

DE COMPATIBILITY

DO YOU HAVE WHAT IT TAKES?

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WHAT DOES IT TAKE?

1. Start early & set objectives
2. Develop design guidelines
3. Follow the guidelines



1. Set Goals



2. Develop
Guidelines

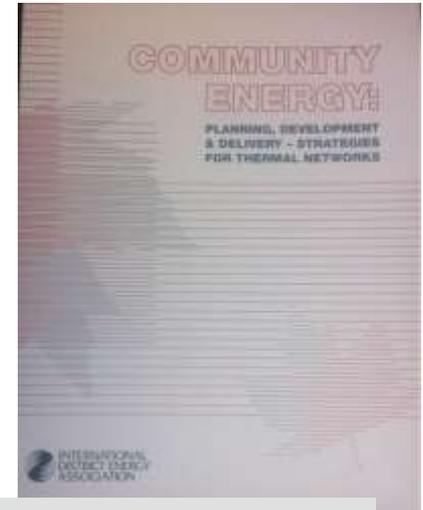


3. Follow
Guidelines



STEP 1 – KNOW WHAT YOU WANT

- Which buildings will be connected?
 - Required or voluntary connection
- How much energy from DES?
 - Developer Costs & DE Profitability
- Communicate with stakeholders



1. Set Goals



2. Develop Guidelines



3. Follow Guidelines



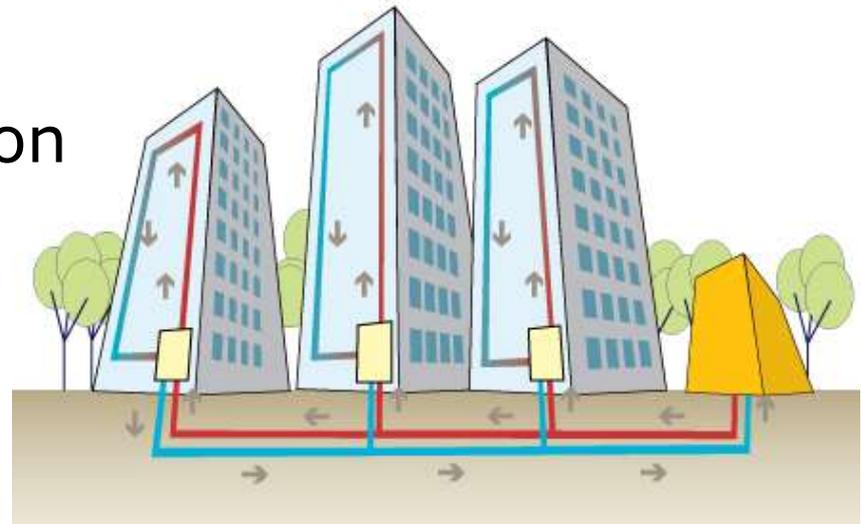
CASE STUDY #1

- Buildings: 18 Townhomes & 3 towers
- Goal: 70% energy from DES
- Situation: Disputed energy from DE
 - 1st floor townhomes not connected to DES
 - Bypasses in mechanical room & at MUA
 - Heat pumps in suite
- Lesson: Make sure goal can be verified



STEP 1 – SET GOALS

- ✓ Maximize energy from DES
- ✓ High efficiency
- ✓ Convenient for connection & maintenance



1. Set Goals



2. Develop Guidelines



3. Follow Guidelines



STEP 2 – GUIDE DESIGN TO MEET GOALS



- ✓ Hydronic System
- ✓ Low return temperature
- ✓ Accessible ETS

Be Specific!

