



# Commitment to Stewardship & Sustainability

**2019** ANNUAL REPORT



local renewable reliable



INCREASED OUR NUMBERS  
OF CUSTOMERS SERVED

**40%**  
DELIVERING

**43%**

MORE MEGAWATT HOURS  
WHILE REDUCING CARBON BY

**70%**  
(Since 2000)

- 2019 -  
RETIRED COAL  
**2 YEARS**  
AHEAD OF  
SCHEDULE





While delivering exceptional and reliable services to our customers, we took several actions in 2019 to further bolster our sustainability, which reduces our impact on the environment and benefits our business longevity.

As the urgency of reducing greenhouse gases and slowing climate change is becoming clear to everyone, we are demonstrating our commitment to be part of the solution for Saint Paul and beyond. We have been working toward carbon reductions and increased renewables for nearly 20 years, as we initially demonstrated with the development of St. Paul Cogeneration and integration of regional tree waste as a major fuel. In 2011, we introduced the country's largest solar thermal installation atop the Saint Paul RiverCentre. And in March 2019, we eliminated coal from our fuel supply, two years ahead of schedule. These efforts combined have lowered our carbon profile by 70% since 2000. As our customers and other partners continue to press for sustainability, we are committed to continue our efforts to deliver reliable and cost-competitive services in innovative and effective ways.

In addition to environmental stewardship, operational excellence is another of our company's core values. This can be seen daily in the commitment of our team members. Their focus and skills help us to deliver value, which was exemplified in 2019 with two large-scale projects: adding a new chiller to our cooling system and converting two coal boilers to efficiently use natural gas.

Beyond project and vendor management, our team designed the integration, programmed new system controls, and updated operating procedures to continue our high standard of system efficiency for both heating and cooling services. The expertise of our team members helped to avoid costs that the scale of these projects would usually incur. I am most proud of the fact that these

initiatives were finished on time and under budget without any impact to the services that we provide to our customers.

In addition to these strategic projects, our team members continue to advance our sustainability by working with customers to improve their building performance and utilizing system data to optimize operations. Evidence of the effectiveness of

this effort is the \$500,000 in energy rebates our cooling customers have received over the past four years. You will see from the features in this report, that we also found innovative ways to continue our long tradition of community engagement and education. As always, thank you for your

partnership and your patronage. We look forward to serving you and working alongside you for decades to come.

*Ken Smith*

**Ken Smith**  
President and CEO

## DISTRICT ENERGY CORE VALUES

Deliver exceptional service

Operate with excellence

People matter

Integrity in all we do

Uphold a culture of respect

Serve as environmental stewards

Be a part of our community



## Service on the Mississippi

This year, Ever-Green Energy launched a Day of Service across all locations, and in Saint Paul our team planted 120 trees in the Mississippi National River and Recreation Area. With guidance of Audubon Minnesota and Mississippi Park Connection, we helped to restore bird habitats in an area that is at increased risk due to development, invasive species, and climate change. Audubon works to protect wildlife, natural places, clean air, and clean water. Audubon believes that what's good for birds is good for all of us, and we agree.



## Video Contest

District Energy St. Paul and the St. Paul Saints invited students to participate in our Big Ideas for a Sustainable Minnesota video contest. We received videos from across the state, with students encouraging waste reduction, pollinator protection, community gardens and local food sources, transit and biking alternatives, new urbanism, and renewable energy. With their video on invasive species awareness, Kelliher Public School was awarded the first place prize of \$5,000 for sustainability programming at their school. Highland Park Middle School won second place and White Bear Lake won third. Those who live and work in Minnesota and benefit from these sustainability ideas have a prize of their own.

# Reducing Carbon Emissions for Saint Paul

Between 2000 and 2019, District Energy reduced carbon emissions by 70%. This achievement has taken a systems approach considering heating and cooling production assets, data collection, dispatch procedures, and customer building performance. District Energy is working to continue to reduce carbon emissions and provide customers with the sustainable energy solutions that they seek.

## Advances in Heating Services

Since 2003, District Energy heating services have been up to 50 percent renewable, using wood waste from the region to generate renewable electricity for Xcel Energy and provide heat for the downtown district system. This year, District Energy eliminated coal from its operation – two years ahead of schedule. Eliminating the use of this fuel was projected to reduce the heating systems CO<sub>2</sub> emissions by 6,000 tons in 2019. This is the equivalent of removing 1,300 cars from the road each year.

## Advances in Cooling Services

District Energy added a new Trane chiller with chilling capacity of 2650-tons of refrigeration that is highly efficient because of variable frequency drives on the chiller compressors which operates at high efficiency levels at any load. The chiller also has the advantage of using a next generation refrigerant, R1233zd. Next generation refrigerants have extremely low global warming potential which minimizes environmental impacts. Pairing this chiller with recent cooling system optimization projects and thermal storage can help to increase efficiency throughout the cooling services.

## Customer Building Performance

By working alongside our customers, we continue to advance system optimization and energy efficiency in customer buildings. This year our customer energy efficiency program supported projects by troubleshooting customer-side system inefficiencies and challenges with return temperatures for heating and cooling. Our efforts to optimize the system have been bolstered by the adjustments customers are implementing in their buildings. When customers work to manage peaks and improve efficiency it makes a positive impact on the entire system. These efforts are made easier by more detailed customer usage meter data collection that has helped customers and our team more closely monitor building energy trends.

