City of Saint Paul
Interdepartmental Memorandum

To: Mayor Christopher Coleman
Members of the City Council

From: District Energy Rate Review Team

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Date: September 20, 2017

Subject: Staff Report for Proposed District Energy St. Paul, Inc. Rates, Effective for FY 2018

This memorandum provides an analysis of District Energy's proposed cooling and heating rate changes for fiscal year 2018, in accordance with the procedural requirements specified in District Energy's franchise agreements.

I. District Cooling Rates:

District Cooling proposes the following changes to Schedule A:

Demand Rate:
Increase from $27.41 to $28.15 per ton per month, an increase of 2.7%
Energy Rate:
Increase from $0.098 to $0.100 per ton-hour, an increase of 2.04%
Transition Rate:
Rate set at the overall cost of $0.381 per ton-hour at 1200 utilization hours

All other service charges will remain at the 2016 levels as indicated in the attached District Cooling Schedule A.

Comparison of Cooling Rates: 2014 – 2018

	Actual FY 2014	Actual FY 2015	Actual FY 2016	Forecast FY 2017	Budget FY 2018
Rates					
Demand ($/ton/mo)	$26.69	$26.69	$26.69	$27.41	$28.15
Energy ($/ton hr)	$0.10	$0.10	$0.09	$0.10	$0.10
Overall cost at 1200 hrs ($/ton hr)	$0.36	$0.36	$0.35	$0.37	$0.38
Increase as %					
Demand ($/ton/mo)	0.00%	0.00%	0.00%	2.70%	2.70%
Energy ($/ton hr)	4.40%	0.00%	-3.20%	6.50%	2.04%
Overall cost at 1200 hrs	1.10%	0.00%	-0.80%	3.60%	2.42%

The proposed District Cooling *average overall cost* (at 1200 utilization hours) shows an increase of 2.42% from forecasted 2017 to budgeted 2018.

The proposed *demand rate* increase is 2.7%. The demand rate covers operations and maintenance, general and administrative, research and development, debt and capital expenses. Total demand related costs are expected to increase by $541,043 (net of capital expenditures).

The *energy rate* is projected to increase by approximately 2.04% over 2017 levels. The energy rate is a pass through to the customer. The rate is based on the projected cost of electricity, which is the major fuel source for cooling. The 2018 budgeted rate is $0.100 - compared to the forecasted 2017 energy rate of $0.098.

The *average overall cost* increase (at 1200 utilization hours) of 2.42% is due to two factors. On the *demand rate* side, an increase in debt service costs, and operation and maintenance costs, are contributing to the increase. On the *energy rate* side, increases in the cost of electricity is contributing to the rate increase.

District Cooling Comparison to Similar Utility Provider

	Cooling Cost* **($ / Ton-Hour 1200 Hrs)**
Energy Park Utility 2017 Cost	$0.30
District Cooling 2018 Cost	$0.38

*Excluding City fees and sales tax.

II. District Heating Rates:

District Heating proposes the following changes to Schedule A:

Single rate & Transition Rate:

Increase from $0.0621 to $0.0623 per kilowatt hour (0.32%)

Two-part rate:

Demand rate increase from $5.37 to $5.45 per kilowatt per month (1.49%)

Energy rate decrease from $24.15 to $23.85 per megawatt hour (-1.24%)

All other service charges will remain at the 2016 levels as indicated in the attached District Heating Schedule A.

Comparison of Heating Rates: 2014 – 2018

	Actual FY 2014	Actual FY 2015	Actual FY 2016	Forecast FY 2017	Budget FY 2018
Rates					
Demand ($/kW/mo)	$5.27	$5.27	$5.27	$5.37	$5.45
Energy rate	$25.59	$25.59	$25.59	$24.15	$23.85
Fuel adjustment rate	$1.24	$0.64	($4.36)	($1.24)	$0.00
Total Energy rate ($/MWh)	$26.83	$26.23	$21.23	$22.91	$23.85
Single Rate ($/KWH)	$0.06	$0.06	$0.06	$0.06	$0.06
Increase as %					
Demand ($/kW /mo)	0.00%	0.00%	0.00%	1.90%	1.49%
Total Energy ($/MWh)	9.90%	-2.20%	-19.18%	8.07%	4.10%
Single Rate ($/KWH)	3.90%	-0.90%	-7.90%	6.30%	0.32%

The proposed District Heating *overall single rate* is projected to increase 0.32% between forecasted 2017 and budgeted 2018. This comes after a 6.30% increase in 2017.

