Attachment 7

SRVH Cost Analysis for Alternative Project Packages

The following analyses evaluate groups of upgrades that, combines, meet code requirements and optimize incentives and rebates. For example, installing a solar microgrid without back up energy storage will forego a significant portion of the rebates and incentives, and installation of the heat pump heating and cooling system requires upgrades to the building management system. In addition, Government Code 4217 requires a finding that the costs of the financing will be offset by the value of the energy savings (for more detail please see Attachment [Z]).

Lastly, please note these packages are more expensive individually than if all elements are implemented together, due to efficiencies in project implementation and management that do not scale in a linear way. For this reason, adding up the total costs for each package will not yield an overall total that matches the costs shown for all elements together in one project. A summary of costs for the project as proposed, with all elements together, is presented in the Board Summary, and a brief overview is included at the end of this Attachment.

Project Package 1: Resiliency Upgrades

• Comprehensive LED lighting retrofit	$57,667
• Carport Solar Photovoltaic (PV) Array 110.7 kW	$494,571
• Battery Energy Storage System (BESS) & Microgrid	$298,239
• Permits, licenses, sub risk, and contingencies	$216,333
• Contractor labor and management	$499,403
• Contractor overhead	$203,608
• Contractor profit	$78,311
• SST Program fee	$184,813
Subtotal = SST Costs	*$2,032,945*
• SPI staff oversight and contingencies	$170,152
Subtotal = SST + SPI Costs	*$2,203,097*
• Capitalized Interest	$60,523
• Finance charges	$756,536
Total = SST + SPI + Financing	**$3,020,157**
• Climate Resilience Fund award (February 1, 2022)	($870,000)
• Self-Generation Incentive Program (SGIP)[1] related to the BESS	($122,400)
• Inflation Reduction Act (IRA) Local Government	

[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 up to $170,000 are reserved for the Veteran's Building towards the cost of a 210 kWh battery energy storage system.

Investment Tax Credit Direct Pay Option [2]	($466,010)
Subtotal = Awards + Incentives	*($1,458,410)*
Net Project Cost with Financing [3]	**$1,561,747**
Net Project Cost w/o financing	***$744,687***

For Package 1, the County would be financing $1,393,621, including capitalized interest, over 20 years through a TELP Agreement. At the current terms (which will be finalized upon approval of the project by your Board) the indicative interest rate is 4.54%, with annual lease payments of $107,508 (principle + interest) and the cost of this financing is $756,536. The funds to pay for the lease come from the energy costs avoided by the package and the incentives reimbursed.

If the interest rate in the final financing package is at the capped value of 6%, and all other parameters remain the same, the total cost for the project (including capital costs, financing, SPI oversight & contingencies, and anticipated operation and maintenance) is $3,589,985. The annual lease payment will be $123,199, and the cost of the financing would be $1,130,883.

Package 1 is estimated to generate or save a total of 188,420 kWh of electricity each year. The CO2e savings are projected to be 12,430 lbs annually, and 417,950 lbs over the life of the equipment.

Project Package 2: Energy Upgrades (Estimated based on SST quote; subject to change at time of bidding if not implemented with Package 1; includes savings from Pkg 3)

• HVAC replacement and decarbonization/electrification	$522,359
• Building Management System (BMS) upgrade	$231,260
• Monitor, verify, and adjust for optimization CMP Scheduling	$45,000
• Other hard and soft costs, overhead, profit & fees	$666,441
Subtotal = SST Costs	*$1,465,060*
• SPI staff oversight and contingencies	$133,278
Total = SST + SPI	**$1,598,338**
• Capitalized Interest	$31,649
• Finance charges	$395,610
Total = SST + SPI + Financing	**$2,025,597**
• Climate Resilience Fund award (February 1, 2022)	($901,230)

[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.

[3] These incentives are reimbursed over 4 years following the completion of the projects and placing the units into service.

- No incentives identified n/a

Subtotal = Awards + Incentives	*($901,230)*
Net Project Cost w/ financing	**$1,124,367**
Net Project Cost w/o financing	***$697,108***

For Package 2, the unfunded cost is $697,108, excluding financing. If financed, a portion of the savings realized from Package 3 will be used to offset the cost of the financing (see below).

Your Board may fund all or part of this gap from General Fund Contingencies (or reprogram other budgeted funds); for example, your Board could fund the net cost of Package 2 ($697,108), or some fraction thereof to reduce the amount financed. Alternatively, your Board may elect to finance this project through the SST program; the financing terms would be the same as for Package 1 by itself. The funds to pay for this lease would come in part from the savings associated with Package 3 (below). This action requires a 4/5 majority vote.

