A Quick Guide to Making the Case: Closing Your First GSHP Sale

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Presentation Overview

Make the case:
- How they work
- Economic benefits
- Environmental benefits
- Luxury benefits
- General tips & pointers

Example Residence
- Sample Calculations
Space Conditioning: The Next Frontier

- April 1993 report:
  - GSHPs are “the most energy efficient, environmentally clean and cost effective space conditioning system available today”

- GSHP systems continue to improve while conventional heating/cooling systems reached their maximum efficiencies years ago
Did You Say “Geothermal”?

Be prepared for questions
  • Each system needs to be “sold”
Heat Pumps are All Around Us

- The technology is proven
  - No need to explain vapor-compression cycle
  - Make it relatable
Forced-Air GSHP – One System Does It All
The Heating Advantage of a GSHP
The Cooling Advantage of a GSHP
GSHPs Offer Luxury

- Unmatched comfort & reliability
  - Longer run cycles = even temp in the home
  - Superior dehumidification
  - Will not dry the air during heating
  - Not affected by OAT

- No combustion
  - Lower homeowner’s insurance
  - No carbon monoxide detectors

- Controls can be very simple
GSHPs are Flexible

- Multitude of delivery options
  - Single unit for forced-air and hydronic in smaller homes
    - Duct zoning with multiple zones
  - Multiple small packaged units distributed through a larger home
  - Centralized hydronic system
    - Radiant systems \( \rightarrow \) high-end/high-comfort
  - Any combination you can think of
Site Benefits

- All GSHP piping is installed underground
- No outdoor equipment / coils
  - Improved aesthetics
  - No chance of theft or vandalism
  - No outside wiring or refrigerant lines
  - Reduced envelope penetrations
**Environmental Benefits**

- Packaged units require no field charging
- No “point of use” pollutants
- Significant reduction in greenhouse gasses
  - Every 1,000,000 GSHP installations:
    - Eliminates 5.8 million metric tons of CO₂ annually
    - Saves 40 trillion Btu’s of fossil fuels
      - Heating/cooling/hot water is 63% of home energy usage
    - Equivalent to planting 385 million trees or taking almost 1.3 million cars off the road

www.eia.gov & www.geoexchange.org
Mechanical Benefits

Mechanically Reliable

• Long service life
  - 20-30 years on the GSHP unit
  - 100 years on the GHEX piping
  - Compare to 12 years w/ ASHPs
• Little/no maintenance costs

Very simple

• Few mechanical components
• Easy to work on / service
GSHPs Increase Real Estate Value

- GSHPs are similar to infrastructure
  - Invest up front to collect energy for years to come
  - Increased awareness means higher home values
    - With homes of equal price, energy efficiency wins
Incentives are Available

- Find them at www.dsireusa.org
- Payback not as sensitive to incentives as other renewables
  - Recoup with GSHPs regardless
    - Payback w/ GSHPs: 6-10 years without incentives
    - Payback w/ PV: 30+ years without incentives
Reduced operating cost
Reduced maintenance costs
Extended equipment life span
Optional desuperheater for hot water
The Big Ticket: Sell the Investment

- Incremental cost **not** total cost
  - $20,000 total cost or $10,000 incremental cost
    - Need to purchase something to heat/cool anyway
      - Investment is added cost to get the GSHP in the home
      - Show savings over 30-years
      - R.O.I.

- Loan payment vs. monthly savings
  - $10,000 added to 30-yr loan at 5% adds $54
  - Compare to monthly operating costs
  - Usually show positive cash flow day-1
The Big Picture: Simple- vs. Long-Term Payback

- Simple payback (SPB)
  - Spend extra $10,000 to save $2,000 per year
    - SPB = 5 years
  - Not always effective

- Total cost of ownership
  - Look at whole picture
    - Incremental cost for GSHP
    - Fuel inflation & long-term operating costs
    - Equipment service life & necessary replacement
    - Spend extra $10,000 to save $XXX,XXX over 30-years
Assume the homeowner knows nothing

- Will it be a hassle?
- Will it mess up the home? The yard? The flower bed?
Included in the Proposal

- Calculations used for design
- Credentials / experience
  - Showcase systems
- List of steps to take / checklist
- Provide a summary:
  - How much money they’ll save vs. spend
  - How much gov’t money they’ll get
  - Short-term vs. long-term payback/cash flow
  - How much they stand to lose if they don’t chose geo
Be an Expert……

• It helps to sell Geo if you know what you are doing. There is more than money on the line.

• Example
Questions?

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