Biogas: Is the glass (of milk) half empty or half full?
Agenda

> Introduction
> What makes a project viable?
> Project finance considerations
> Example Projects
> Recent IRS notices regarding “Begun Construction”
> Questions and Answers
Baker Tilly is the 8th largest accounting network worldwide

> Top 20 largest firms in the U.S. consisting of more than 1,600 professionals

> Established in 1931

> Offices throughout the Midwest and East Coast
  - Chicago
  - Detroit
  - Minneapolis
  - New York
  - Washington DC
  - Wisconsin
We serve our clients through our industry teams

Utilities

> **Nationwide energy practice:** More than 40 years experience and over 300 energy and utility clients nationwide - electric, water, waste water, storm water, and gas utilities

Renewable Energy

> **Dedicated Renewable Energy Group:** Focused on development and financial solutions to get projects to the finish line in a way that maximizes client value and minimizes risk. We work with more than 40 active projects representing 1,500 MW.

Manufacturers and Food & Beverage

> **Seventy-five years serving manufacturers:** We serve more than 2,300 manufacturers and wholesale/distributors with over 230 in the Food and Beverage industry.

State and Local Government

> **Work closely with municipalities and other non profits:** Experience with municipal/government leaders allows us to understand diverse perspectives. We work with more than 150 higher education and research institutions across the United States.
Since 2008, Baker Tilly has been involved with over $1.96 billion of renewable energy projects that are either operating or under construction

> Over 15 biogas projects (food processors and agricultural feedstock) and $220 million of funding

**Our role:**

> Accessing Federal Incentives (ITC, PTC, 1603 grants, NMTC’s)

> Development Support

  - Feedstock agreements, PPA’s, heat sale agreements, etc.
  - EPC, O&M and Technology procurement agreements

> Financial Advisory and Funding Procurement
Assessing the Business Case for a Project’s Viability

Current Growth Constraints

Primary Issues

- Cost
- Disposal of waste
- Energy
- Environmental
- Regulatory compliance
- Community impact
Assessing the Business Case for a Project’s Viability

Industry Growth Potential

Primary Benefits

> Less risk regarding cost of disposal and energy
  - Long-term pricing stabilization
  - Possible reduction of current costs
> Ability to expand on existing footprint
> Ability to meet other sustainability goals whether mandated internally or externally
Assessing the Business Case for a Project’s Viability

Project Drivers
Crucial to understand all variables before defining Project Viability

- Waste Hauling & Disposal Costs
- Utility Costs
- Sufficient Biogas Yield Associated with each Feedstock
- Cost of Capital & Financial “Feasibility”
- Clusters of Food Plants for Synergy in Regional Digester
- Landfill and/or Land Application Limits
- Wastewater Disposal – Capacity & Flow Costs

Candor. Insight. Results.
The primary question of a development is to evaluate “is the project feasible?”
- “Feasible” means different things to different project stakeholders, or project “Sponsors”
- A typical view of what is a feasible project, is the “developer” view - “Can the project stand on its own as a viable business entity?”
- To a waste producer, community and environmental impacts may be the primary driver why a project is feasible.

The project developer needs to understand what “feasible” means to the “project owner” to advance development tasks and obtain required contracts.
- Outside third parties (project finance model)
- Waste producer (internally funded)
> Awareness to market funding options important regardless of “internal capacity” to fund:
>   > Added discipline to underwriting by understanding “project finance” standards and value of “de-risking” the investment
>   > Opportunity cost perspective
Who is behind the project?

- Financial strength of primary project owner/sponsor
- If owner does not have experience, what outside parties has the owner aligned itself with that do?
- How are outside parties (engineering/design, construction, operations and maintenance) aligned with the project’s success?
  - Fixed cost agreements, performance guarantees, liquidated damages, etc.

What fundamental needs does the project meet and why will the project’s value proposition remain relevant over the funding period?

- Long term contracts with feedstock providers and off-takers (power and by-products) are typically the best way to answer this question.
  - “Long Term” is defined relative to the term of the financing.
  - Credit quality of counter parties has significant impact.
- The less cash flow coverage provided by long term contracts the greater owner/sponsor at-risk capital is required.
Biogas projects typically fall under the “open loop biomass” or “trash” facilities definition. Applies only to projects that use the biogas to produce electricity.

