Overcoming the Margin Squeeze: An Evaluation of Strategies to Manage Your Plant’s Cost of Capital

ACE Conference
August 14, 2019
Omaha Nebraska
Today’s Discussion

- Industry Working Capital and Finance Structure
- Long-Term Debt Structuring
- 45Q & Grant Update
- Long-Range Planning: Ensure the Best Capital Structure for Your Unique Vision
- Corn Cost Strategy—What We’ve Seen
Financial Efficiencies

Working Capital Per Gallon

- 2010: Average $0.15, Lowest Quartile $0.15, Highest Quartile $0.00
- 2014: Average $0.32, Lowest Quartile $0.32, Highest Quartile $0.20
- 2018: Average $0.20, Lowest Quartile $0.20, Highest Quartile $0.00
Financial Efficiencies Over Time

Equity to Total Assets

- 2010: Average 0.54, Highest Quartile 0.86, Lowest Quartile 0.29
- 2014: Average 0.74, Highest Quartile 0.92, Lowest Quartile 0.58
- 2018: Average 0.71, Highest Quartile 0.97, Lowest Quartile 0.47
Financial Efficiencies

Long-Term Liabilities Per Gallon

- **Average**
- **Lowest Quartile**
- **Highest**

<table>
<thead>
<tr>
<th>Year</th>
<th>Average</th>
<th>Lowest Quartile</th>
<th>Highest</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>0.47</td>
<td>0.02</td>
<td>0.97</td>
</tr>
<tr>
<td>2014</td>
<td>0.19</td>
<td>0.00</td>
<td>0.50</td>
</tr>
<tr>
<td>2018</td>
<td>0.17</td>
<td>0.00</td>
<td>0.53</td>
</tr>
</tbody>
</table>
Enacted by the Energy Improvement and Extension Act of 2008 to provide a credit for the sequestration of CO2

Amended by the American Recovery and Reinvestment Tax Act of 2009, and more recently by the Bipartisan Budget Act (BBA) of 2018 signed into law by President Trump

- Included a reform to the tax credits awarded under Section 45Q for capturing and securing geologic storage of certain carbon oxide emissions
- Expanded and increased the credit
- Currently the IRS developing rules and closed the comment period July 4th

Old Law: The total number of 45Q credits allowed to be claimed was capped at 75 million tons, after which the credit disappeared

New Law: There is no limit on the number of available credits
45Q Tax Credit Overview Cont.

- Under the new law, there are size requirements for the facility.
- While the new legislation allows smaller facilities to be eligible, there are still size requirements that exist.

<table>
<thead>
<tr>
<th>Facility Type</th>
<th>Facility Size</th>
<th>Minimum CO² Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Small Facility</td>
<td>&lt;500,000 tons annually</td>
<td>≥25,000 tons annually</td>
</tr>
<tr>
<td>Large Facility</td>
<td>≥500,000 tons annually</td>
<td>≥100,000 tons annually</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Facility Type</th>
<th>Facility Size</th>
<th>Minimum CO² Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Facilities</td>
<td>Any Size</td>
<td>≥500,000 tons annually</td>
</tr>
</tbody>
</table>
45Q Tax Credit Overview Cont.

There are also equipment and construction timing considerations:

➤ The credit is claimed by the person that owns the carbon capture equipment and physically or contractually ensure the capture and disposal, utilization, or use as a tertiary injectant of such qualified carbon oxide.

➤ Equipment placed in service after February 8, 2018.

➤ Construction begins before January 1, 2024.
### 45Q Tax Credit Overview Cont.

#### New Credit Amounts/Values and Timing

If the equipment was placed in service before the bill passed, the credit amount is $20 per ton sequestered and $10 per ton injected, plus an annual inflation adjustment.

