Santa Rosa Veterans Hall Energy & Resilience Upgrades

Sustainable Solutions Turnkey Program Phase 1 Project

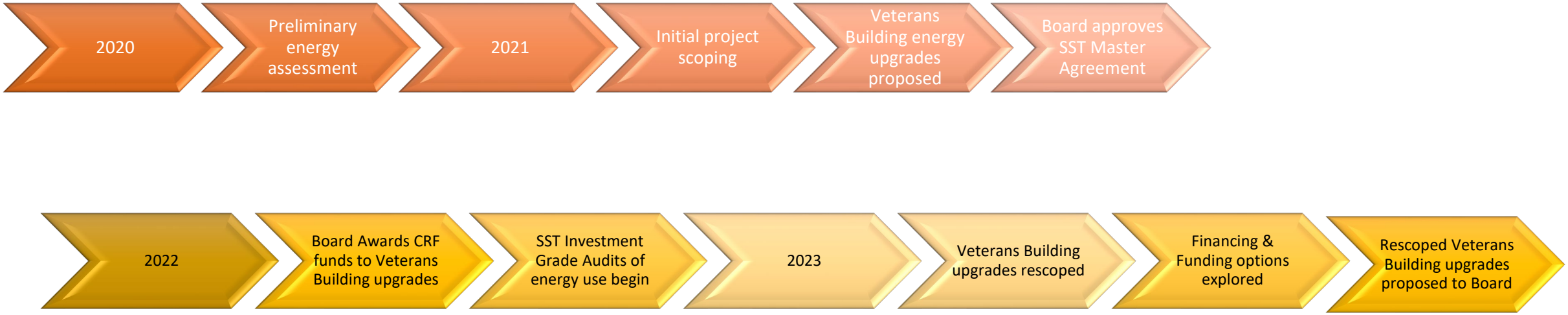
Sonoma County Public Infrastructure and CAO/Climate Action and Resiliency

Overview

- Review proposed energy improvements at the Santa Rosa Veterans Building
- Consider proposed funding and financing for the project
- Hold a public Hearing to make determinations and findings related to the project
- Approve the project, and funding and financing, or provide other direction to staff

Project Background

Timeline Overview



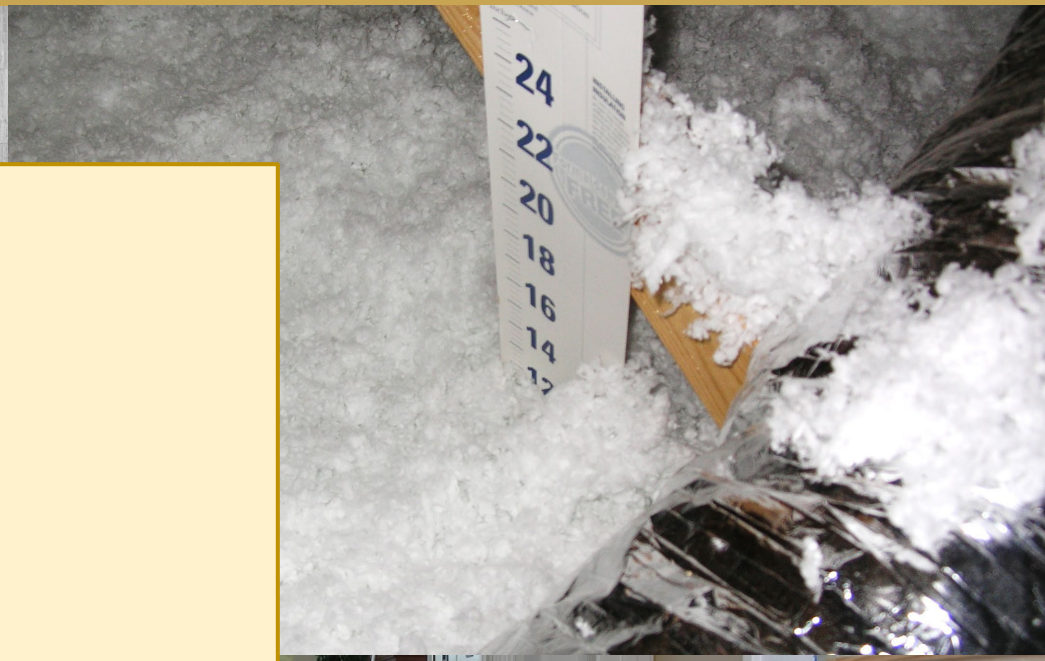
Sustainable Solutions Turnkey (SST) Program

