

SP 5190 SUB ϕ

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Danny Kluthe
Okeano Energy
2464 Rd 17
Dodge, Ne 68633
July 11, 2015

Ms. Harold J. Mount, Chief Clerk
N.C. Utilities Commission
4325 Mail Service Center
Raleigh, NC 27699-4325

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JUL 17 2015

Clerk's Office
N.C. Utilities Commission

Dear Ms. Mount,

The fuel for Okeano Energy is swine waste, the system is not metered; therefore, all parasitic loads are subtracted before the electric meter.

Thank You,

Danny Kluthe
Daniel (Danny) Kluthe
Okeano Energy
cell # 402-720-3425

Louanne Kampschneider



Daniel W. Kluthe - Olean Energy - Registration Statement Docket No. SP-5190 Sub 0
Renewable Energy Certificate calculations

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100% percent of substrate is swine waste

Generator output:

110 kW generator
× 75% operation time
× 720 hours per month
59400 kWh generated

Parasitic loads:

40 horsepower circulator pumps
× 0.5 hours operation time every:
÷ 8 hours
× 0.746 kW per horsepower
× 720 hours per month
1343 kWh consumed by circulator pumps

5 horsepower generator cooling fan
× 75% operation time
× 0.746 kW per horsepower
× 720 hours per month
2014 kWh consumed by generator cooling fan

2 horsepower gas pump
× 75% operation time
× 0.746 kW per horsepower
× 720 hours per month
806 kWh consumed by generator cooling fan

59400 kWh generated
- 1343 kWh consumed by circulator pumps
- 2014 kWh consumed by generator cooling fan
- 806 kWh consumed by generator cooling fan
55237 kWh net
÷ 59400 kWh generated
93.0% of electrical energy can earn swine waste RECs