01 / REMOTE REVIEW DEMONSTRATION

Understand the home behind the bills.

2406 County Road 852, McKinney, Texas



CASCADE WORKS SAMPLE

DEMONSTRATION DATA - NOT THIS HOME'S UTILITY USE

No owner bills, equipment records, occupancy history or test results were supplied. Every numerical usage, tariff, savings and cost scenario below is invented to demonstrate the deliverable.

A real review replaces these examples with owner-supplied records, checks the assumptions, and prioritizes investigations. Actual efficiency, energy use and savings for this property remain unknown.

Starting at $495. Written scope agreed first; on-site tests and installation are separate.

02 / WHAT IS KNOWN AND WHAT IS MISSING

Build an evidence-based baseline.

Listing facts / available, not independently verified

3,246 sq ft and 1978 construction are listing-reported. Condition and heated floor area are unconfirmed.

Energy and water / missing

Twelve consecutive bills for electricity, every heating fuel and water; meter dates, units, tariff details and fixed charges.

Equipment / missing

HVAC model, age, fuel and maintenance; water-heater details; major pumps, refrigeration and other significant loads.

Household and comfort / missing

Occupants, occupancy changes, thermostat routines, hot or cold rooms, drafts and moisture concerns.

Site and envelope / missing

Roof, insulation, windows, ducts, shading, drainage, and existing inspection or test results.

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ENERGY STAR's Yardstick compares annual energy use with similar homes while accounting for weather, home size and occupancy. No benchmark is assigned here because the needed data is absent. [2]

03 / FICTIONAL ELECTRICITY DATASET

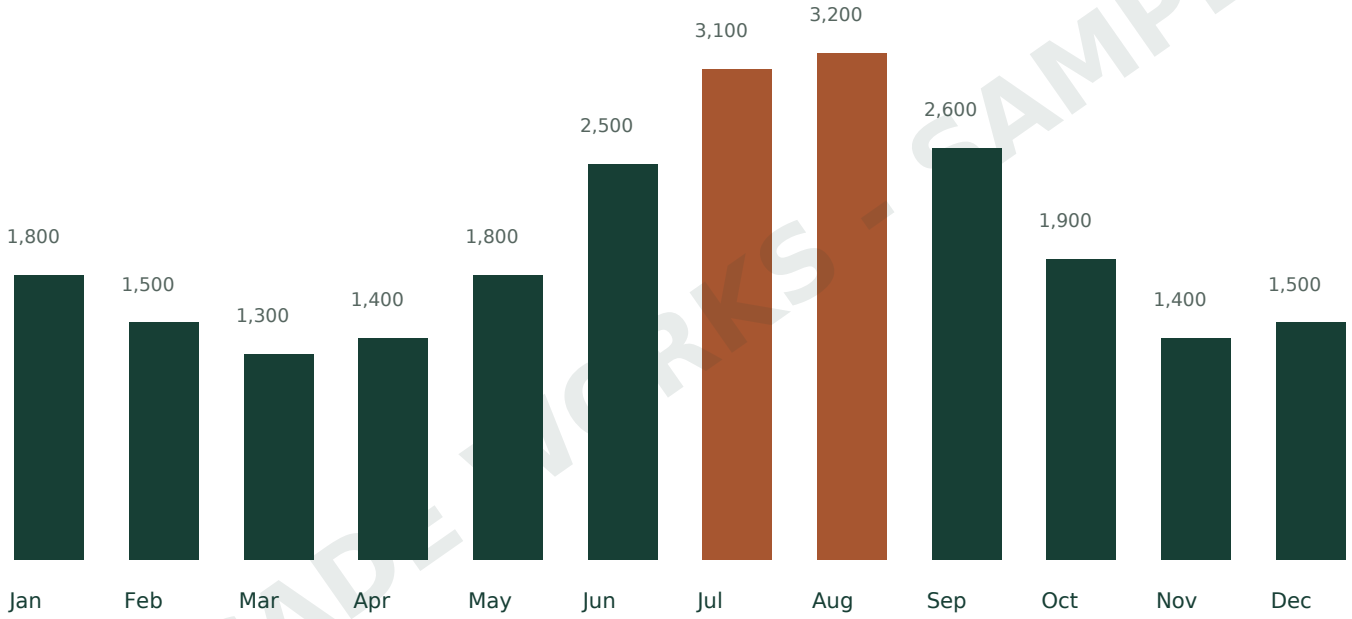
See the seasonal pattern.

24,000 kWh / year

EXAMPLE ONLY

Not weather-normalized. Not actual meter readings.

Monthly electricity use (kWh) - fictional



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The example peaks in summer. That pattern could guide questions about cooling, irrigation pumps, occupancy or other seasonal loads; it does not identify the cause by itself.

