

MARYSVILLE JUSD PHASE II ENERGY EFFICIENCY PROGRAM



INTRODUCTIONS



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Agenda



Recap of Phase I



Progress of Phase I



Phase II



Phase II Savings



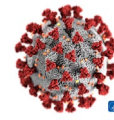
Questions



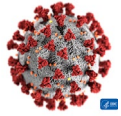


- Critical Infrastructure Improved
- Budget Neutral Program
- Guaranteed Outcome of Program

RECAP OF PHASE I



Pathogen Mitigation and Air Quality



99.4% efficient to
kill COVID 19



cru® **us**

Starting in April Installing 791 Ionization GPS Units District Wide



Energy

- Web Based Energy Dashboard
- Remote and Onsite Energy Management
- Monthly Reporting
- Student Educational Services
- Energy Data Hosting
- Staff Training and Education in Energy

RECAP OF PHASE I

Solar and Shade

82% of the District's
electricity will be
produced through
solar power

Savings of \$1.2 M annually

- Browns Valley Elementary
- Cedar Lane Elementary
- Cordua Elementary
- Covillaud Elementary
- Edgewater Elementary
- Ella Elementary
- Foothill Intermediate
- Johnson Park Elementary
- Kynoch Elementary
- Linda Elementary
- Lindhurst High School
- McKenney Intermediate
- Olivehurst Elementary
- Yuba Gardens Intermediate
- Marysville High School,
- Community Day
- Independent Study
- MCAA

RECAP OF PHASE I



- **Cedar Lane Elementary School**
Replacement of: (5) Pkg GE units, (10) Split GE, (1) Bard
- **Ella Elementary School**
Replacement of: (8) Pkg GE units, (4) Bard
- **Foothill Middle School**
Replacement of: (17) Pkg HP
- **Kynoch Elementary School**
Replacement of: (18) Pkg GE units, (1) Split HP, (6) Bard
- **Yuba Feather Elementary School**
Replacement of: (4) Pkg GE units, (2) Bard
- **Yuba Gardens Middle School**
Replacement of: (5) Pkg GE units, (10) Split GE, (1) Bard
- **Lindhurst High School**
DRX and VRF systems

