



Payson

ENERGY & FACILITY

— *solutions* —

Lin Alder, Matt Bruce & Leslie Larocque 435.632.8433 *August 20, 2014*

Are Your Buildings Money Sinks or Money Sources?



?



Are You Overpaying Utilities & Maintenance?

10%  **30%**
Reduction (or more)



Increased equipment and operation efficiency
= Stop overpayment

Is Payson Overpaying Utilities/O&M?

Building Controls

- Is scheduling optimized?
 - Night/evening setbacks, reset after special events, simultaneous heating/cooling
- Are temperatures set correctly?
 - Boiler supply/return?
- Energy saving Indoor Air Quality improvements?
 - Are economizers installed and functioning?
- Are Variable Speed Drives an option for Pumps and Fans?
 - Are pumps in their efficiency 'sweet spot' as often as possible?



Is Payson Overpaying for Utilities/O&M?

Proactive Maintenance

- Avoid end-of-life emergency repairs
 - Municipal building boiler?
 - Predict and minimize?
 - Reduce down time
- Capital Improvements List?
 - Known problems needing long term fixes



WHAT

Removing energy waste from facilities

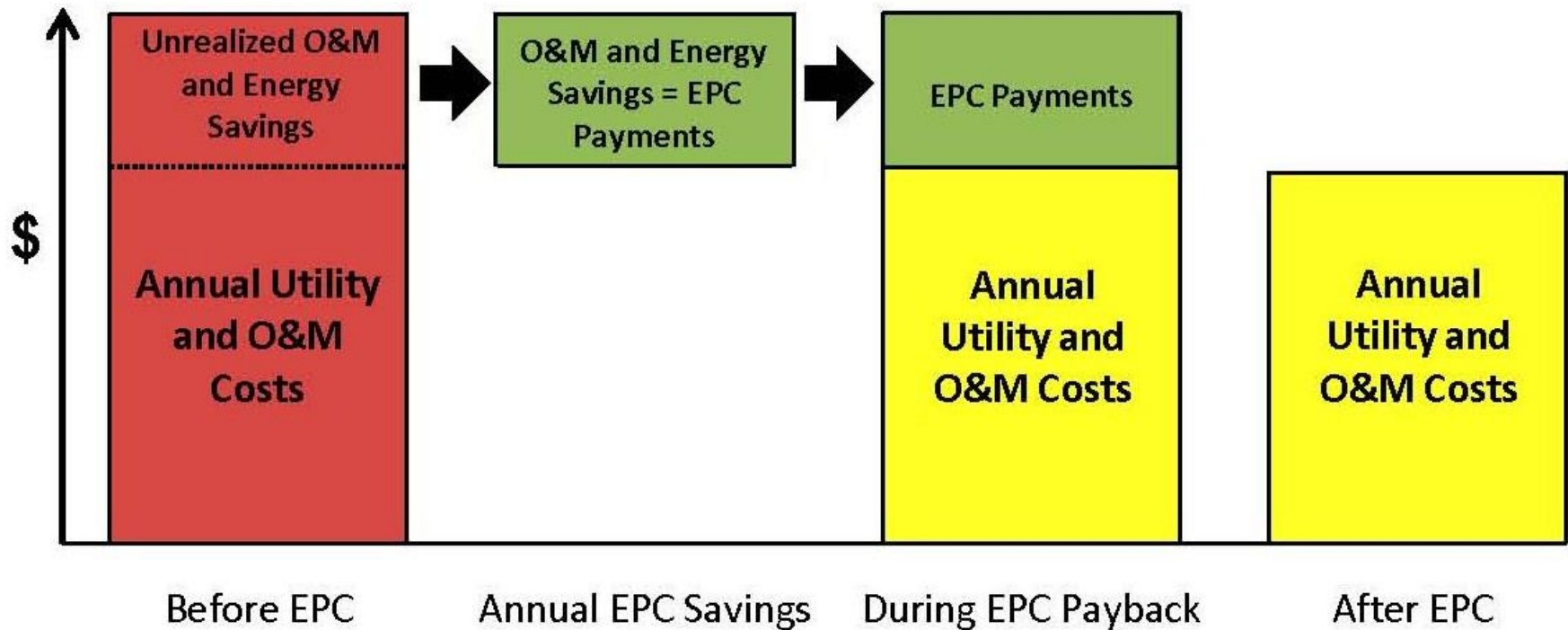
HOW

Design and implement improvements with guaranteed performance

HOW MUCH \$

Pay for improvements over time through energy and maintenance cost savings – not Capital budgets

How Does Performance Contracting Work?



