

# SOLAR OPPORTUNITY



# Why Now

2

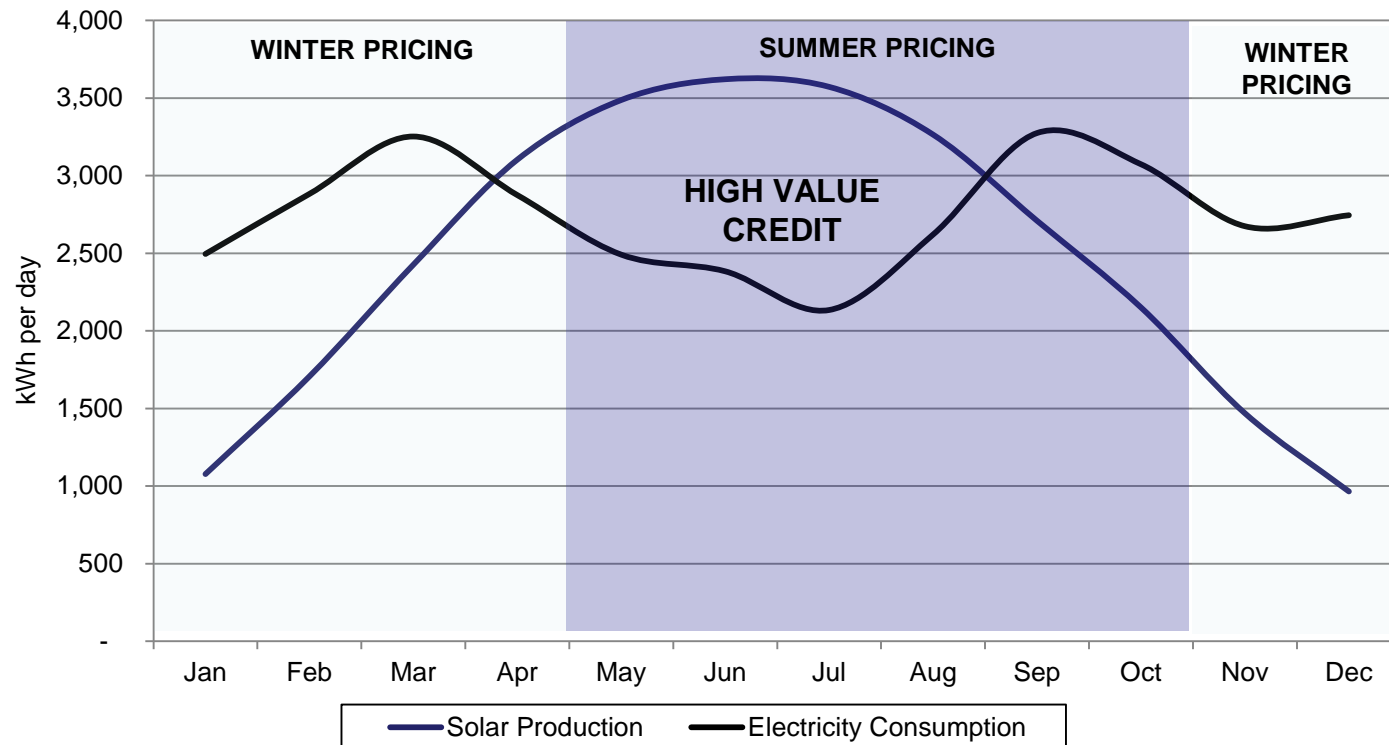
- PG&E rate changes and tax credit for providers
  - ▣ PG&E changes to TOU rate structure that are detrimental to savings from solar; opportunity for 10 year grandfathering under current TOU rates
  - ▣ Beneficial PG&E rate structure for solar (A6) being phased out as of **March 31, 2017**
  - ▣ 30% Investment Tax Credit to improve PPA rate and lower eventual cost to purchase
    - PPA = Power Purchase Agreement (way to borrow)

# Net Metering (NEM)

3

*The NEM option allows you to receive a credit for the surplus electricity you supply to the electric grid. This credit is applied to your energy bill, to offset all or part of the costs associated with the energy you consume each month.*

Net Metering: Electricity Consumption vs. Solar Production



# Deadline

4

- Decision needs to be made soon in order to meet deadlines
- Key Deadline: Project(s) must be completed by **Dec 31, 2017**
- 2 typical ways of mounting solar panels
  - ▣ On rooftops of south-facing roofs
  - ▣ On shade structures, often found in parking lots

