

# Farm Power

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Chair Vega Pederson and Members of the House Energy and Environment Committee:

The Biomass Producer or Collector tax credit has been effective at encouraging the growth of Oregon's biogas industry while supporting dairy operations. Treating animal manure through anaerobic digestion provides energy, economic and environmental benefits to Oregon and can help the state meeting its greenhouse gas reduction goals.

The current biomass tax credit provides \$110 to \$150 per cow, spanning the manure range from lower-production Jerseys to higher-production Holsteins; on average, the value has been \$130 of tax credit per cow, per year.

### **Ongoing benefits per cow, per year:**

- Two megawatt-hours (2MWh) of consistent renewable electricity, reducing fossil-fuel electricity-generation emissions by one ton of carbon dioxide.
- Four hundred pounds of net methane emissions reduction, equivalent to four tons of carbon-dioxide reduction.
- Ten thousand gallons of manure slurry processed to reduce threats to water quality from bacteria (99% fecal coliform reduction), improve fertilizer value, and reduce spreading odor.
- Up to ten cubic yards of digested fiber bedding material, reducing demand for about one dry ton of sawdust bedding (thus reducing competition and cost for woody biomass fuel, enabling more efficient use of other biomass tax credits).
- Steady, non-seasonal work: one hour direct labor by local digester staff, several more hours of indirect and management work.

### **Benefits from investment stimulated by availability of tax credit, per cow:**

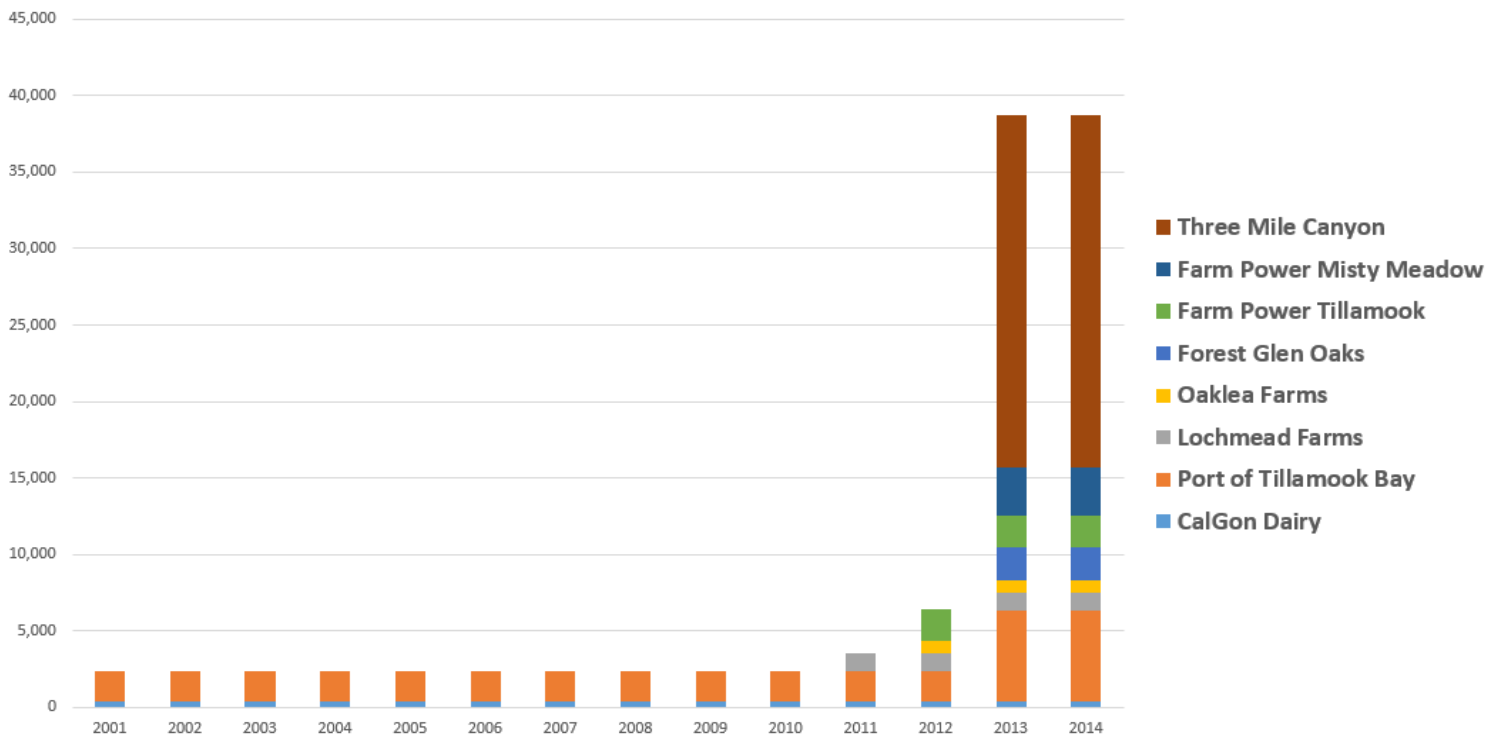
- A quarter-kilowatt of renewable electrical capacity installed (all digesters built while the tax credit has been available are still in operation)
- Up to \$1500 invested in rural energy infrastructure
- Biogas production capacity from anaerobic digesters that could be shifted from electricity to renewable natural gas if future needs changed.

### **Collective benefits to Oregon**

Almost 40,000 cows currently supply manure to Oregon anaerobic digesters; the collective energy impact is \$50 million invested in 10MW of renewable capacity, generating nearly

70,000MWh a year, enough for 7,000 houses. The collective carbon reduction is close to 200,000 tons annually (similar to removing 38,000 cars from the road), while over 350,000,000 gallons of manure slurry are processed into safer, cleaner, better fertilizer. Dozens of steady jobs have been created and sustained; and, finally, usage of sawdust for cow bedding has declined, freeing up tens of thousands of tons of woody biomass for other usage.

Number of Oregon Cows' Manure Being Used as Digester Feedstock



### Conclusions

As the chart above shows, the manure Biomass Tax Credit helped create a whole new industry, adding value to Oregon’s milk production and increasing rural economic development. No dairy digester funded by Biomass Tax Credits has ever shut down; the steady growth in manure fed to anaerobic digesters represents a steady expansion of the benefits to society.

The Climate Trust, Oregon’s respected carbon-offset expert, reminds us that the EPA has set the societal value of reducing a ton of carbon emissions at \$37; meanwhile, the market value of one ton of carbon reduction is between \$5 and \$10. In rough terms, the extra value to society from one cow’s digester-related emissions reduction is the same amount as the Biomass Tax Credit paid per cow—about \$130 annually. The State of Oregon, by supporting emissions reductions that are otherwise undervalued by the market, could then consider all the other benefits of anaerobic digesters—renewable energy, rural economic development, manure processing, and fiber byproducts—as ongoing free bonuses for society. We ask the Legislature to preserve the Biomass Tax Credit for manure, extending all the impact described above through 2021.