

# Nez Perce Tribe Energy Efficient Facility Installation



# Getting to Know Us

- Established by treaty with the United States government in 1868, the current Reservation consists of 770,000 acres of which only 124,000 are tribally-owned. The hospitality of the Nez Perce people has been famous since the Lewis and Clark party stumbled over the mountains in 1805.
- Part of five Idaho counties, Nez Perce, Lewis, Latah, Idaho and Clearwater Counties, are located within the reservation boundary. The cities of Lapwai and Kamiah serve as Tribal centers on the east and west ends of the Reservation. U.S. Highway 95 runs north and south through Idaho, and the reservation, and serves as a major interstate highway. Highway 12 runs east and west through Idaho's panhandle. It loosely follows the trail Lewis and Clark used to cross the mountains and today is a national scenic highway.
- Nez Perce Reservation lands consist of productive dry-land wheat farms that border on the Clearwater and Nez Perce National Forests. Beside arable hill tops and river bottoms, the reservation includes forested river canyons and steep, non-arable hillsides. The chief economic basis of this entire region is in agriculture and timber products.

# Geography





**Idaho has some of the cheapest electricity in the nation**



# Power Supply



Dworshak Dam



Lower Granite Dam

## Related Facts

- ❖ Tribal program offices are housed in 40-plus separate buildings - in six counties in two states
- ❖ With few exceptions all are heated and cooled with electricity
- ❖ Several buildings are from the old Fort Lapwai Agency-era built in the early 20<sup>th</sup> century with only sporadic energy updates since then
- ❖ Yearly electrical costs exceed \$ 380,000

# Project Goals

- Reduce the Nez Perce Tribal government's operating costs
- Provide a better working environment for Tribal employees

# The Lucky Five



BOYS & GIRLS CLUB

NPTEC & OLC OFFICES



VETERAN'S OFFICE BUILDING



WATER RESOURCES



PI NEE WAUS OFFICES



# Community Center Supply



# The Project - Electrical

- ❖ Replace 631 lighting fixtures with 2' x 4', two lamp 32W, T-8 in five buildings. Four of the five buildings are Tribal government offices.
- ❖ Largest consumer of electricity was the Boys and Girls Club because of their 24/7 anti-vandalism lighting policy. T-8 fixtures and motion sensors reduced costs.

# The Project - Insulation

Add Blow-in Insulation to a R-38 Rating:

- ❖ NPTEC/OLC Offices: 7,500 square feet. Existing R-Value was estimated at R-18 .
- ❖ Water Resource Offices: 2,900 square feet. Existing R-Value was estimated at R-8.
- ❖ Veteran's Building Office: 13,500 square feet. Existing R-Value was estimated at R-18.
- ❖ PiNeeWaus Offices: 6,724 square feet. Existing R-Value was estimated at R-18.

Total: 30,624 sq. ft.

# The Project - Windows

- ❖ Replace approximately 205 exterior windows in four Tribal office buildings. The windows were to be Vinyl, Low-E, single hung, .30 shading coefficient
  - PiNeeWaus: 83
  - NPTEC/OLC: 39
  - Water Resources: 20
  - Veteran's Building: 63

