



Just like OJ is a part of your complete breakfast



Solar Heating and Hot Water – An Essential Part of a Net-Zero School Building



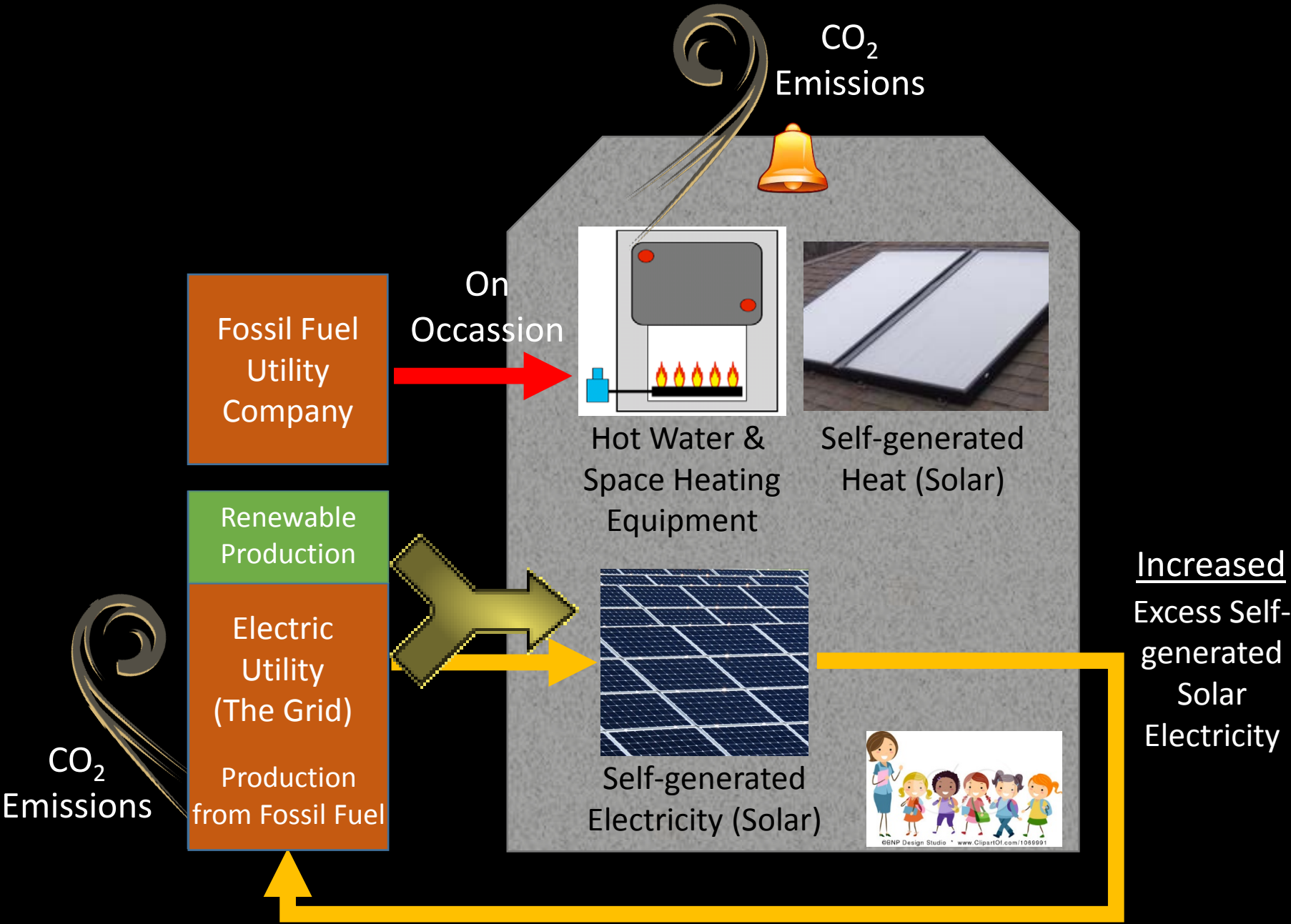
**ALBUQUERQUE
PUBLIC SCHOOLS**

**Tony Sparks, Project Manager
Energy Conservation and Sustainability Strategies Group**



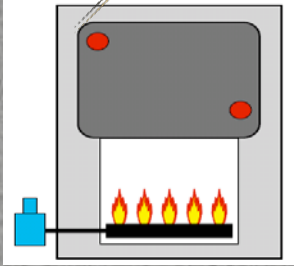
**Fred Milder, PhD, CEO
SolarLogic, LLC**