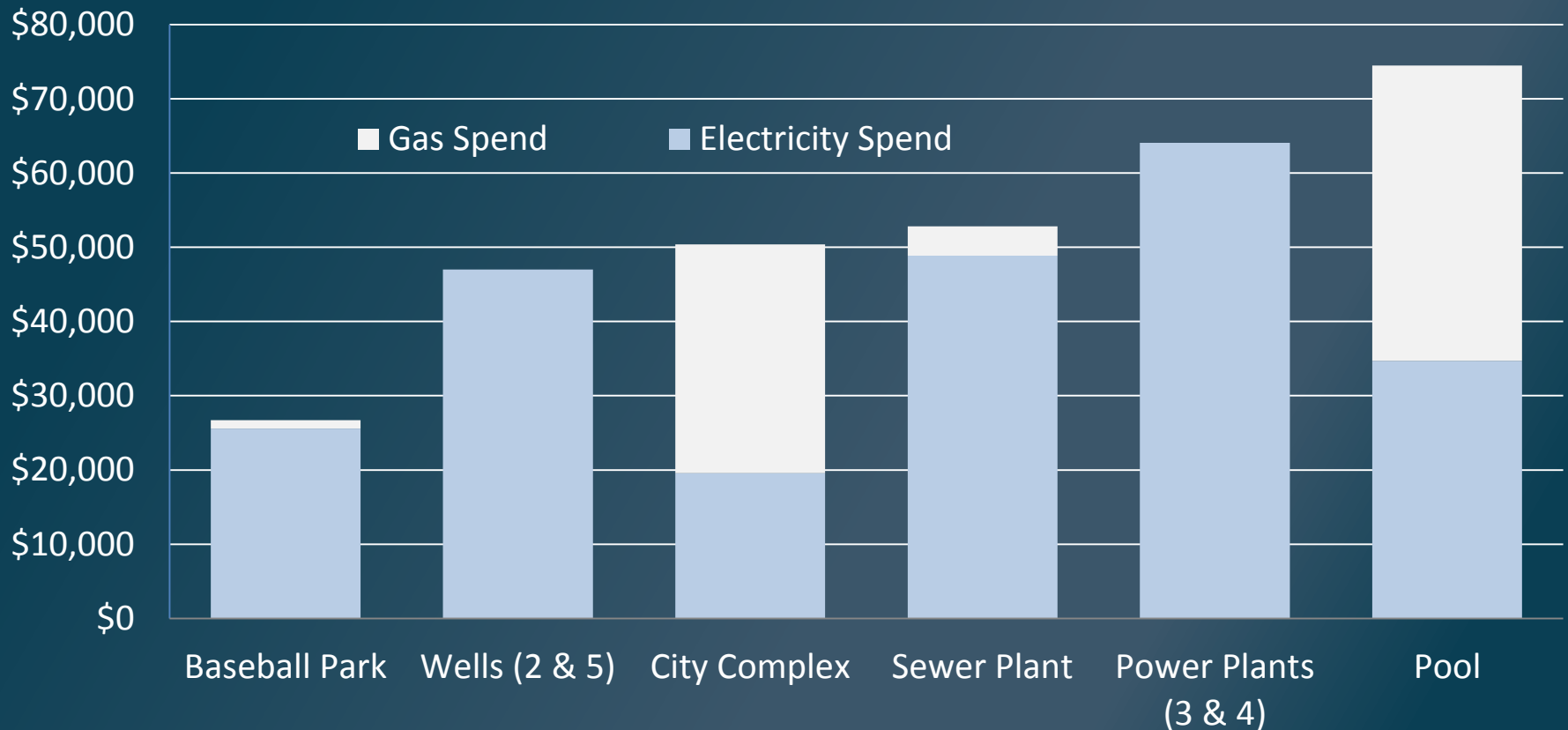
EPC = Energy Performance Contract

Payson Annual Energy Costs (sample)

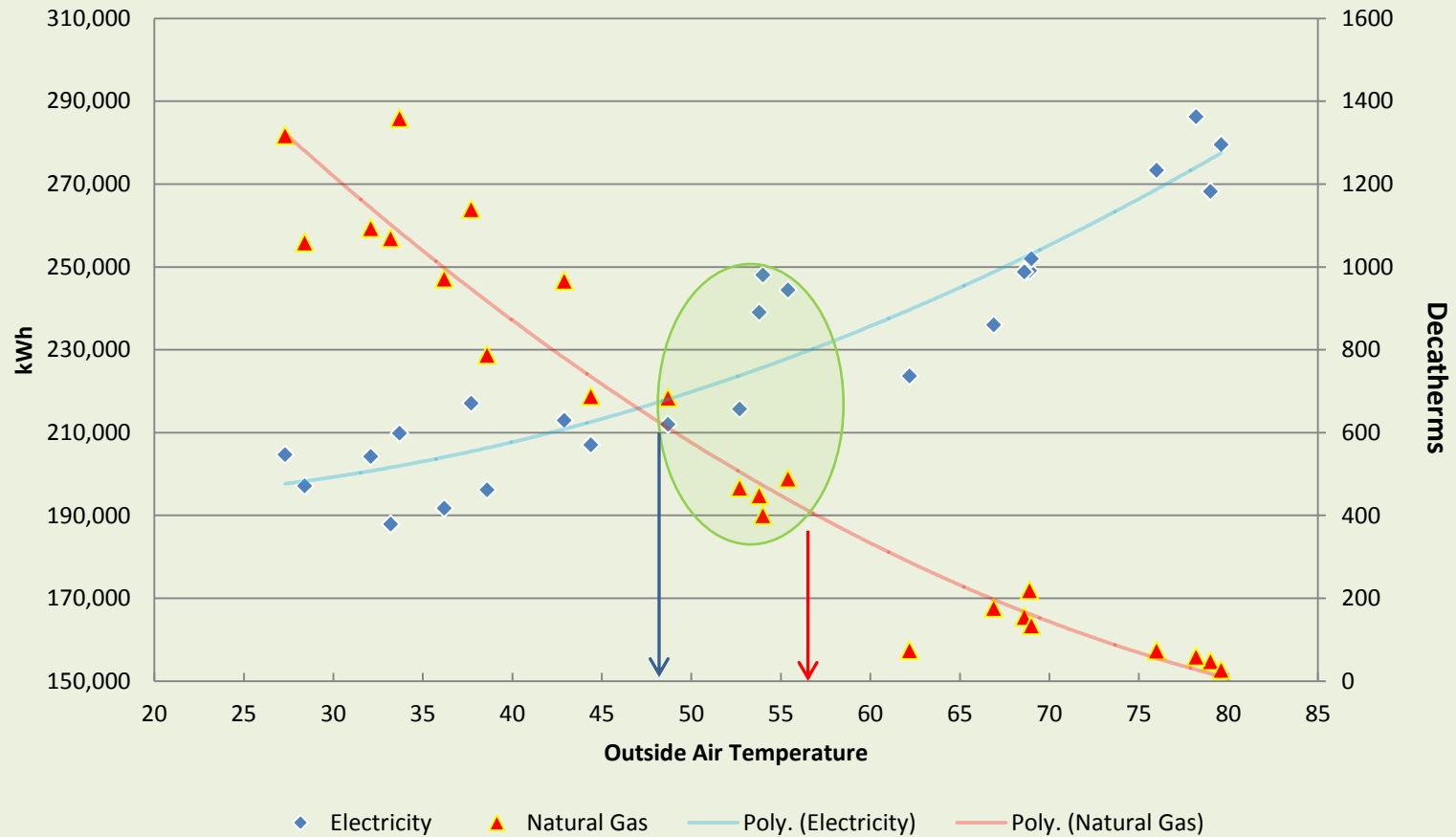
- Municipal Building: \$50,378 (?)
- Pool: \$74,500
- Wastewater Plant: \$52,800 (?)
- Baseball Park & Snack Shack: \$26,700
- Power Plant 3 & 4 (Electricity): \$64,067
- Wells 2 & 5: \$47,018
- Total:

Payson Energy Spend

Annual Energy Spend by Facility



Facility Energy Assessment



Annual Energy Cost Savings: Example #2

- \$450,000 annual utility expense
- 20% annual savings = \$90,000
- 10 - 15 year lease purchase
 - \$90,000 X 10 years = \$900,000
 - \$90,000 x 15 years = \$1.35 million

What Do You Prefer?

\$90,000/year

?



Utility Overpayment



Improve Your Facilities

Finance Costs vs. Facility Benefits

Finance Cost:

$\$900,000 \times 3\%$



\$142,856

Facility Investment:

$\$900,000 - \$142,856$



\$757,144

Cost vs. Overpayment Reduction = \$1 to \$5.3

Worst Case* Finance Costs Scenario

For every \$1 spent on financing...

Payson receives \$5.30 in overpayment reduction / facility investment

*Does not include utility incentives, capital contribution, debt restructuring or early payoff

Rate Increases Function Like Compounding Debt

Deseret News

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Deseret News

Rocky Mountain Power asking for rate hike

Deseret News

Published: Friday, Jan. 3 2014 1:44 p.m. MST

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Rocky Mountain Power is requesting a price increase of \$76.3 million or 4 percent overall average. A typical residential customer would see an increase of about \$3.73 on their monthly bill.

Ravell Call, Deseret News

[Enlarge photo](#)

