

```

attic_basics <- energy_test_googlesheets |>
  select( `Attic insulation type`, `Quality of attic insulation's installation? Assess worst
  mutate(Attic_all = paste(`Attic insulation type`, ",", `Quality of attic insulation's insta
  mutate(Info = 'Attic',
        .before = `Attic insulation type`)

attic_basics <- attic_basics[,-c(2,3,4)]

names(attic_basics) <- c('Info', 'Values')

```

```

gallon_sources <- double_basics |>
  select('Gallons of Heating Oil', 'Gallons of Propane', 'Gallons of Kerosene')|>
  pivot_longer(cols = c('Gallons of Heating Oil', 'Gallons of Propane', 'Gallons of Kerosene'
    names_to = "Source",
    values_to = "Amount")

gallon_cost <- double_basics|>
  select('Cost in Dollars (Heating Oil)', 'Cost in Dollars (Propane)', 'Cost in Dollars (Ker
  pivot_longer(cols = c('Cost in Dollars (Heating Oil)', 'Cost in Dollars (Propane)', 'Cost
    names_to = "Source_Cost",
    values_to = "Dollars")

annual_totals_gallon <- gallon_sources |>
  cbind(gallon_cost) |>
  filter(Amount != is.na(NA))|>
  mutate(Annual_Totals = paste(`Amount`, " Gallons,", `Dollars`, "USD"))

annual_totals_gallon <- annual_totals_gallon |>
  mutate(Source = recode(Source, 'Gallons of Heating Oil' = 'Annual heating oil usage from

annual_totals_gallon <- annual_totals_gallon[, -c(2,3,4)]

```

```

kWh_sources <- double_basics |>
  select('kWh of Electricity')|>
  pivot_longer(cols = c('kWh of Electricity'),
    names_to = "Source",
    values_to = "Amount")

kWh_cost <- double_basics|>
  select('kWh of Electricity')|>
  pivot_longer(cols = c('kWh of Electricity'),
    names_to = "Source_Cost",

```

```

    values_to = "Dollars")

annual_totals_kWh <- kWh_sources |>
  cbind(gallon_cost) |>
  filter(Amount != is.na(NA))|>
  mutate(Annual_Totals = paste(`Amount`, " kWh,", `Dollars`, "USD"))|>
  mutate(Source = recode(Source, 'kWh of Electricity' = 'Annual electricity usage from bills'))

annual_totals_kWh <- annual_totals_kWh[, -c(2,3,4)]

```

```

cords_sources <- double_basics |>
  select('Cords of Firewood')|>
  pivot_longer(cols = c('Cords of Firewood'),
    names_to = "Source",
    values_to = "Amount")

cords_cost <- double_basics|>
  select('Cords of Firewood')|>
  pivot_longer(cols = c('Cords of Firewood'),
    names_to = "Source_Cost",
    values_to = "Dollars")

annual_totals_cords <- cords_sources |>
  cbind(cords_cost) |>
  filter(Amount != is.na(NA))|>
  mutate(Annual_Totals = paste(`Amount`, " Cords,", `Dollars`, "USD"))|>
  mutate(Source = recode(Source, 'Cords of Firewood' = 'Annual firewood usage from bills',))

annual_totals_cords <- annual_totals_cords[, -c(2,3,4)]

```

```

tons_sources <- double_basics |>
  select('Tons of pellets')|>
  pivot_longer(cols = c('Tons of pellets'),
    names_to = "Source",
    values_to = "Amount")

tons_cost <- double_basics|>
  select('Tons of pellets')|>
  pivot_longer(cols = c('Tons of pellets'),
    names_to = "Source_Cost",
    values_to = "Dollars")

```

```

annual_totals_tons <- tons_sources |>
  cbind(tons_cost) |>
  filter(Amount != is.na(NA))|>
  mutate(Annual_Totals = paste(`Amount`, " Tons,", `Dollars`, "USD"))|>
  mutate(Source = recode(Source, 'Tons of pellets' = 'Annual pellets usage from bills',))

annual_totals_tons <- annual_totals_tons[, -c(2,3,4)]

```

```

other_sources <- double_basics |>
  select('Write the quantity and measuring unit')|>
  pivot_longer(cols = c('Write the quantity and measuring unit'),
    names_to = "Source",
    values_to = "Amount")

other_cost <- double_basics|>
  select('Write the quantity and measuring unit')|>
  pivot_longer(cols = c('Write the quantity and measuring unit'),
    names_to = "Source_Cost",
    values_to = "Dollars")

annual_totals_other <- other_sources |>
  cbind(other_cost) |>
  filter(Amount != is.na(NA))|>
  mutate(Annual_Totals = paste(`Amount`, `Dollars`, "USD"))|>
  mutate(Source = recode(Source, 'Write the quantity and measuring unit' = 'Other annual en

annual_totals_other <- annual_totals_other[, -c(2,3,4)]

