

An aerial photograph of Earth's surface, showing a large body of water on the right and a landmass on the left. The landmass is covered in a dense forest of green trees, with a prominent river or waterway flowing through it. The water is a deep blue color, and the sky is a lighter blue. The overall scene is a natural landscape.

A BALANCED NATURAL SYSTEM

ARE WE PART OF IT ?

PETER MILLAR, MS



ENERGY MANAGEMENT SPECIALIST,  
SMALL BUSINESS DEVELOPMENT CENTER  
UNIVERSITY OF NEVADA, RENO

PETER MILLAR, MS



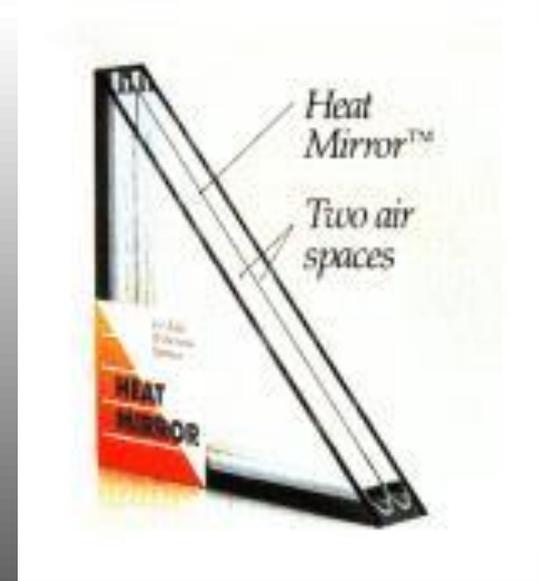
CONSTRUCTION AND ENGINEERING

PETER MILLAR, MS

DEGREE IN CHEMISTRY

MASTER'S DEGREE IN ENVIRONMENTAL  
AND MECHANICAL ENGINEERING

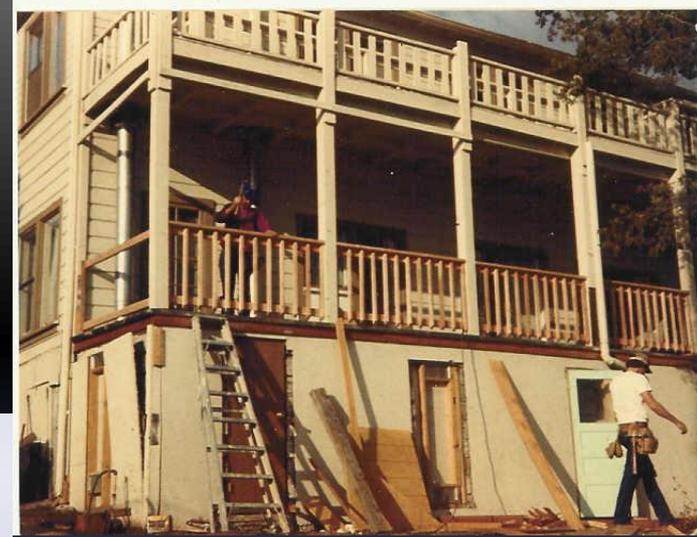
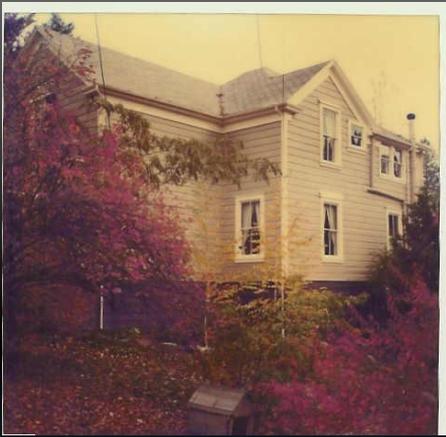
PATENTS & AWARDS IN BUILDING PRODUCTS