# Terra Verde Proposal

5

- Terra Verde, energy consultant, has proposed solar on shade structures
  - ▣ Due to tight timeline, this is the only feasible option to meet the Dec 31 deadline
- But shade structures may not be right for LASD
  - ▣ School principals have vetted this proposal and are in support of moving ahead

# Considerations

6

- Schools with a significant number of portables should be getting new buildings to replace portables
  - ▣ We could take the opportunity then to include solar on rooftops of new buildings
- Aesthetics: Do we want parking lot shade structures at the front of our schools?
- Logistics of installing structures during school year
- Funding: Will there be Measure N funds available for solar?

# Rooftop v. Parking Lot Arrays

7

School	Size	# of Portables	Candidate for Rooftop Solar
Blach	18 acres	None	
Egan	19 acres	Some	
Covington	16 acres	Few	
Almond	10 acres	Some	
Gardner	10 acres	Many	Yes
Loyola	10 acres	Some	
Oak	10 acres	Many	Yes
Santa Rita	11 acres	Many	Yes
Springer	10 acres	Some	

8

# Sample solar shade structures



# Parking Lot, top view





# Parking Lot, side view

10





# Field, top view

11



# Field, side view

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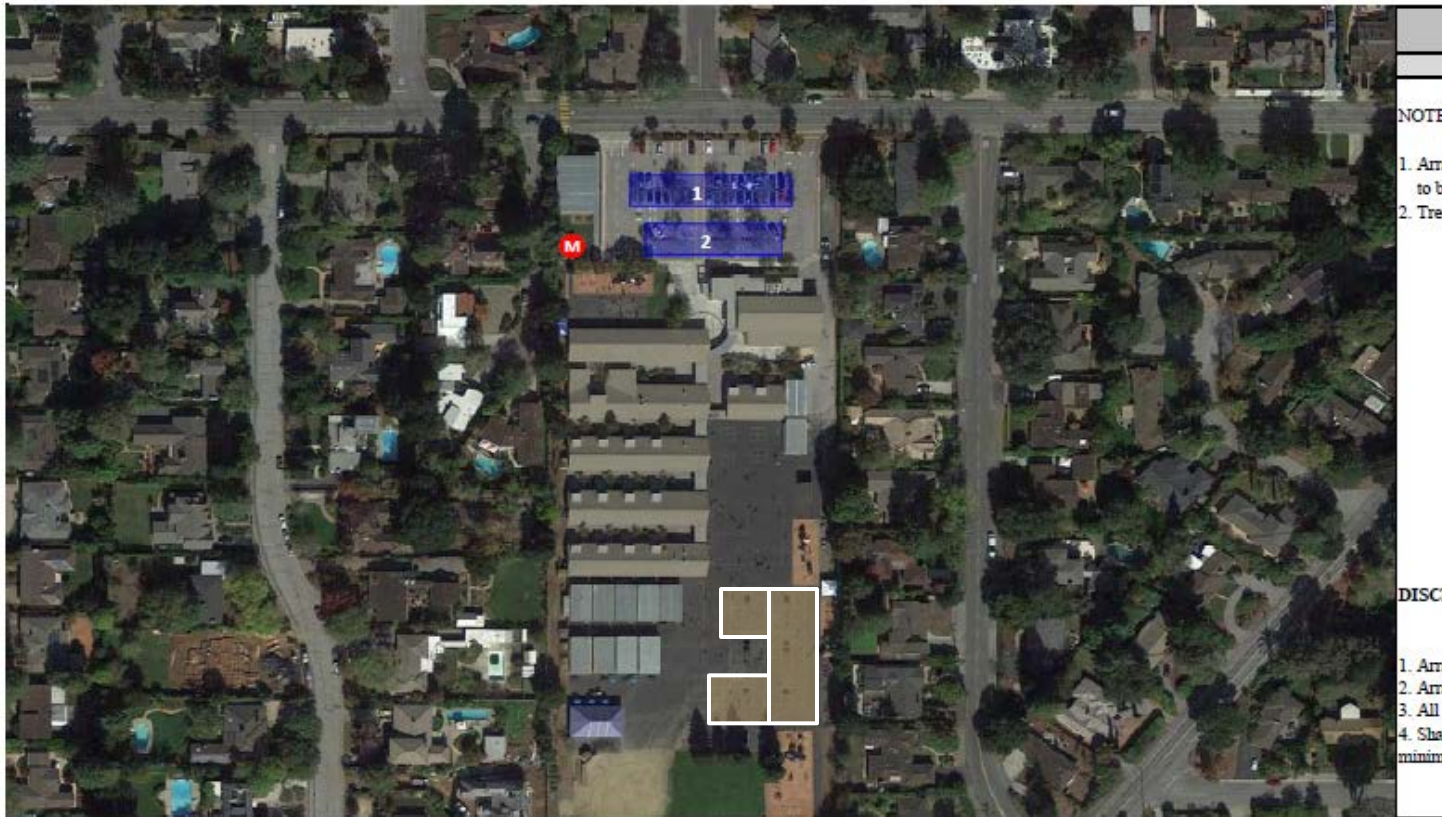
## Proposal for LASD

