federal match: $3.5 million Denali and $400 thousand other)
Money Sale!

APPROXIMATE FFB QUARTERLY RATES

<table>
<thead>
<tr>
<th>Period (yr)</th>
<th>Rate</th>
</tr>
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<tbody>
<tr>
<td>3-mo</td>
<td>1.52</td>
</tr>
<tr>
<td>6-mo</td>
<td>1.55</td>
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<tr>
<td>1-yr</td>
<td>1.54</td>
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<tr>
<td>2-yr</td>
<td>1.53</td>
</tr>
<tr>
<td>3-yr</td>
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<tr>
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<tr>
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<td>1.78</td>
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<tr>
<td>20-yr</td>
<td>2.02</td>
</tr>
<tr>
<td>30-yr</td>
<td>2.09</td>
</tr>
</tbody>
</table>

Plus 1/8%

1/6/2020 rates (rates set daily)
## RUS Loan Portfolio

<table>
<thead>
<tr>
<th>Principal Balance as of 09/30/2019</th>
<th>313A PBO</th>
<th>FFB PBO</th>
<th>RESP PBO</th>
<th>RET PBO</th>
<th>COC</th>
<th>PBO less COC</th>
</tr>
</thead>
<tbody>
<tr>
<td>RUS Electric Borrowers w/Coal Plant Assets</td>
<td></td>
<td>$16,136,189,365.60</td>
<td>$15,767,354.07</td>
<td>$1,455,900.69</td>
<td></td>
<td>$16,150,500,818.98</td>
</tr>
<tr>
<td>RUS Electric Total Portfolio</td>
<td>$5,637,155,489.73</td>
<td>$41,695,830,469.33</td>
<td>$1,388,787.41</td>
<td>$1,938,016,329.03</td>
<td>$5,207,787,215.41</td>
<td>$44,064,603,860.09</td>
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</tbody>
</table>
# RUS Borrowers with Coal Assets

<table>
<thead>
<tr>
<th>RUSBorrowerId</th>
<th>PlantName</th>
<th>State</th>
<th>Fuel</th>
<th>borrower</th>
</tr>
</thead>
<tbody>
<tr>
<td>AK0006</td>
<td>Healy</td>
<td>Alaska</td>
<td>Coal</td>
<td>yes</td>
</tr>
<tr>
<td>AL0042</td>
<td>Lowman</td>
<td>Alabama</td>
<td>Coal</td>
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</tr>
<tr>
<td>AR0032</td>
<td>GRDA</td>
<td>Oklahoma</td>
<td>Coal</td>
<td>yes</td>
</tr>
<tr>
<td>AR0034</td>
<td>Turk</td>
<td>Arkansas</td>
<td>Coal</td>
<td>yes</td>
</tr>
<tr>
<td>AZ0028</td>
<td>Apache</td>
<td>Arizona</td>
<td>Coal</td>
<td>yes</td>
</tr>
<tr>
<td>CO0034</td>
<td>Comanche #3</td>
<td>Colorado</td>
<td>Coal</td>
<td>yes</td>
</tr>
<tr>
<td>FL0041</td>
<td>Seminole</td>
<td>Florida</td>
<td>Coal</td>
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<tr>
<td>GA0109</td>
<td>Wansley</td>
<td>Georgia</td>
<td>Coal</td>
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<tr>
<td>IA0083</td>
<td>Walter Scott</td>
<td>Iowa</td>
<td>Coal</td>
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<tr>
<td>IA0084</td>
<td>Neal</td>
<td>Iowa</td>
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<tr>
<td>IL0050</td>
<td>Marion</td>
<td>Illinois</td>
<td>Coal</td>
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<td>IN0106</td>
<td>Merom Generating Station</td>
<td>Indiana</td>
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<td>KS0053</td>
<td>Holcomb</td>
<td>Kansas</td>
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<tr>
<td>KS0054</td>
<td>Iatan 2</td>
<td>Missouri</td>
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<tr>
<td>KY0059</td>
<td>Cooper</td>
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<td>KY0062</td>
<td>Wilson</td>
<td>Kentucky</td>
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<tr>
<td>MO0071</td>
<td>Chamois</td>
<td>Missouri</td>
<td>Coal</td>
<td>yes</td>
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<tr>
<td>MO0073</td>
<td>Thomas Hill</td>
<td>Missouri</td>
<td>Coal</td>
<td>yes</td>
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<tr>
<td>MS0053</td>
<td>R. D. Morrow, Sr.</td>
<td>Mississippi</td>
<td>Coal</td>
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<tr>
<td>ND0020</td>
<td>Milton R. Young 1</td>
<td>North Dakota</td>
<td>Coal</td>
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</tr>
<tr>
<td>ND0048</td>
<td>Milton R. Young 2</td>
<td>North Dakota</td>
<td>Coal</td>
<td>yes</td>
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<tr>
<td>OH0099</td>
<td>Cardinal Station 1,2 and 3</td>
<td>Ohio</td>
<td>Coal</td>
<td>yes</td>
</tr>
<tr>
<td>OK0032</td>
<td>Hugo</td>
<td>Oklahoma</td>
<td>Coal</td>
<td>yes</td>
</tr>
<tr>
<td>TX0154</td>
<td>Nelson</td>
<td>Louisiana</td>
<td>Coal</td>
<td>yes</td>
</tr>
<tr>
<td>TX0158</td>
<td>Dolet Hills</td>
<td>Louisiana</td>
<td>Coal</td>
<td>yes</td>
</tr>
<tr>
<td>TX0161</td>
<td>Turk</td>
<td>Arkansas</td>
<td>Coal</td>
<td>yes</td>
</tr>
<tr>
<td>WI0064</td>
<td>Genoa #3</td>
<td>Wisconsin</td>
<td>Coal</td>
<td>yes</td>
</tr>
</tbody>
</table>