PETER MILLAR, MS



BUSINESS OWNER, CONTRACTOR, ENERGY CONSULTANT  
LAST 20 YEARS





LIFE,  
ENJOYMENT





# SOLAR THERMAL HOT WATER

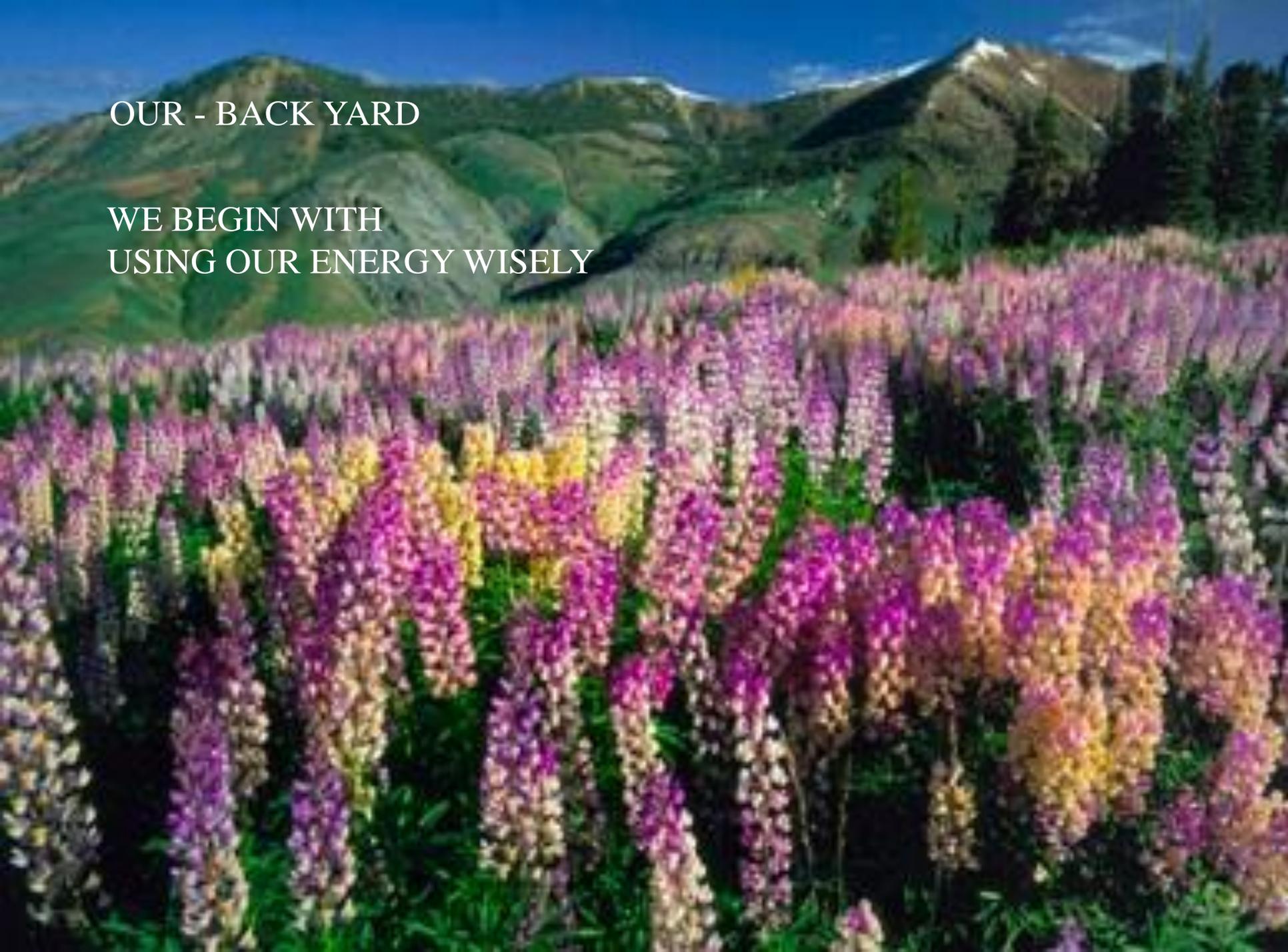


# HYDROELECTRIC CITIES



# PHOTOVOLTAIC POWER



A vibrant field of lupines in shades of purple, pink, and yellow stretches across the foreground. In the background, rolling green hills lead up to rugged mountains with patches of snow under a clear blue sky.