Some solar array locations may change



# Almond

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NOTE

1. Arra  
to be
2. Tree

Potential  
solar array

Masterplan  
construction  
zone

DISCI

1. Arra
2. Arra
3. All c
4. Shac  
minimum

Los Altos School District

Almond Elementary  
550 Almond Ave., Los Altos



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UTILI

# Covington

15



Los Altos School District  
Covington Elementary  
201 Covington Road, Los Altos



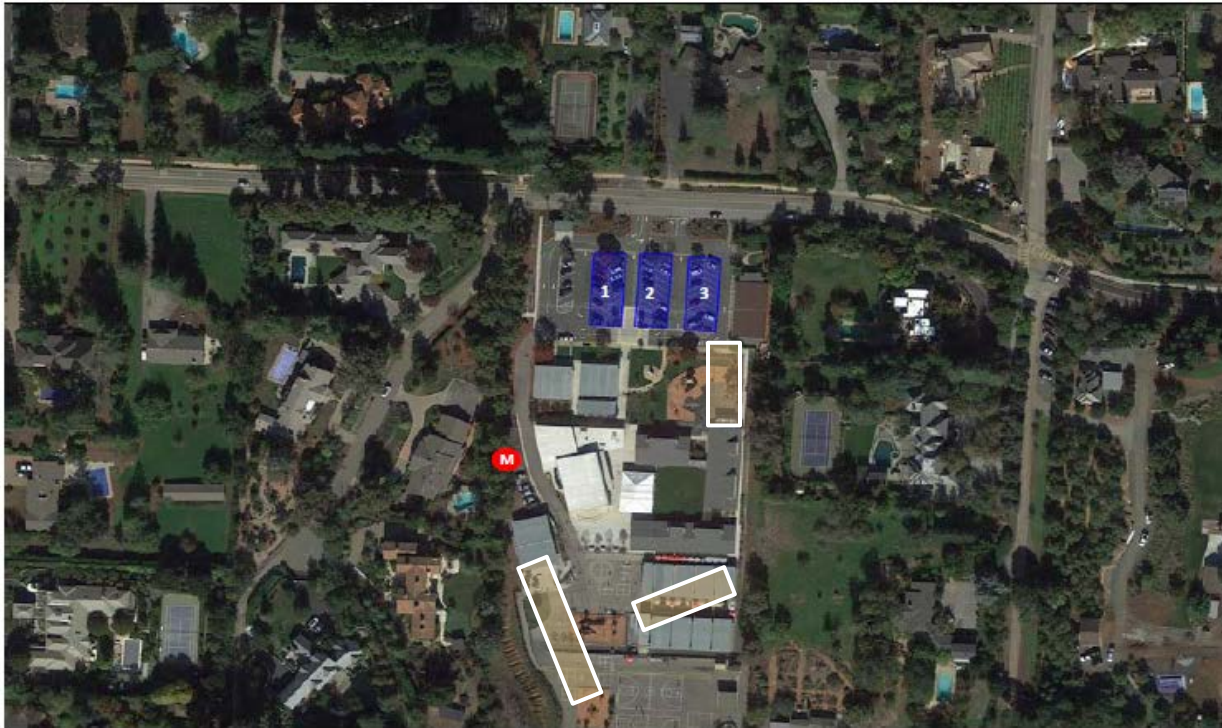
Potential  
solar array

Masterplan  
construction  
zone



# Gardner

16



- Potential solar array
- Masterplan construction zone

Los Altos School District

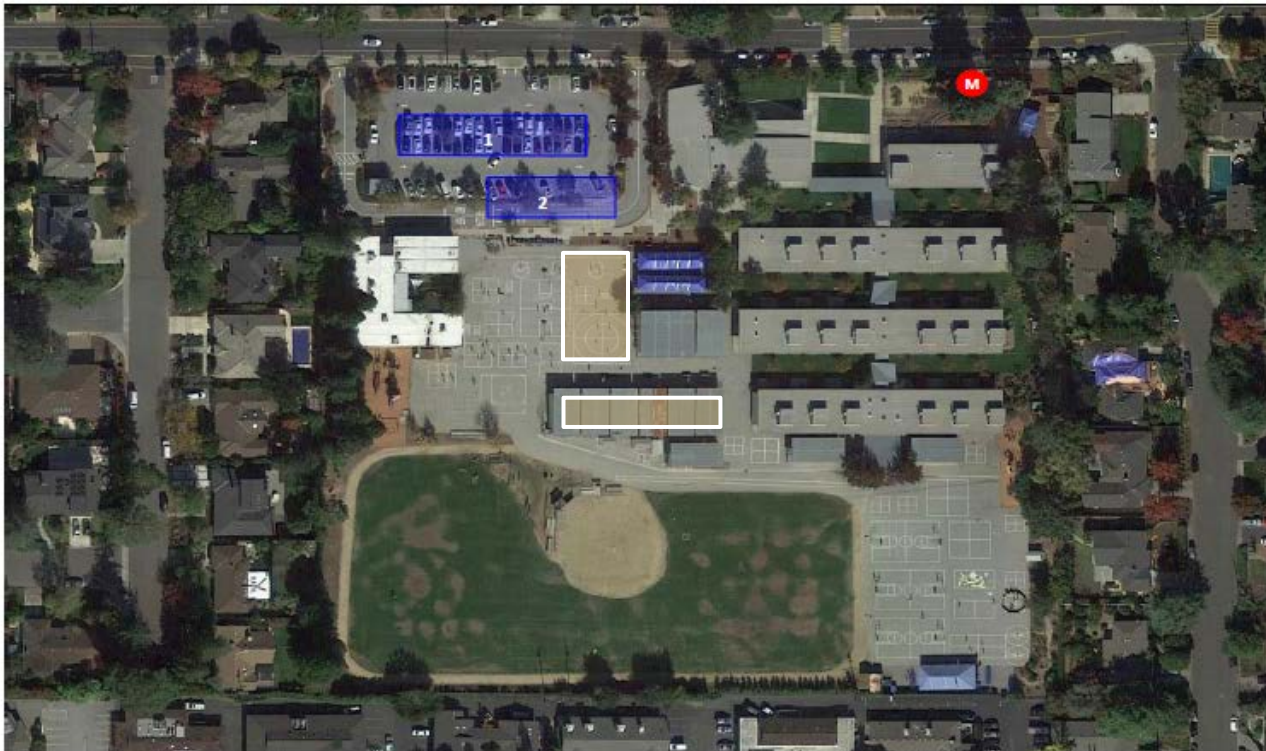
Gardner Bullis Elementary  
25890 Fremond Road, Los Altos