# Project Estimate vs. Bid Amount

## Window Replacement

Estimate  
\$65,639

Bid  
\$62,155

## Added Insulation

Estimate  
\$14,215

Bid  
\$19,569

## Lighting Upgrade

Estimate  
\$51,380

Bid  
\$75,371



# Installation - Windows



# Installation - Insulation



# Installation - Lighting



# Before & After - Windows



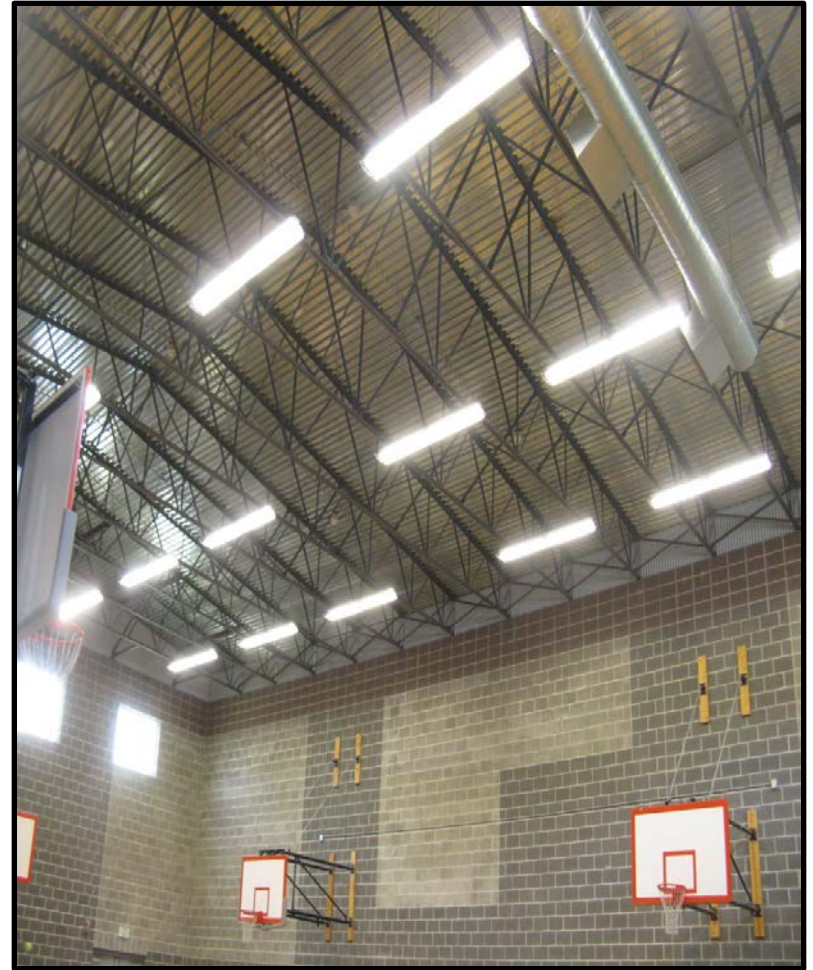


# Before & After - Windows





# Before and After - Lighting



# Before and After - Lighting





# Before and After - Insulation



# Before and After - Insulation



# Avista Corporation

- ❖ Power production through hydroelectric plants, coal and biomass in three states
- ❖ Previous assistance in lighting replacement project with excellent rebate program
- ❖ Hours studying existing energy waste/cost
- ❖ Determine optimum method to achieve 30% in energy conservation
- ❖ **Incentive Rebate Program**



# Avista Corporation

Energy Cost Savings	Simple Payback Before Incentives	Potential Incentive	Simple Payback After Incentives
<b>Boys &amp; Girls Club</b>			
\$9,056	1.4 yrs	\$6,784	.6 yrs
<b>Water Resources Office</b>			
\$2,590	9.8 yrs	\$7,471	6.9 yrs
<b>Veteran's Office Building</b>			
\$7,770	5.9 yrs	\$16,842	3.7 yrs
<b>NPTEC/OLC Offices</b>			
\$5,213	7.0 yrs	\$12,380	4.6 yrs
<b>Pi Nee Waus Offices</b>			
\$3,668	6.6 yrs	\$7,855	3.7 yrs

