



Cascade**Energy**[®]



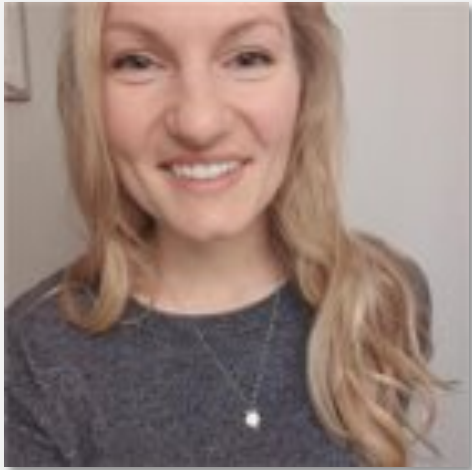
Streamlined Ag Efficiency

Ashton Genzman

Program Sponsor



Streamlined Ag Efficiency (SAE) – Cascade Energy Team



**Ashton Genzman –
Technical Lead/Engineer**



**Assaf Weinberg –
Technical Lead/Engineer**



**Alberto Pezzani –
Program Manager**



**Molly Pero –
Program Specialist**

Agenda

Introductions & Cascade Energy Explained

SAE Benefits & Strategy

Example Energy Savings Projects

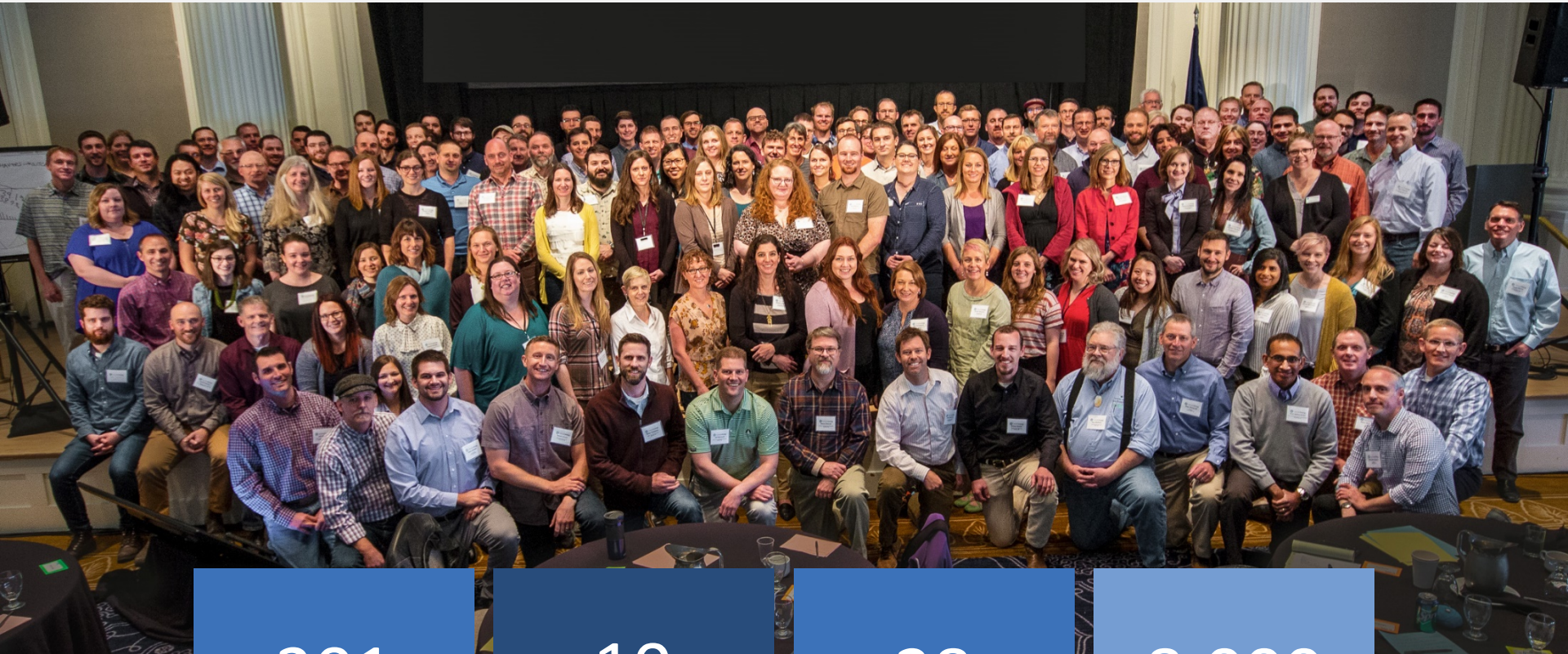
Incentives & Rebates (\$)

What's Next

Q&A



Cascade Energy - Who We Are



201

Employees

10

Offices

28

Years

8,000

GWh

Industrial - What We Do



Relationships – How We Partner



How Cascade can help you!