RUS borrowers who own all or part of a coal fired power plant.
Energy Focused DOE/USDA Memorandum of Understanding (MOU)
DOE and USDA Join Forces to Increase Energy Technology Development and Deployment in Rural America

OCTOBER 24, 2019

WASHINGTON, DC - U.S. Under Secretary of Energy Mark W. Menezes and Deputy Under Secretary Donald LaVoy today announced a Memorandum of Understanding (MOU) between the two departments to promote rural energy and the development of technologies that will support and advance rural and agricultural communities and domestic manufacturing.

The newly-signed MOU, which was required under section 6501 of the 2018 Farm Bill, will enhance collaboration and coordination between the Department of Energy (DOE) and USDA. The areas covered by the MOU include facilitating energy-related investments in America's rural communities; streamlining, leveraging and optimizing program resources; encouraging innovation;
The MOU was established in response to the Presidents Executive Orders on Rural Prosperity (2017) and Energy Infrastructure (2019), and was mandated in the 2018 Farm Bill

- The MOU establishes new, and formalizes existing, USDA-DOE collaboration, and has five primary objectives;

  - Develop and expand energy- and manufacturing-related businesses, industries, and technologies in rural America;
  - Encourage investments in new or improved rural energy infrastructure;
  - Enhance capital access for energy-related businesses and industries in rural America;
  - Support rural community investments that anticipate growth associated with rural energy investment and development; and
  - Encourage, support, and invest in cybersecurity initiatives and grid improvements.
Current Status/Actions to Date

- Key personnel have been identified from across both departments, an interdepartmental workgroup formed, and an administrative structure established to implement the MOU

- Four interdepartmental teams within the workgroup have been formed
  - Energy Industry – Electric Generation
  - Energy Industry – Non Electric Generation
  - Manufacturing
  - Critical Infrastructure and Cybersecurity

- An sixteen initial projects have been identified and aligned under the appropriate focus areas, project leads have been assigned, and efforts are underway
**USDA Agencies***

