REVISION ENERGY

Saving Energy and Money with Solar

Solar Energy Options for MSAD 51

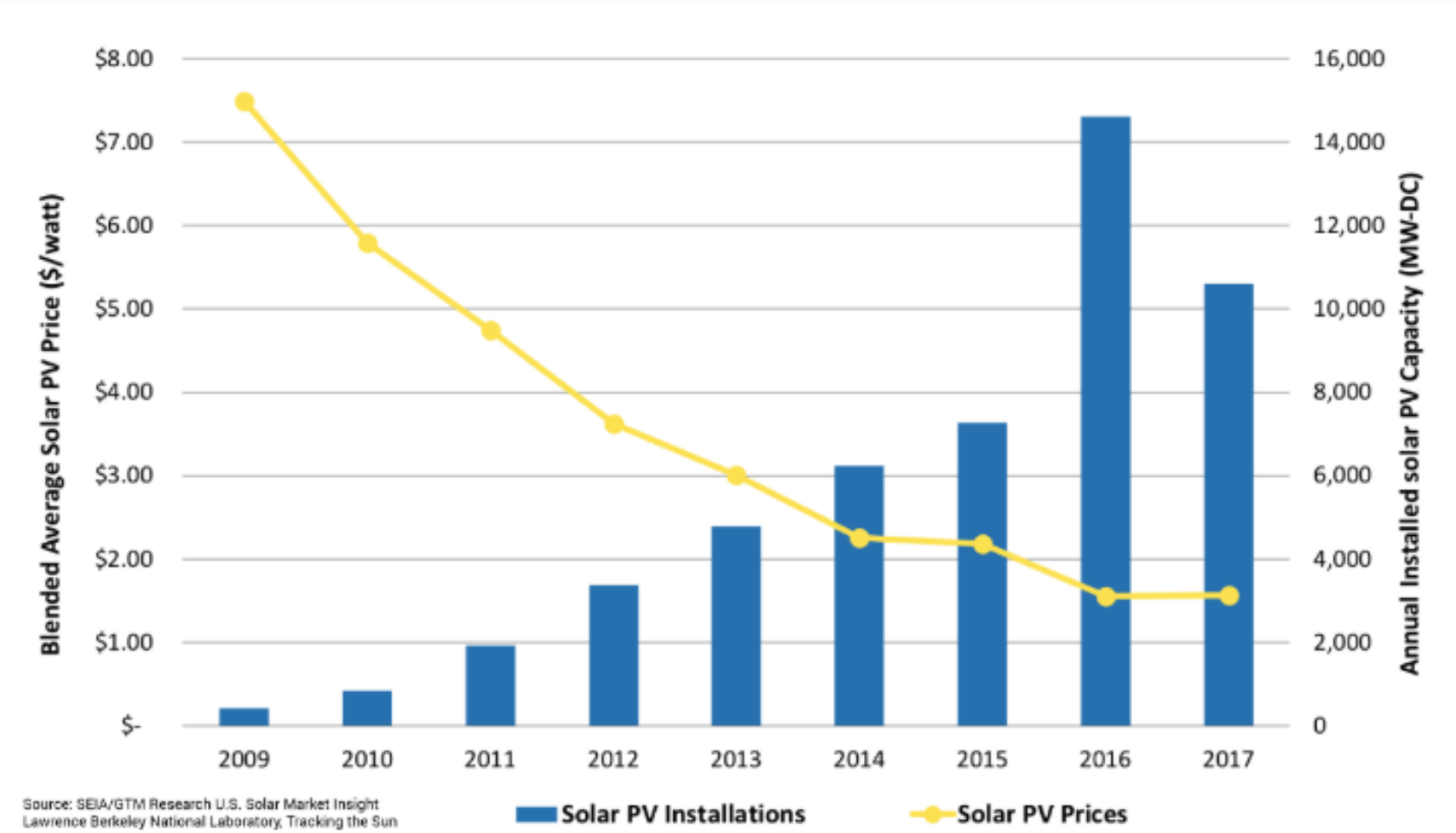
250+ Employee Owners

that care about your system and its lifespan

