



Upgrade Your Refrigerated Display Cases with Airfoils and Save!

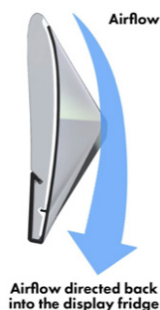
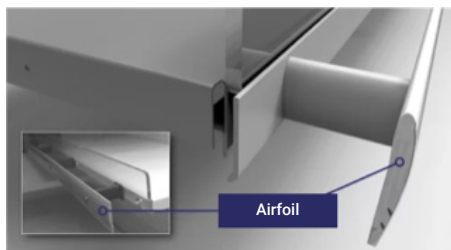
CalNEXT has completed field research at California grocery stores to explore the benefits of installing airfoils on vertical open refrigerated display cases — and the savings are great, with an estimated payback time in as little as seven months. This field testing was a follow up to the laboratory study conducted by Southern California Edison (SCE) in January 2022.

What are airfoils?

Airfoil vanes are attached to shelves of grocery store refrigerated display cases, positioned perpendicularly across the air curtain of the display case. The vane directs airflow down by strengthening the barrier and reducing infiltration between the refrigerated air and warm moist air outside of the display case. Airfoils are unique in terms of airflow in that they direct airflow even at zero angle of airflow and can also direct airflow at an angle without creating turbulence.

Plus, the airfoil vanes double as price tag holders, making them appear as part of any standard display case shelf.

The guiding vanes installed in this field study were single bladed guides in the form of airfoils.



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Study Findings

Savings ranged from
9-14%
of total compressor energy consumption, depending on application.

Overall kilowatt-hour (kWh) savings averaged
147 kWh
per feet of installed airfoil.

A typical store, with 330 feet of refrigerated cases, would save
42,722 kWh
per year.

Simple payback is calculated at
7-17 months
depending on cost of energy.



Interested in reading the full report?

Download the *Field Assessment of Refrigerated Display Cases Air Curtain Guiding Vanes Summary Report* at calnext.com/approved-projects/#ET23SWE0046

Results

Location	Installed Cost (\$)	Before Energy (kWh)	After Energy (kWh)	Annual Savings (kWh)	Feet Installed (ft)	Energy Saving per Linear Foot (kWh/ft/year)
Long Beach	\$4,499	140,224	121,251	18,973	292	65
South Gate	\$3,432	310,847	285,039	25,808	214	121
West Covina	\$2,450	299,363	264,032	35,331	152	232
Cathedral City	\$1,911	225,320	204,194	21,126	124	170
Averages	\$3,073	243,939	218,629	25,310	196	147

The table below shows simple payback based on a range of energy costs and using the average energy savings for the assessment.

Blended Cost of Energy (\$/kWh)	Average Energy Saving (kWh/year)	Average Technology Cost (\$/year)	Energy Cost Saving (\$/year)	Simple Payback Period (Years)
\$0.09	25,310	\$3,073	\$2,278	1.4
\$0.10			\$2,531	1.2
\$0.15			\$3,797	0.8
\$0.20			\$5,062	0.6

Airfoil technology is low cost, easy to install, and does not require ongoing maintenance. Upgrade today and start saving!



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