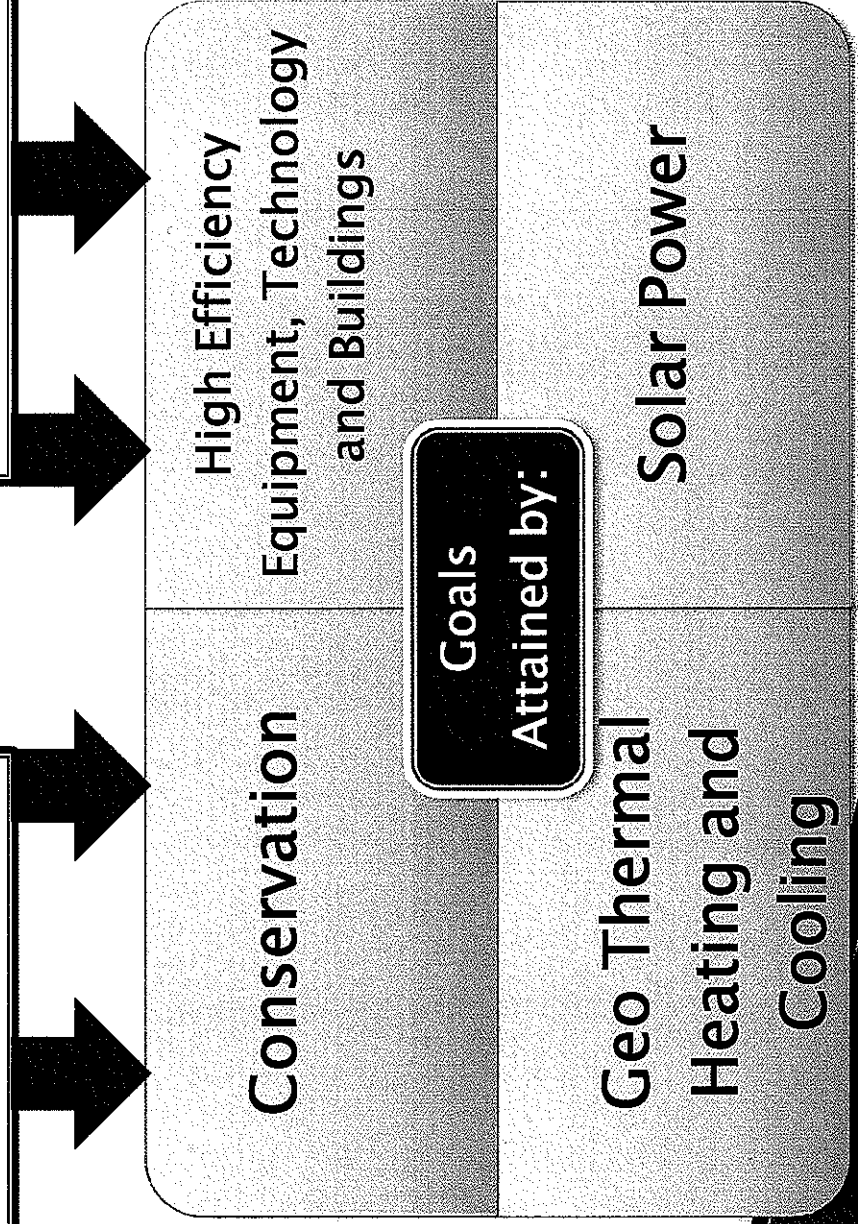




**Mesa State's Energy Independence Initiative  
Long Range Goal by 2015 to:**

**Consume 50% less  
Energy**

**Purchase 90% less  
Energy**



# Conservation:

## 2.1 Million dollar Energy Performance Contract with Chevron Energy Solutions

- Energy Consumption will be reduced by at least 8.2%
- Reduced Carbon Emissions by 8.2%
- \$\$Dollars\$\$ - Saved from Energy Efficiency will Offset the Cost of Implementation

- Efficiencies Gained by improvements in:
- Lighting
  - Heating/Cooling
  - Building Controls
  - Mechanical Systems



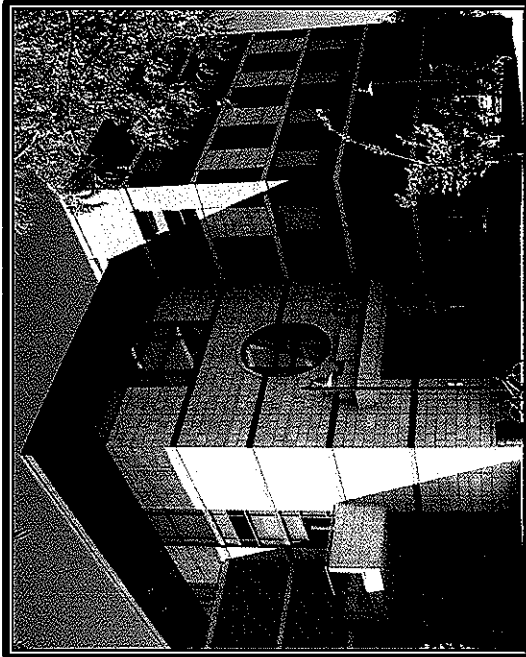
**MESA**

**S T A T E  
C O L L E G E**

# **High Efficiency Equipment, Technology & Buildings:**

**New Buildings Designed to Meet LEED Standards**

- **New Academic Classroom Building  
LEED Gold Certified**
- **New Student Housing, Saunders  
Expansion, Science Expansion and  
New College Center are in Design to  
Meet LEED Standards**
- **Xcel Energy awarded the Academic  
Classroom Building the most Energy  
Efficient Building in Western  
Colorado**