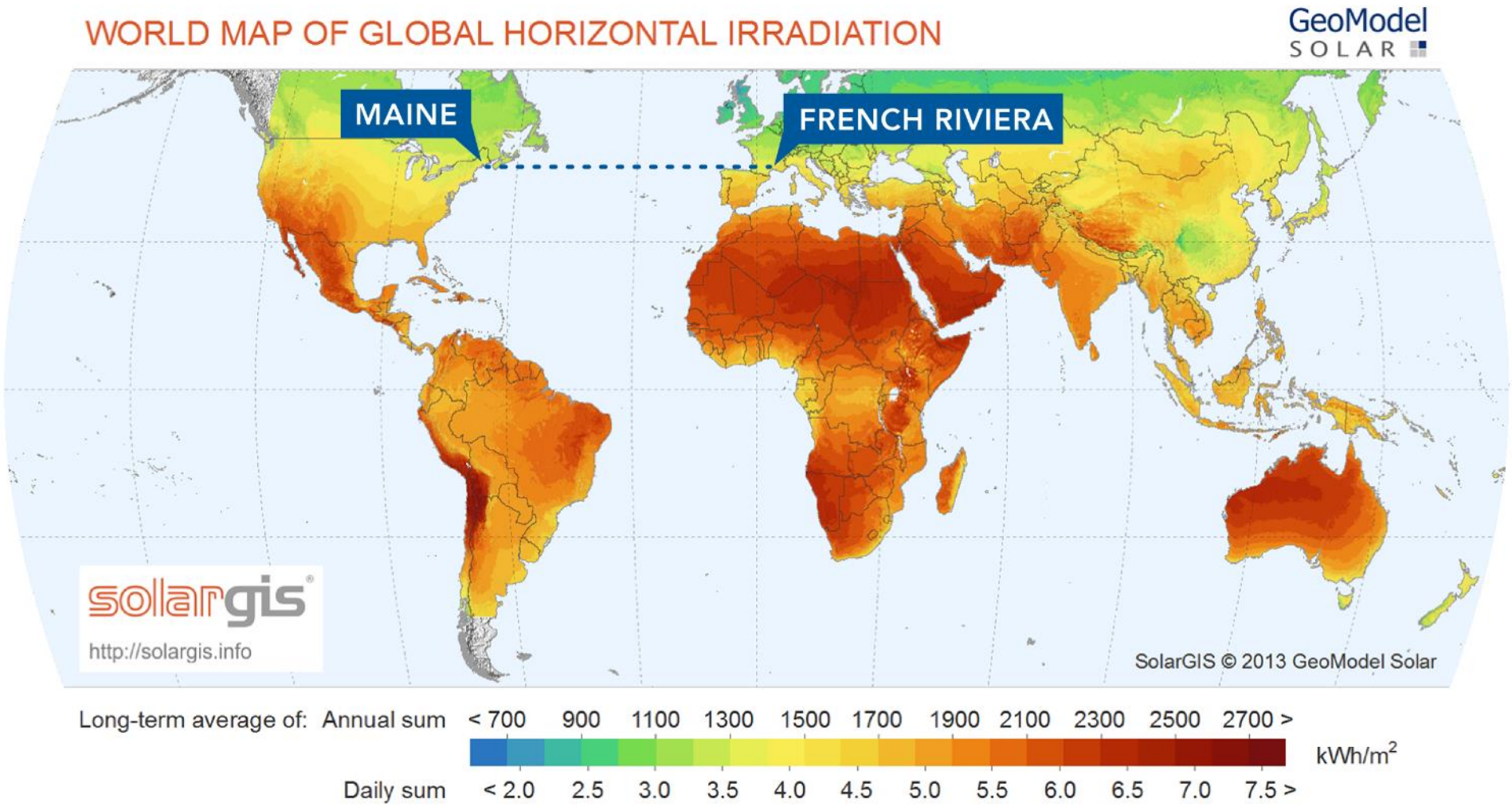
Our Mission

To accelerate and lead the transition to a clean, renewable energy economy in Northern New England.

