



Solar Energy

St. Cloud Nutrient, Energy and Water Recovery Facility

ST.CLOUD  **GREATER**

SOLAR INITIATIVE TIMELINE



Solar Initiative Resolution of Support
was approved by City Council in July 2015



First Solar Install
at the St. Cloud Nutrient Energy & Water Recovery Facility



8 Behind the Meter Solar Installations at City facilities are generating electricity

May 2015

01

July 2015

02

Jan 2016

03

2016

04

2017

05

2018

06

2019

Solar RFP

City issued a Request for Proposals for Solar related Services and Projects



Community Solar Gardens

City subscribed to over 20 million kWh's



2019
NEW Facility
200 kW Array
40 kW Array



ENERGY TRACKING

Buildings (This site contains one building)

[Add a Site/Building](#)



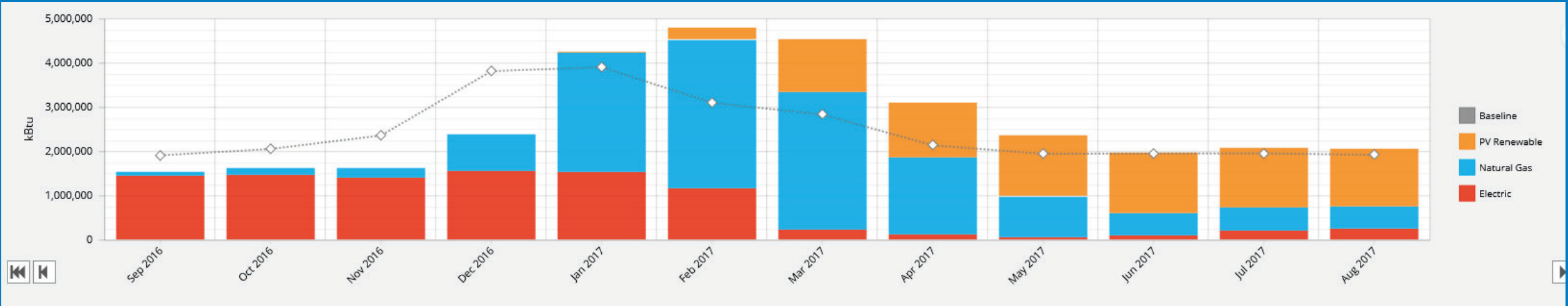
Wastewater Treatment Plant
525 60th St S Saint Cloud, MN 56301

Waste Water Treatment Plant
Plant Design Flow Rate: 17.9 MGD

Meters (8 meters)

Current To 9/25/2017 [Add a Meter](#)

Meter Name ↑	Status	Type	Utility	Meter #	Acct #	First Reading	Last Reading	Conn
Biofuel Generator	✓	PV Renewable Meter	Owner	16120559	51-5187789-1	1/12/2017	9/25/2017	1 ↓
Flow Meter	✓	Flow Meter	(Unknown)			12/1/2009	10/1/2017	1 ↓
WWTF Boilers/Bio Solids Firm	✓	Natural Gas Meter	Xcel Energy	628482	51-5187789-1	12/29/2007	9/25/2017	1 ↓
WWTF Boilers/Bio Solids Interruptible	✓	Natural Gas Meter	Xcel Energy	594392	51-5187789-1	12/4/2007	9/25/2017	1 ↓
WWTF Electric	✓	Electric Meter	Xcel Energy	17955943	51-5187789-1	12/29/2007	9/25/2017	1 ↓
WWTF Pilots/Lab	✓	Natural Gas Meter	Xcel Energy	20339497	51-5187789-1	12/29/2007	9/25/2017	1 ↓
WWTF SOLAR PV 220KW	✓	PV Renewable Meter	(Unknown)	16120551	51-5187789-1	5/19/2017	9/25/2017	1 ↓
WWTF SOLAR PV20KW	✓	PV Renewable Meter	(Unknown)	18980348	51-5187789-1	1/26/2016	9/25/2017	1 ↓