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Sequestration</th>
<th>EoR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Old Law</td>
<td>$20.00</td>
<td>$10.00</td>
</tr>
</tbody>
</table>

For equipment placed in service after the bill passed, Specifics around the timing of the credit can be claimed as follows:

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Sequestration</th>
<th>EoR</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Law – Prior Service</td>
<td>$20.00</td>
<td>$10.00</td>
</tr>
<tr>
<td></td>
<td>plus inflation adjustment</td>
<td></td>
</tr>
<tr>
<td>New Law – New Equipment (2017 – 2026)</td>
<td>$22.66 - $50.00</td>
<td>$12.83 - $35.00</td>
</tr>
<tr>
<td></td>
<td>Linear growth to $50 over 10 years</td>
<td>Linear growth to $35 over 10 years</td>
</tr>
<tr>
<td>New Law – New Equipment (2027 and after)</td>
<td>$50.00</td>
<td>$35.00</td>
</tr>
<tr>
<td></td>
<td>Plus inflation adjustment</td>
<td>Plus inflation adjustment</td>
</tr>
</tbody>
</table>
45Q Tax Credit Overview Cont.

There are limitations and structure issues that need to be considered

- General Business Tax Credit

- Limited to the difference between regular tax before credits and the Alternative Minimum Minimum Tax (AMT).

  - Additional limiter if 25% of the regular tax over $25,000 exceeds the tentative minimum tax. Then the credit allowed is the difference between that number and the regular tax.

  - Passive investors (< 500 hours per year) face additional limitations

- Tax Cuts and Jobs Act (TCJA)

  - Raised exemption amount for the AMT
  - Corporations are no longer subject to AMT
Timing considerations to claim the credit

This credit can be claimed for up to 12 years, and each years tax credit can be carried back for one year, and carried forward for up to 20 years

12 Years of Credit Generation
- 45Q credits can be generated during the 12-year period that begins on the date the equipment is placed into service
- After that 12-year period, the credits for that project end

1 Year of Credit Carryback
- If you have unused 45Q credits during a tax year, you can carry them back 1 year

20 Years of Credit Carryforward
- If additional unused credits remain after applying the credit to the current year and prior year, then that unused credit may be carried forward to another tax year for up to 20 years
What is this Worth?

- 40% of oil price ($23/ton at ~$60 per barrel)
- $35 per ton Credit = 9 cpg
Carbon Capture and Sequestration (CCS)

- CCS is an emerging technology gaining traction in the renewable fuel industry as a method to greatly reduce CI emissions
- CCS protocol issued by CARB with rulemaking for 2019 and beyond
- Credits go to the capture facility
  - Reduction subtracted from CI score
- Storage facility must be a co-applicant
  - Capture and storage facilities do not need to be co-located
- CARB is providing strong incentives combined with long-term tracking and reporting mechanisms
### 45Q Tax Credit Overview Cont.

**Carbon Capture and Sequestration (CCS) Impact on CI score**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Assumed value</th>
<th>Contribution to CI of EtOH</th>
</tr>
</thead>
<tbody>
<tr>
<td>ILUC</td>
<td>Default Value</td>
<td>19.8</td>
</tr>
<tr>
<td>Corn Farming And Transport</td>
<td>Default In CA-GREET 2.0</td>
<td>30.1</td>
</tr>
<tr>
<td>Co-product Credit</td>
<td>5 Dry lbs DGS/Gal</td>
<td>-11.1</td>
</tr>
<tr>
<td>Natural Gas</td>
<td>24,000 Btu/Gal</td>
<td>19.8</td>
</tr>
<tr>
<td>Electricity</td>
<td>0.7 Kwh/Gal</td>
<td>5.9</td>
</tr>
<tr>
<td>Chemicals</td>
<td>Industrial Typical</td>
<td>2.0</td>
</tr>
<tr>
<td>T&amp;D Of Etoh</td>
<td>Midwest To CA By Rail For 1,900 Miles</td>
<td>2.4</td>
</tr>
<tr>
<td>CCS Net Credit</td>
<td>100 MGY facility trucking to injection point</td>
<td>-20.0</td>
</tr>
<tr>
<td>Total CI without CCS</td>
<td></td>
<td>69.0</td>
</tr>
<tr>
<td>Total CI with CCS</td>
<td></td>
<td>49.0</td>
</tr>
</tbody>
</table>

*Approximate value based on assumptions for ethanol yield, CO2 production, CO2 recovery, and CO2 sequestration.*
### What Does This Mean for the Producers and the Industry?