# Loyola

17



Potential  
solar array

Masterplan  
construction  
zone

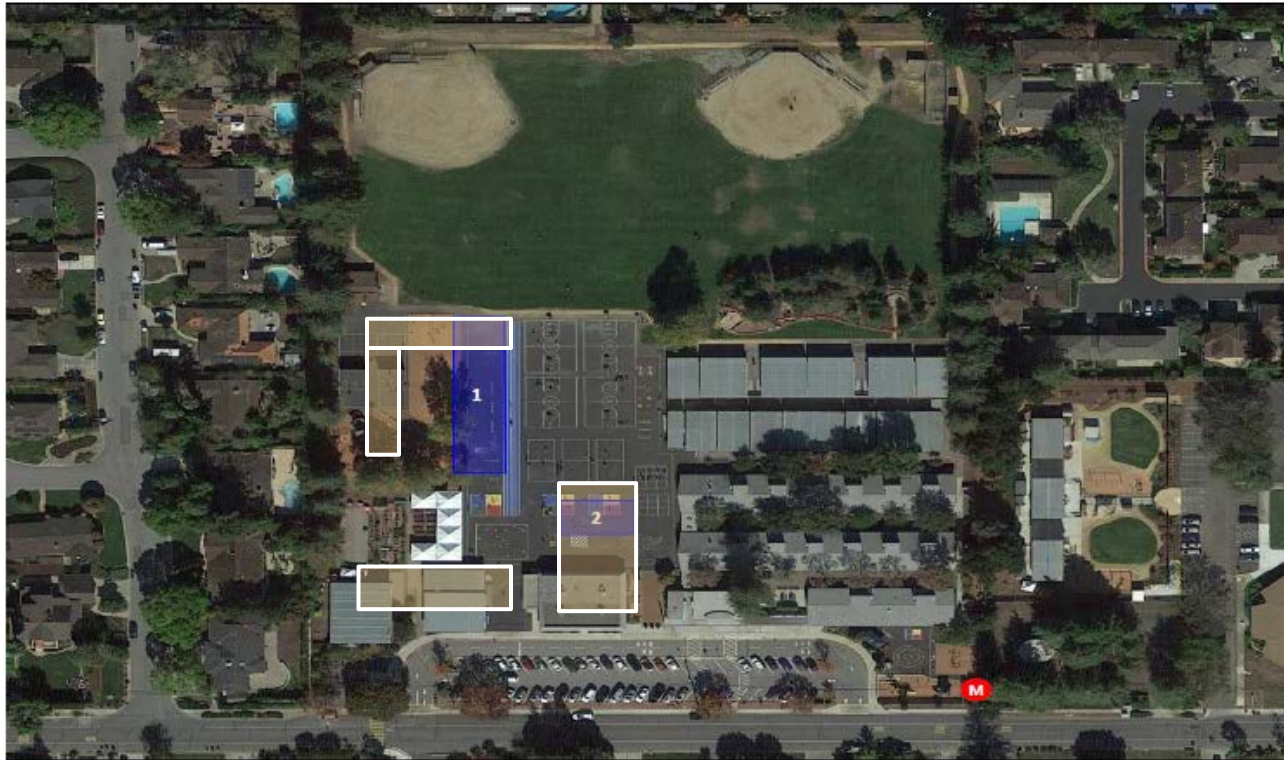
Los Altos School District

Loyola Elementary  
770 Berry Avenue, Los Altos



# Oak

18



Potential  
solar array

Masterplan  
construction  
zone

Los Altos School District