The nominal cost of Package 1 and Package 2 combined is $3,756,435, however, if your Board proceeds with Package 1 *and* Package 2 together, there are cost savings due to efficiencies in project implementation and management, so the total cost for Package 1 and 2 would be $3,546,720, including SPI oversight and contingencies, but not including any financing costs. Implementing both packages together saves approximately $209,715. The CRF awards for both projects total $1,771,230, leaving $1,857,090 unfunded. Note that if this amount is to be financed, a portion of the savings from Package 3 would be used to offset the cost of the TELP lease payments on an annual basis (see the discussion of Package 3, below).

Alternatively, your Board may elect to defer the project until your Board considers the SST recommendations for the remainder of the 84 County facilities undergoing IGAs, at which time other financing options may be available. These recommendations are expected to come to you by the end of 2023. The risk associated with delay is the anticipated increase in costs, and the possible loss of incentives and rebates.

Package 2 is estimated to eliminate 1,770 therms of natural gas use annually, however the addition of cooling in the summer comes with an electricity use disbenefit of 24,710 kWh per year. Because the methane in natural gas is a more potent greenhouse gas, the project still has a net positive effect reducing CO2e. The CO2e savings are projected to be 22,120 lbs annually, and 442,400 lbs over the life of the equipment.

If the interest rate in the final financing package is at the capped value of 6%, and all other parameters remain the same, the total cost for the project (including capital costs, financing, SPI oversight & contingencies, and anticipated operation and maintenance) is $2,239,521. The annual lease payment will be $64,424, and the cost of the financing would be $591,365.

Project Package 3: Energy Scheduling

• Analyze and align CMP time of energy use	incl. in SST IGA
• Monitor, verify, and adjust for optimization	$45,000
Subtotal = SST Costs	*$45,000*
• SPI staff oversight and contingencies	n/a
Total = SST + SPI	**$45,000**
• No incentives identified	n/a
Total Project Cost	**$45,000**

The total cost for monitoring, verification, and further optimization will accrue over three years (approximately $15,000 per year) and can be paid without incurring debt. Rescheduling at the CMP will save the County about $125,000 per year (estimated savings of $4,339,906 projected over 20 years with increasing energy costs). Note that if the financing is elected for the unfunded cost of both Packages 1 and 2, a portion of these savings each year will need to be used to offset the cost of the TELP lease. Staff evaluated using about 50% of the annual savings (over the life of the lease) to offset some of the cost of lease payments if the entire unfunded project cost was financed (see below), and 50% is more than sufficient. Approximately of the same portion would be needed to offset the financing charges of Package 2 by itself.

Package 3 is not estimated to any GHG emissions because it is a time of use cost savings, not an actual energy savings.

Project cost and financing of all three packages together

In order to transparently analyze the costs of financing *all* unfunded costs, the costs for Package 3, while small, are included in the total 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*
• Capitalized Interest	$81,600
• Finance charges	$1,008,134
Total = SST + SPI + Financing	**$4,636,454**
• Climate Resilience Fund award (February 1, 2022)	($1,771,230)
• Self-Generation Incentive Program (SGIP)[4] related to the BESS	($122,400)
• Inflation Reduction Act (IRA) Local Government Investment Tax Credit Direct Pay Option[5]	($466,010)
Subtotal = Awards + Incentives	*($2,359,640)*
Net Project Cost with Financing[6]	**$ 2,276,814**
Net Project Cost w/o financing	***$1,187,080***

The County would be financing $1,857,090, including capitalized interest, over 20 years through a TELP Agreement. At the current terms (which will be finalized upon approval of the project by your Board) the indicative interest rate is 4.54%, with annual lease payments of $143,261 (principle + interest) and the cost of this financing is $1,008,134. The funds to pay for the lease come from the energy costs avoided and the incentives reimbursed if approximately 50% of the cost savings from energy scheduling are applied.

If the interest rate in the final financing package is at the capped value of 6%, and all other parameters remain the same, the total cost for the project (including capital costs, financing, SPI oversight & contingencies, and anticipated operation and maintenance) is $5,358,712. The annual lease payment will be $164,083, and the cost of the financing would be $1,399,641.

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[4] 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.

[5] 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.

[6] These incentives are reimbursed over 4 years following the completion of the projects and placing the units into service. The project costs to be financed are $1,333,098.

The energy upgrades in all packages combine are estimated to generate or save a total of 157,920 kWh of electricity each year, and 1,770 therms of natural gas. The CO2e savings are projected to be 34,550 lbs annually, or taking about 3.5 passenger vehicles off the road. The energy upgrades will save 860,350 lbs over the life of the equipment. Although the CMP scheduling change saves considerable cost, it does not change actual energy use and so does not contribute to energy savings or CO2e reductions.