<table>
<thead>
<tr>
<th>Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increase investment in new CO(^2) capture and sequestration technologies</td>
</tr>
<tr>
<td>Increase the adoption of existing CO(^2) capture and sequestration technologies</td>
</tr>
<tr>
<td>Offset the cost of investing in existing CO(^2) capture and sequestration technologies</td>
</tr>
<tr>
<td>Create an additional revenue stream for plants</td>
</tr>
<tr>
<td>Enhance a plant’s ability to recover credit value for CO(^2)</td>
</tr>
<tr>
<td>Reduce a plant’s tax liability</td>
</tr>
</tbody>
</table>
Existing Funding

**Integrated CCS Project**

- Partners: Red Trail Energy, University of North Dakota, DOE, North Dakota Industrial Commission, National Energy Technology Laboratory, and the Energy Environmental Research Center at the University of North Dakota

**Midcontinent Carbon Storage Hub**

- Partners: 8 Ethanol Plants and other Sources, DOE, NPPD, Battelle, Archer Daniels Midland Co., the Kansas Geological Survey, and the Energy Environmental Research Center at the University of North Dakota
New Funding Opportunities

➢ Upcoming Funding Announcement:
  ➢ Focus on commercialization
  ➢ Expected announcement ~ September

➢ Farm Bill
  ➢ 9003 – now includes CO2
Strategic Planning

> Industry top performers
  > Leadership
  > Laser focus
Strategic Planning

> Why so difficult?
> It’s not!

It’s EASY!
Follow Strategic Process

➢ Assessment—Where are we now?
➢ Vision/Gap—Where do we want to be?
➢ Strategic Plan—How do we close the gap?
➢ Goals & Measurements — How do we monitor our progress?
Measurable Goals

➤ Step by step process—get detailed
➤ Set expectations
➤ Define goal
➤ Who’s responsible for goal
➤ Due date
➤ Who to report to
➤ Reporting intervals
Characteristics of Boards and Leadership

- Stay put—improve current footprint
- Grow
  - Expansion
  - Acquisition
- Exit strategy
Strategies Determine Action Plans

> Stay put:
  > Efficiency gains—yield & energy
  > Reduce Carbon Index score
Strategies Determine Action Plans

> Grow:
>  > Expand front and back ends
>  > Gain scale (plus must gain efficiencies)
>  > Build war chest for acquisition opportunities
>  > Impact member distributions
Strategies Determine Action Plans

- Exit strategy:
  - Stockholder & boards aging
  - Purpose of company
  - Plan investment strategy—maximize value
  - Plan for 3-5 years
Keys to Success!

- Leadership
- Laser focus
USDA – August Report

<table>
<thead>
<tr>
<th>Year</th>
<th>Yield</th>
<th>Production</th>
</tr>
</thead>
<tbody>
<tr>
<td>USDA August</td>
<td>169.5</td>
<td>13.901</td>
</tr>
<tr>
<td>USDA July</td>
<td>166</td>
<td>13.875</td>
</tr>
</tbody>
</table>
# Acres – August Report

## Planted Acreage

<table>
<thead>
<tr>
<th>Source: USDA</th>
<th>Corn</th>
<th>Beans</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>USDA August</strong></td>
<td>90.005</td>
<td>76.700</td>
</tr>
<tr>
<td><strong>USDA July</strong></td>
<td>91.700</td>
<td>80.000</td>
</tr>
<tr>
<td><strong>2019 Prevent Plant</strong></td>
<td>11.2</td>
<td>4.35</td>
</tr>
</tbody>
</table>

*In Millions of Acres*
Change in 2019 Planted vs. August ‘18

FSA Prevented Planting Acreage

2019 Corn Crop-Condition

U.S. THIS YEAR
EXCELLENT: 10%
GOOD: 47%

Data updated each Monday at 3 p.m. (CDT) by USDA NASS.
Thank You!

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Always evaluate your unique situation, and seek assistance from tax or other financial expert to determine whether investments, credits or other opportunities are right for you, and if the value justifies the investment.