

# Washington Cow Dairies and Digesters, July 2011



## Dairies by Size

- **Small** (175 Farms)  
1 to 199 mature animals
- **Medium** (165 Farms)  
200 to 699 mature animals
- **Large** (103 Farms)  
700 or more mature animals

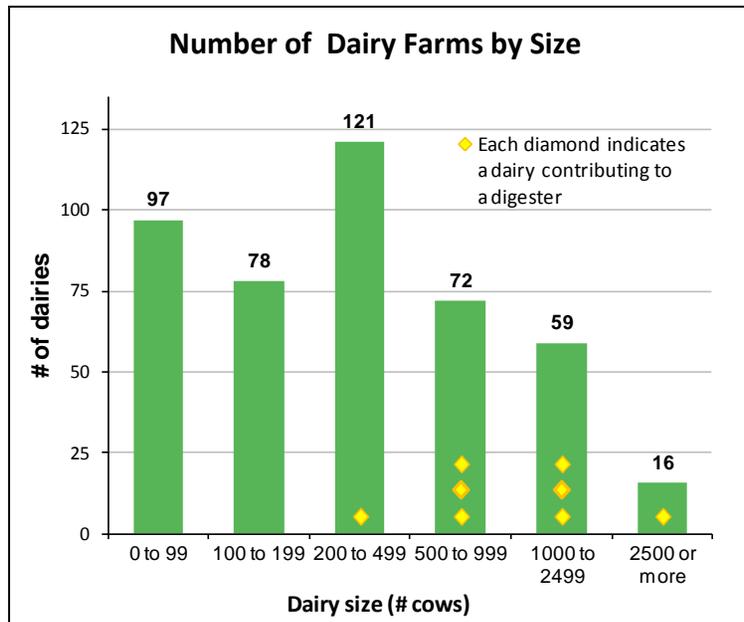


Source: WSDA Dairy Nutrient Management Program, 2010 Registration

## Dairy Digesters in Washington, July 2011

	FPE Renewables Vander Haak Dairy	George DeRuyter & Sons Dairy	Qualco Energy	Farm Power Rexville	Farm Power Lynden	Van Dyk-S Holsteins
<b>Business Model</b>	Farm own/operate	Farm own/operate	Public/private partnership	Developer own/operate	Developer own/operate	Farm own/operate
<b>Location (city, county)</b>	Lynden, Whatcom	Outlook, Yakima	Monroe, Snohomish	Rexville, Skagit	Lynden, Whatcom	Lynden, Whatcom
<b>Year Operational</b>	2004	2006	2008	2009	2010	2011
<b>Contributing Dairies</b>	1*	2	1	2	1	1
<b># Cows Feeding Digester</b>	800	5,300	1,100	1,200	2,000	1,000
<b>Additional feedstocks</b>	Pre-consumer waste	Grease trap waste	Pre-consumer waste	Pre-consumer waste	Pre-consumer waste	Pre-consumer waste
<b>Biogas end use</b>	Electricity, digester heating	Electricity, digester heating	Electricity, digester heating	Electricity, digester heating	Electricity, digester heating, greenhouse heating	Electricity, digester heating
<b>Installed Capacity (kw)</b>	600	1,200	450	750	750	400
<b>Receiving Utility</b>	Puget Sound Energy	PacifiCorp (Pacific Power)	Puget Sound Energy through Snohomish PUD	Puget Sound Energy	Puget Sound Energy	Puget Sound Energy
<b>Other</b>	Nutrient recovery, CNG research	Sells all solids for peat moss replacer	WSU research collaboration	First developer owned/operated	Greenhouse collaboration	First use of alternate digester design

\*This digester also regularly receives some manure from a nearby dairy.



### Washington Dairy Facts

- Washington has 443 commercial cow dairies.
  - 40% of the dairies (175 farms) have less than 200 cows.
  - 37% of the dairies (165 farms) have 200 to 699 cows.
  - 23% of the dairies (103 farms) have more than 700 cows.
- The top two dairy counties are Whatcom and Yakima.
  - Whatcom has the most dairies, with 125 dairies with more than 46,000 cows.
  - Yakima has the most dairy cows, with almost 94,000 cows on 67 dairies.
- Eight dairies currently contribute manure to the state's six dairy digesters.
- Digestion of Washington dairy manure, together with other organic waste, produces a steady output of up to 4,150 kW of electricity (enough to power more than 2,700 homes), while reducing greenhouse gas emissions from conventional manure management systems by over 50,000 tons of CO<sub>2</sub> equivalent per year.

*Source: WSDA Dairy Nutrient Management Program, 2010 Registration*