U.S. Cost of Solar Power ($/watt) & Solar Installations



World Map of Solar Potential



Germany Achieves Milestone – Renewables Supply Nearly 100 Percent Energy for a Day

May 16, 2016

By Jessica Shankleman, Bloomberg

Clean power supplied almost all of Germany's power demand for the first time on Sunday, marking a milestone for Chancellor Angela Merkel's "Energiewende" policy to boost renewables while phasing out nuclear and fossil fuels.

Solar and wind power peaked at 2 p.m. local time on Sunday, allowing renewables to supply 45.5 GW as demand was 45.8 GW, according to provisional data by Agora Energiewende, a research institute in Berlin. Power prices turned negative during several 15-minute periods yesterday, dropping as low as minus 50 euros ($57) a MWh, according to data from Epex Spot.

Major Components

Solar Panels convert sunlight into Direct Current (DC) electricity

Inverters take the DC electricity and convert it into Alternating Current (AC) electricity

How Solar Energy Works

1. Sun hits panels, creating DC electricity.

2. Solar inverter converts DC power into AC power for your lights, television, computers, etc.

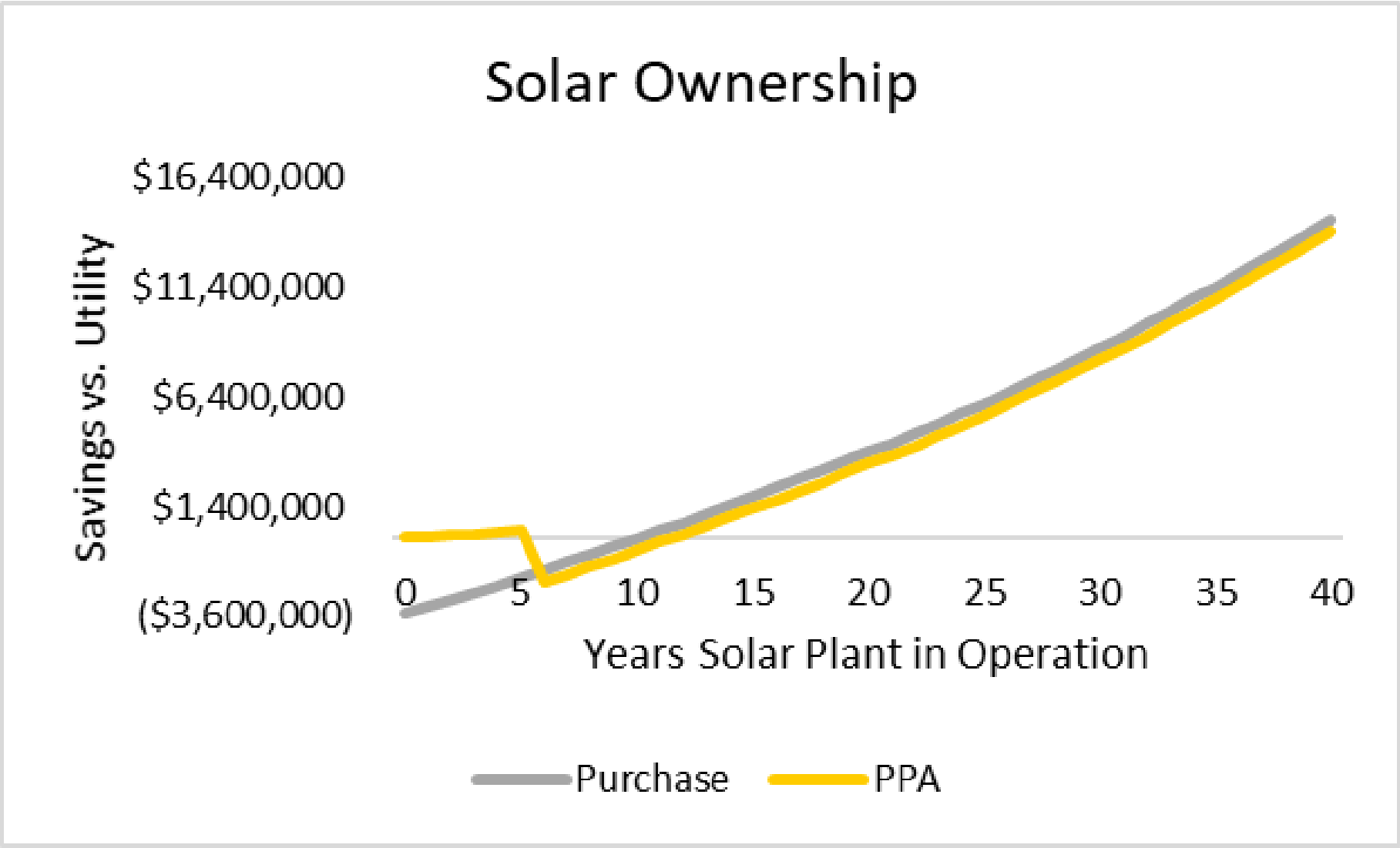
3. Excess power is sent to the grid, crediting your monthly bill.