RECAP OF PHASE I

260 Pelican Wireless Thermostats



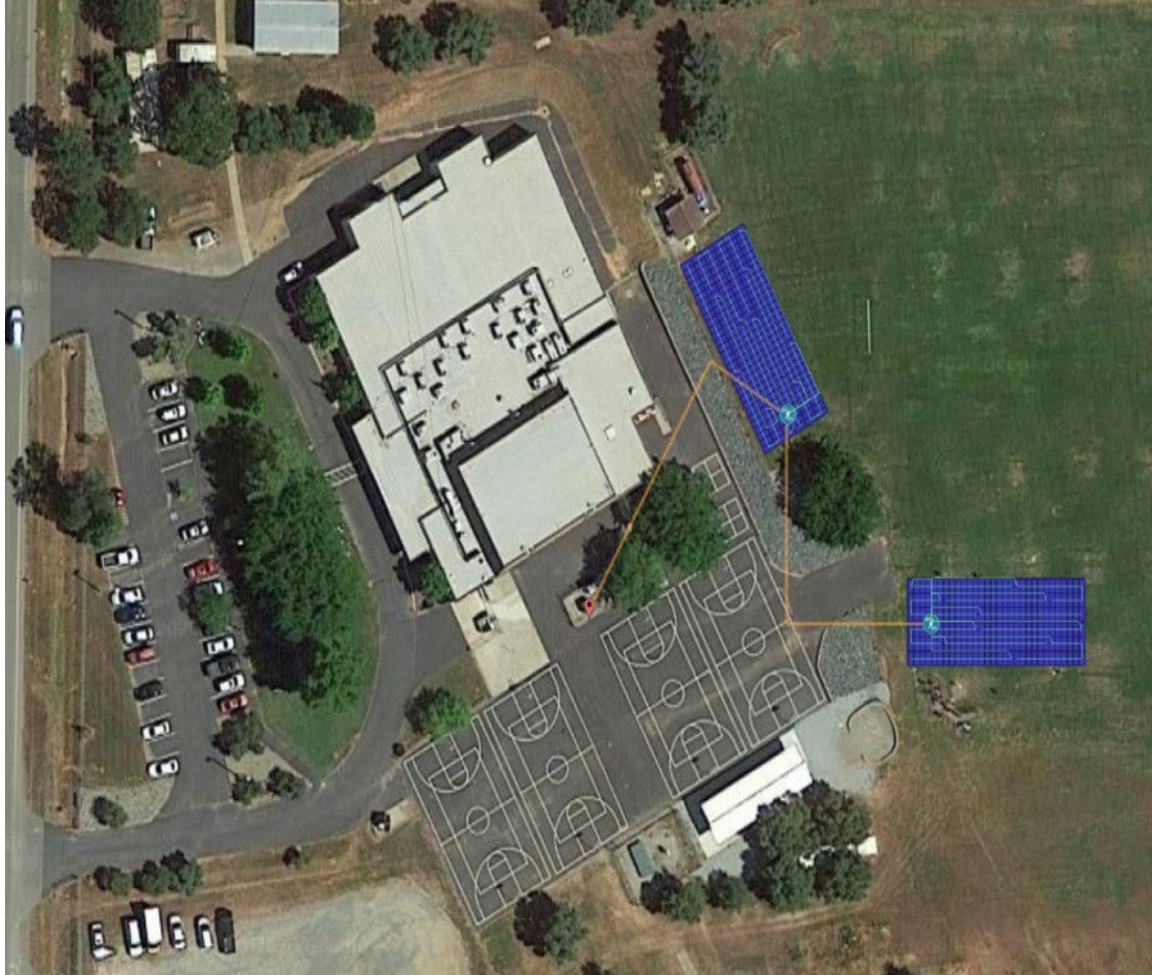


Lighting

- Retrofitting 7,422 school lights
- Emergency lighting at 19 sites
- KWh savings 735,915 annually
- \$180,796 annual savings

FOOTHILL SOLUTION

Independence from power grid



Battery Storage



LINDHURST HIGH SCHOOL SOLUTION HVAC

In Bldg. E&G DX Cooling Coils

Building A VRF (Variable Refrigerant Flow)





NOTICE TO PROCEED RECEIVED 3/11/2021

Interconnection Applications with PG&E

Major Equipment Ordering

Kickoff with District Staff

Labor Mobilization Preparations

All Compliance Processes Begun

District Representative for Energy Program Identified



PHASE II



- **Arboga**
Replacement of: (4) Pkg GE units (22) Bard
- **Browns Valley**
Replacement of: (1) Pkg GE units, (3) Bard, (1) Mini Split
- **Cordua**
Replacement of: (1) Bard, (1) Mini Split
- **Covillaud**
Replacement of: (8) Pkg GE units, (1) Split HP, (12) Bard
- **Johnson Park**
Replacement of: (10) Bard
- **Linda**
Replacement of: (14) Split GE, (10) Bard
- **Lindhurst/ South Lindhurst**
Replacement of (16) Bard
- **Loma Rica**
Replacement of: (1) Pkg GE units, (9) Bard
- **Marysville HS-District Office-Community Day-MCAA**
Replacement of: (35) Pkg GE units, (4) Split HP, (25) Bard
- **McKenney**
Replacement of: (12) Pkg GE units, (2) Split, (2) Bard
- **Olivehurst**
Replacement of: (5) Split GE, (12) Bard
- **Marysville HS-Wood Shop & Pottery Classrooms**
Replacement of: (1) Bard Add: (6) Ductless Split

87% of the District's
electricity will be
produced through
solar power 

- Arboga Elementary
- Dobbins Elementary
- Loma Rica Elementary

Savings of an additional
\$90K annually

SOLUTION OF PHASE II

515 Additional Pelican Wireless Thermostats

Saving the District an additional
\$27K annually



SUMMARY OF PHASE II



Partnership

515 Pelican Wireless
Thermostats

225 New HVAC Units

3 Solar Arrays (3 sites)

Cost for Phase II: \$8,735,168

Deduction on Ionization Units: (\$610,876)

New Total Phase II: \$8,124,292

New Savings
\$1.7 Million Annually



ENERGY SAVINGS PAYS FOR THE PROJECT

SAVINGS + SOLUTIONS



\$1.7M Annual Savings

Projected Energy Savings from the project



99.4%

Inactivation Rate of SARS-CoV-2 from ionization units installed



87%

Energy Produced onsite used by the District



Improvement

Improvement of indoor and outdoor lighting for students



MARYSVILLE JOINT
UNIFIED SCHOOL DISTRICT
SAVES OVER \$48 MILLION

SCOPE: FULL PROJECT SCOPE (PHASE I AND PHASE II)