The proposed *demand rate* represents a 1.49% increase for budgeted 2018. The rate has remained relatively flat since 2014. The demand rate covers operations and maintenance, general and administrative, research and development, debt and capital expenses.

The budgeted *total energy rate* represents a 4.10% increase in 2018. This comes after an 8.07% increase in 2017. The budgeted 2018 total energy rate is $23.85, compared to the 2017 forecasted rate of $22.91. This increase is largely driven by an increase in the cost of fuels used to operate the District Heating system, including the cost of natural gas. The energy rate is a pass through to the customer. The rate is based on projected cost of fuels utilized.

For FY 2018 the overall rate increase of 0.32% was due to a budgeted increase in the *demand* rate and the *fuel adjustment rate*.

District Heating Comparison to Other Similar Utilities

	Heating Cost* **($ / MMBtu 1700 Hrs)**
Energy Park Utility 2017 Cost	$21.89
District Heating 2017	$18.26

*Excluding City fees and sales tax.

III. Customer Survey

In spring 2016, District Energy conducted a customer satisfaction survey. Of the survey responses received, 94% rated District Energy's overall customer service as excellent, and 84% rated the system reliability as excellent.

IV. Staff Recommendation

District Cooling:

From an internal perspective, looking at the City's own district cooling expense trend for the past five years (see table below), District Energy's requested rate increase does not seem unreasonable. The City's own trends in cooling costs are likely similar to District Energy's other customers. Given that customer survey results reflect that most customers are satisfied with the service, and given that the average rate increase request at 2.42% is relatively small, staff recommends approval of the rate increase request.

City District Cooling Expenditures by Department:

Department	Description	2011	2012	2013	2014	2015	2016
Police	Building Maint.	100,898.22	103,464.29	83,283.31	93,489.07	92,135.37	90,764.00
Fire	Station Maint.		30,229.72	26,680.31	26,846.95	27,847.81	27,694.00
Real Estate	Real Estate CHA	71,260.83	71,396.41	79,954.43	73,257.51	72,190.04	76,681.00
Library	Maint. Service	66,730.87	78,212.82	74,746.66	54,928.69	47,770.77	51,267.00
Total		238,889.92	283,303.24	264,664.71	248,522.22	239,943.99	246,406.00
% Change		-3.10%	18.60%	-6.60%	-6.10%	-3.50%	2.69%

District Heating:

From an internal perspective, looking at the City's own district heating expense trend for the past five years (see table below), District Energy's requested rate increase does not seem unreasonable. The City's own trends in cooling costs are likely similar to District Energy's other customers. Given that customer survey results reflect that most customers are satisfied with the service, and given that the average rate increase request at 0.32% is similar to past increases, staff recommends approval of the rate increase request.

City District Heating Expenditures by Department:

Department	Description	2011	2012	2013	2014	2015	2016
Parks & Rec	Utilities	3,253.74					
Police	Building Maint.	136,265.83	135,534.60	153,961.04	154,371.54	131,725.31	123,067.00
Fire	Station Maint.	59,613.48	38,688.62	40,018.17	35,336.50	30,837.65	29,531.00
Real Estate	Real Estate CHA	91,396.17	90,830.16	92,314.52	81,776.58	67,431.12	59,083.00
Library	Maint. Service	59,359.88	50,036.88	48,778.48	47,343.66	36,714.71	36,140.00
Total		349,889.10	315,090.26	335,072.21	318,828.28	266,708.79	247,821.00
% Change		7.0%	-9.9%	6.3%	-4.8%	-16.3%	-7.1%