

# Energy Use and Production

Evaluation Criteria:

- Potential Green House Gas Reduction
- Cost to Implement Measure
- Ease of Implementation – Public Support
- Visibility of Measure – Raises Public Awareness
- Social Justice – Equity of Measure’s Benefits

	<b>Category</b>	<b>Action</b>	<b>Green Dots</b>	<b>Red Dots</b>
A	Energy Production	Produce 100% renewable electric power for Davis in or near city	28	1
B	Energy Production	Implement citywide PV project to displace city’s PEAK DEMAND on PG&E	10	0
C	Energy Production	Identify solar potential on existing low income housing	1	0
D	Energy Production	Actively encourage homeowners to install solar PV and solar hot water	23	0
E	Energy Production	Require city to purchase 100% green power	5	3
F	Energy Financing	Pursue Power Purchase Agreements (PPA)	1	2
G	Energy Financing	Create a “Berkeley type” financing district to enable Davis residents and small businesses to finance solar and energy efficiency improvements.	25	0
H	Energy Financing	Create a Community Choice Aggregation (CCA) entity to provide Davis with 100% renewable energy and reduce cost of distributed systems through mass wholesale purchase	17	1
I	Energy Financing	Encourage bulk purchasing for energy efficiency and solar projects similar to “Go Solar Marin” and Northern California Power Authority.	13	0
J	Energy Financing	Actively advertise tax rebates and incentive programs	12	0
K	Energy Financing	Investigate grants for retrofitting low income housing	13	0
L	Energy Financing	Use proceeds from sale of carbon off-sets to finance carbon-free energy projects in Davis	1	3
M	Energy Financing	Provide financing strategies to school district to implement energy saving programs	6	1
N	Energy Efficiency	Expand city’s green building requirements for new construction and retrofit	33	1
O	Energy Efficiency	Install solar PV for pool facilities	5	0

	<b>Category</b>	<b>Action</b>	<b>Green Dots</b>	<b>Red Dots</b>
P	Energy Efficiency	Add LED/energy efficient decorations to Davis Enterprise Christmas light competition	1	0
Q	Energy Efficiency	Require all new buildings in Davis to be net zero electricity users	21	3
R	Energy Efficiency	Require all existing buildings to meet an energy efficiency standard by time of sale	7	5
S	Energy Efficiency	Convert traffic signals, street lights and park lights to more efficient technologies as they become available	11	0
T	Energy Efficiency	Reduce heating and cooling by promoting light colored roofs/Cool Roof on re-roofing projects throughout the city	17	0
U	Energy Efficiency	Require tree or solar shading for parking lots.	13	0
V	Energy Education	Actively advertise tax rebates and incentive programs	8	0
W	Energy Education	Encourage elementary, junior high and high schools to emphasize energy efficiency in curriculum	18	0
X	Energy Education	Implement city wide and neighborhood based outreach programs to promote participation in energy efficiency projects	14	0
Y	Energy Education	Educate public about integrating trees and solar PV	7	0
Z	Energy Education	Create city ‘thermometer’ to show progress on GHG reduction	19	0
AA	Energy Administration	Hire full-time city energy manager to maximize city’s use of rebates and grants	1	3

**Comments:**

- A – red, renewable energy projects are usually land intensive. I prefer surrounding land to remain agricultural use.
- B – have the city buy solar panels for roofs @ wholesale cost and hire full time installer to reduce overhead costs.
- D – “encourage” is good, but does nothing to advance. How about incentive, or COOP PV fields w/in or adjacent to the urban planning limit.
- R – for example: ceiling insulation.
- R – This is the only way the efficiency of existing stock can be addressed.
- S – start building traffic circles instead of stop signs and lights.
- U – existing, but needs real follow up and enforcement.

- U – this also promotes bicycle/ped use.
- Permit citizens to contribute on H2O bills to a greenhouse gas reduction fund for local projects—such as solar on schools, or insulating flat roads.
- Household size wind turbines—or on street lights.
- Feed in tariffs for excess energy.
- A major item for some of use is the cost of loans for installing photovoltaics – a city-supported loan or incentive program could be helpful.
- Didn't understand all the terminology, which could affect “voting.”
- Aerial infrared dark night photo of Davis, so people can see their house and where energy is leaking.
- Offer incentives/green building credits to apartment complexes willing to retrofit their units w/solar panels, green roofs, energy star appliances, solar hot water, and allow composting.
- Build shade structures w/PV panels over city parking lots. Encourage schools, businesses, etc.. to do the same.
- (on above comment) Yes—great idea—build them, don't wait for schools or businesses to be able to afford this up front.
- Instead of requiring existing buildings to meet energy std at time of sale, require an energy audit at the time of sale – require disclosure but not retrofit .
- (on above comment) Good idea.
- Promote change out of wood burning fireplaces. Ordinances against burning wood fires—altogether or at least during poor air days!
- Solar panels on school buildings.
- City-edge retail farms (save oodles of energy, and produce it, too!) .
- Require chimney retrofit by sale of house.
- Turn down the air-conditioning. It doesn't need to be so cold. Maybe change summer dress codes to that we don't have to cool buildings to accommodate people in slacks and long-sleeved shirts.
- Highly support a UCD/downtown shuttle 10am-2pm every 5 minutes!
- (on above comment) Yes!!
- Extend horizon of retrofit paybacks for energy reduction upgrades.
- Provide homeowners and landlords to borrow \$ from cit to insulate old homes and pay off costs over 5-15 years add line item to utility bill.
- Put a real estate sales tax on all sales and use funds to finance loans to home owners to retrofit their homes w/double pane windows, etc.
- Require blown in wall insulation in house upon resale.
- Require flat top roofs to be insulated when reroofed add to reroof permit.
- For those who cannot install solar roofing panels because of shade trees or house orientation, allow families to buy into a PV development (farm) outside the city. Once they have bought-in with an investment based upon their past energy use, then they would get their power from the PV farm instead of PG&E.
- Power all public schools from 100% renewable energy.
- Favor progressive new energy-saving building techniques over other project goals.
- Celebrate 4<sup>th</sup> of July, etc. sans fireworks. Donate burned money funds to save our schools and celebrate that!
- Ban leaf blowers/save gas!
- Use funds from new construction “zero” energy requirements to provide a loan program to retrofit/insulate old houses.
- Use a city revenue bond to finance and addition to Solano wind farms and use that win energy in a community aggration type plan.
- Install solar on all school roofs (large and flat) do not expect schools to pay for this up front. Assess all roofs for solar potential – I don't use much electricity, but my roof could be ideal for some solar panels—may not directly benefit me, but many roofs together could benefit all of us.
- Do a study on why all our trees (shade) are dying in Davis.
- Give solar reports to public.

