

Electric Operations - State of South Dakota

COGENERATION AND SMALL POWER PRODUCTION FILING

Derivation of Metering Costs - State of South Dakota

**OCCASIONAL DELIVERY ENERGY SERVICE**

<b>STANDARD KWH METER</b>	<b>Single Phase</b>
(1) Installed Cost	\$127.00
(2) L.A.R.R.	9.94%
(3) Levelized Cost (1)*(2)	\$12.62
(4) Accounting Expenses \$/Cust/Yr	\$21.70
(5) Total Annual (3)+(4)	\$34.33
(6) Total Monthly (5)/12	\$2.86
	Proposed <input type="text" value="\$3.75"/>
	Current <input type="text" value="\$3.75"/>

**TIME OF DELIVERY ENERGY SERVICE**

<b>TOD KW/KWH METER</b>	<b>Single Phase</b>
(7) Installed Cost	\$252.00
(8) Levelized Cost (7)*(2)	\$25.05
(9) Total Annual (8)+(4)	\$46.75
(10) Total Monthly	\$3.90
	Proposed <input type="text" value="\$4.75"/>
	Current <input type="text" value="\$4.75"/>

Source:

(1)(7) Data provided by NSP Metering Dept.

(2) Based on cost of capital on page 4

(4) Based on NSP ECCOSS Workpapers (Docket No. EL12-046).

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Derivation of Energy Payments - State of South Dakota

**OCCASIONAL DELIVERY ENERGY SERVICE**

	<b>Annual Average</b>
(1) Estimated System Average Incremental Energy Costs for 2013 (¢/kWh)	2.53
(2) Energy Loss Factors	0.9348
(3) Estimated System Average Incremental Energy Costs Adjusted for Losses (1)/(2)	2.71

**TIME OF DAY PURCHASE SERVICE**

	<b>Annual On Peak</b>	<b>Annual Off Peak</b>
(1) Estimated System Average Incremental Energy Costs for 2013 (¢/kWh)	3.43	2.05
(2) Energy Loss Factors	0.9272	0.9383
(3) Estimated System Average Incremental Energy Costs Adjusted for Losses(1)/(2)	3.70	2.19

Sources:

Incremental Energy Cost Data provided by Xcel Energy's Generation Modeling Services.

**Electric Operations - State of South Dakota****COGENERATION AND SMALL POWER PRODUCTION FILING****Calculation of Net Annual Avoided Capacity Costs**

(1) Completed Cost of Planned C.T. Unit (2013\$)	\$750 /kW
(2) Inflation Net of Technical Progress	1.66%
(3) Average Service Life	35 Years
(4) Discount Rate (After Tax)	6.78%
Calculation of Marginal Capital Carry Charge Rate	
(5) Present Value of Revenue Requirements	\$849 /kW
(6) Annuity Factor Adjustment for Inflation **	6.24%
(7) Present Value of Revenue Requirements Adjusted for Inflation (5)*(6)	\$52.96
(8) Marginal Capital Carrying Charge Rate (7)/(1)	0.07059
(9) First Year Revenue Requirement (1)*(8)	\$52.96 /kW (2013 \$)
(10) Present Value at 6.78% for 0 years	\$52.96 /kW
(11) Present Value of Average Annual Fuel Savings	\$0.00 /kW
(12) Annual Avoided Capacity Cost (10)-(11)	\$52.96 /kW
(13) Adjusted for 15.00% Reserve Margin (12)*15.00%	\$60.90 /kW
(14) Plus \$2.51/kW Fixed O & M (2013 \$) (13)+\$2.51	\$63.41 /kW
(15) Adjusted for Losses (14)/0.9674	\$65.54 /kW
(16) NET ANNUAL AVOIDED CAPACITY COST	\$65.54 /kW
(17) Net Annual Avoided Capacity Cost Average Over All Hours (16)*100/8760	0.75 cents/kWh

$$** AC = K*(r-j)*(1+j)^{(t-1)}*[1/(1-(1+j)^n/(1+r)^n)]$$

Where AC = Annual Charge in year t

t = Year (=1)

K = Total Present Value Cost of Original Investment

r = Discount Rate (Overall Marginal Cost of Capital) (6.78%)

j = Inflation Rate Net of Technology Progress (1.66%)

n = Expected Service Life of Investment ( 35 Years)

PUBLIC DOCUMENT  
CONFIDENTIAL INFORMATION HAS BEEN EXCISED

Northern States Power Company, a Minnesota Corporation

Attachment 1

Page 4 of 4

Electric Operations - State of South Dakota

COGENERATION AND SMALL POWER PRODUCTION FILING

**Marginal Cost of Capital**

<i>(Before Tax)</i>	Capitalization Ratio (%)	Cost (%)	Weighted (%)
Debt			
Preferred Equity			
Common Equity			
<b>Weighted Average</b>	100.00%		7.78% *

<i>(After Tax)</i>	Capitalization Ratio (%)	Cost (%)	Weighted (%)
Debt			
Preferred Equity			
Common Equity			
<b>Weighted Average</b>	100.00%		6.78%

\* SD Commission approval of settlement in Docket No. EL12-046.

Source:

Information based on May 22, 2013 Corporate Assumptions (Confidential)