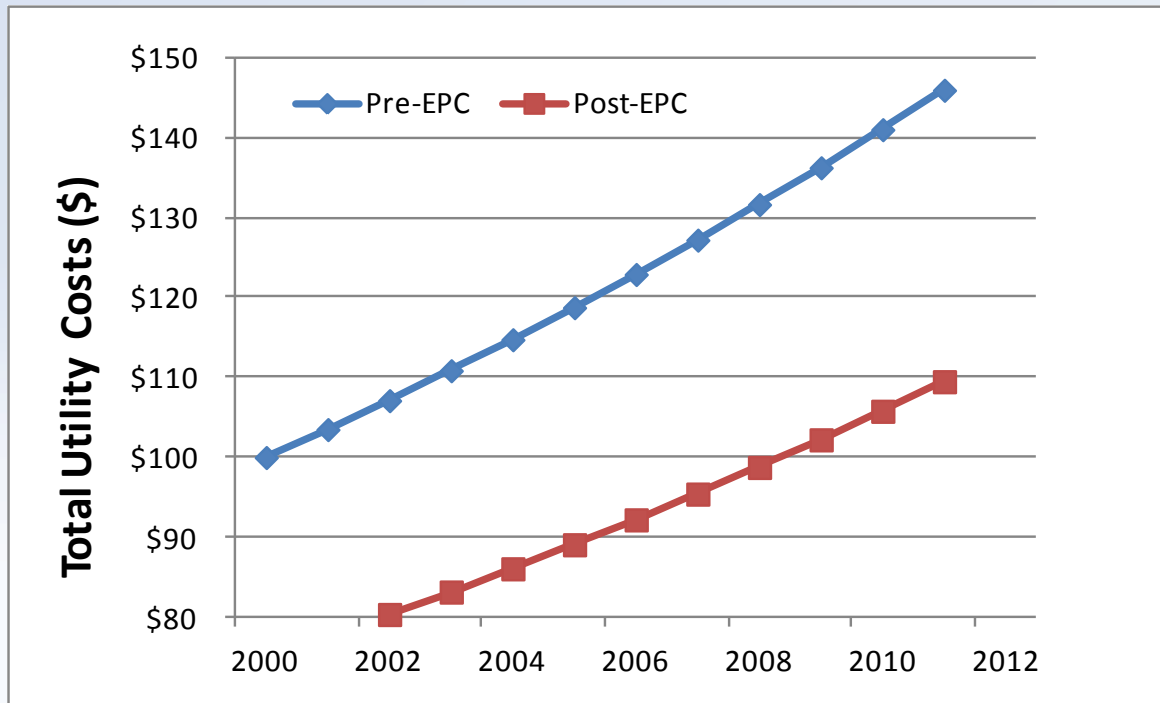
Summary

Rocky Mountain Power is requesting a price increase of \$76.3 million or 4 percent overall average. A typical residential customer would see an increase of about \$3.73 on their monthly bill.

SALT LAKE CITY — Utah power users may pay a little more for their electricity because of a rate hike request from the state's largest electric utility.

Rocky Mountain Power is requesting a **rate increase** of \$76.3 million or **4 percent overall on average**. If approved by the Utah Public Service Commission, a typical residential customer would see an increase of about \$3.73 on their monthly bill.

Uncontrollable Rate Increases vs. Guaranteed Savings



EPCs reduce utility costs, but rates increase.
Today's energy savings increase in value over time.

Utah Entities Using EPC: Sample List

- Washington City
- St. George City
- Orem City
- Salt Lake City
- Salt Lake Community College
- State Prison
- University of Utah
- Utah Division of Facility Construction and Management

Utility Incentives vs. Performance Contracts

Utility Programs	Performance Contracts
Identify opportunities (free)	Identify opportunities (free & cost)
Primarily prescriptive	Primarily custom
Utility-approved contractors	State-approved contractors (can use utility-approved subs)
3 rd party providers	In-house or 3 rd party providers
Generally piece by piece	Generally comprehensive
Eligible for cash incentives	Eligible for same cash incentives
Not eligible for financing	Eligible for financing

Can Performance Contracting Help Payson?



Typically financed through lease-purchase agreement

- Funds from multiple sources may be combined*

Annual cost savings meet or exceed annual payments

Redirect money already being spent on utility budget

State pre-approved EPC provider list

What Makes A 'Good' Energy Partner?

People

- **Collaborative team with history together**
- **Low turnover; utilize local subcontractors**
- **Shared values**

Expertise

- **Deeper savings and proven solutions**
- **Collaboration with Fac. Mntnc. is key**
- **Specific: Rec., Admin., Library, etc.**

Project Approach

- **Know where and how to focus**
- **Integrated delivery of all services**
- **Open book/transparent pricing**

Next Steps For Payson

NO COST (completed)

- Finish preliminary building, equipment assessment
- Data analysis and site visits
- Present preliminary findings to decision makers