OUR - BACK YARD

WE BEGIN WITH  
USING OUR ENERGY WISELY

UNIVERSITY OF NEVADA  
BUSINESS ENVIRONMENTAL PROGRAM

Energy Efficiency

TELEPHONE SUPPORT, WORKSHOPS,

BUILDING AUDITS, INSPECTIONS

CONTRACT, PROPOSAL REVIEW

FINANCING, LEASED SPACE ARRANGEMENTS,

TAX AND UTILITY SUPPORT

CONTRACTOR INTERACTIONS

[WWW.UNRBEP.ORG](http://WWW.UNRBEP.ORG)

Nevada Small Business  
Development Center

# BUSINESS ENERGY EFFICIENCY

UNR BUSINESS ENVIRONMENTAL PROGRAM

BUSINESS-GRADE SITE AUDITS

[WWW.UNRBEP.ORG](http://WWW.UNRBEP.ORG)

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Provided with Support by a Grant from the Small Business Administration



# THE BUSINESS CONTEXT

\$1 BILLION GOES OUT OF NEVADA EVERY YEAR  
FOR COAL AND NATURAL GAS

EFFICIENCY IS A MUCH LESS COSTLY ENERGY SOURCE THAN  
COAL, NATURAL GAS, SOLAR, AND GEOTHERMAL

PAYBACK IS IN THE RANGE OF ¼ TO 3 YEARS

= 30% TO 400% RETURN ON INVESTMENT

30% REDUCTION

= 30% BETTER USE OF  
ALTERNATIVE ENERGY SYSTEMS

# THE BIGGER CONTEXT

EMPOWERMENT  
SOVERIGNTY  
ENLIGHTNMENT  
REVITALIZATION  
STRENGTH  
INTELLIGENCE  
WISDOM  
CONFIDENCE  
INITIATIVE  
SPIRIT

CREATE A HEALTHY SOCIETY THAT IS DEEPLY INTEGRATED  
INTO THE NATURAL AND SPIRITUAL WORLDS

# THE BUSINESS CONTEXT

PAYBACK ON MANY ENERGY-FOCUSED  
IMPROVEMENTS IS IN THE RANGE OF ¼ TO 3  
YEARS

30% TO 400% RETURN ON INVESTMENT  
ENERGY EFFICIENCY IS A SECURE  
INVESTMENT

UNR PROGRAM TARGET

Nevada Small Business  
Development Center

# ENERGY EFFICIENCY

IT'S NOT ABOUT "SAVING MONEY"



