

Table A
GFX™ Savings, Payback & Savings to Investment Ratio (SIR)
Maine (Climate Zone 1)

Energy Source	Conversion Efficiency	Energy Cost April 2005	Annual Energy Savings	Annual \$-Savings	Payback (yr)	SIR (4/05)
Electrical	100%	11-15¢/kWh	1760 kWh	194-264	1.75-1.29	8.8-11.9
Natural Gas	76%	\$1.56/Therm (5.32¢/kWh)	96.0 Therm (2813 kWh-thermal)	150	2.27	6.8
Oil	55%	\$2.00/gallon (4.84¢/kWh)	80.5 gallons (3303 kWh-thermal)	161	2.11	7.3

Table B
U.S. DOE Estimates in October 1986
U.S. Averages (Climate Zone 3)

Energy Source	Conversion Efficiency	Energy Cost October 1986	Annual Energy Savings	Annual \$-Savings	Payback (yr)	SIR (10/86)
Electrical	100%	8.66¢/kWh	1195 kWh	103.5	2.09	7.4
Natural Gas	76%	\$6.35/10 ⁶ Btu	53.7 Therm	34.1	6.34	2.4
Oil	55%	\$1.0/gallon	53.5 gallons	53.5	4.04	3.8

Footnotes

- a. Table A corresponds to Model G3-60 GFX rated @ 60%, with an active length of 57" and L.O.A. of 60". Climate Zone 1 savings correspond to Canadian R-2000/Energuide savings from <http://gfxtechnology.com/R-2000.pdf>. (See also DOE/EEI, PP&L evaluations @ <http://gfxtechnology.com/bundles.html> & <http://gfxtechnology.com/bundles.html>)
- b. Table B entries from Table 1, attached. Performance corresponds to a less efficient design having a 60" flattened coil offering 53% DHR-efficiency, compared to a 60" long G3-60 having a 57" coil and 60% DHR-efficiency. (See also <http://gfxtechnology.com/Pravda.pdf>)
- c. Installed Cost for new construction \$350 in 2005; \$216 in 1986.
- d. Payback = Installed Cost to \$-Savings Ratio.
- e. PVF = Present Value Factor = 15.4 for GFX; corresponding to a 30 year life. (See <http://gfxtechnology.com/E-SIR.html> & <http://gfxtechnology.com/App-A,B,C,F.pdf>, pg. 11)
- f. SIR = Savings to Investment Ratio = PVF * (\$-Savings)/(Installed Cost) = PVF/Payback.
- g. Energy costs courtesy of David Kaufman, Energy Solutions, P.O. Box 261, Waldoboro, ME 04572 (Tel: 207-329-2094)

Energy Source	Conversion Efficiency	Energy Cost	Dollar Savings per Year	Simple Payback in Years (Without Interest)
Electrical	100%	8.66¢/Kw-hr	103.49	2.09
Natural Gas	76%	\$6.35/10 ⁶ Btu	34.09	6.34
Oil	55%	\$1.0/gallon	53.48	4.04

Notes: 1. Energy saving for an average household is 1195 Kw-hr thermal per year

2. Installed cost of heat exchanger is \$216

TABLE 1

SIMPLE PAYBACK SUMMARY FOR REDESIGNED THIN-FILM HEAT EXCHANGER

Flattened Type L, 1/2-inch Copper Water Tubing
Grainger's Stock No. 3P667 or Equal

