INOGATE

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New ITS Project
Sustainable Energy

BUILDING PARTNERSHIPS FOR ENERGY SECURITY

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Effective Reports & Presentations for Energy Audits

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INOGATE New ITS Project

ECMs

- Results of energy audit are recommendations.
- Recommendations appear as energy conservation measures (ECMs).
- ECMs are actions you take to save energy.

ECMs

- ECMs define projects, based on data and analysis from energy audits.
- Recommendations may be presented in
  - Report (written for client)
  - Slide presentation (live discussion with client)

Method

To make the report and presentation clear:

1. State the problem.
2. Explain the approach.
3. Propose a solution.

Method

- Make it easy for the client to understand what the ECM accomplishes.
- Use
  - Graphs (especially profiles)
  - Summary tables

Example: 1. Problem

- Refrigeration compressors reject heat to atmosphere.
- This is a wasted resource.
- At 60 ^{o}C, there may be a use for this heat.

Example: 2. Approach

- Compressors give:
  a) Low level waste heat supply
  b) Year round operation

Question: What is appropriate demand?

Answer: Domestic hot water (DHW).

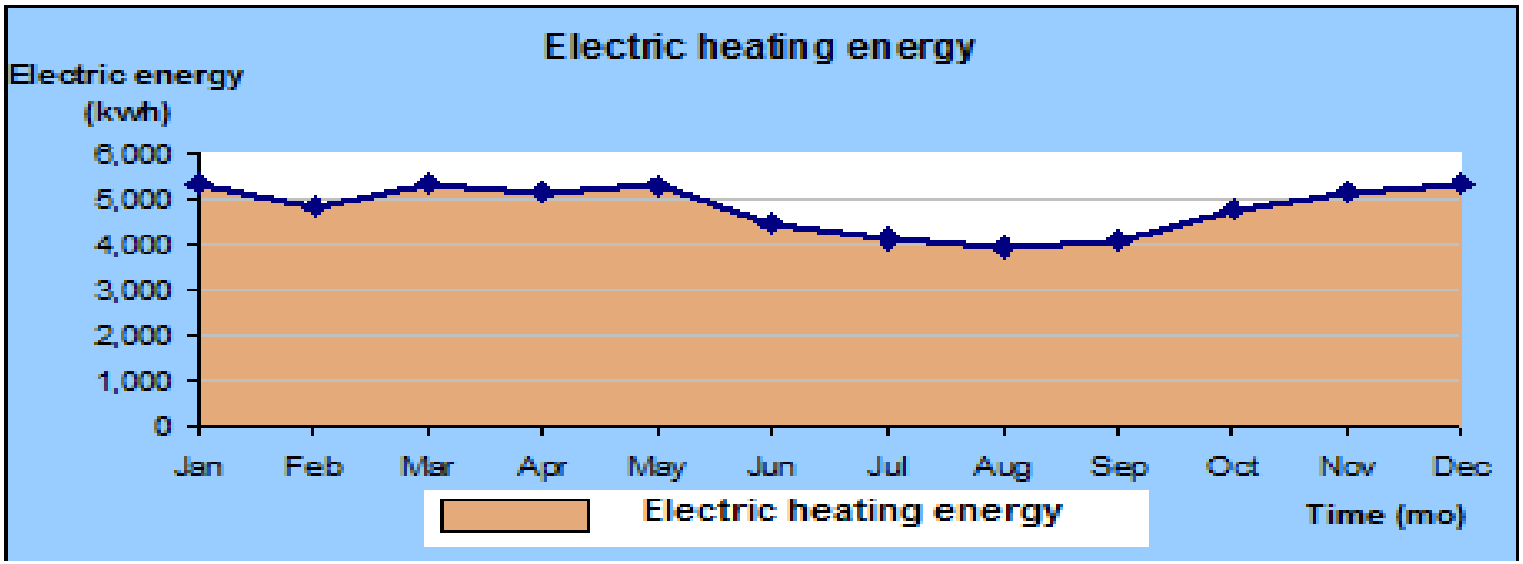
- DHW has:
  a) Low level heat requirement
  b) Year-round demand

Example: 3. Solution

- Desuperheaters recover waste refrigeration heat.
- Install a desuperheater to heat DHW.
- A desuperheater may reduce both refrigeration and DHW costs.
- Match source and sink as well as possible.

