FACT SHEET: RENEWABLE ENERGY

SUSTAINABILITY OPPORTUNITY

Development of onsite renewable energy supplies may be desirable to provide lower long-term costs, stabilize operating budgets, and allow Stanford to achieve top-tier emissions reductions. Stanford's 2009 Energy and Climate Plan outlines an energy supply transition from natural gas cogeneration to a regeneration scheme with heat recovery technology. This proposed energy supply system allows flexibility in the method of electricity generation, and renewable sources could facilitate further greenhouse gas emissions reductions via a shift away from the use of fossil fuel. Accordingly, the university is running several solar electric demonstration projects and has also undertaken a comprehensive assessment of utility-scale renewable energy technologies for the campus.

EXISTING PHOTOVOLTAIC INSTALLATIONS AT STANFORD

The solar projects below do not supply a significant portion of Stanford's energy needs, but they provide enormous educational value. They familiarize faculty, staff and students with the day-to-day operation of solar technologies, as well as help the university gather performance data and determine how the control and monitoring of such systems can be optimized in the event of future large-scale expansion.

Location	Date Installed	Manufacturer & Type	# of Modules	System kW (AC)	Actual or Predicted kW/year
Synergy House	2003		54	7.5	11,250
Leslie Sun Field Station	2003	BP CdTe (thin film)	275	20.0	30,000
Reservoir 2	2004	BP (poly)	220	30.0	47,771
Y2E2 #1	2008	Sharp (poly) nd-208u1	27	4.7	8,220
Y2E2 #2	2008	Sunpower (mono) spr215	30	5.6	9,554
Y2E2 #3	2008	Unisolar (thin film) es124	20	2.2	3,630
Hoover House	2008	Evergreen (mono)	252	40.8	64,000
Graduate School of Business	In Progress	Firstsolar CdTe (thin film)	4275	320.0	486,739
Huang Engineering Center	2010	BP 3215B	140	26.0	44,596
Nanoscale Engineering Center	2010	BP 3215B	140	26.0	44,596
			TOTALS	482.8	750,356

mono = monocrystalline; poly = polycrystalline
thin film = (usually CdTe—Cadmuim Telluride)

MORE INFORMATION

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SUSTAINABLE STANFORD