# Avista Presentation – October 9, 2012



# After Facts

## Estimated Annual Savings

322,813 Kwh or \$30,000 in Tribal operating costs

## Actual Rebate Amount

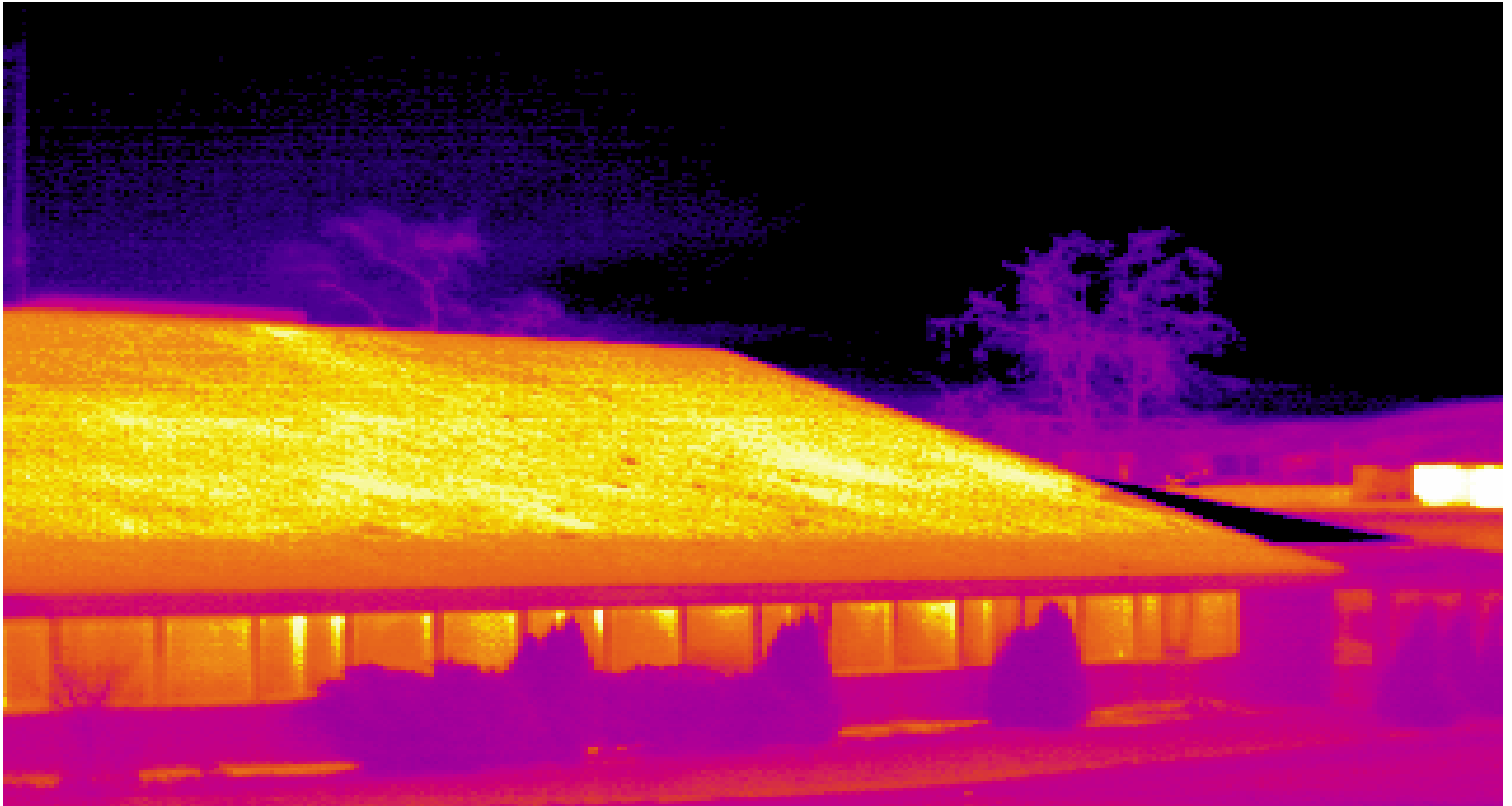
\$49,723