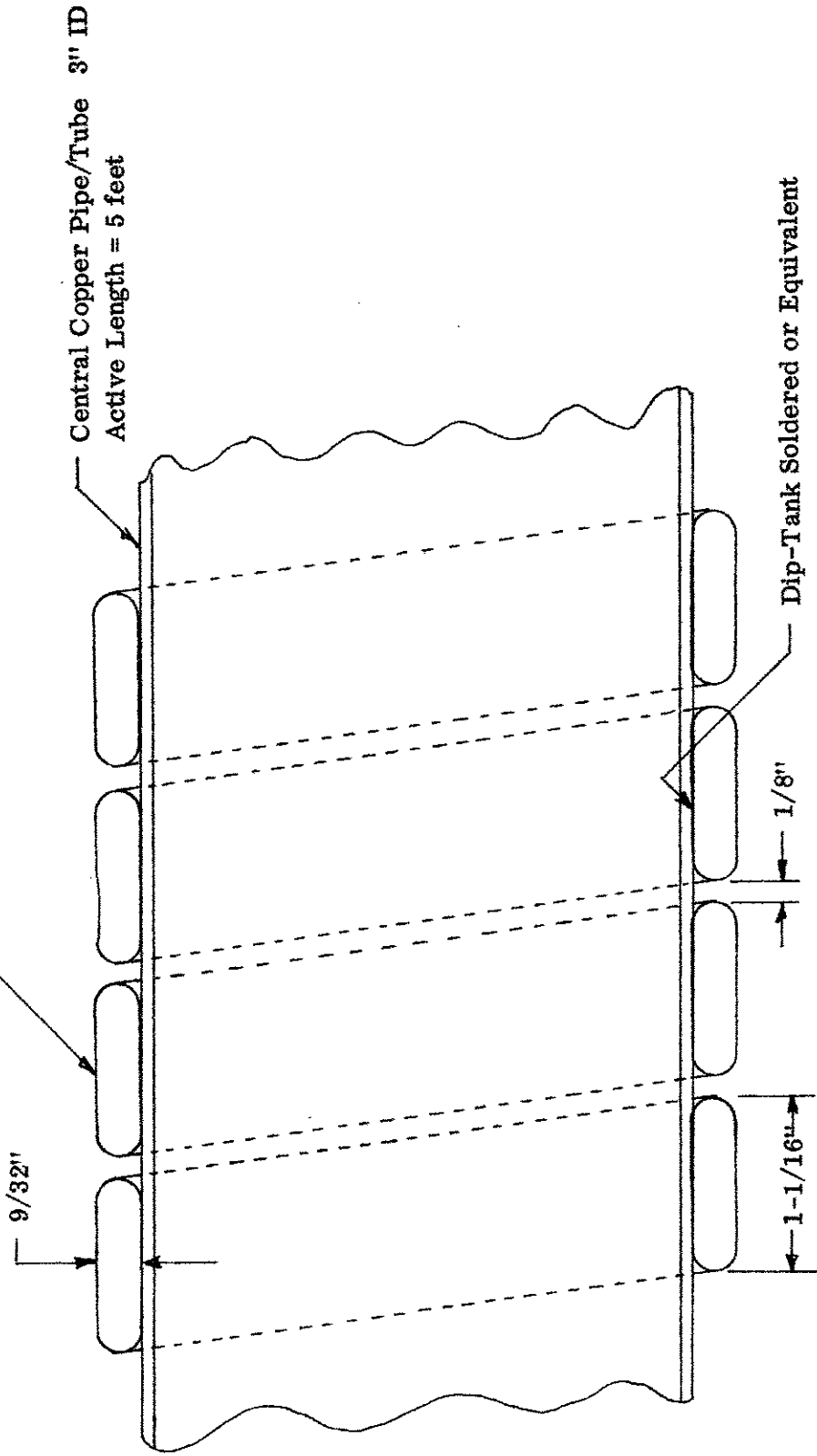


FIGURE 1
SECTION VIEW OF REDESIGNED HEAT EXCHANGER

Source: Tab B in DOE's GFX-Grant Report, Recommendation No. 382, OERI No. 009925,
Office of Energy Related Inventions, December 16, 1986. (<http://gfxtechnology.com/Pravda.pdf>)

