



National Milk Producers Federation  
Connecting Cows, Cooperatives, Capitol Hill, & Consumers

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# Perspective and Engagement of Dairy Industry on Water Quality Trading Markets

December 8, 2014



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National Milk Producers  
Federation

# Who are we?

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- **32 Milk Co-ops owned by over 32,000 dairy farmers**
  - **Represent farmers of all sizes in all 50 states**
  - **Farmers produce the milk, and co-ops market the milk by processing the milk, selling the milk or shipping the product overseas**
  - **Largest dairy states are California, Wisconsin, Idaho, New York and Pennsylvania**
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# Annual Dairy Cow Nutrient Production

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Size lb.	N lb/yr	P <sub>2</sub> O <sub>5</sub> lb/yr	K <sub>2</sub> O lb/yr
150	22	9.1	18
250	37	15	30
500	75	30	59
1,000	150	61	119
1,400	210	84	166

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# Why We Started The Energy And Nutrient Recovery Effort

## Current State

- Increasing regulatory and societal pressure about manure management resulting in litigious environment
- Wet or dry manure applied untreated with air and water emissions
- Timing of manure application is not best for crop uptake



## Desired State

- Prevent costly, burdensome regulation and litigation
- Realized economic benefit from voluntary action
- Dairy farm helps resolve societal issues related to air and water pollution and GHG emissions
- Improved social license to operate and increased consumer trust



# Opportunities - I

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- **Potential High – 11.7 Million MWH/year; value of \$894 Million<sup>1</sup>**
- **Proven commercial digester technology exists**
  - *But conventional lending difficult to obtain, and*
  - *Power Purchase Agreements yield low prices*
- **Suite of new funding programs becoming available which enhance economics:**
  - **USDA Rural Utility Service (RUS) Energy Efficiency and Conservation Loan Program (EECLP) – FY 2014 \$250M**
  - RUS Water and Wastewater Disposal Loans**
  - **US DOE Draft Renewable Energy and Efficient Energy Projects Loan Guarantee Program - \$2.5 to \$4B announced April 2014**

*(<sup>1</sup>Informa Economics 2013)*

# Opportunities - II

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- **Strategic opportunities look promising with**
  - **Utility Companies (G&T's)**
  - **Rural Electrical Co-ops**
  - **NACWA**
  - **WWTPs**
- **Securing funding alternatives will create opportunity to launch starter market → enables scale and incentive to develop nutrient recovery technology**
- **Nutrient trading concept gaining traction → will create incentives and additional value for digester projects**
- **Solar has a real potential to significantly reduce power costs for all producers -- large and small**

# The Vision

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- **Creating a business co-op would**
  - **help to facilitate nutrient trading**
  - **enhance digester and nutrient recovery technology**
  - **provide needed environmental services to dairy producer co-ops**
- **Initial projects are underway in each area.**
- **Envision pursuing any and all technologies across the United States that deliver benefits to dairy producers**
- **Ultimately the business entity can**
  - **act as a repository for knowledge and expertise**
  - **assist large and small cooperatives who would like to pursue new and unique opportunities**



# Environmental Issues Committee Recommendation

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***“The National Milk Producers Federation should help develop and support a business entity to assist dairy cooperatives in providing Energy & Environmental Services for dairy producers to support the voluntary production of environmental benefits through market-based incentives. This Energy & Environmental Services business entity should be built upon the developments from the Strategic Partnerships, learnings from the Pilot Projects, and other cooperative and business considerations. The Energy & Environmental Services business entity will have defined ownership opportunities for those cooperatives that finance its development.”***



## Other Possibilities

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- **Solar power can work on farms of all sizes and also works well when combined with methane digesters**
  - **New lagoon filter technology**
  - **Free-standing livestock waste treatment systems**
  - **Conservation tillage, filter strips, cover crops and 4R principles can also increase water quality production on dairy farms**
  - **Energy efficiency measures on farms hold large GHG reduction potential**
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