1. Set Goals



2. Develop
Guidelines

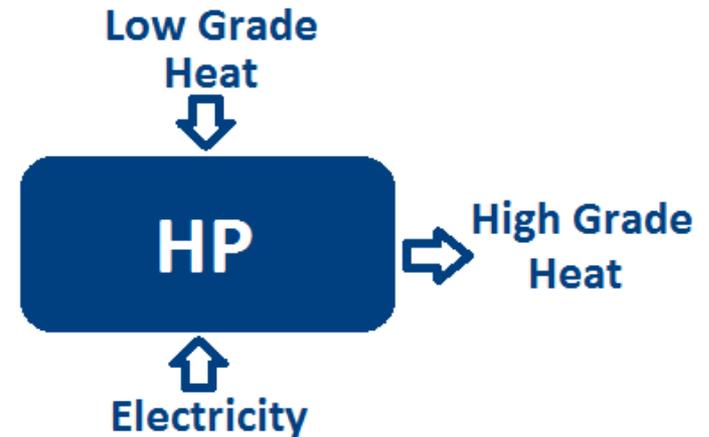


3. Follow
Guidelines



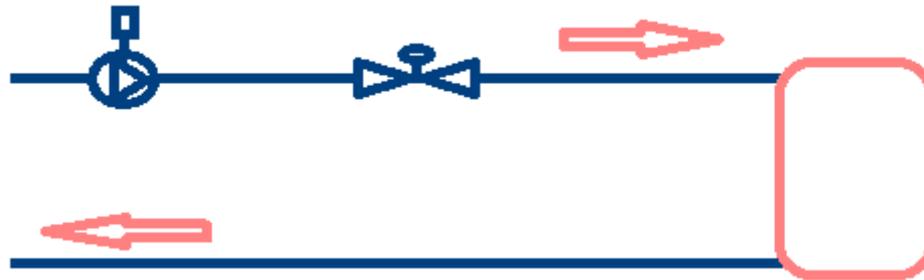
GOAL: HYDRONIC SYSTEM

- Are exceptions allowed?
 - Garage entrance heaters
 - HW reheat
 - Pool & W/C
- Heat pumps ≠ fully hydronic
 - Consider hybrid HPs
- Case #2 - ASHP

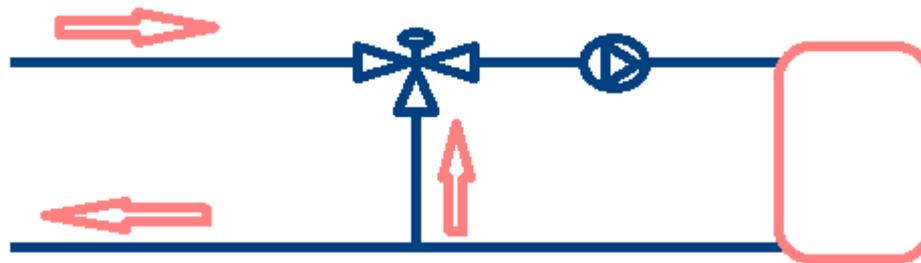


GOAL: (ΔT) PROPER VALVE SELECTION

- No bypass valves
- 2 way valves + VFD



- 3 way mixing valves



GOAL: ACCESSIBLE ETS

- Where?
 - Exterior wall, near the DE distribution lines
 - Main floor or P1 level
- When?
 - Immediate or future connection
- Case #3 – Tower w/ ground level townhomes



STEP 3 - FOLLOW THE GUIDELINES!