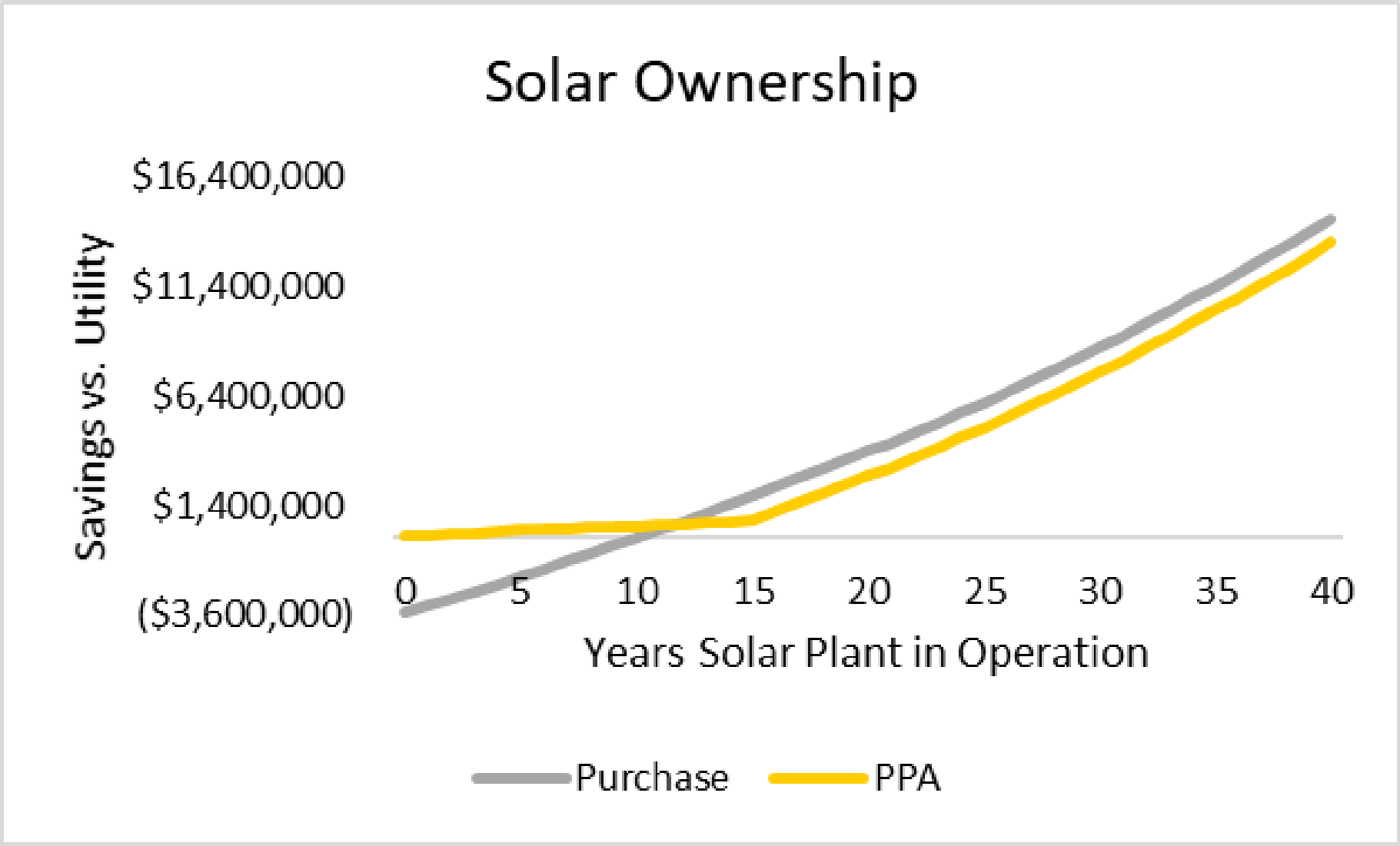
Financing Options for Schools and Non-Profits