Year		Annual COP Finance Payment ³	Solar O&M Service, Energy Management & Dashboard	Avoided Cost & Maintenance Savings	Prop 39, SGIP, & AB841 Contribution	Project Savings	Annual Savings	Cumulative Savings
0	\$ -	\$ -	\$ -	\$ 201,954	\$ 900,000	\$ 418,252	\$ 1,520,206	\$ 1,520,206
1	\$ -	\$ 1,455,000	\$ 214,635	\$ 807,814	\$ 50,000	\$ 1,733,236	\$ 921,416	\$ 2,441,621
2	\$ -	\$ 2,018,000	\$ 221,074	\$ 832,049	\$ 50,000	\$ 1,795,633	\$ 438,608	\$ 2,880,229
3	\$ -	\$ 2,088,400	\$ 227,706	\$ 857,010	\$ 50,000	\$ 1,860,276	\$ 451,180	\$ 3,331,408
4	\$ -	\$ 2,159,800	\$ 234,537	\$ 882,721	\$ 50,000	\$ 1,927,245	\$ 465,629	\$ 3,797,037
5	\$ -	\$ 2,237,000	\$ 241,574	\$ 909,202	\$ 50,000	\$ 1,996,626	\$ 477,255	\$ 4,274,292
6	\$ -	\$ 2,269,600	\$ 248,821	\$ 884,995		\$ 2,068,505	\$ 435,079	\$ 4,709,371
7	\$ -	\$ 2,344,200	\$ 256,285	\$ 911,545		\$ 2,142,971	\$ 454,030	\$ 5,163,401
8	\$ -	\$ 2,429,000	\$ 263,974	\$ 938,891		\$ 2,220,118	\$ 466,035	\$ 5,629,436
9	\$ -	\$ 2,513,400	\$ 271,893	\$ 967,058		\$ 2,300,042	\$ 481,807	\$ 6,111,243
10	\$ -	\$ 2,597,200	\$ 280,050	\$ 996,070		\$ 2,382,844	\$ 501,663	\$ 6,612,906
11	\$ -	\$ 2,690,200	\$ 288,451	\$ 1,025,952		\$ 2,468,626	\$ 515,926	\$ 7,128,832
12	\$ -	\$ 2,781,800	\$ 297,105	\$ 1,056,730		\$ 2,557,497	\$ 535,322	\$ 7,664,154
13	\$ -	\$ 2,876,800	\$ 306,018	\$ 1,088,432		\$ 2,649,567	\$ 555,180	\$ 8,219,335
14	\$ -	\$ 2,979,800	\$ 315,199	\$ 1,121,085		\$ 2,744,951	\$ 571,037	\$ 8,790,372
15	\$ -	\$ 3,080,200	\$ 324,655	\$ 1,154,718		\$ 2,843,769	\$ 593,632	\$ 9,384,004
16	\$ -	\$ 2,182,800	\$ 334,394	\$ -		\$ 2,946,145	\$ 428,951	\$ 9,812,955
17	\$ -	\$ 2,267,200	\$ 344,426	\$ -		\$ 3,052,206	\$ 440,580	\$ 10,253,535
18	\$ -	\$ 2,350,400	\$ 354,759	\$ -		\$ 3,162,086	\$ 456,927	\$ 10,710,461
19	\$ -	\$ 2,437,200	\$ 365,402	\$ -		\$ 3,275,921	\$ 473,319	\$ 11,183,780
20	\$ -	\$ 2,527,200	\$ 376,364	\$ -		\$ 3,393,854	\$ 490,290	\$ 11,674,070
21	\$ -		\$ 387,655	\$ -		\$ 3,516,033	\$ 3,128,378	\$ 14,802,448
22	\$ -		\$ 399,284	\$ -		\$ 3,642,610	\$ 3,243,325	\$ 18,045,773
23	\$ -		\$ 411,263	\$ -		\$ 3,773,744	\$ 3,362,481	\$ 21,408,254
24	\$ -		\$ 423,601	\$ -		\$ 3,909,598	\$ 3,485,998	\$ 24,894,252
25	\$ -		\$ 436,309	\$ -		\$ 4,050,344	\$ 3,614,035	\$ 28,508,287
26	\$ -		\$ 449,398	\$ -		\$ 4,196,156	\$ 3,746,758	\$ 32,255,045
27	\$ -		\$ 462,880	\$ -		\$ 4,347,218	\$ 3,884,338	\$ 36,139,383
28	\$ -		\$ 476,766	\$ -		\$ 4,503,718	\$ 4,026,951	\$ 40,166,334
29	\$ -		\$ 491,069	\$ -		\$ 4,665,852	\$ 4,174,782	\$ 44,341,117
30	\$ -		\$ 505,801	\$ -		\$ 4,833,822	\$ 4,328,021	\$ 48,669,138
Totals	\$ -	\$ 48,285,200	\$ 10,211,349	\$ 14,636,224	\$ 1,150,000	\$ 91,379,463	\$ 48,669,138	\$ 48,669,138



- Board Approval April 27th, 2021
- Notice to Proceed Phase II, May 3rd, 2021
- Implementation Begins May 2021

A photograph of a classroom where several students have their hands raised, indicating they want to ask a question or answer. The background is slightly blurred, showing a chalkboard and other students. A dark blue horizontal band is overlaid across the middle of the image.

Questions