- Start early
- Review design when it can still change
- Verify compatibility

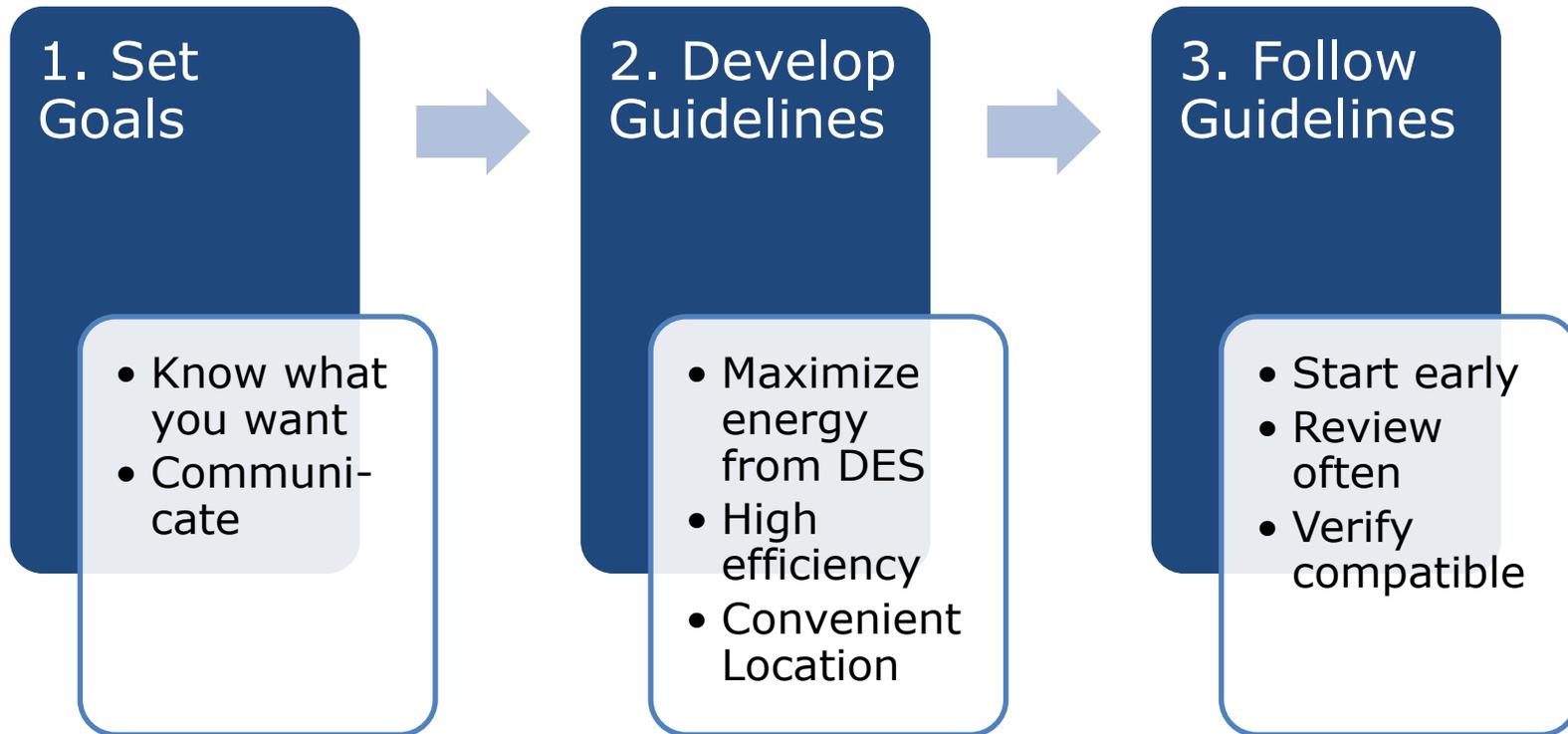


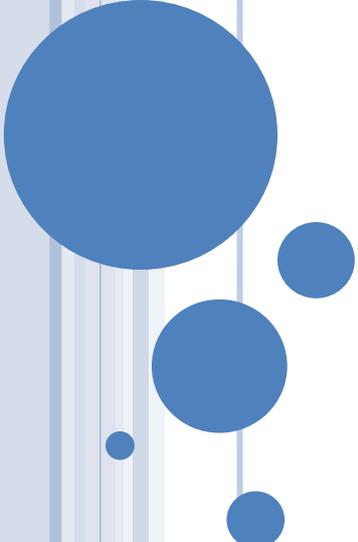
CASE #4

- Building: At building permit stage
 - In-suite HPs
 - No space for ETS allocated
 - Diverting 3 way valves
- Situation: Not meeting design requirements
- Lesson: Verify Design



SUMMARY





QUESTIONS?

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