- Schools & Non-Profits cannot directly monetize tax incentives
- Instead of buying outright, can finance through Power Purchase Agreement (PPA)
  - No upfront cost to non-profit
  - Indirectly takes advantage of federal tax incentives
  - Speeds up payback period

Solar PPA Structure

- School licenses roof/land space to Investor (if on-site project)
- Investor finances, builds, owns and operates for 5-30 years
- Investor sells solar electricity to school, at a discount
- After 5 years, school can purchase at 60% - 70% upfront price


Solar Ownership
$16,400,000
$11,400,000
$6,400,000
$1,400,000
($3,600,000)
Savings vs. Utility
0
5
10
15
20
25
30
35
40
Years Solar Plant in Operation
Purchase
PPA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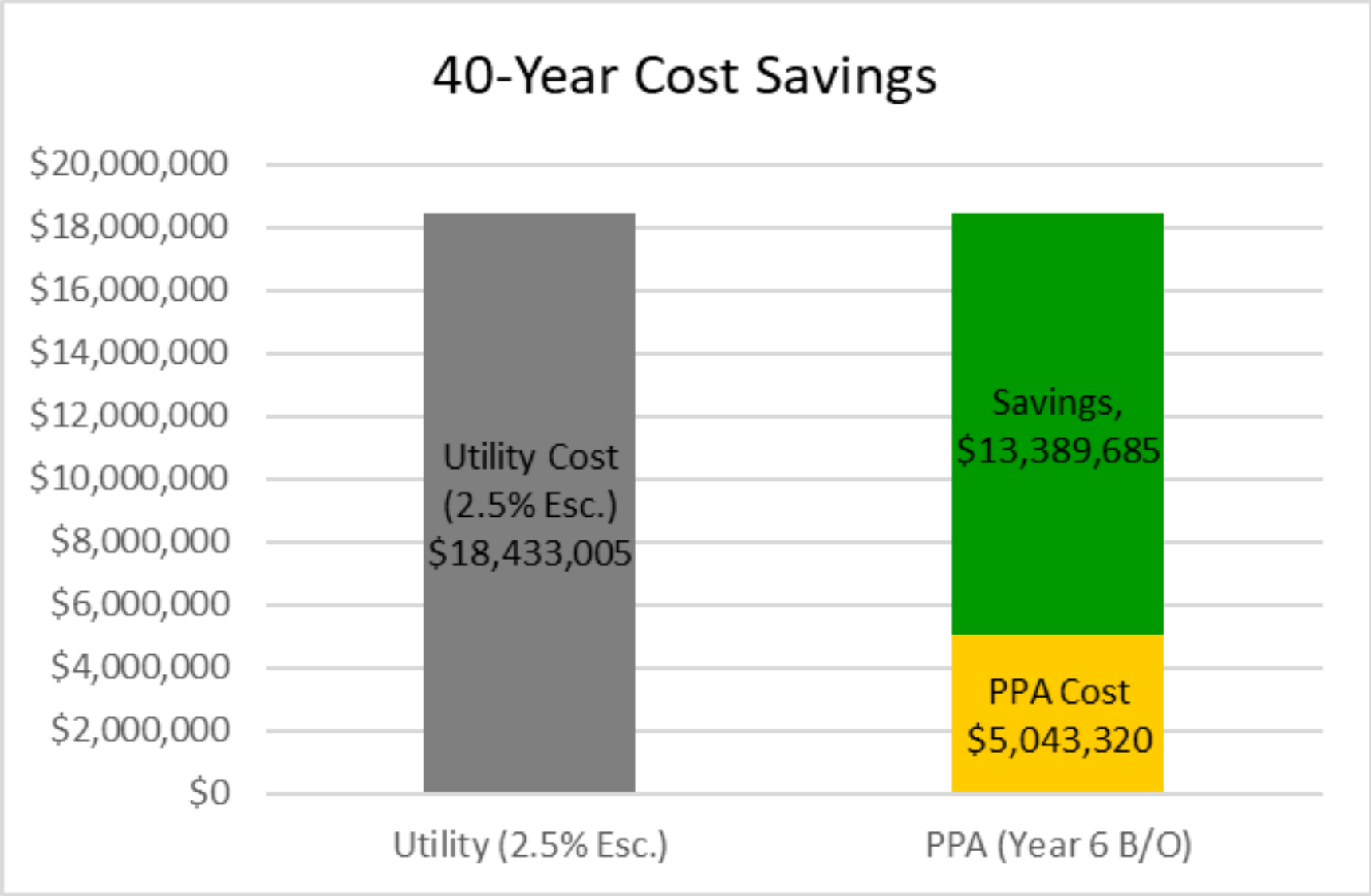
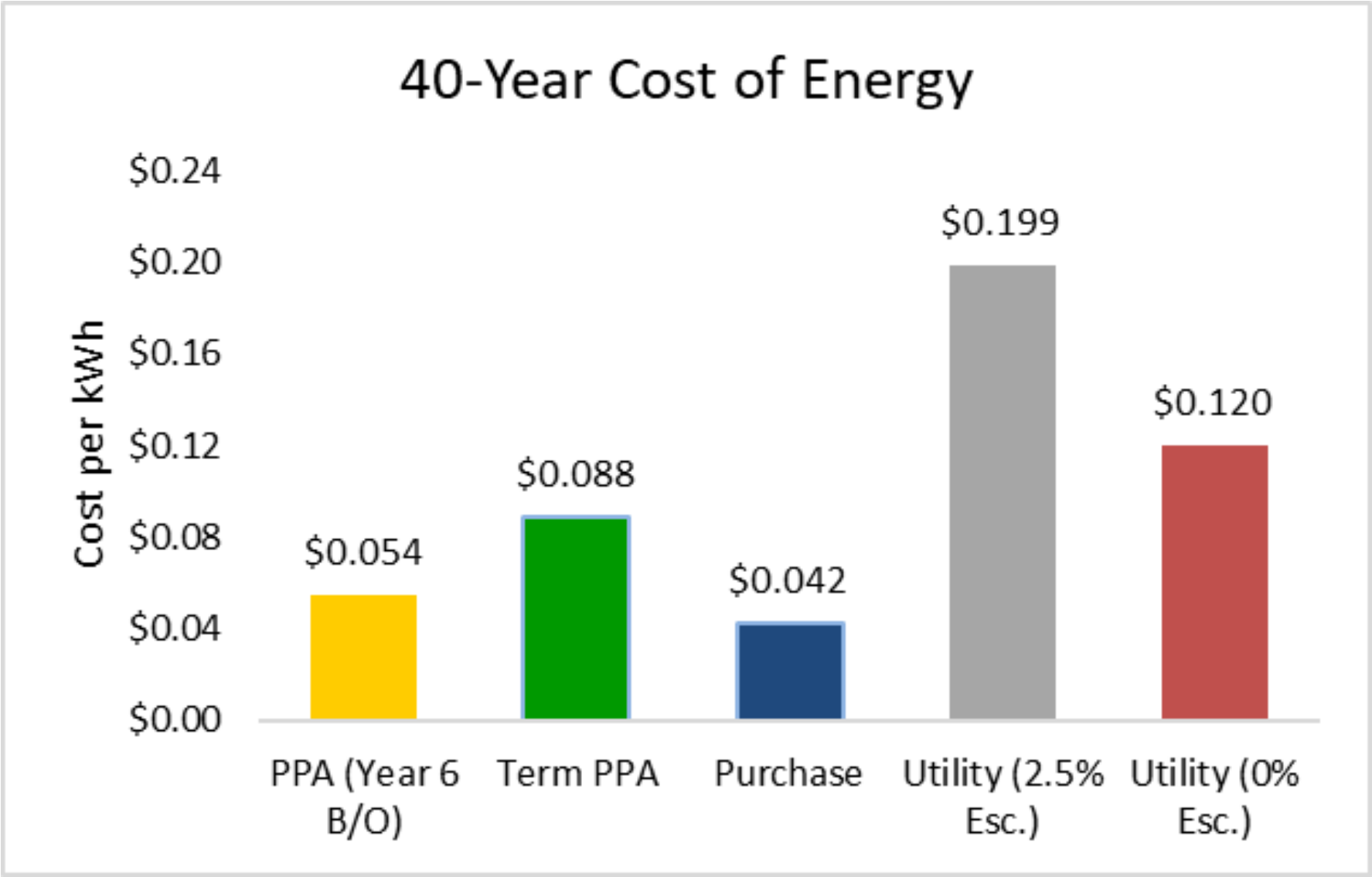