**MSC Academic Classroom Building**

**MESA**

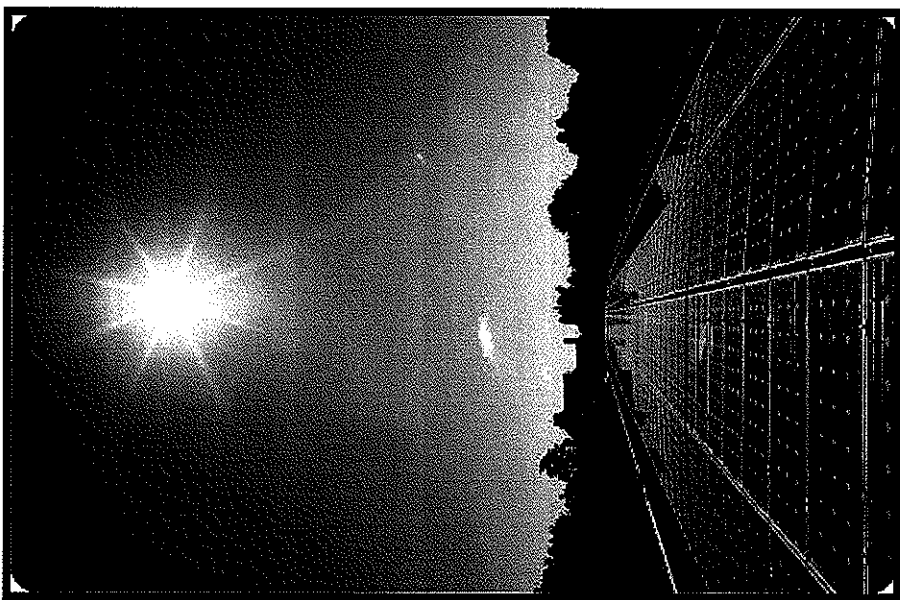
**S T A T E**

**C O L L E G E**

# **Solar Photovoltaic Energy:**

**300 Days of Sunshine = MSC's Clean Energy Power Plant**

- MSC has Installed two Solar Panel Arrays one on the Science Building and a Second on the New North Ave. Residence Hall
- These Panels will Produce 30kw of Clean Energy
- A Third 100kw Array is in Planning Stages to be placed on Roof of Saunders
- An Additional 1.2 Megawatt of Solar is in our two year plan



**MESA**

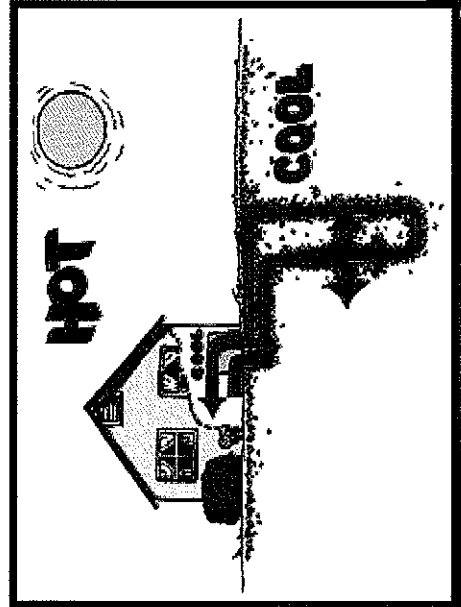
**S T A T E**

**C O L L E G E**

# **Geo Thermal Energy:**

## **MSC Using the Largest Solar Collector in Existence: The Earth**

- MSC has Completed Three Bore Fields
- The 288 Bore Holes will combine to have 134,640 Linear Feet of Depth - Over 25 Miles!
- These Fields are Designed so Future Fields Could be Connected and Looped - Increasing overall Energy Synergies
- Over 319,000 sq ft will be served by Geothermal Energy - 25% of Campus



- Combined, the Current Fields will produce 1,579 tons of Heating and 1,506 tons of Cooling
- This Initiative will Increase Capacity to 1,965 tons of Heating and 1,655 tons of Cooling

**MESA**

**S T A T E  
C O L L E G E**

# High Efficiency Equipment, Technology & Buildings:

Comparison of New Classroom Building to Traditional Houston Hall

## Energy Usage Index (EUI)\*

	New Academic Classroom Building	Houston Hall Classroom Building
Electrical Usage per year KWh	842,518	1,196,126
Gas Use per year, CCF	0	91,251
Facility Size, GSF	56,862	71,250
<i>EUI in kBtu/Sf-yr</i>	<b>50.57</b>	<b>160.01</b>

**New Classroom Building is 316% More Efficient**

\* Source: EMC Engineers and Davis Partnership Architects