

**From:** [Grey, Skip](#)  
**To:** [Board Letters](#); [GuestCA](#); [Lenzi, Chelsea](#); [Allen, Michael \(COB\)](#)  
**Subject:** FW: Item A 6 energy saving project  
**Date:** Monday, May 7, 2018 12:56:04 PM

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Please see the email below sent to Andy Caldwell and all Board of Supervisors.  
Skip Grey

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**From:** Grey, Skip  
**Sent:** Monday, May 7, 2018 12:42 PM  
**To:** 'andy@colabsbc.org'  
**Cc:** Pell, Janette ; Miyasato, Mona ; Adam, Peter ; Hartmann, Joan ; Williams, Das ; Lavagnino, Steve ; Wolf, Janet ; Frapwell, Jeff ; Hapeman, Roy  
**Subject:** RE: Item A 6 energy saving project  
Hi Andy,

Thanks for your inquiry on our solar and energy efficiency item on tomorrow's Board agenda. We wanted to respond to your questions in advance of the Board Meeting tomorrow. Please see our responses below in red.

Skip Grey

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Skip Grey  
Assistant Director  
General Services  
County of Santa Barbara  
1105 Santa Barbara Street  
Courthouse East Wing, 2nd Floor  
Santa Barbara, CA 93101  
Desk: 805-568-3083  
Cell: 805-451-9949

Begin forwarded message:

**From:** Andy Caldwell <[andy@colabsbc.org](mailto:andy@colabsbc.org)>  
**Date:** May 5, 2018 at 7:10:01 AM PDT  
**To:** "Miyasato, Mona" <[mmiyasato@countyofsb.org](mailto:mmiyasato@countyofsb.org)>  
**Cc:** "Adam, Peter" <[peter.adam@countyofsb.org](mailto:peter.adam@countyofsb.org)>, "Hartmann, Joan" <[jHartmann@countyofsb.org](mailto:jHartmann@countyofsb.org)>, "Williams, Das" <[DWilliams@countyofsb.org](mailto:DWilliams@countyofsb.org)>, "[steve.lavagnino@countyofsb.org](mailto:steve.lavagnino@countyofsb.org)" <[steve.lavagnino@countyofsb.org](mailto:steve.lavagnino@countyofsb.org)>  
**Subject:** Item A 6 energy saving project

Dear CEO Miyasato,  
The attached staff report doesn't have enough information in order for the board (or the public) to make an informed decision.  
We would appreciate knowing what is the expected savings over the life of the project

and the savings per year?

This project consists of various energy efficiency items, renewable energy, a roof replacement and some equipment replacement initiatives. Combined, they are estimated to offset all energy usage from the proposed sites. The total utility savings over 25 years is \$9.9 million which is an average of \$397k per year. This assumes that the solar panels degrade at a quarter of a percent (0.25%) per year and utility costs increase at 3% per year over the life of the project.

As indicated in the proposal by the contractor, the materials used in this project don't last forever.

What is the project life of each of the components in comparison to the cost of the same and the projected savings over time?

Solar panels are known to last much longer (35-40 years) but typically the savings are estimated based on 25 years which is the warranty period for most solar panels. Since all components of the project are intended to work together, it isn't possible to calculate the savings for every component of the project separately. For example a roof replacement is a routine replacement that has very little savings attached to it but is part of the entire project to be able to optimize the operation and life of other project components.

The staff report indicates the county could start seeing a payback in 13-17 years, but it doesn't say how much nor does the report indicate whether that payback is dependent on the lower interest rate of 1.5% or the higher interest rate of 5%?

Payback means the cost recovery which in this case is the original project cost of \$4.5 million. It is estimated to be between 13 years if the interest rate is 1.5%, and 17 years if the interest rate is 5%. At a 5% interest rate, the project generates a positive *accumulated* cash flow in year 17 of just over \$4.5 million. The debt is paid off (principle and interest) in year 15. At a 5% interest rate, annual debt payments are \$431k (principle and interest). As mentioned above, the utility savings is \$397k per year. After the debt is paid off in year 15, cash flow and savings becomes positive. At a 1.5% interest rate, which assumes lower cost CEC loan and "on-bill financing" can be secured, the project has a positive cash flow in each year beginning in year one. That is, the utility savings exceeds the debt payments in each year of the project. In this scenario, in year 13 the total savings (utility savings minus principle and interest on the debt minus O&M costs on the solar system) equals approximately \$4.5 million which is the original cost of the equipment.

The final cash flow and payback will be determined once the debt financing is secured and the interest rate is known. At that time, the project will be brought back to the board for final approval before proceeding.

Is this a \$5 million project or a \$6.4 million project?

That depends on the cost of financing. If that cost is low (scenario of 1.5% interest rate) then, the cost will be \$5 million. At the high-end it is estimated to 6.4 million corresponding to the interest rate of 5%. The base cost of the project material and labor remains the same (\$4.5 million).

There should also ALWAYS be a calculation of the cost per ton of pollution eliminated by these projects!

Carbon offset: 1,066 tons per year. Cost per ton: Low-end: \$4,690, High-end: \$6,000.

That is, this project is ostensibly being proposed to save the county money on its energy bills and to prevent greenhouse gas emissions.

Well, just how effective is this project in comparison to other options as it relates to these two goals?

The components of this project are the most used and market-ready solutions for achieving these two goals.

Finally, the county departments always seem to gloss over the cost associated with loans, grants and bond revenues!

For instance, in this case, some of the money is coming from a bond that has to be paid back with interest presumably by either taxpayers or ratepayers.

But, there is no such thing as free money.

What are the real costs of this project in light of the subsidies, grants, and loans?

The project includes a battery rebate of \$337,000, a lighting rebate of \$35,000 and projected maintenance savings of over \$75,000 over the life of the project. The cost of financing has been described in the Agenda Letter (see Fiscal Analysis section). It is expected to be between \$0.5 million and \$1.9 million. This is on top of the base project cost of \$4.5 million. Thus the total cost is expected to be between \$5 million and \$6.4 million.

We look forward to your staff's response.

Sincerely,

Andy Caldwell

COLAB