ENERGY EFFICIENCY



1,600,000
Kilowatt-
Hours

=



164
Homes' Electricity
(Use for one year)



1,200,000
Pounds of Coal



2,700,000
Miles Driven
*(By a passenger
vehicle)*

NEW RECOVERY FACILITY • SOLAR



350,000 kWh ANNUAL PRODUCTION

FIRST SOLAR ROOFTOP INSTALL

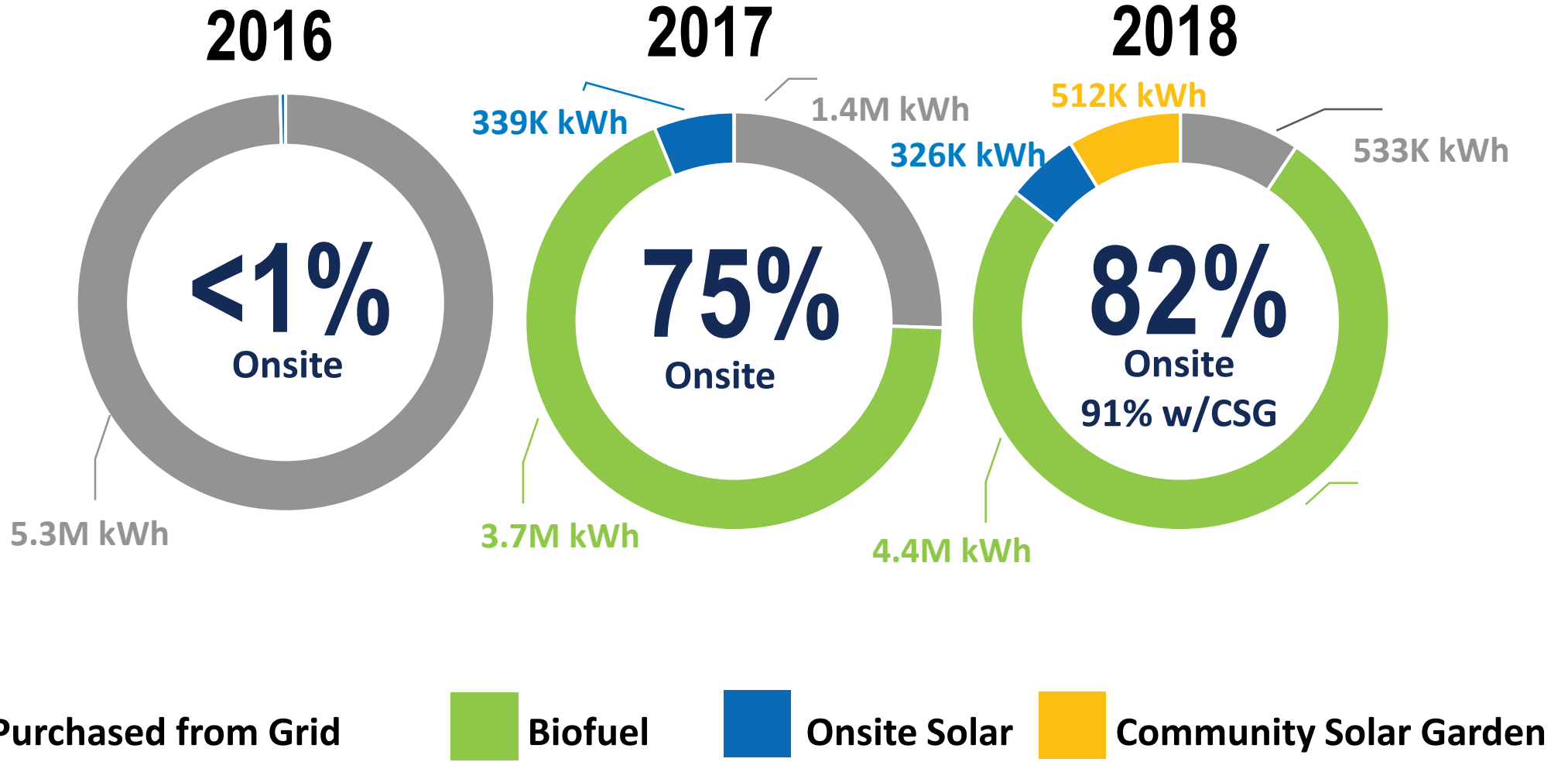
20 kW

FIRST BEHIND THE METER INSTALL

