Impact Investment to Expand Biogas Technology Deployment

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US EPA Technology Market Summit

May 14, 2012

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Presentation Outline

- **Stahlbush Island Farms**
- **Financing Hurdles**
- **Impact Investment**
- **"Capital Activation"**
- **Government Enabling Actions**

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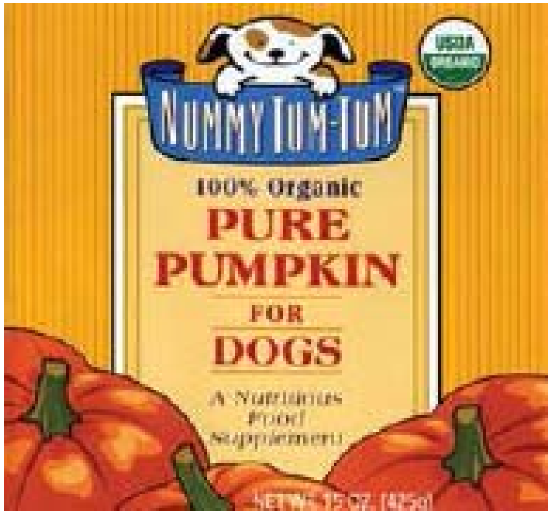
Stahlbush Island Farms
Innovators in Sustainable Farming



- Location: Corvalis, OR
- Farm: 5,000 acres of pumpkin, sweet corn, berries, broccoli & other produce
- Operation: 75M pounds of food canned or 'quick freeze'
- Biogas Project: $10M Organic Waste Digestion facility

Stahlbush Island Farms

Innovators in Sustainable Farming

- Partners: AAT Abwasser (Austria), EC Oregon
- Two 900,000 gallon anaerobic digesters
- 18 months from design to constructior
- June 2009: Generating electricity

Stahlbush Island Farms

Innovators in Sustainable Farming

- Strong farm & tech expertise enabled biogas project
- European technology needed ‘road testing’ in US
- Re-engineering along the way added time and cost
- State tax credit change was disruptive
- Existing banking relationship was key

Stahlbush Island Farms

Financing Components & Lessons Learned

- $10M in capital cost
  - Oregon state tax credit 50%
  - Federal investment tax credit 30%
  - Term and bridge loans ~$6M
  - Farm equity, collateral and 'tax equity'
- Revenue & co-benefits
  - Power purchases ~$0.05/KwH average
  - Farm expense offset (energy, heat, fertilizer)
  - Renewable energy certificates
  - Marketing & waste mgmt benefits

Typical Financial Structure

- $3-15M in construction costs depending on size
  - 40-50% equity (including tax credits or grants that act like equity)
  - 30-50% debt (including leases or bridge loans)
  - Remainder: Pre-paid carbon, expectation of cost savings on farm
  - **Need power purchase of $0.15-0.18 KwH**
- Cement platforms, manure management piping, tanks, electrical components, biogas engine and grid connectivity

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Financing Hurdles

- **Financing is complex requiring equity, debt, tax credits, grants & multiple revenue streams**
- 70% of farms are medium to small-scale (<2000 cows)
- State programs (tax credits & loan programs) and federal funds (e.g. 1603, USDA REAP) have dwindled rapidly
- Rural bank loans much more difficult to acquire during crisis

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Financing Hurdles
Increasing "bankability"

- **Underlying dairy fundamentals**
- **Need to introduce biogas technology & feedstock to banks**
- **Need dependable revenue from incentives, environmental markets and renewable energy**
- **Recourse required for 'small', non-credit worthy developers**
- **Must address revenue risks and debt/equity ratio requirements (USDA guarantees and credit enhancement are critical)**

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Typical Financial Structure

- **Timing and type of financing must be perfect**
  - Long process for government grants, tax credits or loans
  - Processes are competitive across renewable energy types (e.g. wind, solar, biogas)
  - Typical lead time is 18-24+ months from ground breaking through commercial operation
  - State incentives are changing (tax credits, feed in tariffs, tipping fees)
  - Carbon incentives do not include all sources of emission reductions