40-Year Cost Savings
$20,000,000
$18,000,000
$16,000,000
$14,000,000
$12,000,000
$10,000,000
$8,000,000
$6,000,000
$4,000,000
$2,000,000
$0
Utility Cost
(2.5% Esc.)
$18,433,005
Savings,
$13,389,685
PPA Cost
$5,043,320
Utility (2.5% Esc.)
PPA (Year 6 B/O)


40-Year Cost of Energy
Cost per kWh
$0.24
$0.20
$0.16
$0.12
$0.08
$0.04
$0.00
$0.054
$0.088
$0.042
$0.199
$0.120
PPA (Year 6 B/O)
Term PPA
Purchase
Utility (2.5% Esc.)
Utility (0% Esc.)

Solar for Northern New England Schools

- 127 kW- Colby-Sawyer College, NH
- 26 kW- Good Will Hinckley School, ME
- 330 kW- Proctor Academy, NH
- 150 kW- Camden Hills HS, ME
- 87 kW- East Rochester School, NH
- 37 kW- Riley School, ME
- 62 kW- Cornerstone School, NH
- 81 kW- Bristol Consolidated School, ME
- 78 kW- Plymouth State University, NH
- 38 kW- Unity College, ME
- 43 kW- White Mountain School, NH
- 170 kW- Thomas College, ME
- 50 kW- College of the Atlantic, ME
- 126 kW- Saint Dominic Academy, ME
- 267 kW- Hebron Academy, ME
- 535 kW- Phillips Exeter Academy

Maine Municipal Solar Projects

- 40 kW for Town of Windham
- 58 kW for Town of Sebago
- 33 kW for Waterville Sewerage District
- 68 kW for Town of Shapleigh
- 20 kW for Town of Parsonsfield
- 23 kW for Town of Woolwich
- 17 kW for Town of Gorham
- 43 kW for Town of Lincolnville
- 41 and 130 kW for Town of Eliot
- 111 kW for Town of Boothbay
- 73 kW for Town of Bar Harbor
- 37 kW for Town of Wells
- 123 kW for Town of Camden
- 21 kW and 1016 kW for City of South Portland
- 121 kW and 883 kW for City of Belfast
- 28 kW for Town of Yarmouth
- 42 kW for Town of Scarborough
- 25 kW for Town of Rockport
- 77 kW for Town of Mount Desert
- 47 kW for Town of Islesboro
- 23 kW and 955 kW for City of Portland
- 62 kW for Town of Chebeague
- 462 kW for Town of Cumberland