Baseline Demand Picture

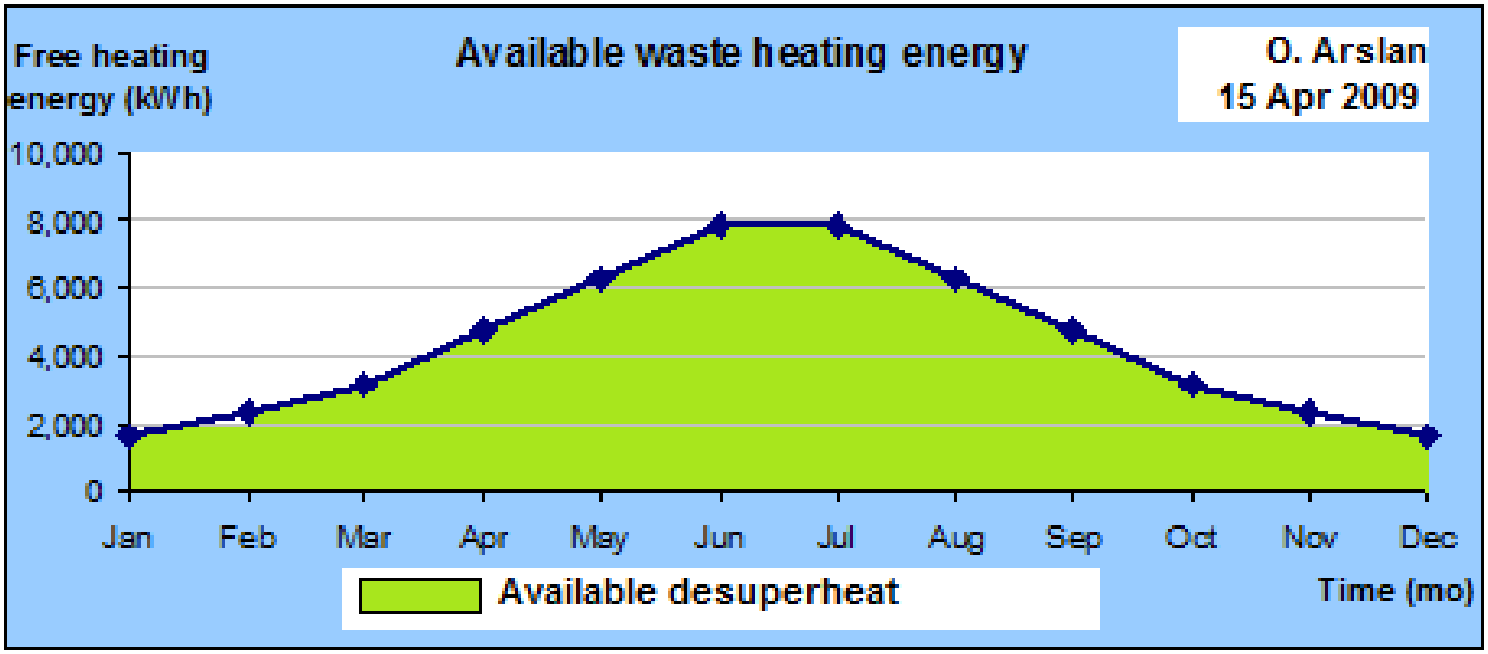
- Illustrate baseline to see current situation.
- Data show this consumption pattern for DHW.



- Total heating requirement: 58,000 kWh/yr

New Supply Picture

- How much waste heat is available in a year?



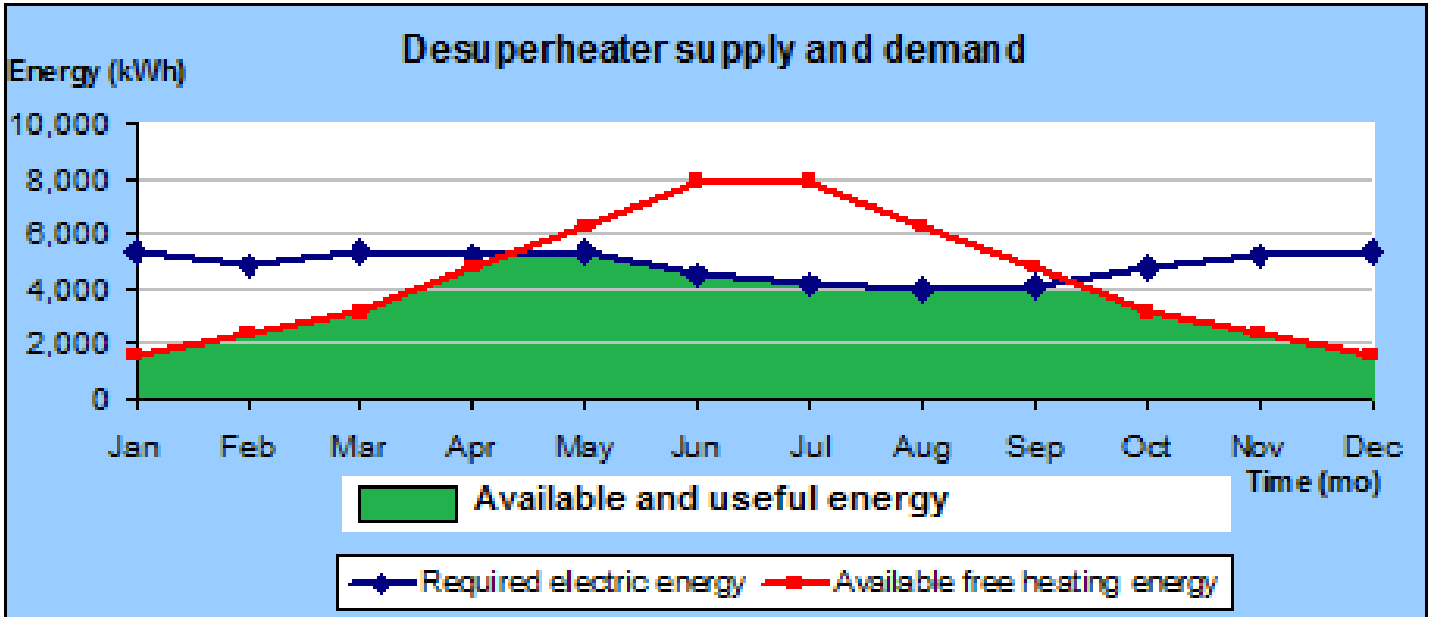
- Refrigeration calculations: 52,000 kWh/yr.