## Actual Savings – Aug 2011 vs. Aug 2012

\$1,270.55

# Infrared Imagery – December 2005

- Veteran's Building Offices



# Infrared Imagery – November 2012



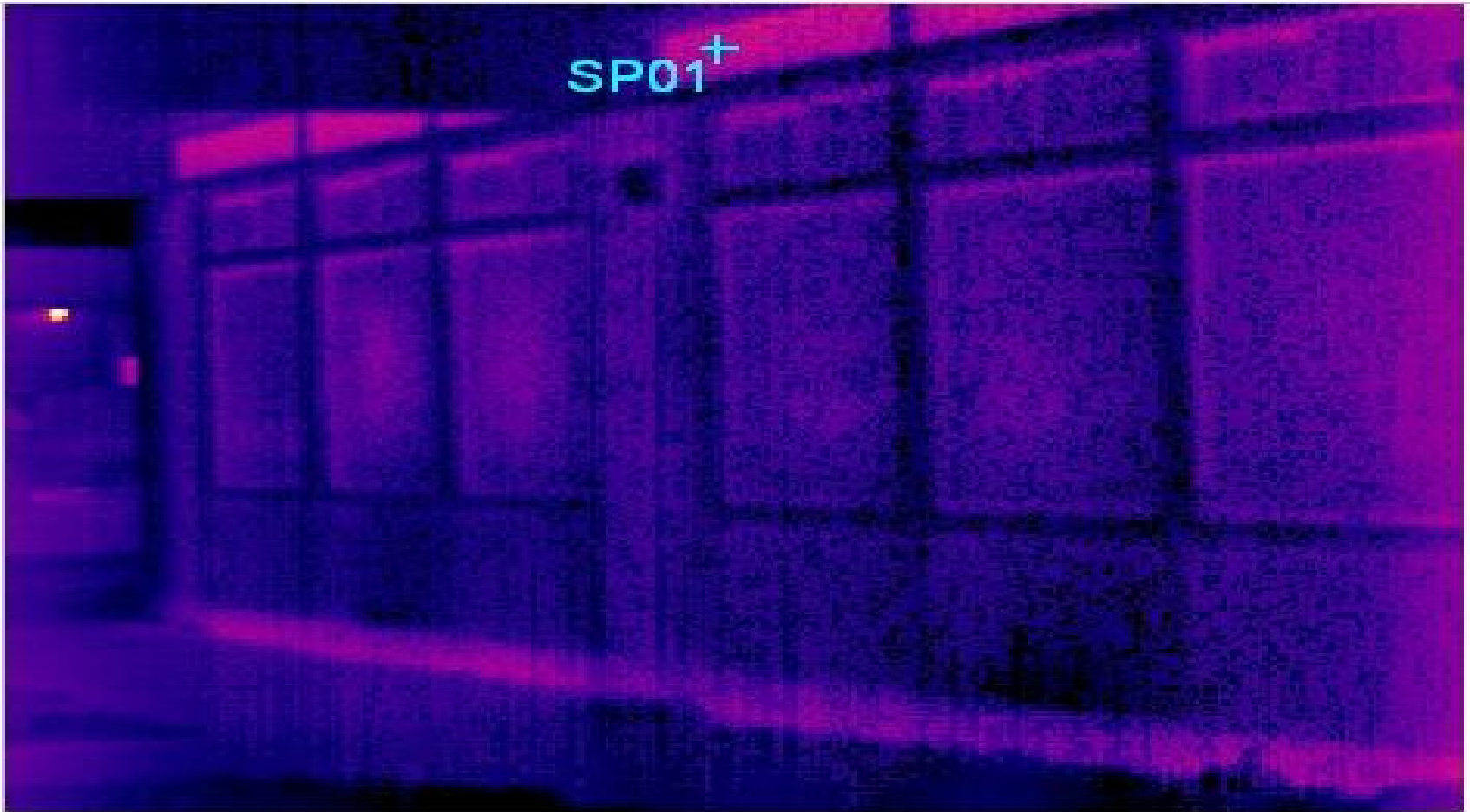
# Infrared Imagery – December 2005

- Pi Nee Waus (Land Services) Offices