126 kW PPA Project on Saint Dominic Academy

Auburn, ME

150 kW PPA Project for Camden Hills High School

266 kW PPA Project for Hebron Academy

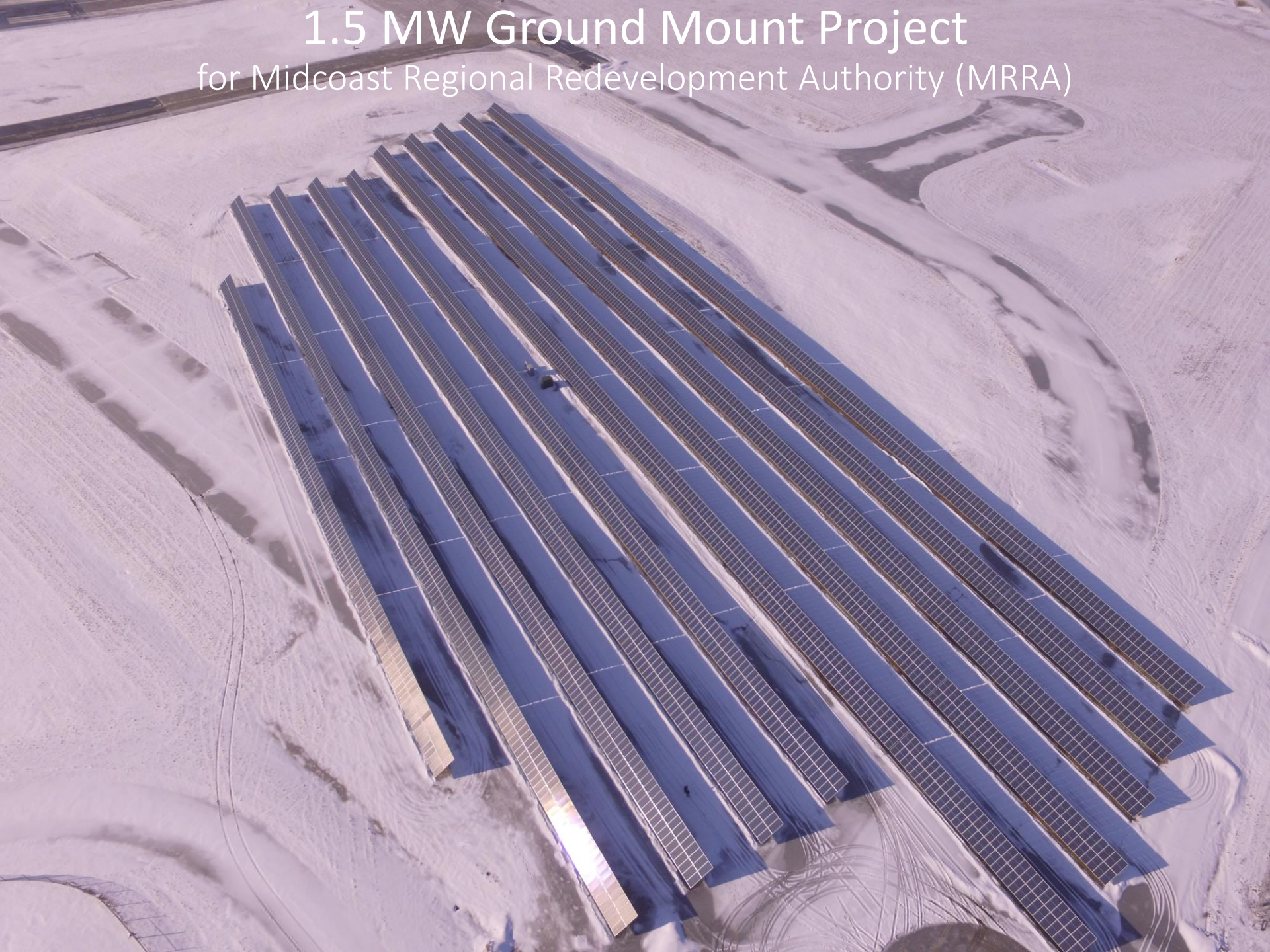
912 kW Ballasted Rooftop Project for Dover High School

152 kW Ground Mount Installation

for the Wells Sanitary District

1.5 MW Ground Mount Project

for Midcoast Regional Redevelopment Authority (MRRA)



618 KW Ground Mount Array for Limestone Water & Sewer District

970 KW Ground Mount Project

for Kennebec Sanitary Treatment District

1.02 MW Capped Landfill Project

for City of South Portland, ME

955 kW Capped Landfill Project

for City of Portland, ME

"Every cent that we save on this electric bill will go to scholarships for kids who need help. That's the biggest win for us."

- Glenn Cummings, President, Good Will Hinckley School.

Nick Sampson

Commercial Solar Consultant

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