### "Shape Of Things to Come

How High Natural Gas Prices Will Effect the Cost-Effectiveness of Energy Improvements



### Price of Fuel

- # \$/KWH = .067
- # \$/Therm = .661

### House #1 40x28 Ranch Over Slab

- # As Is to Upgrade
- # House Score: As is 80.4 Upgrade 87.1
  - Features
    - NACH 0.50 to 0.35
    - Slab Edge 0 to R-5
    - 2x4 Wall R-15
    - Windows U 0.50 SHGC 0.62 to U 0.35 SHGC 0.35
    - Ceiling R-30 to R-38
    - Furnace AFUE 80% to 92%
    - H2O EF 0.53 to 0.62
      - With pipe and tank wrap 0.66
    - Ducts Leaky to tight
    - AC 10 SEER to 12 SEER



### House #1 Slab General Numbers

- # House Score: As is 80.4 Upgrade 87.1
- # Installed Cost of Improvements \$2544.00
- # Present Value \$3000.41
- # Total Fuel Use Therms 778 Cut to 610
- # Heating Fuel Use Therms 378 Cut to 267
- # Total Fuel Savings Therms 168 Improved to 321

# House #1 Slab Specific Upgrade Numbers

- # H2O: <u>C/B 6.20</u>, PV \$437.90, \$150.00
- **#** NACH: <u>C/B 5.71</u>, PV \$341.34, \$90.00
- # Ceiling R-38: <u>C/B 2.59</u>, PV \$654.57, \$537.00
- # Window: <u>C/B 2.11</u>, PV 426.81, \$430.00
- # Slab Edge: <u>C/B 2.07</u>, PV \$170.66, \$175.00
- **#** Ducts: <u>C/B 1.47</u>,PV \$219.27, \$225.00
- # Furnace: C/B 1.29, PV \$441.94, \$625.00
- # AC: <u>C/B .14</u>, PV \$29.94 , \$312.00

# House #2 40x28 2 Story Over Crawl

- # As Is to Upgrade
- # House Score: As is 80.3 Upgrade 87.6
  - Features
    - NACH 0.50 to 0.35
    - Vented Crawl to Un-vented Crawl
      - Perimeter R-11
    - 2x4 Wall R-15
    - Windows U 0.50 SHGC 0.62 to U 0.35 SHGC 0.35
    - Ceiling R-30 to R-38
    - Furnace AFUE 80% to 92%
    - H2O EF 0.53 to 0.62
      - With pipe and tank wrap 0.66
    - Ducts Leaky to tight
    - AC 10 SEER to 12 SEER



### House #2 Crawl General Numbers

- # House Score: As 80.3 is Upgrade 87.6
- # Installed Cost of Improvements \$3181.00
- # Present Value \$5771.17
- # Total Fuel Use Therms 1685 Cut to 729
- # Heating Fuel Use Therms 1102 Cut to 517
- # Total Fuel Savings Therms 329 Improved to 582
- # Total Fuel Cost Savings \$217 Improved to \$384

# House #2 Crawl Specific Upgrade Numbers

- # H2O: <u>C/B 9.60</u>, PV \$677.89, \$150.00
- **#** NACH: <u>C/B 5.35</u>, PV \$636.81, \$179.00
- # Window: <u>C/B 3.16</u>, PV 1280.80, \$860.00
- # Ducts: <u>C/B 2.93</u>, PV \$438.92, \$225.00
- # Ceiling R-38: <u>C/B 2.58</u>, PV \$654.58, \$538.00
- # Furnace: <u>C/B 2.54</u>, PV \$871.28 , \$625.00
- # AC: <u>C/B .58</u>, PV \$119.62 , \$312.00
- **#** Warm Crawl / Vapor Barrier: <u>C/B 0.24</u>, PV 43.47, \$392.00



#### House # 3 40x28 2 Story Over Basement

- # As Is to Upgrade
- # House Score: As is 80.7 Upgrade 87.8
  - Features
    - NACH 0.50 to 0.35
    - Basement R-11
    - 2x4 Wall R-15
    - Windows U 0.50 SHGC 0.62 to U 0.35 SHGC 0.35
    - Ceiling R-30 to R-38
    - Furnace AFUE 80% to 92%
    - H2O EF 0.53 to 0.62
      - With pipe and tank wrap 0.66
    - Ducts Leaky to tight
    - AC 10 SEER to 12 SEER



#### House #3 Basement General Numbers

- # House Score: As is 80.7 Upgrade 87.8
- Installed Cost of Improvements \$3004.00
- # Present Value \$6842.38
- # Total Fuel Use Therms 1104 Cut to 806
- # Heating Fuel Use Therms 796 Cut to 559
- # Total Fuel Savings Therms 406 Improved to 704
- # Total Fuel Cost Savings \$289 Improved to \$530

# House #3 Basement Specific Upgrade Numbers

- # H2O: C/B 11.20, PV \$791.34, \$150.00
- # NACH: <u>C/B 5.17</u>, PV \$924.26, \$269.00
- # Ducts: C/B 3.13, PV \$468.74, \$225.00
- # Window: C/B 3.05, PV 1236.79, \$860.00
- # Ceiling R-38: <u>C/B 2.64</u>, PV \$669.30, \$538.00
- # Furnace: <u>C/B 2.72</u>, PV \$934.32, \$625.00
- # AC: <u>C/B .53</u>, PV \$109.92 , \$312.00