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Impact Investment

- Impact investing is when an investor requires financial, environmental and social returns
- Typical impact investors: Foundations, pension funds, nonprofits, or high net worth individuals
- Sometimes allow below market rates or better terms for exceeding metrics
- Small but growing segment

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Vision: We envision swift collective action to protect the integrity of the Earth's climate and safeguard against climate impacts

- Founded: 1997 as nonprofit
- Portfolio: $20M, 9 states, 2 countries
- Financing biogas projects since 2007
- Impact investor with $11M

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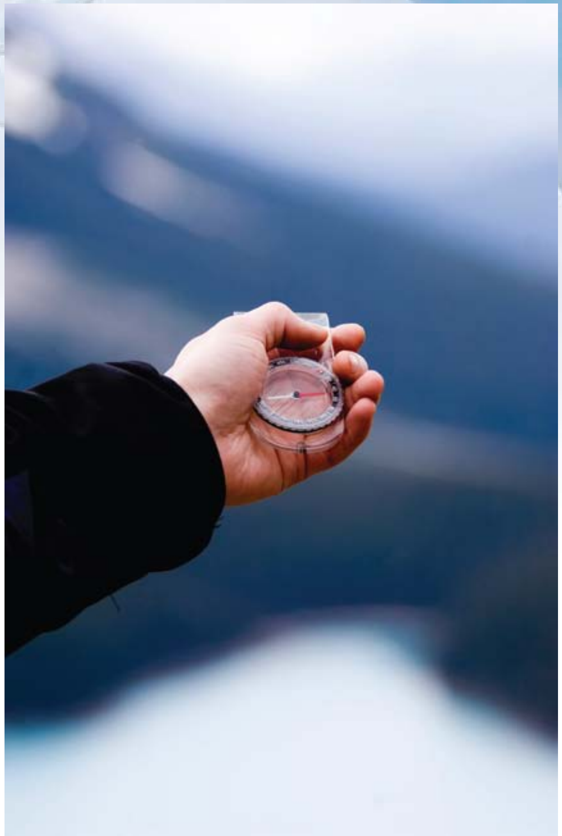
“Capital Activation”: Biogas Fund

- Aggregate traditional finance
  - Debt, carbon/REC funding
  - Potentially other financing
- Attract capital for upfront financing gaps in a portfolio
  - Program/Mission Related Investments
  - Upfront funding from companies
  - Bundle USDA loan guarantees
  - State-backed programs or bond market securitization over time



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“Capital Activation”: Biogas Fund
(Based on actual project pipeline)

- TCT designing fund to finance 15-20 “family-sized farm digesters”
- Debt capital of $20-25M from PRI, impact investors and carbon financing
- Medium-term loans with expected rates 7%-9% depending on position in capital stack, risks and guarantees
- TCT allocation of at least $2M for carbon incentives

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Government Enabling Actions

- What government can do today!
  - Extend tax credits for defined period (say 10 years even if declining)
  - USDA or other guarantees to nonprofits in addition to banks (e.g. repurpose REAP grants to backstop impact investors)
  - Pass new proposed IRS rules for program-related investments
  - Use all available funding mechanisms (e.g. problem of “smaller scale” NMTCs)
  - Multi-agency RFPs to advance models

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Thank You!

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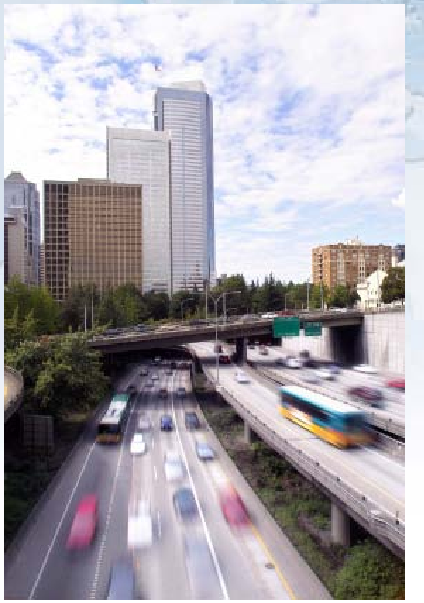

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