Net Zero \neq Carbon Neutral



Fossil Fuel
Utility
Company

On
Occassion



Hot Water &
Space Heating
Equipment

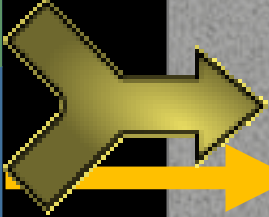


Self-generated
Heat (Solar)

Renewable
Production

Electric
Utility
(The Grid)

Production
from Fossil Fuel



Self-generated
Electricity (Solar)



Increased
Excess Self-
generated
Solar
Electricity

CO₂
Emissions

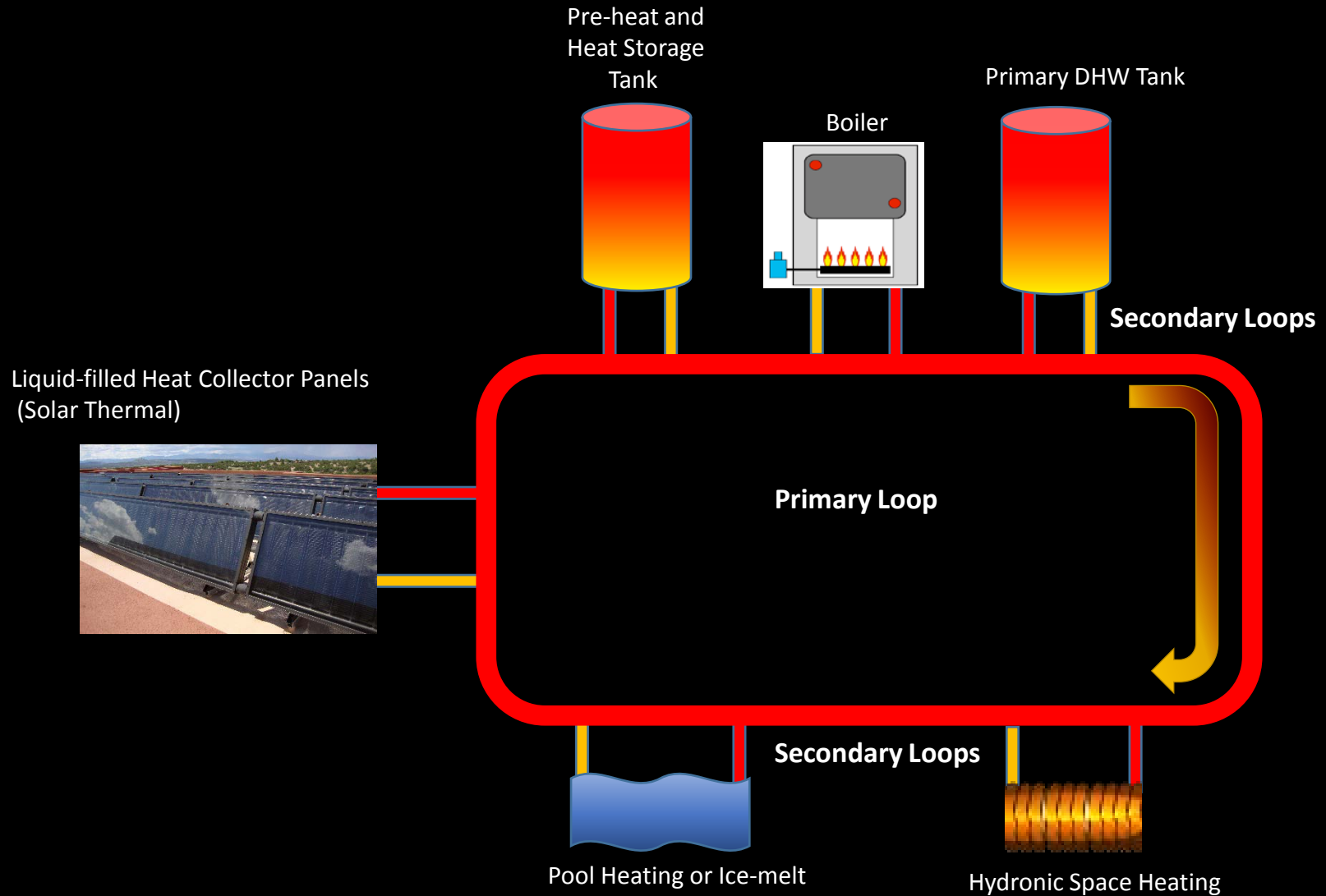
CO₂
Emissions

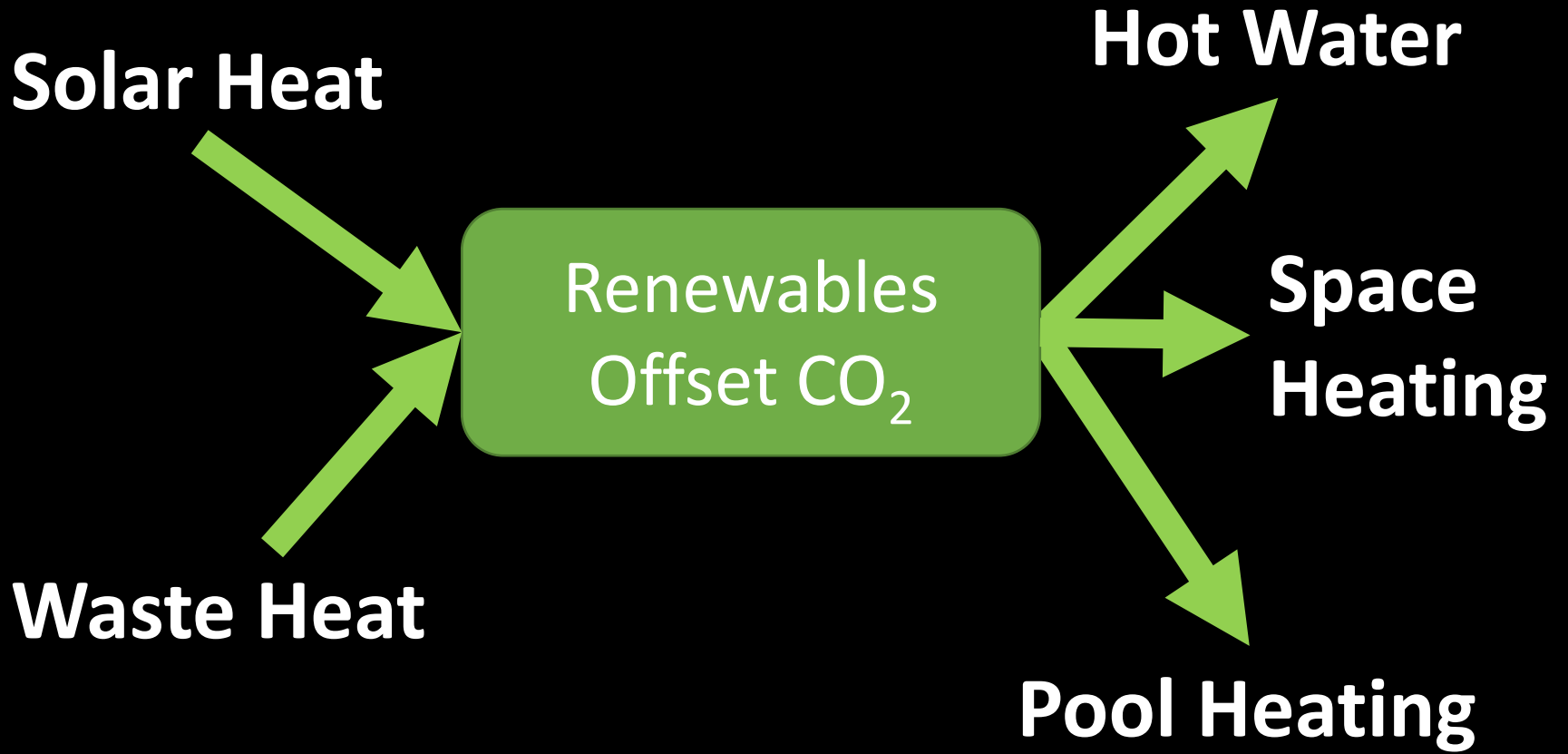


- **Net Zero is a great goal**
- **Carbon Neutral is a separate goal**
- **Generate renewable electricity to offset needed electric energy**
- **Generate renewable heat to offset needed heat energy**
- **Renewable heat can come from solar, from waste heat, or from a heat pump**