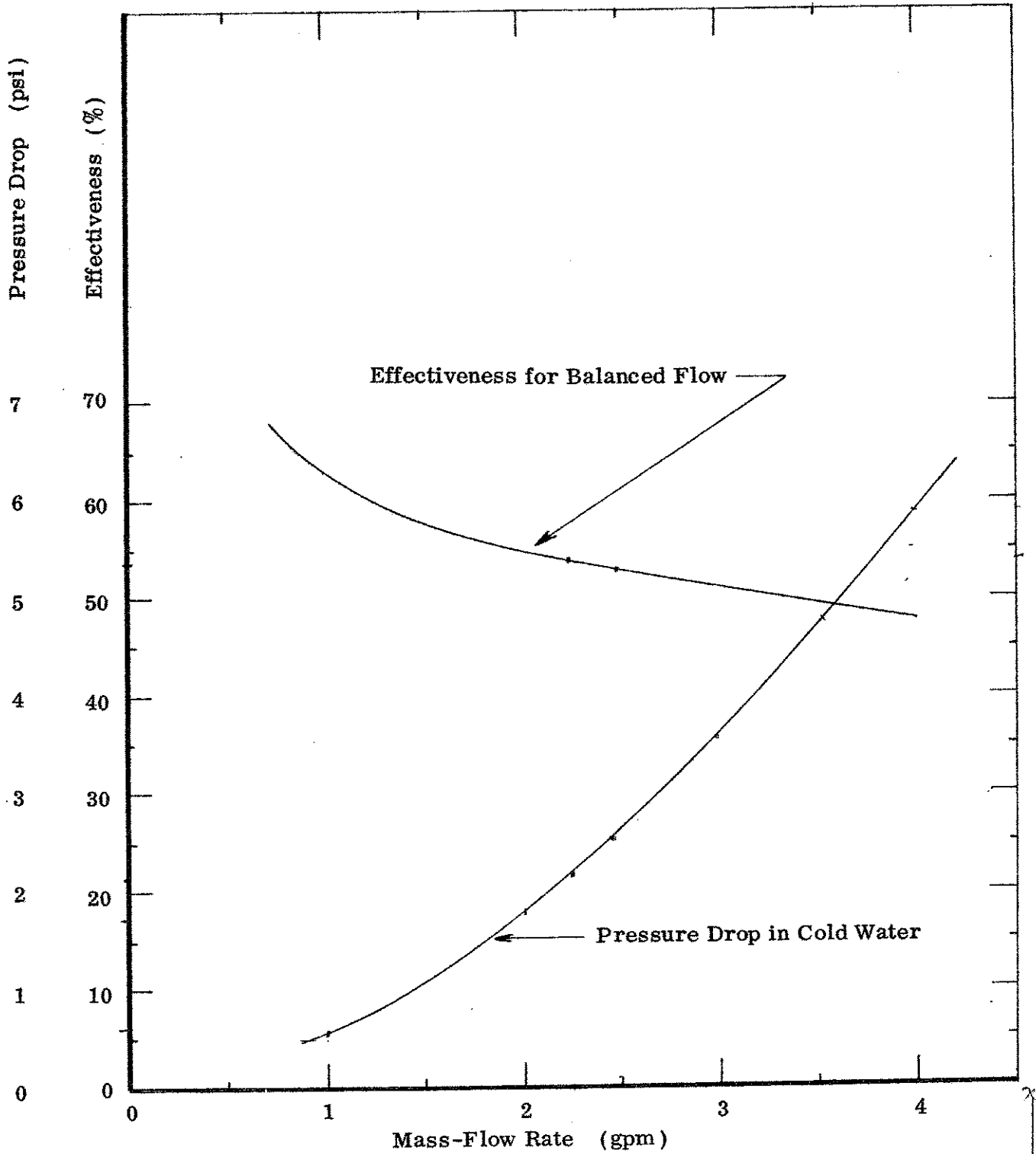


FIGURE 2
EFFECTIVENESS AND PRESSURE DROP FOR
REDESIGNED FALLING-FILM HEAT EXCHANGER

Source: Tab B in DOE's GFX-Grant Report, Recommendation No. 382, OERI No. 009925,
 Office of Energy Related Inventions, December 16, 1986. (<http://gftxtechnology.com/Pravda.pdf>)