IT'S ABOUT MAKING MONEY  
ITS ABOUT IMPROVING LIVES  
ITS ABOUT BEING SMART

# AUDIT PROCESS

Sierra Pacific SERVICE RECYCLING

ACCOUNT NUMBER: 10 00004444 444444 4

10/00/0000

10/00/0000

PREVIOUS BALANCE	PAYMENTS	CURRENT CHARGES	TOTAL AMOUNT DUE	DUO DATE
8000.00	8000.00	8000.00	8000.00	10/00/0000

2 Thank you for maintaining an excellent and important record, we look forward to serving you in the future.

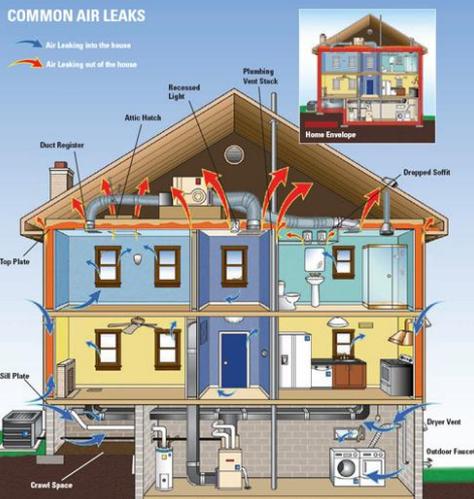
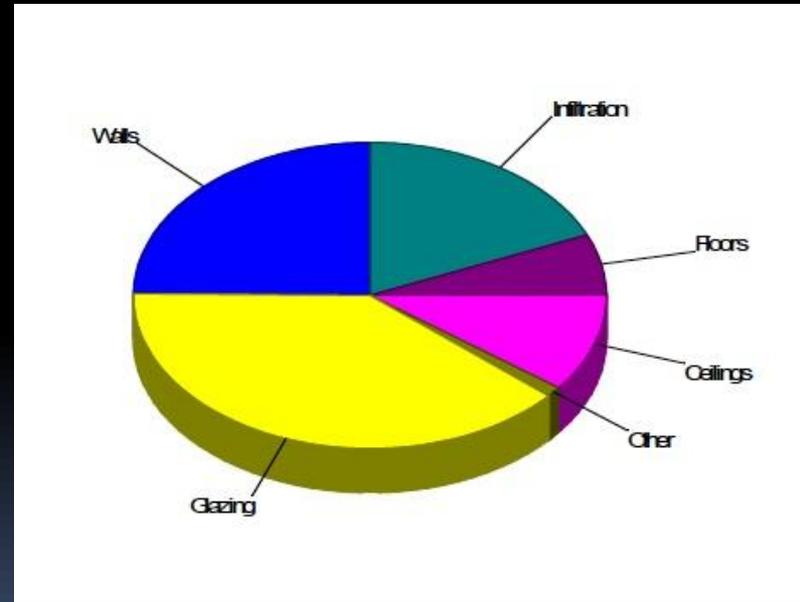
3 ELECTRIC SERVICE

Service Category	Start Date	End Date	Rate	Amount	Balance
POWER SERVICE	11/27/10	11/27/10	4.00	4.00	4.00
TIER 10 USE	12/01/10	12/01/10	100.00	100.00	104.00
TIER 2 USE	12/01/10	12/01/10	100.00	100.00	204.00
DELIVERY SERVICES	12/01/10	12/01/10	4.00	4.00	208.00
CONNECTION CHARGE	12/01/10	12/01/10	1.00	1.00	209.00
FRANCHISE FEE	12/01/10	12/01/10	10.00	10.00	219.00
<b>TOTAL ELECTRIC SERVICE AMOUNT</b>					<b>219.00</b>

4 SERVICE OFFICE: 800-800-8000, 800-800-8000, 800-800-8000

5 Sierra Pacific SERVICE RECYCLING

6 SERVICE RECYCLING



Nevada Small Business Development Center

College of Business  
University of Nevada, Reno



**\$1,100 EARNED PER YEAR WITH LIGHTING  
UPGRADE**

**8.5 MWh – 5.5 TONS OF CO2**



**\$1,600 EARNED PER YEAR WITH  
LIGHTING CHANGE OUT**

**12.3 MWh - 8 TONS OF  
CO2**

**\$1,900 - EXIT SIGNS**  
**14.6 MWh OF ELECTRICITY NOT USED**

**\$2,100 - BASEMENT LIGHTING**

**TURNKEY PROJECT**

**\$37,000 SAVED PER YEAR**  
**47% OF ENERGY**

**THREE YEAR PAYBACK**



# NEAR ZERO ENERGY

\$16400 407 MWh 265 TONS OF CO2  
WITH HVAC UPGRADE ALONE



# WASHOE TRIBE ENERGY EFFICIENCY

13 BUILDINGS REVIEWED – 1,106,000 K<sub>w</sub>H =  
1000 MILLION WATTS  
~ \$110,600 PER YEAR - 30% = \$33,200 PER YEAR

GAS USE - ??



# THE BIGGER CONTEXT

EMPOWERMENT  
SOVERIGNTY  
ENLIGHTNMENT  
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CREATE A HEALTHY SOCIETY THAT IS DEEPLY INTEGRATED  
INTO THE NATURAL AND SPIRITUAL WORLDS

CREDIT: CETAN WANBILI

# UNR BUSINESS ENVIRONMENTAL PROGRAM

AUDITS

OPPORTUNITY EVALUATION

FINANCING, LEASED SPACE AGREEMENTS

TAX AND UTILITY *SUPPORT*

PROJECT AND PROPOSAL REVIEW

[WWW.UNRBEP.ORG](http://WWW.UNRBEP.ORG)

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