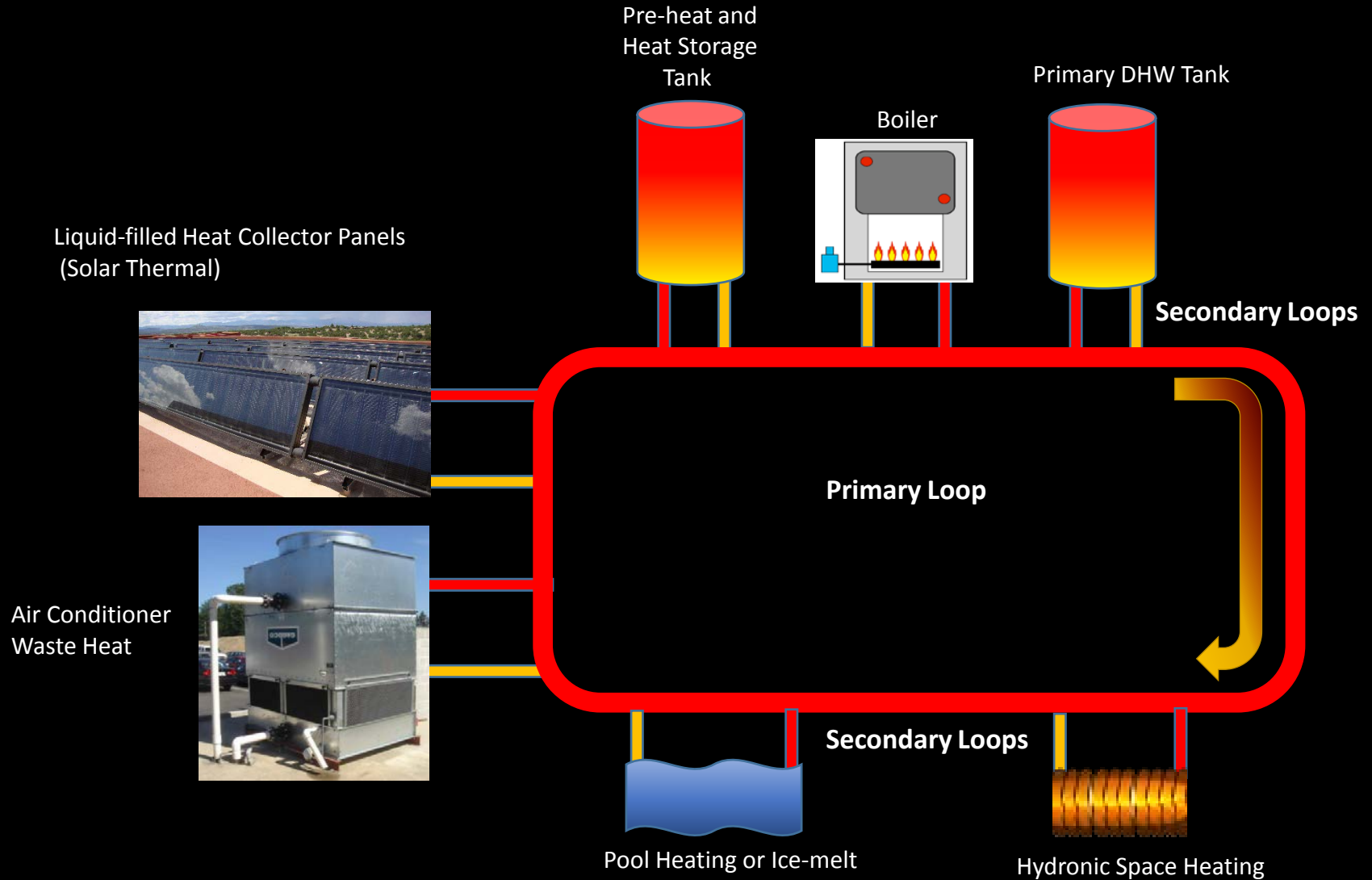
Tony Sparks presents the
Rudolfo Anaya Prototype Elementary School
Solar Hot Water Story

Integrated Solar Heating and Hot Water System (Primary/Secondary Loop)





Integrated Solar Heating and Hot Water System (Primary/Secondary Loop)



What Do You Get with Today's Renewable Heat Energy Systems?

Eliminate CO₂ Production

Easier / Better Compliance

Lower Operational Costs

Remote Monitoring / Adjustment / Diagnostics

Easier / Better Serviceability

Teachable Displays

**Log On to the
Anaya Elementary School Solar
Hot Water System**

- **Net Zero \neq Carbon Neutral**
- **Offset non-renewable, fuel-generated heat directly with renewable heat**
- **Today's Renewable Heat Systems are different from the 'Old School' ways – in design, function and control**
- **Use an Integrated Design approach for Flexibility and Scalability**
- **Get a Renewable Heat Expert involved early**