```

```

annual_totals <- annual_totals_kWh|>
  rbind(annual_totals_gallon, annual_totals_cords, annual_totals_tons )

names(annual_totals) <- c('Info', 'Values')

```

```

all_basics <- double_other |>
  rbind(character_other, attic_basics,annual_totals )|>
  arrange(factor(Info, levels = c('Date Built', 'Foundation Type', 'Attic', 'Number of floors

```

Energy Audit Report

Homeowner: Me_test1

Address: Me_test1

Auditors: Rudolfs

Contact: mdicommunityenergy@coa.edu, 802 266 0301

Date: 25 July 2024

We conducted an energy assessment of your home on . This report will tell you what we did, what we found, and what we suggest for your home. These suggestions include information on incentives and financing to make improvements more affordable.



Table of Contents

Here will be the table of contents

1. Summary of your Audit

1.1 Visual Inspection and Measurements

We started with a tour and visual inspection of the inside and outside of the home. We identified any visible damage to the building, moisture control strategies, major appliances, and insulation. We measured square footage and volume of the home, as well as the area of all exterior windows and doors. We used a kill-a-watt meter to measure the electricity use of some appliances. During your audit, we used a carbon monoxide meter to measure the ambient carbon monoxide levels throughout the home.

1.2 Attic

We entered the attic to check for insulation, air sealing, ventilation, and potential hazards such as mold. Additionally, we visually inspected the attic ventilation and any duct and pipework passing through the attic.

1.3 Basement

We visually inspected any appliances in the basement and noted insulation levels, moisture, rodents, and any other concerns.

1.4 Combustion Appliance Safety

We assessed combustion appliances that burn fossil fuels such as propane, heating oil, or kerosene. These include furnaces, boilers, water heaters, and gas ovens. We visually inspected the combustion appliance(s) in your home. La LA la We also performed gas leak detection tests on your propane appliance(s).

1.5 Blower Door / Air Leakage Test

We used a large fan in an exterior door to depressurize your house. This allows us to determine the volume of air leakage into the house and to locate bigger air leaks. To find leaks, we used an infrared camera to check for unusually hot and cold spots. We also checked the pressure differences of the rooms to help determine major air leak locations.

2. Summary of Recommendations

We recommend the following upgrades for your home. Detailed information about these recommendations and financial resources can be found in other sections of this report.

| Recommendation | Description |
|--|-------------------------------|
| Furnace Tune-up | Description of Recommendation |
| Recommendations ranking [Low-flow Showerhead(s)] | Description of Recommendation |
| LEDs | Description of Recommendation |
| Window Dressers | Description of Recommendation |
| Refrigerator | Description of Recommendation |
| Freezer | Description of Recommendation |
| Induction Stove | Description of Recommendation |

3. What We Found

3.1 Basics

| Info | Values |
|--|--|
| Date Built | 2023 |
| Foundation Type | Walk in |
| Attic | Loose Cellulose , Poor instullation, 45 inches |
| Number of floors | 2 |
| Square footage of conditioned space | 76868 |
| Volume of conditioned space (cubic feet) | 78764 |
| Ambient Carbon Monoxide reading | 45, kitchen |
| Annual heating oil usage from bills | 6543 Gallons, 97554 USD |
| Annual propane usage from bills | 67 Gallons, 6432 USD |
| Annual kerosene usage from the bills | 865 Gallons, 5868 USD |

3.2 Exterior

3.3 Interior/Living space

3.4 Blower Door / Air Leakage Test

A blower door test simulates a 20mph wind hitting your house. To run the test, we used a large fan in an exterior door to depressurize your house. This allows us to determine the volume of air leakage into the house and to locate bigger air leaks. To find leaks, we used an infrared camera to check for unusually hot and cold spots. We also checked the pressure differences of the rooms to help determine major air leak locations. Air leaks are a big source of heat gain in warm weather and heat loss in cold weather. They also allow moisture to get into the home. Below are some numbers, pictures, and descriptions explaining what we found.

Using a thermal imaging camera, we looked for major air leakage locations and thermal bridging, where heat is bypassing the insulation. There was evidence of ...
3.5 Attic ###
3.6 Basement ### 3.7 Electrical and Mechanical Systems ### 3.8 Energy Bills ## 4. Recommendations