GMP Clean Energy
Cleaner Water Projects
in Vermont
Green Mountain Power

- Founded in 1893 in Vergennes, VT
- 261,294 customers in 202 VT towns
- 92% GMP Customer Satisfaction
- Vermont’s energy company of the future!
- First utility in the World to earn B-Corp certification.
- 250,000 gallons of fleet diesel/year

<table>
<thead>
<tr>
<th>Employees</th>
<th>560</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customers served (VT)</td>
<td>70%</td>
</tr>
<tr>
<td>Area served (VT)</td>
<td>63%</td>
</tr>
<tr>
<td>Line miles</td>
<td>12,000</td>
</tr>
<tr>
<td>In-State Hydro</td>
<td>32 stations 103 MW</td>
</tr>
</tbody>
</table>
B-Corp Certified: 1st Utility in the World

Why B-Corp?

A redefined success in business that meets a higher standard of social and environmental performance, accountability and transparency.
Directly linking customers to farms.

• Provides customers a renewable **choice**.
• Provides farmers with new **revenue**
• Provides tools to **protect** the environment.
Green Mountain Power
Annette Compton 1959-2012
Lake Champlain– Critical Need

- Heavy phosphorus loading in Lake Champlain hurts water quality
- Persistent and recurring algae blooms are symptomatic of the nutrient problem
- GMP wants to help address root causes

GMP proposed the St. Albans digester with nutrient capture -- its water quality capabilities extend beyond a typical Cow Power project
South Lake – Evidence of Nutrient Problem

Spring  Summer
Phosphorus Loading
The GMP Digester project

• Project Goals to create multiple benefits
  – **Clean Energy and Clean Water**
  – Remove up to 80% of the phosphorus from farm effluent
  – Reduced nutrient runoff potential

• Local renewable generation with important benefits for:
  – GMP Customers
  – Local Dairy Farms
  – Reduced nutrient loading of St. Albans Bay
  – GHG and odor reduction
Whole Raw Manure
DVO Digester
Genset Technology
Stage 1: Bedding Fiber Separation
Liquid After Bedding Fiber
Stage 2: Dissolved Air Flotation (DAF)

- Project will include primary and secondary separation systems including (DAF).
- Systems can remove *up to 80%* (39 MT) of the phosphorus from the effluent returning only what the farm needs for crops.
- Liquid effluent coupled with GSR algae culture system, using the high nitrogen, low solids liquid to produce algal biofuels will further sequester nutrients in a granular fertilizer.
Recovered DAF Solids
Prototype Algae Culture