ARRA passed in February, 2009:
- Investment Tax Credit (“ITC”) equal to 30% of eligible project costs
- Production Tax Credit equal to $.0115/kwh produced for 10 years
  - Indexed to inflation
  - 2 X more for “closed loop biomass” facilities
- Required to be placed in service by December 31, 2013

American Taxpayer Relief Act of 2012
- ITC/PTC deadline extended
  - Deleted 12/31/13 placed in service requirement (no credit termination date)
  - Added 12/31/13 “begun construction” deadline
- These changes do not apply to the 1603 grant program
New Markets Tax Credits
- Designed to spur investment in economically disadvantaged areas (census tract driven)
  - Can be paired with energy credits
  - Brings additional low cost capital to fund a project
- “Typical” NMTC deal ($10 million of allocation) provides approximately $2.0 million of benefit to the project
- Total allocation of $29.5 billion since program’s inception in 2000
- American Taxpayer Relief Act of 2012 allocated $3.5 billion of allocation to each 2012 and 2013
<table>
<thead>
<tr>
<th>Potential Funding Options</th>
<th>Cost of Funds</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1603 Grant Funds*</td>
<td>Nearly 0%</td>
<td>Need to have met &quot;start of construction&quot; requirement prior to December 31, 2011</td>
</tr>
<tr>
<td>NMTC Proceeds</td>
<td>Nearly 0%</td>
<td>Not an &quot;entitlement program&quot;, must secure allocation from CDE</td>
</tr>
<tr>
<td>Utility Rebates/Grants</td>
<td>Nearly 0%</td>
<td>Depends on project deliverables and timing for &quot;yearly&quot; program goals/funding</td>
</tr>
<tr>
<td>Federal Loan Guarantees/TIF/Other</td>
<td>4-6%</td>
<td>Specific to project location, availability and owner's overall profile of need</td>
</tr>
<tr>
<td>Tax Equity**</td>
<td>8-15%</td>
<td>Supply/demand driven and is a fluid market</td>
</tr>
<tr>
<td>Senior Debt</td>
<td>6-9%</td>
<td>Depends upon Sponsor's background and contractual &quot;de-risking&quot; of the project</td>
</tr>
<tr>
<td>Equity</td>
<td>12-20+%</td>
<td>Depends upon technology's stage of development</td>
</tr>
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* Requires a bridge investment (funds received post COD).
** Cost of funds represents return provided by combination of tax benefits and cash flow.
Expansion without Federal Tax Credits

Example MSW Project

On-site

Factory Expansion

$4 M

Taxable Entity

Off-site

Municipal Treatment

$5 M

Non-Taxable Entity

= Cost goes up for Factory
= Debt levels go up for Municipality

$9 M Total Project Spend = All assets Non-Eligible
Expansion with Investment Tax Credit and New Markets Tax Credits

Example MSW Project

Now $10M spend has up to $6M eligible for 30% ITC & 20% from NMTC = $3.8M
Reduces project net costs from $10M down to approximately $6.2M

**Benefit:** Long-term levelized disposal cost, plus electrical and thermal generation for the factory with less long-term financial commitment by municipality, and project debt now possible
Closer look at Qualifying Equipment

Anaerobic Digester & Electrical Generation Process Flow Diagram

- Factory
- Anaerobic Digester
- Solids Separation
- 1st Stage Remove
- Aerobic Treatment
- DAF
- Flare
- Gas Skid
- Engine
- Clarifier
- Sludge Press

> What is integral to the production of electricity?
> When and how do I qualify these project costs for the Investment Tax Credit?
Private development of high strength liquid waste digester with 3.0+ MW from 5+ large food manufacturers’ feedstocks

> Primary Driver – long-term cost and environmental risk associated with land application of waste water
> Assembled long-term (10-years) feedstock contracts w/tipping fees
> Able to procure power purchase agreement at adequate rate
> Utilized proven technologies with performance guarantees acceptable to debt community (non recourse debt)
> Utilized combination of equity, mezzanine funds, vendor financing state loans, NMTC funds and debt to finance (approx. $28.5 MM project)
Public expansion turned private development with 1.5+ MW of electrical power from 3 large food manufacturers’ feedstocks

- Primary Driver – Opportunity to expand core manufacturing and manage odors in community with overburdened POTW
- Formed joint venture to take advantage of economies of scale
- Negotiated 20 year power sales with local utility at adequate rates
- Paired NMTC and 1603 grant to offset capital costs of project
- $30 MM investment
High strength liquid waste digester with 250 kW from food processor