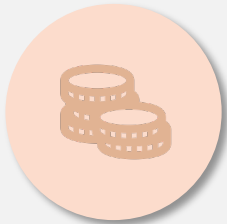
SAE Program - Benefits



Save energy
(i.e. electric/gas)



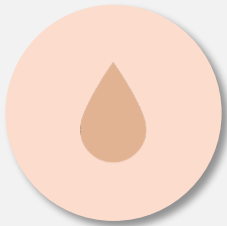
No cost technical
expertise



Cash incentives



Increase site
efficiency



Potential water
savings

Cascade's Strategy – Streamlined Approach

Outreach by Cascade Engineer



If interested, site visit to identify savings opportunities



Engineer to quantify savings, costs, and payback estimates



If interested, Engineer to define rebates or custom incentives

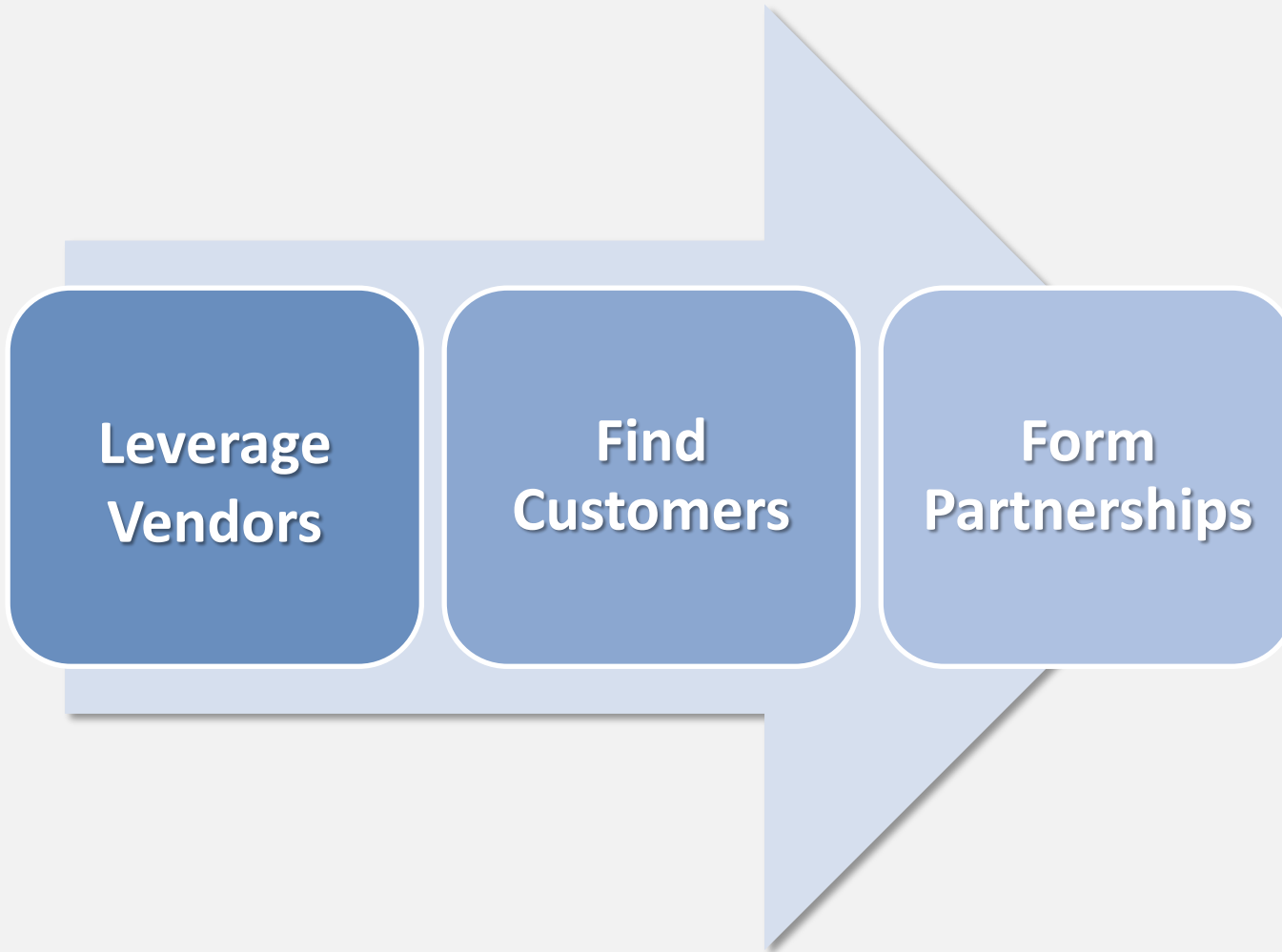


Customer implements and savings verified



Celebrate! Rebate/incentive paid to customer

Cascade's Strategy – Alternative Approach



Where do energy savings come from? Example projects!



Irrigation Pumps – Variable Frequency Drives

Measure:

Install a VFD in the pump's motor

How it saves energy:

A VFD changes the speed of the pump, effectively changing its performance curve. The VFD will regulate the speed of the motor, altering the pressure and flow. Savings come from fully opening system valves and operating at minimum required speed that provides the necessary pressure and flow.

Example Savings/Incentive:

Deemed, \$30/rated HP Rebate



Adaptive Refrigeration Controls (ARC)



Measure:

Retrofit refrigeration system with ARC

How it saves energy:

ARC allow the system to cycle fans off when liquid solenoid valve is off, speed down EC motors, and/or controlling defrost logic, reducing frequency and duration of defrost cycle, preventing excess defrost.

Example Savings/Incentive:

Custom, \$0.25/kWh

Building Envelope - Insulated Sidings

Measure:

Install upgraded insulated sidings

How it saves energy: Increases insulation value, and decreases infiltration losses.

Example Savings/Incentive:

Custom, \$1.25/therm



Greenhouse - Heat Curtains & Controls



Measure:

Install Heat Curtains and Controls

How it saves energy:

Thermal curtains decrease conduction, convection, and radiation heat losses in greenhouses. Thermal curtains are installed inside the greenhouse and are designed to be placed horizontally above the growing zone. In addition to retaining heat, thermal curtains are commonly used for shading.