- Rural Business Service
- Rural Utilities Service

**DOE Program Offices**

- Office of Fossil Energy
- EERE (Renewable)
- Cybersecurity
- Office of Electricity

**IWG/Teams Crosscut Multiple Agencies/Program Offices**

- Manufacturing IWG
- Energy Industry (Non-Generation) IWG
- Energy Industry (Generation) IWG
- Infrastructure and Cybersecurity IWG

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*USDA Natural Resources Conservation Service (NRCS) currently participates on one selected project, Rural Housing Service will be included on as-needed basis*
## Inter-Departmental Work Groups (IWG) and Projects

<table>
<thead>
<tr>
<th>Manufacturing IWG</th>
<th>Energy Industry (Non-generation) IWG</th>
<th>Energy Industry (Generation) IWG</th>
<th>Infrastructure and Cybersecurity IWG</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>USDA/DOE/SBA Capital Access Forum Series</strong></td>
<td><strong>CO2 Pipeline Network Routing</strong></td>
<td><strong>Carbon Capture Utilization and Storage Task Force</strong></td>
<td><strong>Energy Government Coordinating Council (EGCC)</strong></td>
</tr>
<tr>
<td><strong>Manufacturing Facility Energy Efficiency Audits</strong></td>
<td><strong>Energy-Agriculture-Water Nexus Drought Mitigation Effort</strong></td>
<td><strong>Existing Coal Plant Efficiency Improvements</strong></td>
<td><strong>APPA Preparedness and Response</strong></td>
</tr>
<tr>
<td><strong>Natural Gas and Coal Based Products Manufacturing</strong></td>
<td><strong>Biofuels Infrastructure Enhancement</strong></td>
<td><strong>Wind Innovation for Rural Economic Development</strong></td>
<td><strong>NRECA and APPA Cybersecurity Training for Utilities</strong></td>
</tr>
<tr>
<td></td>
<td><strong>LNG Energy related projects</strong></td>
<td><strong>Hydro for Rural Economic Development</strong></td>
<td><strong>Reduction of Fires from Vegetation and Electric Grid Contact</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><strong>Electric Grid Outage and Impact Sharing</strong></td>
</tr>
</tbody>
</table>
Additional Efforts Underway Related to MOU Agreement

• Within one year of signing of the MOU, the workgroup will produce a report on opportunities for USDA and DOE to collaborate on rural energy issues
  • Focus on Challenges and Opportunities for Energy Related Rural Economic Development
  • Link USDA and DOE programmatic resources currently available to help address these items

• Soliciting stakeholder (within and external to Federal Government) input on critical areas that can be addressed through this joint effort
When to Fund CCUS Projects?

- RUS remains optimistic but will invest prudently.

- Technological & Financial Risks must be minimized to protect rural consumers & U.S. tax payers.

- Staff will perform Engineering & Financial analyses & due diligence. Recall...
  
  - **Proven Technology** - Commercially Available.
  
  - **Loan Feasibility** – Reasonable assurance loan will be repaid in full as scheduled.
  
  - **Loan Security** – Reasonable adequate security.
Electric Program Opportunities & Challenges

Future opportunities & challenges:

- Continued Investments needed to address aging plants and electrical facilities
- Smart Grid essential to modernize the electric infrastructure, secure grid, enhance recovery and promote efficiency
- New Natural Gas Combined Cycle plants with advanced Combustion Turbine technology & new reciprocating engines
- More solar PV facilities and other renewables
- Energy Efficiency and Demand Response interest rising
- Grid Resiliency needed to address natural disasters, cyber, EMP and human threats
- Microgrids Energy Storage, Enhanced Control Systems
- Carbon Capture, Usage & Sequestration
- Fiber investment for Smart Grid synergetic with broadband goals
Thank You!

- Follow-up opportunities:

  Christopher A. McLean  
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  Rural Utilities Service  
  Electric Programs  

  Christopher.McLean@usda.gov