- PG&E “turnkey offering”
- Helps customers identify, prioritize, fund, and implement energy efficiency, generation, storage, and water conservation measures.
- PG&E’s Turnkey team has been successfully designing, financing, and installing projects for large customers since 2008

Key Things to Note:

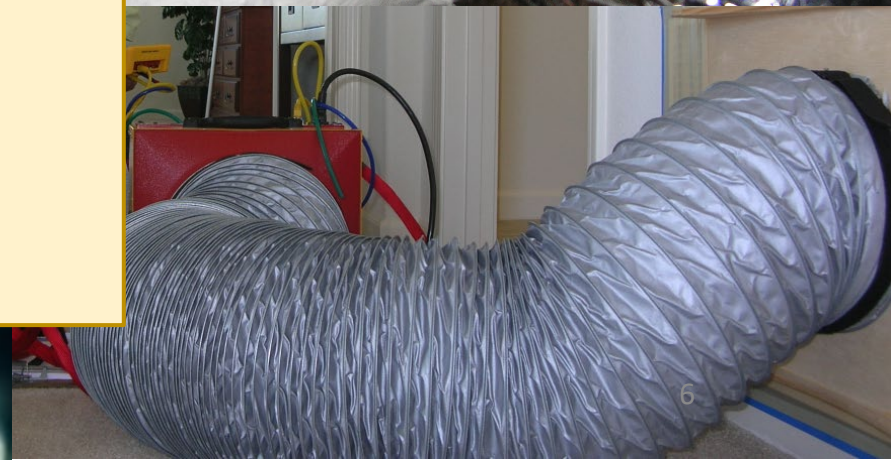
- Project measures go deep/wide: Lighting, HVAC, Controls, PV, Cogen, Batteries, Chargers, etc.
- Project “paybacks” range 3-20 yrs. (government projects often 15-20 yrs. in order to update core systems)
- Projects targeted to be cost-neutral with finance payments pegged to annual cost savings yielded by the project
- All forms of financing utilized: OBF, CEC, Private Finance, Buy-Downs, etc.
- Customers typically see cost, energy, and CO2 savings of 20-40% annually

Sustainable Solutions Turnkey (SST) Program Users



Some Examples:

- DMV HQ (Sac.) ($9M)
- DMV Field Offices (across CA) (6M+)
- CPUC HQ (SF) ($1.6M)
- DSH Hospitals (Coalinga/Metro) ($35+M)
- 7 VA Hospitals (across CA) ($40M+)
- Army Bases (across CA) ($20M+)
- Cities & Counties (dozens in CA) ($40M+)
- Schools & Univ. (across CA) ($20M+)
- NASA (across CA) ($25M+)
- Fed. Bureau of Prisons (Taft) ($10M)
- Sutter Hospitals (across CA) ($10M)



Project Details

Santa Rosa Veterans Memorial Building + CMP chiller schedule update

Comprehensive project to upgrade the infrastructure, reduce the energy/carbon footprint and increase resilience

Project Scope:

- Parking Lot Car Canopy Solar PV – 110 kW
- Battery Energy Storage – 80 kW / 220 kWh
- LED Lighting Retrofit
  - Replace existing fluorescent lights with T8s, add Title 24 Energy Code compliant controls
- HVAC upgrades to Auditorium and 3 offices
  - 80 tons of heat pump cooling & heating for the Auditorium
  - 3 mini split heat pump systems for front offices
- Building Management System (BMS) upgrade
- Update Central Mechanical Plant chiller and thermal storage schedules to avoid peak demand periods