Oak Elementary  
1501 Oak Avenue, Los Altos







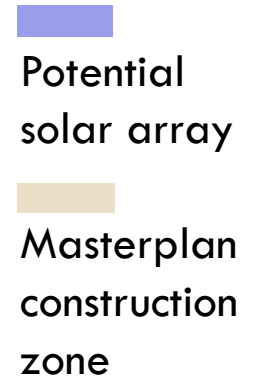
# Santa Rita

19



-  Potential solar array
-  Masterplan construction zone

## 20



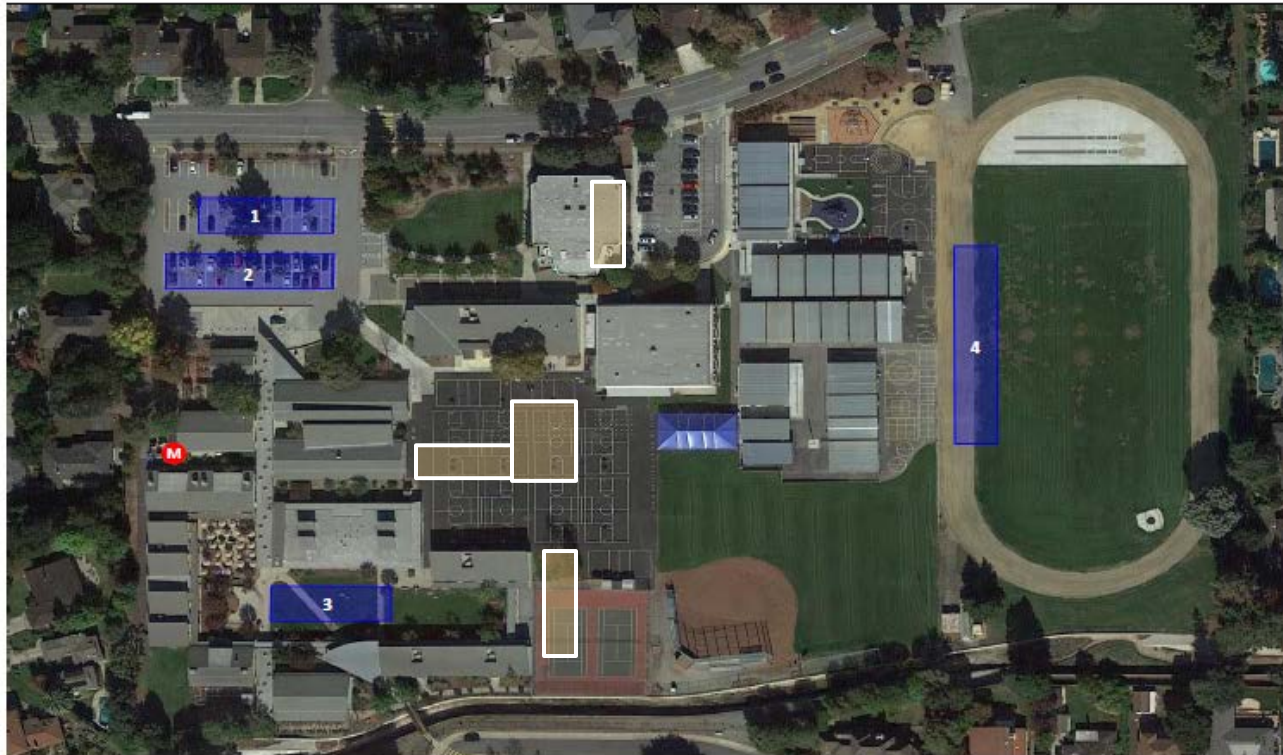
Springer Elementary  
1120 Rose Avenue, Mountain View