Describe Concept in Words

- State existing situation:
  "Current annual water heating requirement = 58,000 kWh/yr from electricity."
- State potential new source:
  "52,000 kWh/yr of heat available from hot refrigerant gas."
- *However,* supply and demand graphs do not have same shape:
  "Demand and supply times do not always coincide."

Superimpose Graphs

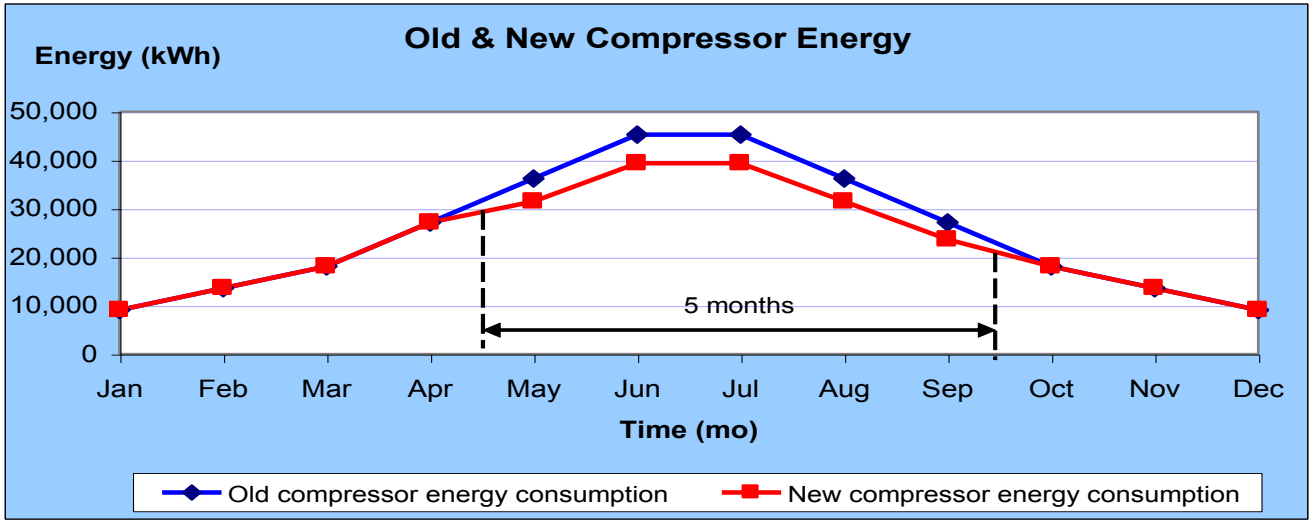
- How much of available waste is useful?



- Overlapping areas: 41,000 kWh/yr of free waste heat can replace electricity.

Look for Additional Savings

- Desuperheat also improves refrigeration coefficient of performance (COP) in summer.



- Condenser load is less, so compressor load is less.

Show Savings

- Value of avoided electric heat 5,000 EUR/yr
- Savings from improved COP 3,000 EUR/yr
- Total savings 8,000 EUR/yr

- Installed cost of the desuperheater and balance of system: 18,000 EUR.

- IRR ~ 40%, so project feasible with any discount rate.

Value of Illustrations

- Clear graphs simplify comprehension of concept.
- Without graphs, difficult to see direction or goal of ECM.
- Graphs:
  - Make it easier for analyst to find solution.
  - Great communication tool for client.
- Show client what ECM accomplishes

Elements of Report

- Executive summary: "Convince the executive!"
  - Last chance to make first impression.
  - Most important section.
  - Write it last.
  - Summarize everything.
  - Make main points.
- Baseline chapter – "What did we find?"
- ECMs – "What should client do?"

Thank you for your attention!

Visit web portal: www.inogate.org

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