

# Photovoltaic Systems in Healthcare

## 20 Year Impact Analysis of Clean Energy

### Tebo Family Medical Pavilion Boulder, CO

#### Custom Unirac Mounting System at 15° angle

27.95 kW-DC system 38,134 kWh annual production

Region 12

#### Healthcare Energy Impact Calculator

Programs of PRACTICE Greenhealth

kWh per 20 years: 762,680

Pollutants	20 Year Reduction	Pollutant Permit Savings
SO2 (Tons)	.65	\$354
NO2 (Tons)	1.23	\$3,637
CO2 (Tons)	737.46	\$13,274*
Mercury (Tons)	.02	\$1,148

Reduced Health Impacts	Societal Value	Medical Cost Savings
Premature Death	\$26,148	\$1,158
Chronic Bronchitis	\$1,160	\$296
Hospital Visit Incidents	\$47	\$38
Respiratory Symptoms	\$134	\$134
Work Loss Days	\$128	\$119
Mercury Related	\$2,468	\$2,468
<b>Totals</b>	<b>\$30,085</b>	<b>\$4,213</b>

\* EU Pricing



Building Owner: Boulder Community Hospital | System Financier: Namaste Solar Electric, Inc.  
System Designer/ Installer: Namaste Solar Electric, Inc. | Installation completed: Summer 2007

### Chase Gardens Medical Center—South Building Eugene, OR

#### Pre-Assembled Modules Heat-Welded to Roofing (no significant angle)

25.2 kW-DC system 25,200 kWh annual production

Region 11

#### Healthcare Energy Impact Calculator

Programs of PRACTICE Greenhealth

kWh per 20 years: 504,000

Pollutants	20 Year Reduction	Pollutant Permit Savings
SO2 (Tons)	.27	\$150
NO2 (Tons)	.44	\$1,285
CO2 (Tons)	251.77	\$4,532*
Mercury (Tons)	.01	\$571

Reduced Health Impacts	Societal Value	Medical Cost Savings
Premature Death	\$10,098	\$447
Chronic Bronchitis	\$449	\$115
Hospital Visit Incidents	\$18	\$14
Respiratory Symptoms	\$52	\$52
Work Loss Days	\$50	\$46
Mercury Related	\$1,228	\$1,228
<b>Totals</b>	<b>\$11,895</b>	<b>\$1,902</b>

\* EU Pricing



Building Owner: Chase Gardens Medical, LLC | System Financier: Chase Gardens Medical, LLC  
System Designer/Installer: Advanced Energy Systems | Installation completed: June, 2007

### Clinica Family Health Services | People's Clinic Boulder, CO

#### Ballasted System at 10° angle

42.84 kW-DC system 56,411 kWh annual production

Region 12

#### Healthcare Energy Impact Calculator

Programs of PRACTICE Greenhealth

kWh per 20 years: 1,128,220

Pollutants	20 Year Reduction	Pollutant Permit Savings
SO2 (Tons)	.95	\$523
NO2 (Tons)	1.82	\$5,380
CO2 (Tons)	1,090.91	\$19,636*
Mercury (Tons)	.03	\$1,699

Reduced Health Impacts	Societal Value	Medical Cost Savings
Premature Death	\$38,680	\$1,713
Chronic Bronchitis	\$1,717	\$439
Hospital Visit Incidents	\$68	\$54
Respiratory Symptoms	\$198	\$198
Work Loss Days	\$187	\$175
Mercury Related	\$3,651	\$3,651
<b>Totals</b>	<b>\$44,502</b>	<b>\$6,230</b>

\* EU Pricing



Building Owner: Clinica Campesina and Boulder County | System Financier: Clinica Campesina and Boulder County  
System Designer/ Installer: Namaste Solar Electric, Inc. | Installation completed: January, 2009

### Sutter Auburn Faith Hospital Auburn, CA

#### Carport Mounting at 5° angle

333.72 kW-DC system 422,152 kWh annual production

Region 13

#### Healthcare Energy Impact Calculator

Programs of PRACTICE Greenhealth

kWh per 20 years: 8,443,040

Pollutants	20 Year Reduction	Pollutant Permit Savings
SO2 (Tons)	1.85	\$1,013
NO2 (Tons)	.98	\$2,877
CO2 (Tons)	2,732.23	\$49,180*
Mercury (Tons)	.02	\$1,588

Reduced Health Impacts	Societal Value	Medical Cost Savings
Premature Death	\$45,360	\$2,009
Chronic Bronchitis	\$2,018	\$515
Hospital Visit Incidents	\$81	\$64
Respiratory Symptoms	\$237	\$237
Work Loss Days	\$221	\$205
Mercury Related	\$3,412	\$3,412
<b>Totals</b>	<b>\$51,330</b>	<b>\$6,444</b>

\* EU Pricing



Building Owner: Sutter Health | System Financier: SunEdison  
System Designer/ Installer: SPG Solar, Inc. | Installation completed: April, 2010

### Sutter Auburn Faith Hospital Auburn, CA

#### Ground-Mounted Single-Axis Tracker

388.80 kW-DC system 653,054 kWh annual production

Region 13

#### Healthcare Energy Impact Calculator

Programs of PRACTICE Greenhealth

kWh per 20 years: 13,061,080

Pollutants	20 Year Reduction	Pollutant Permit Savings
SO2 (Tons)	2.86	\$1,567
NO2 (Tons)	1.51	\$4,451
CO2 (Tons)	4,226.66	\$76,080*
Mercury (Tons)	.04	\$2,456

Reduced Health Impacts	Societal Value	Medical Cost Savings
Premature Death	\$70,169	\$3,107
Chronic Bronchitis	\$3,122	\$798
Hospital Visit Incidents	\$125	\$99
Respiratory Symptoms	\$366	\$366
Work Loss Days	\$341	\$317
Mercury Related	\$5,279	\$5,279
<b>Totals</b>	<b>\$79,401</b>	<b>\$9,965</b>

\* EU Pricing



Building Owner: Sutter Health | System Financier: SunEdison  
System Designer/ Installer: SPG Solar, Inc. | Installation completed: May, 2010

### Effects of Location: 13,061,080 kWh produced in different supply regions