Changes in Scope of Upgrades

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Project Benefits

Key Things to Note:

- Improves resiliency of an important community center & creates a conditioned space for events
- Improves lighting throughout the building space
- Reduces site carbon emissions through electrification
- Eligible for over $588,000 of grants and incentives
- Replaces an out-of-date building controls systems
- Implements existing demand reduction capabilities at the CMP, providing a quick return on investment

California Government Code 4217 Compliant

- ✓ Anticipated cost of energy will be less than if the County does ***not*** proceed with the proposed project
- ✓ Project provides significant verifiable savings
- ✓ Using projected utility escalation rates paired with incentives and rebates, marginal project costs & staff time are covered by savings

Alignment with County Strategic Plan

Climate Action and Resiliency Pillar

- **Goal 3**: Make all County facilities carbon free, zero waste, and resilient
  - **Objective 3.1**: Design or retrofit County facilities to be carbon neutral, zero waste, and incorporate resilient construction techniques and materials.
  - **Objective 3.3**: Invest in County owned facilities, establishing carbon eliminating microgrid technology and improving energy grid resilience to reduce the impact of power loss during power shutdowns and natural disasters (floors, fires, earthquakes), prioritizing critical infrastructure such as command and communications facilities.

Resilient Infrastructure Pillar

- **Goal 2**: Invest in capital systems to ensure continuity of operations and disaster response.
  - **Objective 2.2**: Invest in electric power resiliency projects at County facilities, including Veteran's Buildings, used for evacuation sites, warming/cooling centers, or as alternate work facilities for delivery of critical services.

Project Cost & Funding

Project Costs

• Comprehensive LED lighting retrofit	$57,667
• Carport Solar Photovoltaic (PV) Array 110.7 kW	$494,571
• HVAC replacement and decarbonization/electrification	$522,359
• Battery Energy Storage System (BESS) & Microgrid	$298,239
• Building Management System (BMS) upgrade	$231,260
• Analyze and align CMP time of energy use	incl. in SST IGA
• Monitor, verify, and adjust for optimization	$45,000
• Permits, licenses, sub risk, and contingencies	$267,411
• Contractor labor and management	$592,503
• Contractor overhead	$320,321
• Contractor profit	$123,201
• SST Program fee	$290,753
Subtotal = SST Costs	***$3,243,290***
• SPI staff oversight and contingencies	$303,430
Subtotal = SST + SPI Costs	***$3,546,720***

Project Funding & Gaps

• Climate Resilience Fund award (February 1, 2022)	($1,771,230)
• Self-Generation Incentive Program (SGIP)[1] related to the BESS	($122,400)
• Inflation Reduction Act (IRA) Local Government Investment Tax Credit Direct Pay Option[2]	($466,010)
Subtotal = Awards + Incentives	*($2,359,640)*
Net Project Cost w/o financing	***$1,187,080***
Additional funds needed for initial award	***$1,775,460***

(1) With prior Board approval in June of 2020, Energy and Sustainability staff applied for and secured SGIP incentive funds through an administered lottery process. Incentive funds are reserved for the Santa Rosa Veteran's location for up to $170,000 towards the cost of a 210 kWh capacity battery energy storage system located on-site.

(2) Program guidelines for the Inflation Reduction Act (IRA) Local Government Investment Tax Credit Direct Pay Option have not been finalized and may require a discount of up to 15% where the qualifying project is financed.

Project Scope & Cost Changes

Project costs have increased since the original scoping:

• Original project cost excluding staff costs and incentives	$1,771,230
• Installation cost increase	$1,472,060
• The SST installation cost (based on bids)	$3,243,290
• Staff oversight and management cost	$303,430
• **Current project cost**	**$3,546,720**
• *Value of incentives*	*$588,410*

Cost increases to the project from the original scoping are due primarily to:

- Changes in equipment and addition of SPI oversight and contingency costs;
- Refinement in cost estimates from preliminary energy assessment to investment grade audit; and
- Construction and materials cost increases from 2020/21 to 2023.