- Stop allowing building height increases without first analyzing effect of adjacent passive solar (or neighbor windows) design. The no-review allowance of second stories undoes the earlier implemented passive solar design! Little things count.
- Solar ovens, clothes line (no dryer use) and compost in every household!
- If the Covell village site was used for solar thermal (i.e. parabolic through collector) it would generate enough electricity to power all of Davis at a similar rate to that charged now (\$.1156/kwh). Let's do this! Alternatively, use land near the sewage plant.
- Community involvement will be much broader if we make this effort competitive, challenging- i.e. contests, challenge Woodland to a GHG reduction contest. Example: challenge residents to go carfree for a month – make the prize for the winner one of those GEM cars the city proposed to get rid of.
- Use low income weatherization pgm. Model to improve efficiency and health of all older homes.
- Involving all educational institution in energy efficiency and waste reduction is very important to continued success.
- Clothesline use in Davis – give incentives, educate public about using them, set up program to install them. –“solar powered” clothes dryer. Do certain communities have ordinances against clotheslines?
- (on above comment) Yes! More drying racks, fewer dryers. Also, phase out leaf-blowers in favor of NON-motorized tools (rakes?) 1-hr of those noisy machines uses the energy equivalent of driving 350 miles!
- Start to promote solar energy collectors on city parking lots. Double gain cover for cars and electricity.
- Investigate/develop financing strategies for high-insulation retrofitting.
- Promote use of solar ovens. Cheap way to cook, especially in a city with many sunny days.
- Strongly encourage “solar” drying – using outside clotheslines to dry clothes April-October. 1) offer free clothes line rope and pulley 2) offer low-cost umbrella clothesline pedestal. F/up with phone call to assess clothes line usage and promote media of this.
- Phase out gas-powered leaf blowers and wood-burning fireplaces.
- Make a big effort to educate people about the energy effects of air-conditioner use. Many people run their when it's cool in the evening.
- How about turning some of our water intensive green belt lawns into areas for PV panels for residential homes.
- Limit square footage of homes –no more 4,000sqft houses!
- Find ways to help people choose energy-efficient heating and cooling systems so that they can afford to spend more for a new system. Education, low-cost loans, rebates, etc.
- I head of 1 new housing place in town (park Santiago) with long CR & RIS (?) preventing people from hanging a clothesline in their yard. Please consider a city ordinance preventing such restrictions and encouraging energy resource conservation.
- Plant big shade trees.
- Require all new public buildings (incl. schools) to be energy autonomous.
- Use ESCO's for residential and homes building retrofits.
- Subsidize residential purchase of waterless water heaters.
- Favor energy saving building materials and techniques.
- Produce city google map of solar installations.
- Do solar and EE tours!

## **EXPLANATION FOR RED DOTS**

- A – I didn't put a red dot here – but I do not support using land to do this – we should be making use of roofs – rather than taking up additional land and probably a net GHG benefit.
- E – the market should make this more affordable in the long run.
- E, F – this could cost a lot of money in the long run.
- H – There is a lot of waste getting power to places, like groceries there is a transportation cost: look at the whole picture of energy – may not be “green” and may be very expensive (better to reduce).

- L – just use carbon off-sets as extra cash—the City of Davis is not a VC for power and any power savings should be on their own merits.
- M – the school district should let the market decide whether this should be done.
- Q – incompatible with multi-story higher density development.
- R, Q – government really needs to let the market handle this. We don't need more regulations.
- R – could be too expensive for individual homeowners.
- R – too complicated and expensive to implement.
- AA – the city is already experiencing budget difficulties. Need we make it worse?
- In response to other red dots, we need to pick items that will be most effective or we will pay through increase in fires, weather instability, crop losses. Money won't matter so much then.
- The best megawatt is the one that is saved through frugality.
- Green building requirements should be encouraged, not required. Not everyone can afford to pay for the higher costs.
- The LED Christmas decoration idea is cute, but how about changing all street lights to LED? Ann Harbor Michigan is doing it, as well as Dusseldorf, Germany.