Example Savings/Incentive:

Deemed, \$0.30/sqft Rebate

Measures List - Example

Measure Description	Rebate Paid Units (tons, each, etc.)	Customer Incentive per Unit (\$)
Refrigeration - New Refrigeration Case w/Doors-Low Temperature Case (SWCR021B)	Len-ft	\$175.00
Refrigeration - New Refrigeration Case w/Doors-Medium Temperature Case (SWCR021A)	Len-ft	\$75.00
Refrigeration - Controls - AOE	kWh	\$0.25
HVAC - Space Cooling - Economizer - Waterside Economizer - AOE	kWh	\$0.25
HVAC - Vent Air Dist. - Controls/Controlling Equip - Air Flow - AOE	kWh	\$0.25
HVAC - Space Cooling - Air Distribution - Air Flow Motor - AOE	kWh	\$0.25
HVAC - Space Cooling - Cooling Tower Upgrades - Packaged System - AOE	kWh	\$0.25
Lighting - Interior - LED Fixture - NR	kWh	\$0.25
Process Distribution - ASD/VFD - AOE	kWh	\$0.25
Process - Pumping - Motor (Agriculture) - NR	kWh	\$0.25
Process - Pumps - Motor and Pump (Agriculture) - AR	kWh	\$0.25
Process Heat - Boiler - Steam - NR	kWh	\$0.25
ProcDist - Pumping - LiqCirc - FlowCtrl - AOE	kWh	\$0.25
VFD on Agricultural Well Pumps for 300 HP and below (SWWP002A)	Rated-HP	\$30.00
VFD on Agricultural Booster Pumps for 150 HP and below (SWWP002B)	Rated-HP	\$30.00
VFD on New Agricultural Booster Pumps for 150 HP and below (SWWP002D)	Rated-HP	\$30.00
VFD on New Agricultural Well Pumps for 300 HP and below (SWWP002C)	Rated-HP	\$30.00
Building Envelope - Greenhouse - Insulated Siding - NR	therm	\$1.25
Process - Cooling - Evap Cooler - NR	kWh	\$0.25
Glycol Pump VFD, Winery, 3HP (SWPR002A)	Each	\$750.00
Glycol Pump VFD, Winery, 5HP (SWPR002B)	Each	\$1,000.00
Glycol Pump VFD, Winery, 7.5HP (SWPR002C)	Each	\$1,000.00
Glycol Pump VFD, Winery, 10HP (SWPR002D)	Each	\$1,000.00
Glycol Pump VFD, Winery, 15HP (SWPR002E)	Each	\$1,500.00
Glycol Pump VFD, Winery, 20HP (SWPR002F)	Each	\$2,000.00
Glycol Pump VFD, Winery, 25HP (SWPR002G)	Each	\$2,500.00
Efficient, Ag Ventilation Fans, 24-26 inch (SWWP001A)	Each	\$20.00
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Structure - Incentive/Rebate