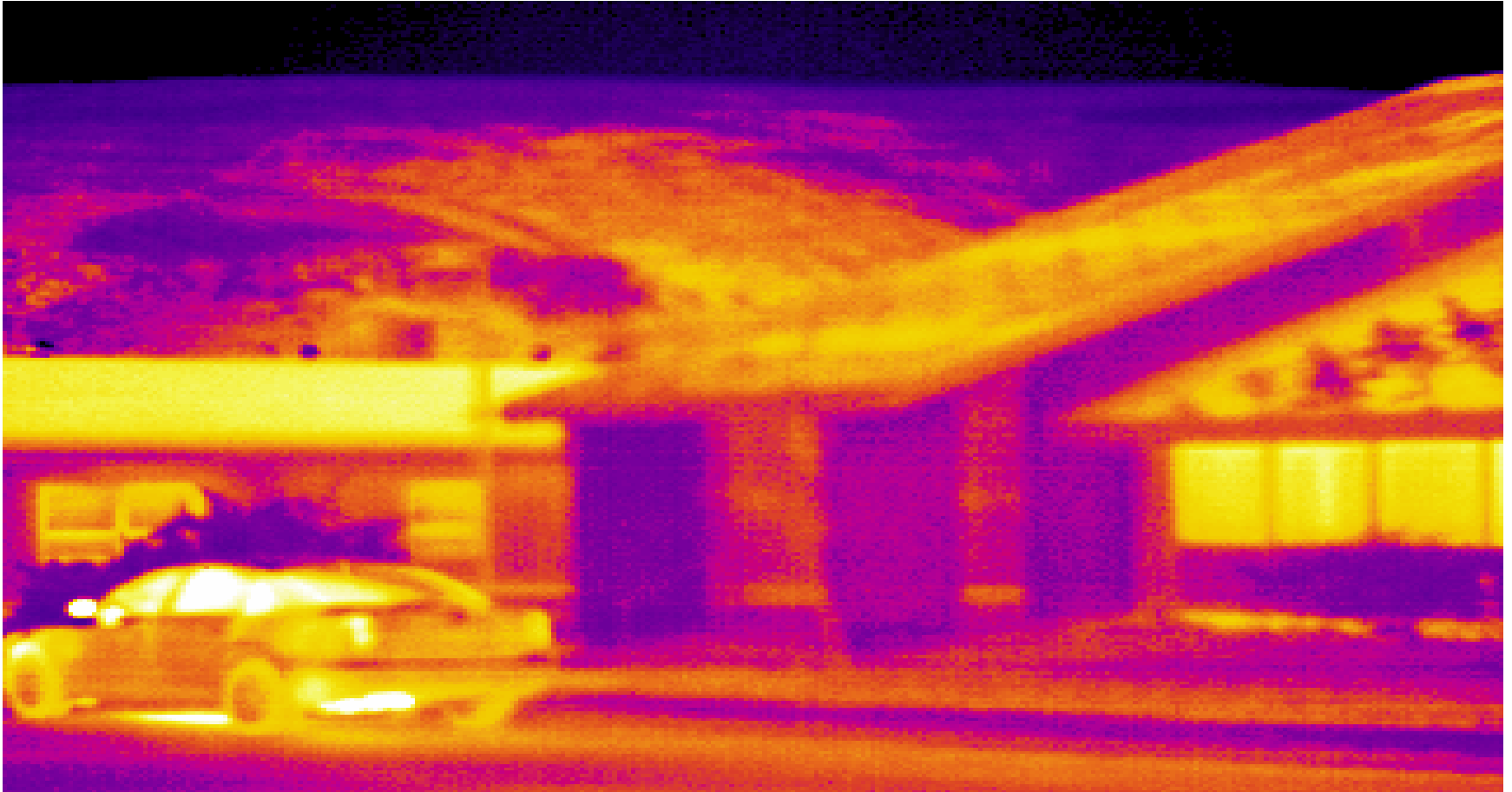


# Infrared Imagery – November 2012



# Infrared Imagery – October 2005

- NPTEC Office Wing (left) and Veteran's Building (right)



# Infrared Imagery – November 2012



