

# Total Cost Comparison

## TempArmour® vs. Other Pharmaceutical Refrigerators

When comparing medical refrigerators, take into account the entire cost of your choice! The TempArmour Vaccine Refrigerator provides the most effective vaccine protection as well as significant cost savings.

	Vaccine Refrigerator	BFRV84	BFRV36
Initial Price	<b>\$3,499</b>	<b>\$3,499</b>	<b>\$2,699</b>
Cold Chain Incidents – Related Costs	\$200 per year +	<b>\$0 per year</b>	<b>\$0 per year</b>
Average Vaccine Losses	\$1,000 per year	<b>\$0 per year</b>	<b>\$0 per year</b>
Notification Systems – Capital Cost	\$200	<b>\$0</b>	<b>\$0</b>
Notification Systems – Ongoing Cost	\$200 per year	<b>\$0 per year</b>	<b>\$0 per year</b>
Maintenance Cost	\$200 per year	<b>\$100 per year</b>	<b>\$100 per year</b>
Backup Power – Capital Cost	\$3,100	<b>\$0</b>	<b>\$0</b>
Backup Power – Battery Replacement	\$500 per year	<b>\$0</b>	<b>\$0</b>
Electricity Cost – 10¢/kWh x kW/year	\$350 per year	<b>\$20 per year</b>	<b>\$20 per year</b>
<b>COST PER YEAR</b>	<b>\$2,450</b>	<b>\$120</b>	<b>\$120</b>
<b>TOTAL COST OF OWNERSHIP OVER 10 YEARS</b>	<b>\$31,049</b>	<b>\$4,699</b>	<b>\$3,899</b>

*Typical Medical Refrigerator + Backup Power* VS. *TempArmour Refrigerators that stay in temperature range during power outages. No backup power required.*

\*NOTES/ASSUMPTIONS FOR OUR EXAMPLE: (assumes a 10-year lifespan for both refrigerators)

**Cost of refrigerator:** The same cost as the TempArmour Refrigerator (\$3,499) is used for the sake of simplicity. \$2,000 – \$10,000 is the typical cost of upright vaccine refrigerators (purpose built and comparable in the quantity of vaccines that it can hold).

**Cold chain incidents:** This number comprises the human resource costs (time) incurred by staff managing cold chain incidents. TempArmour customers typically don't experience refrigerator-related cold chain incidents.

**Vaccine losses:** \$1,000 per year average chosen as a typical scenario (e.g., one \$10,000 loss in a 10-year period). Average vaccine losses of TempArmour customers is \$0.

**Notification system costs:** Remote monitoring/notification systems are available with varying costs and are important for standard vaccine refrigerators that can go out of temperature range quickly. The majority of TempArmour customers opt not use remote monitoring systems as the TempArmour typically maintains its temperature for 6 days during power outages, unplugged cords, etc.

**Maintenance cost:** The TempArmour Refrigerator does not require on-site maintenance by a technician. Costs include recalibration/replacement of thermometers and data loggers when required. (Note: Vaccines for Children (VFC) Providers are typically required to do that yearly.)

**Backup power costs:** The TempArmour Refrigerator does not require backup power as it typically maintains its temperature for 6 days during power outages, unplugged cords, etc.

\$3,100 is the cost of a backup power system (PowerHub 1800-400) that would provide 8-16 hours of backup power for a standard upright vaccine refrigerator. The cost of battery replacement every 3 years for that system is \$1,500 (\$500/year). (Tip: If your fridge is currently hooked up to a hospital generator, using the TempArmour Refrigerator will free up that generator capacity for another critical item in the hospital.)

**Electricity costs:** The power consumption of a typical full-size upright vaccine refrigerator varies, however 400 W/hr is a reasonable estimate. The approximate power consumption of the TempArmour Refrigerator is 20 W/hr. Electricity costs vary therefore the average electricity cost of 10¢/kWh was used. The calculated numbers were also rounded off for clarity in the example.