# Blach

21



-  Potential solar array
-  Masterplan construction zone

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Blach Intermediate  
1120 Covington Road, Los Altos



# Egan

22



- Potential solar array
- Masterplan construction zone

Los Altos School District

Egan Junior High  
100 West Portola Ave., Los Altos



23

# Cost benefit analysis

# Pro Forma done by Terra Verde

24

- Summary of Pro Forma on solar throughout district
  - ▣ Total cost of Gas/Electricity: \$750,000 annually
  - ▣ Electricity share, factoring out BCS and tenant usage: roughly \$580,000
  - ▣ Estimated savings if solar throughout district: \$580,000 annually
    - If financed through a Power Purchase Agreement (PPA), the savings is around \$200,000 annually



# Options

25

- Do nothing
- Egan 2 Story only
  - ▣ Zero Net Energy project planned for Summer 2017
- Egan, entire campus
- Egan + Blach + Covington
- All of above + Loyola/Springer
- All campuses

# Costs v. savings

26

- What are annual savings under the various options?
  - ▣ Egan 2 Story only: Cost (\$362k); Savings (\$19k)
  - ▣ All sites:
    - Cash: Cost (\$7.0 M one-time); Savings (\$580k)
    - PPA Model: PPA Payments (\$380k annually); Savings (\$200k net)
      - Option to purchase solar project at end of year 5 for reduced price due to 30% Investment Tax Credit taken by PPA provider

PPA 3 <sup>rd</sup> Party pays electric bill:	\$	580,000
District makes payment to PPA:	\$	(380,000)
<b>Net Savings to LASD:</b>	<b>\$</b>	<b>200,000</b>

# Cost Benefit Summary

27

Option	Cost	Annual Savings (Cash)	Annual Savings (PPA)
Do nothing	n/a	n/a	n/a
Egan 2 Story only	\$362,000	\$19,000	n/a
Egan, entire campus	\$1.1M Cash	\$82,000	n/a
Egan + Blach + Covington	\$2.6M Cash	\$218,000	\$75,000
All of above + Loyola/Springer	\$4.1M Cash	\$335,000	\$119,000
All campuses	\$7.0M Cash	\$580,000	\$200,000

Note: PPA cost is difference between cash savings and PPA savings.  
Egan campus alone is too small a project for a PPA.

# Timeline

28

- Background work done by Terra Verde
  - Jan – March
- **RFP to solar contractors: March 14**
- RFP response deadline: April 14
- Review responses, interview, finalize contract negotiations
- **Board award of contract: May 8**
- **Design/construction: completed by Dec 31**

# Conclusion

29

- Do we want to take advantage of the reduced costs to do solar now and, if so, where?
- **Recommendation:** that board provides direction to staff to begin the RFP process
  - ▣ We can decide whether or not to move ahead once we evaluate the proposals
- What additional information does the board need to ultimately make a decision?
  - ▣ We will have more information on costs and logistics once we receive proposals