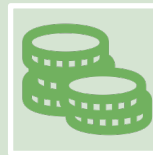
Incentives: Pre-approval is required prior to purchasing equipment. Do not purchase equipment prior to receiving an approved project agreement and notice to proceed.

Rebates: Rebate amounts don't depend on the amount of savings. Customers can purchase equipment prior to the notice to proceed.



Incentive

\$.25/kWh
\$ 1.25/therm



Rebate

Applications for incentives/rebates must be submitted by December 15, 2022

The best part – minimal paperwork!

Streamlined Ag Efficiency INCENTIVE APPLICATION

Company Name (if account holder, name on SDG&E bill):	Contact name:	Title:	
Contact cell or telephone:	Fax:	Email:	
Address where items installed:	City:	State:	Zip:
Mailing address (if different):	City:	State:	Zip:
Account # or meter # where installed:	Business property type:		NAICS code:

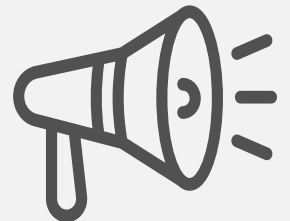
TERMS AND CONDITIONS

In order for equipment to be eligible for incentive in the SAE program, this application must be approved, an incentive agreement must be signed, and notice to proceed must be issued by Cascade Energy before Participant purchases or installs equipment. Equipment purchased prior to receipt of a notice to proceed is not eligible for incentive.

I understand and agree that I am solely responsible for the selection, purchase, installation, and ownership of measures and services under this program. Neither Cascade nor SDG&E makes any representation or warranty regarding the qualifications of performance of any supplier, contractor, vendor, or trade professional that Participant may choose to work with. I understand and acknowledge that completion of this form and/or acceptance of this form by Cascade is a requirement of participation in the program, but is not a guarantee that my project qualifies for acceptance into the program and is not a guarantee of any incentive or rebate in any amount. I agree to follow all guidelines and procedures in the Statewide Customized Offering Procedures Manual for Business.

SAE 2022 - Energy Savings Goal

1,000,000 kWh
20,000 Therms



SAE Program – Ongoing Goals

Fill the project pipeline – act fast!

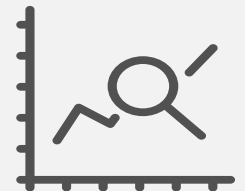
- Larger Ag customers to start
- Poultry, processors, orchards, and nurseries

Foster Vendor Relationships

- Pump, fan, refrigeration, and Ag vendors

Finish Strong – Quick Timeline

- SAE Program ends December 2022
- Major push to get incentives to Ag customers
- More to come...



Ag-STAR - SDG&E Ag Program to Replace SAE

What does it mean?

Ag-STAR: **S**avings, **T**raining, **A**ssistance, **R**ebates

Start date?

January 2023

Added benefits?

- Trainings to improve efficiency awareness and encourage savings projects
- Leverage Strategic Energy Management principles
- Energy Tracking and Performance software

Interested? See program information below:

Call: 619-375-1735

Email: sae@cascadeenergy.com

Visit www.streamlinedag.com



Cascade**Energy**[®]

Any questions on the SAE
program?





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Thank you!