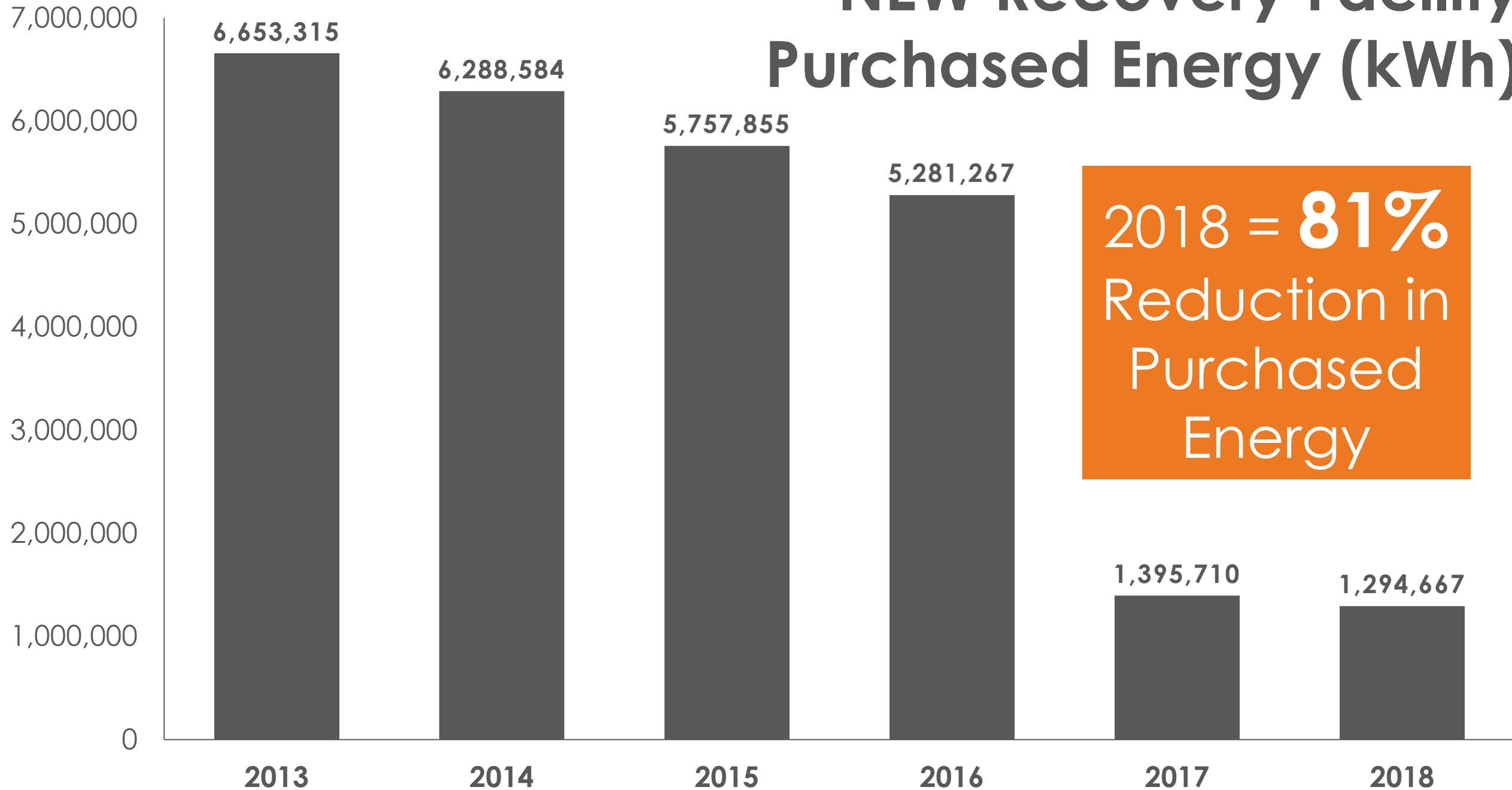
220 kW



NEW - % from Renewable Energy Sources

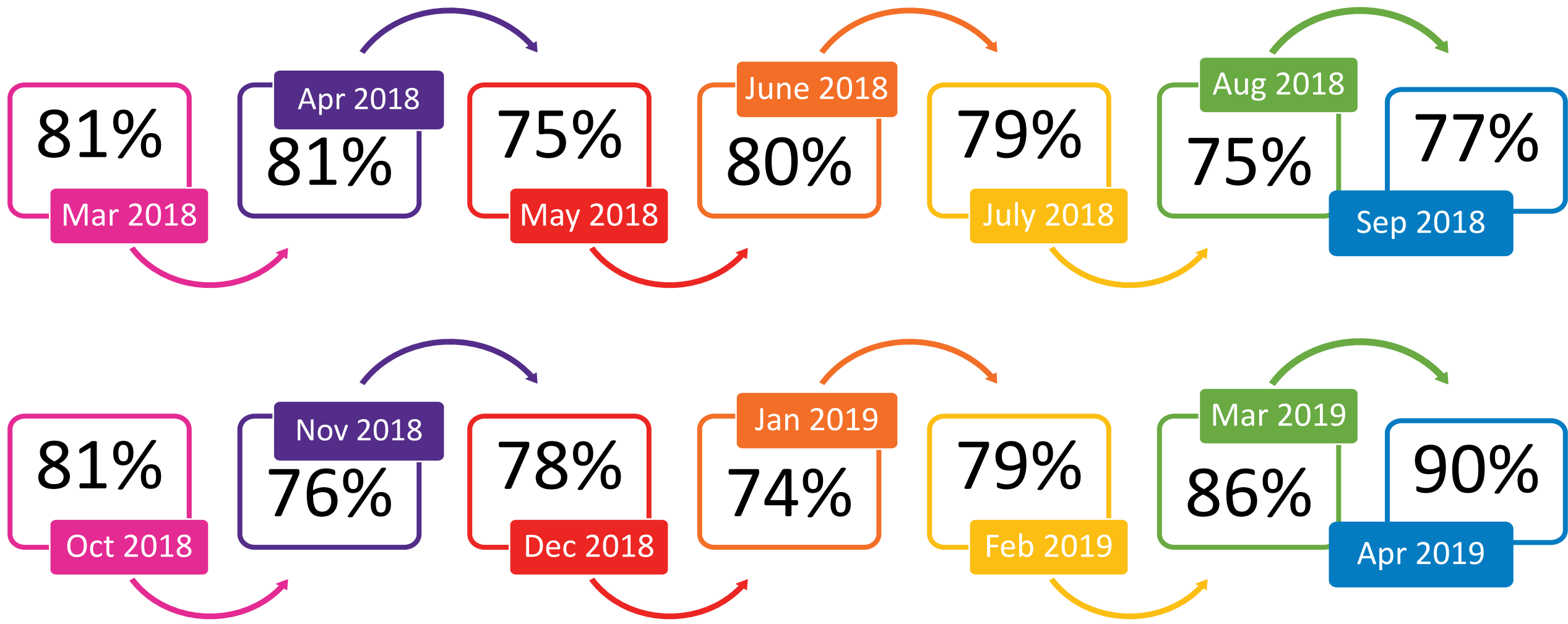


NEW Recovery Facility Purchased Energy (kWh)