Illustrative electricity price: $0.15/kWh plus $20/month fixed charge. Annual example bill = 24,000 x $0.15 + 12 x $20 = $3,840. No other fuels, taxes or tariff tiers are included.

A real review reconciles billing periods and identifies rate or occupancy changes before comparing years.

04 / SENSITIVITY ANALYSIS, NOT A FORECAST

Compare scenarios transparently.

These are whole-home electricity-reduction assumptions, not project-specific savings estimates. They are alternatives and must not be added together.

Reduction	kWh saved	$/year saved	New annual bill
10%	2,400	$360	$3,480
20%	4,800	$720	$3,120
30%	7,200	$1,080	$2,760

Calculation: saved kWh x $0.15. Fixed charges remain $240/year in all cases. Real tariffs, demand charges, export credits and taxes can change the result.

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AN EXAMPLE OF SIMPLE PAYBACK

For an invented $3,000 project cost: $360/year saves back the cost in 8.3 years; $720/year in 4.2 years; $1,080/year in 2.8 years. These are arithmetic examples, not quotations or estimated outcomes for any project.

Simple payback excludes financing, maintenance, price changes and equipment life. No incentives are assumed. Actual savings are unestimated.

05 / CONDITIONAL PROJECT PRIORITIES

Investigate the highest-value questions.

1 / Comfort, air leakage and distribution

If occupants report persistent discomfort, ask a qualified professional to investigate the envelope, ducts and controls. Require findings before selecting insulation, sealing or replacement work.

2 / Existing heating and hot water

Obtain equipment and service records. Compare a repair or operational correction with replacement only when the evidence supports it. System condition is currently unknown.

3 / Solar after demand is understood

Use verified bills, roof condition, site-specific production analysis and actual utility terms. No solar size, production estimate or payback is assigned in this sample.

Priority rule

Address documented problems first, then compare cost, comfort and maintenance benefits. A low-cost remedy may outrank a larger project even when its annual dollar savings are modest.

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WHAT AN ON-SITE PROFESSIONAL ADDS

Remote review organizes evidence and decisions. Measurements such as air leakage, duct leakage or thermal observations need an appropriately scoped site assessment. Ask for pre- and post-work testing where relevant.

06 / SEPARATE RESOURCE AND LIFESTYLE BENEFITS

Water and upkeep belong in the picture.

First establish the water baseline

Request monthly use, unit charges, irrigation schedules and the water source. EPA recommends checking for household leaks; follow up on unexplained use before expanding irrigation. [3]

FICTIONAL WATER SAVINGS EXAMPLE

If annual use fell by 20,000 gallons and the avoided volumetric charge were $8 per 1,000 gallons, the variable-bill reduction would be $160/year. Fixed fees would remain. This is not this property's tariff or a prediction.

Rainwater and graywater are different projects

Rain capture needs a collection, storage and overflow plan. Graywater needs separate local-rule and plumbing review. No discharge area, water quality or lawful reuse is established here.

Track time as well as money

Record mowing, irrigation and garden care hours before and after a change. An orchard, greenhouse, pool or livestock area may add enjoyment while increasing water use and ongoing work.

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Do not count lifestyle additions as efficiency savings without a supported calculation.

07 / A FOLLOW-THROUGH WORKSHEET

Measure results without guessing.

Before the work

Keep 12 months of bills with billing days and units. Record occupancy, thermostat practices, equipment and the specific comfort problem. Save the agreed scope and assumptions.

At completion

Keep invoices, equipment details, warranties and agreed commissioning or test results. Record the date and exactly what changed.

Each month

Log kWh, fuel units, gallons, bill amount and days billed. Separate unit-price changes from use changes. Note visitors, vacancies, new equipment and unusual weather.

After a full seasonal cycle

Compare an appropriate baseline while accounting for weather and occupancy. Seek professional analysis where causal savings or normalized performance is needed.

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DECISION RECORD

Project: _____ Completed: _____

Expected benefit: _____ Evidence: _____

Next decision: continue / adjust / investigate

08 / SCOPE, SOURCES AND HANDOFF

What this review delivers.

Included in a scoped remote review

A record-based baseline, documented assumptions, prioritized investigations, relevant scenarios and a way to track outcomes. The final scope depends on available data and agreed questions.

Outside the remote review

An inspection, certified energy rating, engineering design, code determination, permit approval, construction estimate or guaranteed savings. Field testing and specialist design are separately arranged.

Next step for this property

Collect the missing owner records before offering a property-specific performance conclusion. PTJ Home Defenders advertises local home energy assessments; confirm its current testing scope if field work is needed. [4]

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Sources reviewed September 24, 2026

[1] Zillow - listing facts only

[2] ENERGY STAR - how the Home Energy Yardstick works

[3] EPA WaterSense - household leak checks

[4] PTJ Home Defenders - local assessment candidate

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Sample uses fictional performance data. A real review starts with evidence.