

## **Solar Energy Potential for Park County**

(For more information, contact Foss Smith at 719-839-0715)

### **Passive Solar**

- Provides the best economics; ideal for new construction
- Retrofits are more expensive than new construction

### **Solar PV**

- Flat solar panels: roof mounted or ground mounted
  - Cost is a major factor
    - Total cost = \$7 to \$9 / watt installed (prices may be lower in 2H2009)
    - Typical residential size would be 2.45 to 5.0 K watt (\$20,000 to \$40,000)
  - Economic return is challenging without incentives
- Applications
  - Residential: net-metering; Xcel Energy rebate (\$3.50 / watt), Fed Tax Credit (30%)
    - Example: 2.45 K watt system provides about 300 KWH / month;
    - Approximate cost = \$18,500; rebate = \$8,575; 30% = \$5,500; net cost \$4,425
  - Commercial: net-metering; Xcel Energy rebate (\$3.50 / watt), Fed Tax Credit (30%), accelerated depreciation (over 5 years)
  - Community: net-metering; Xcel Energy rebate (\$3.50 / watt), DOLA GEO grant potential

### **Solar Hot Air Systems**

- Uses air to transfer heat from panels to the room
- Low capital cost for both roof and wall mounted systems
- Federal Tax Credit

### **Solar Thermal Systems**

- Uses fluid to transfer heat from panels to heat storage / distribution system
- Cost effective for domestic hot water today; panels are less expensive than solar PV but have higher weight
- Federal Tax Credit