## Continuous Improvements

System energy savings are made possible through strategic capital investments, maintenance investments, and continued focus on dispatch procedures. For example, we have been able to save our customers money by shifting chilled water production to nighttime to take advantage of lower off-peak electric rates by utilizing our thermal storage capacity. Our team continues to look for opportunities to conserve energy in our production and distribution network.



## Supporting Climate Literacy

Read Brave is a Saint Paul Public Library reading program that revolves around a theme relevant to the city, and this year the theme is "Our Climate Crisis." We are proud to sponsor this initiative in support of our local libraries and climate literacy in our community.

# FINANCIALS

## Rates and Unit Sales

Year-End September 30	FY2019	FY2018
<b>HEATING SERVICES</b>		
Demand rate (\$/kW/mo) .....	\$ 5.53 .....	\$ 5.45
Energy rate (\$/MWh) .....	\$ 22.21 .....	\$ 22.21
Overall rate (\$/MMBtu, 1700 Util hrs) ...	\$ 17.95 .....	\$ 17.78
Demand (kW) .....	177,143 .....	182,928
Energy sales (MWh) .....	362,337 .....	348,136

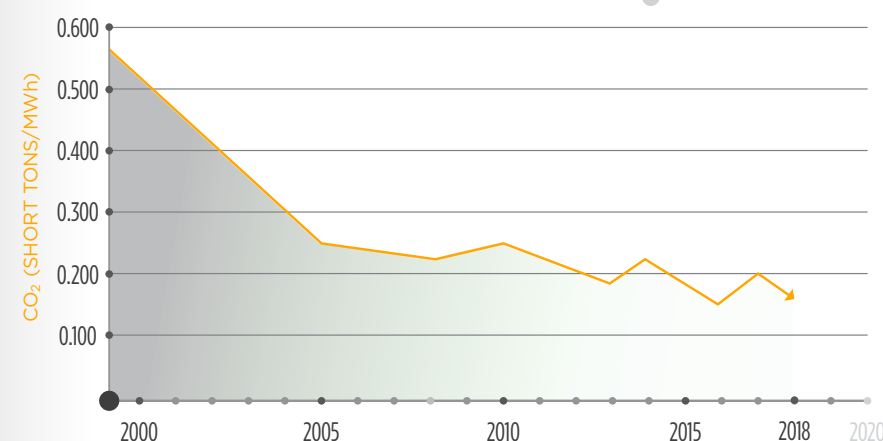
## COOLING SERVICES

Demand rate (\$/ton/mo) .....	\$ 28.57 .....	\$ 28.15
Energy charge (\$/ton-hour) .....	\$ 0.085 .....	\$ 0.089
Overall rate (\$/ton-hour, 1200 Util hrs) ...	\$ 0.370 .....	\$ 0.371
Demand (tons) .....	27,572 .....	27,591
Energy sales (tons-hours in 000's) .....	34,138 .....	40,430

## Revenues and Expenses

Year-End September 30 (\$ in 000's)	FY2019	FY2018
Operating Revenues .....	\$33,391 .....	\$33,721
<b>Operating Expenses</b>		
Fuel and energy .....	\$ 11,050 .....	\$ 11,372
Non-fuel operating expenses .....	\$ 12,722 .....	\$ 12,363
Total operating expenses .....	\$ 23,771 .....	\$ 23,735
Operating income Before depreciation .....	\$ 9,620 .....	\$ 9,986

DISTRICT ENERGY ST. PAUL ANNUAL CO<sub>2</sub> EMISSIONS



# COMBINED HEAT AND POWER

## OUR CHP REDUCES

- ▶ fuel
- ▶ carbon

Capturing both heat and power from our own plant makes our system nearly **2X** as efficient as traditional electricity generating power plants.



**144** solar hot water panels on the Saint Paul RiverCentre reduce **272,000 pounds of carbon per year**

Equal to the energy needed to charge **15,734,559 SMART PHONES**



**223,476 TONS** OF TREE WASTE TRANSFORMED TO RENEWABLE ENERGY IN 2019



**CHP PRODUCES** 25 MW of renewable electricity and 195,126 MWh of renewable heat

## District Energy St. Paul Board of Directors 2018-2019

Kris Taylor, Chairperson  
Vice-President of Community Relations, Ecolab

Heidi Conrad  
Vice President & Chief Financial Officer, Regions Hospital  
Large-sized customer representative

Julio Fesser  
Vice President of Facilities Services, Securian Financial  
Medium-sized customer representative

Patrick Hamilton  
Director of Global Change Initiatives, Science Museum of Minnesota  
Small-sized customer representative

Beverly Jones Heydinger  
Retired Chair, Minnesota Public Utilities Commission

Ken Peterson  
Attorney and former Commissioner of the Minnesota Department of Labor and Industry

Pat Wolf  
President, Commercial Real Estate Services

David Ybarra  
President, Minnesota Pipe Trades Association

Ken Smith, Ex Officio  
President & CEO, District Energy St. Paul

NEARLY **50%** of the heat we supply to downtown Saint Paul comes from renewable energy

Snow melt systems reduce salt & chemicals in our local waterways

Since 2014, supported 171 nearby communities in 22 counties dealing with tree waste

**106,000 tons** of carbon avoided each year

EQUAL TO THE ELECTRICITY USED BY **16,281 homes for 1 year**



**DISTRICT ENERGY**  
ST. PAUL™

[districtenergy.com](http://districtenergy.com)