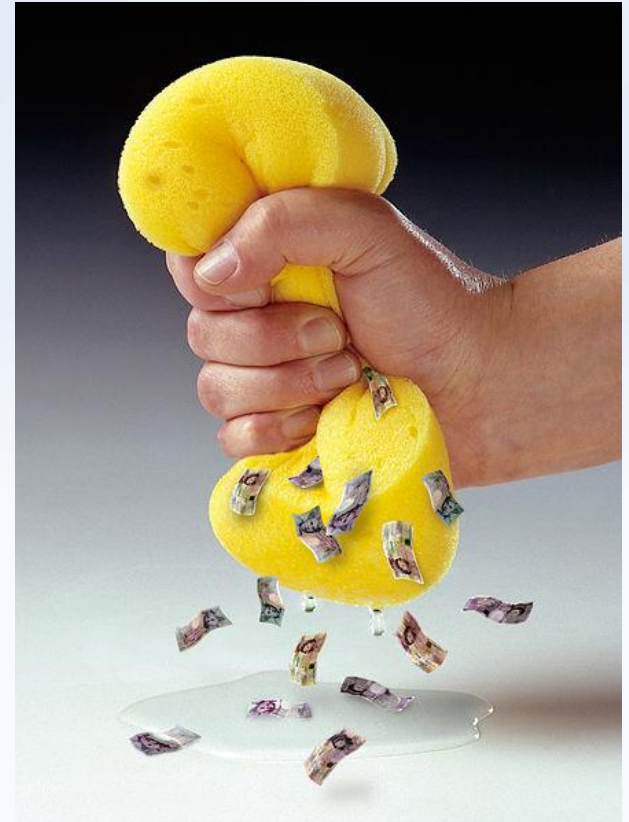
COST

- Commitment: Investment Grade Audit
- Lease Agreement & Funding
- Contracting/construction/optimization
- Measurement & Verification for term of contract

Are Your Buildings Money Sinks or Money Sources?



?



Highlands Ranch Community Association

- *29,000 households*
- *331,000 sqft*
- *Conservative*
- *5,000+ daily visits*
- *Utility bills: \$1 mil*
- *~\$90 Million in Deferred Maintenance*



HRCA Improvements

- Add variable frequency drives to pool pumps
- Upgrade building automation systems
- Replace outdated pool room air handling units
- Insulate pipes, heat exchangers, and other mechanical equipment
- Install high-efficiency lighting
- Retrofit sinks, toilets, and showers
- Improve air conditioning system
- Install high ceiling air destratification



HRCA Project Details

Total Project Cost

\$2,608,916

Utility Rebates

\$131,000

Project Cost After Rebate

\$2,477,916

Annual Savings

\$207,490



Total Project ROI: 12 years

HRCA Projected Annual Savings

Energy Conserved
23%

Electricity Conserved
1,450,768 kWh

CO² Emissions Reduced
3,749,702 lbs.

Natural Gas Saved
93,094 Therms



Evergreen Parks and Recreation

- *Rural/ Mountain town*
- *22,000 households*
- *Many Years of Deferred Maintenance*
- *High Capital Improvement Project Needs*



EPRD Summary

FACILITIES

- Buchanan Recreation Center
- Wulf Recreation Center
- Evergreen Lakehouse
- Park Administrative Building
- Park Operations Building



EPRD Facility Improvements

- Added building insulation
- Improved heating and cooling controls
- Installed water-saving components
- Provided new energy-efficient lighting and controls
- Installed new pool energy recovery heating system
- Commissioned and retro-commissioned equipment



Project Cost and Savings Summary

Project Installation Cost:	\$849,000
EPRD CIP Contribution:	(\$238,000)
Estimated Utility Rebates:	<u>(\$44,000)</u>
Net Project Financed Amount:	\$567,000
Total Annual Savings:	\$44,000
Project Simple Payback:	12.9 years

Notes:

1. Net project financed amount 100% funded from future savings.
2. Financing currently quoted at 3.4% rate over a 12 year term.

EPRD Project Savings

- Energy Conserved: 23.7%
- Electricity Conserved: 364,316 kWh
- CO² Emissions Reduced: 435 Metric Tons
- Natural Gas Saved: 29,928 Therms



Thank You!



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