Funding Options

- Finance through SST with a Tax-exempt Equipment Lease Purchase
  - Project costs $3,546,720
  - Less CRF award -$1,771,230
  - Project cost to be financed $1,775,460
  - Estimated capitalized Interest (financed) $81,600
  - Estimated finance charges (@4.54%) $1,008,134
  - **Total cost if financed** **$4,636,454**
- Finance through another lender
- Fund with General Fund Contingencies
- Fund from Deferred Maintenance Fund

Projected Overall Return

- Project Cost is **$3,546,720**
- Project cost if financed is **$4,636,454**
- Incentives applied after completion save **$588,410**
- Projected annual savings from CMP load rescheduling is **$125,000**
- Total Projected Value of Energy Savings and Incentives: **$5,580,955**
- On a net metering basis, the new solar PV will **generate all needed electricity** at Santa Rosa Veterans Building
- Project reduces over **800,000 lbs of lifetime C02 emissions reduction**

Using SST
&
Government Code 4217

Government Code 4217

- Provides a streamlined path to contracting and financing
- Requires specific findings to use the streamlining
  - The total cost is less than the total savings (4217.12)
  - The project is in the best interests of the County (4217.12)
  - The lease payments can be made from the savings (4217.13)

Note: The estimated interest rate is 4.54% but the financing isn't locked until the contract is executed, analyses were also run at a higher rate of 6% to verify findings can still be made.

GC 4217.12 – Contracting

GC 4217.12 requires a finding: That the County cost of the proposed energy and conservation services and measures is less than the anticipated costs for energy that otherwise will be consumed by the County at the Building, and that the terms of the Contract are in the best interests of the County.

- Total cost with financing $4,636,454
- Expected operation & maintenance $305,822
- All project costs $4,942,276
- Estimated savings, including incentives $5,511,054

Note: total cost at 6% is $5,358,712 and still supports the required finding.

GC 4217.13 – Financing

GC 4217.13 requires the finding: That funds for the repayment of the financing and/or the cost of design, construction, and operation of the energy conservation facility, are projected to be available from funding that otherwise would have been used for purchase of energy in the absence of the energy conservation facility.

- Estimated annual TELP lease payments $143,261
- Estimated annual savings $177,822 - $268,832

Notes on Savings: Incentives were spread over multiple years. Savings increase as energy prices increase. Energy price escalation rate of 5% used, which is less than the average increase of 8.25%. The lease payment at a financing rate of 6% is $161,910 and still supports the required finding.

Alternative Scenarios

Assessing Alternatives

- Efficiencies in project implementation and management mean the project elements are more costly if implemented individually.
- Due to building code requirements and other constraints, only certain equipment groupings are viable.
- All alternative scenarios were evaluated at a financing interest rate of 4.54% and at a cap of 6%; all other parameters remain the same.

Alterntaive Package #1:
Solar, Battery Storage, and LED Lighting

• Comprehensive LED lighting retrofit	
• Carport Solar Photovoltaic (PV) Array 110.7 kW	
• Battery Energy Storage System (BESS) & Microgrid	
• Project installation costs	$2,203,097
• Project costs if financed at 4.54%	$3,020,157
• Estimated annual lease payment	$107,508
• CRF award	$870,000
• Incentives reimbursed after completion	$588,410
• Total savings	$3,612,480
• Estimated annual savings	$107,510 to $122,212

Alterntaive Package #2 + 3:
Heating & Cooling + Building Mgmt + CMP sched.

• Heating & Cooling replacement	
• Building Management System	
• CMP energy scheduling optimization	
• Project installation costs	$1,553,388
• Project costs if financed at 4.54%	$1,953,017
• Estimated annual lease payment	$56,218
• CRF award	$901,230
• Incentives reimbursed after completion	none
• Total savings	$2,328,674
• Estimated annual savings	$70,969 to $179,336

Project Contacts

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