FT Energy Controls, LLC

A Solution to the Climate Crisis for Buildings

Richard Furman – Co Founder / CEO

Zachary Thomas – Co Founder / COO

A Solution to the Climate Crisis for Buildings

- A more efficient HVAC System is needed to achieve zero CO₂ emissions with the minimum amount of renewable electricity.
- The solutions to the Climate Crisis will require both speed and scale.
- FT Energy Controls (FTEC) has developed a new HVAC system that makes use of HVAC equipment that is already available at scale and provided by many manufacturers.
- Independent engineering evaluations have determined that FTEC's new HVAC system:
 - reduces energy costs by 36%,
 - reduces CO₂ emissions by 34%, and
 - reduces capital costs by 27%.

Case Study: 200 Room Hotel

Comparison of Annual Energy Costs: Conventional System vs FTEC System (IES VE simulation)



- Study performed by Syska Hennessy, an expert energy modeling firm.
- The energy consumption for cooling, heating, all the fans and pumps are less for the FTEC system.

NNNNNNN

7777777777

..........

2222222

Case Study: 200 Room Hotel (Cont.)

Carbon Impact Using Existing Electricity and Natural Gas Supply: Conventional System vs FTEC System



assumptions: 0.855 lbs. CO_2 / Kwh; 12 lbs. CO_2 / therm

- FTEC's system reduces CO2 emissions by 34% due to the increase in the efficiencies of the use of both electricity and natural gas.
- The current use of natural gas boilers can be replaced with electric heat pumps as more renewable electricity is available. This will provide an allelectric HVAC system which consist of electric heat pump chillers for cooling and electric heat pump heaters for heating.
- When this system is provided with 100% renewable electricity it will provide zero CO2 emissions with the minimum amount of renewable electricity.

0000000

3000000

0000000

Case Study: 200 Room Hotel (cont.)



MANNAN NANANANA NA

00000000

0000000

Resources

- Patents:
 - 3 U.S. Patents
 - 14 U.S. and Foreign Patents Pending (4 different patent families)
- Additional Information available at <u>ftenergycontrols.com</u>:
 - White Paper: A Solution to the Climate Crisis for Buildings
- Available upon request:
 - Syska Hennessy and Gardiner & Theobald Report of their Independent Engineering Evaluations

.........

0000000

Founders



Richard Furman – Co Founder / CEO richard@ftenergycontrols.com

Previously Principal Consultant for New Energy Technologies, LLC where he assisted clients transitioning New Energy Technologies MS ChE (MIT); BS ChE (WPI)



Zachary Thomas – Co Founder / COO zach@ftenergycontrols.com

Electrical Engineer and Patent Attorney active in both professions.

PhD EE (MIT); MS EE (MIT); JD (Suffolk Law); BS EE (Syracuse)

ANN NAME OF A

1777777777

00000000

222222

. . . .



THANK YOU.