NEW Recovery Facility

% RENEWABLE



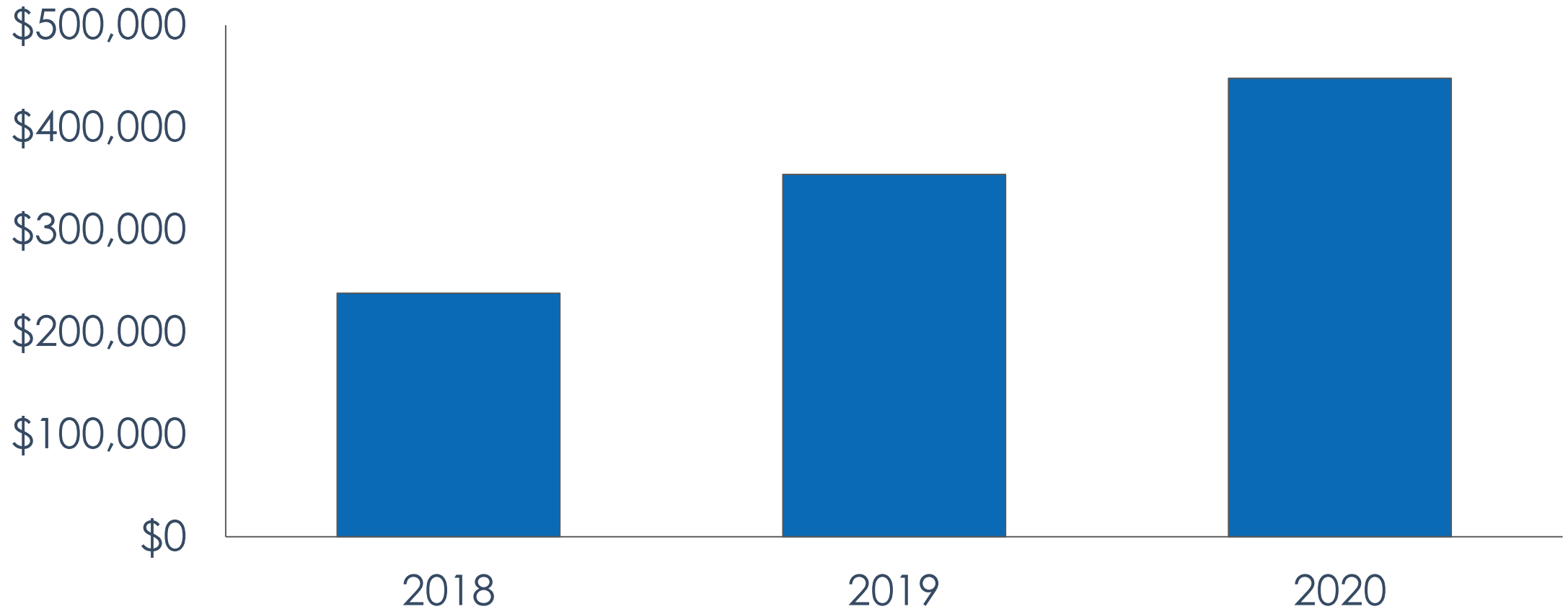
St. Cloud & Community Solar Gardens

- Subscribed to over **22,000,000** kilowatt-hours
- **32** Gardens
- **25** gardens commissioned since 2017
- **7** Project Sites
- **5** Solar Developers



Projected Annual Savings

Community Solar Gardens



Projected Savings of **\$28,000,000** over the next **25** years

THANK YOU & QUESTIONS



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CSG SAVINGS - SIMPLE



Company	Total Cost	Total Credits	Total Savings
NordicSolar	\$117,373.42	\$128,768.10	\$11,394.68
Potentia	\$383,864.42	\$409,788.15	\$25,923.73
SoCore/ Project Co	\$1,044,017.85	\$1,181,429.84	\$137,411.19
US Solar	\$2,394.00	\$2,565.15	\$171.15
Totals	\$1,689,959.10	\$1,864,859.85	\$174,900.75

Energy Fund 760

REVENUE

- Made in Minnesota Rebates (3)
- Solar Lease Revenue
- Renewable Energy Credits
- Community Solar Garden Savings



City Services used **11.8 M** kWh from CSGs

\$159,000 Savings from CSG Solar Credits