- AD to power solution identified as most optimal after performing cost benefit impact of anaerobic, aerobic, and open pond based technology
- Allowed manufacturer to grow core business and reduced regulatory risks
- Paired NMTC and Investment Tax Credit to offset capital costs of project
- Over $23 MM plant expansion including $7MM anaerobic waste treatment plant
American Taxpayer Relief Act of 2012

> ITC/PTC deadline extended
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What is “Begun Construction”

- IRS has provided two notices during 2013
  - 2013-29 (April)
  - 2013-60 (September)

- Two tests, only have to meet one
  - “Physical work of a significant nature” (PWSN)
  - Safe Harbor equal to 5% of ITC eligible costs

- Major change from 1603 guidance is “continuous efforts” requirement under the safe harbor test
  - Adds level of subjectivity to safe harbor test
  - Notice 2013-60 clarified this requirement by providing if a facility is placed in service by December 31, 2015 the continuous efforts requirement is deemed to be met.
Physical Work of a Significant Nature Rules

> Binding written contract (if work done by someone other than taxpayer)
  - “Binding” if it is enforceable in the state where the facility is to be located and the contract doesn’t limit damages to less than 5% of the contract price
  - Master contract can be assigned to multiple facilities by the taxpayer
  - Physical work can be on-site or off-site
    - Manufacturer must have reasonable method for tracking equipment produced for a project
    - Doesn’t include work to produce equipment that is in inventory
> Does not include preliminary activities (planning, financing, permits, clearing the site, etc.)
> Must be a continuous program of construction
  - Allowable disruptions include force majeure, licensing and permitting delays, financing delay of less than 6 months, and others
  - Notice 2013-60 clarified this requirement by providing if a facility is placed in service by December 31, 2015 the continuous construction requirement is deemed to be met.
Safe Harbor Rules

> Taxpayer must pay or incur 5% of the eligible costs of the facility by December 31, 2013

  - “Incur” applies to accrual basis taxpayers (most), and requires that the product or service be provided to the taxpayer within 3 ½ months of payment (or that the taxpayer reasonably expects to have it provided within 3 ½ months)

  - Costs incurred by a vendor, pursuant to a binding written contract with the taxpayer may be treated as incurred by the taxpayer for purposes of this requirement

  - Does include preliminary activities (planning, financing, permits, clearing the site, etc.) to the extent they are allocated to cost basis of qualifying property

  - No exclusion of equipment from inventory

> Taxpayer must make continuous efforts toward construction

  - Definition of “continuous efforts” is broader than for PWSN, includes planning, financing, making additional payments.

  - Allowable disruptions include force majeure, licensing and permitting delays, financing delay of less than 6 months, and others (same as PWSN)

  - Notice 2013-60 clarified this requirement by providing if a facility is placed in service by December 31, 2015 the continuous efforts requirement is deemed to be met.
Transfer Rules

> Notice 2013-60 states that as long as a facility has met the Begun Construction test via either the PWSN or Safe Harbor test, the owner of the facility when it is placed in service may claim the PTC or ITC.

> Doesn’t require the taxpayer to be the owner at the time the facility begun construction.

  - This is a significant change from prior guidance under the 1603 program whereby the transfer of ownership needed to be to a related party.
Plan and take action prior to December 31, 2013

> If you are confident you can place the project in service by December 31, 2015 then most of the subjectivity is gone from both tests
  - Still some subjectivity regarding what constitutes starting physical work activities under PWSN

> If project timeline extends beyond December 31, 2015, then strong preference for meeting Safe Harbor
  - Take title to qualifying equipment prior to December 31, 2013 if possible.
  - If not possible, make sure purchase documents clearly show reasonable expectation of delivery within 3 ½ months of payment

Clearly document actions that have met Begun Construction

> There is no “pre-application” to show that you’ve met the Begun Construction test. Important to have actions clearly documented to support claiming the ITC after the facility is placed in service.

> Makes sense to document continuous efforts in case the placed in service date slips past the December 31, 2015 deadline
What can Vendors do to support meeting Begun Construction?

Support owner’s need for correct documentation

> Make sure contracts are binding
> Demonstrate manufacturing activities for equipment began after the execution of the contract with the owner but before December 31, 2013 and are not items typically held in inventory (PWSN)
> Include language demonstrating reasonable expectation of having equipment or service provided within 3 ½ months of payment (for Safe Harbor)
> Create a process during construction to document activities that are relevant to “continuous efforts”
Meeting Begun Construction tests are “binary”: you either get the ITC or you don’t depending on meeting this test, no in between. So take the time to make your actions as compliant with the rules as possible.

Depend on objective rules as much as possible
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