



**ACR830  
PROJECT PLAN**

**Revision 6**

**March 2023**

**ADVANCED REFRIGERATION PROJECTS FOR USE OF NEW ULTRA LOW-GWP LARGE  
REFRIGERATION RACKS IN UNITED STATES**

<b>ACR Project ID</b>	<b>Vintage</b>	<b>Location</b>	<b>Project Name</b>
830	2021	US(NY,MN,NJ)	ARS2021002

# Table of Contents

Table of Contents.....	2
<b>A. PROJECT OVERVIEW .....</b>	<b>5</b>
A1. PROJECT TITLE - Overview.....	5
Table 1 – Project Vintages and Locations.....	5
A2. PROJECT TYPE.....	5
A3. PROOF OF PROJECT ELIGIBILITY.....	5
Table 2 – Project Eligibility Criteria.....	5
A4. LOCATION.....	9
Table 3 – Manufacturing Locations .....	9
Table 4 – Project Locations.....	9
A5. BRIEF SUMMARY OF PROJECT .....	9
A6. PROJECT ACTION.....	10
Table 5- Level of Activity.....	10
A7. EX ANTE OFFSET PROJECTION.....	11
Table 6 – Ex-Ante ERT Projection.....	11
A8. PARTIES .....	11
<b>B. METHODOLOGY .....</b>	<b>12</b>
B1. APPROVED METHODOLOGY.....	12
B2. METHODOLOGY JUSTIFICATION .....	12
B3. PROJECT BOUNDARIES.....	13
Table 7 – Project Boundaries.....	13
B4. IDENTIFICATION OF GHG SOURCES AND SINKS.....	14
Table 8 – GHG Sources and Sinks.....	14
B5. BASELINE .....	14

Table 9 - QBR,j,l.....	14
Table 10 - Baseline Scenerio.....	15
B6. PROJECT SCENARIO.....	15
B6. Table 10 - Project Emissions.....	15
B7. REDUCTIONS AND ENHANCED REMOVALS.....	17
B7. Table 12 - Project Emissions Reductions.....	17
B8. PERMANENCE.....	17
<b>C. ADDITIONALITY .....</b>	<b>17</b>
C1. REGULATORY SURPLUS TEST.....	18
C2. COMMON PRACTICE TEST.....	19
C3. IMPLEMENTATION BARRIERS TEST.....	19
C4. PERFORMANCE STANDARD TEST.....	19
<b>D. MONITORING PLAN.....</b>	<b>19</b>
D1. PARAMETERS MONITORED .....	19
D2. MONITORING PLAN .....	21
<b>E. QUANTIFICATION.....</b>	<b>22</b>
E1. BASELINE EMISSIONS .....	22
E2. PROJECT EMISSIONS .....	23
E3. LEAKAGE .....	23
E4. UNCERTAINTY .....	23
E5. PROJECT EMISSION REDUCTIONS.....	23
E6. EX-ANTE ESTIMATION METHODS.....	24
<b>F. COMMUNITY ENVIRONMENTAL &amp; IMPACTS.....</b>	<b>24</b>
F1. NET POSITIVE IMPACTS .....	24
F2. STAKEHOLDER COMMENTS.....	24
<b>G. OWNERSHIP AND TITLE .....</b>	<b>25</b>

G1. PROOF OF TITLE ..... 25

G2. CHAIN OF CUSTODY..... 25

G3. PRIOR APPLICATION.....25

**H. PROJECT TIMELINE .....25**

H1. START DATE.....25

Table 13 – Project Start Dates .....25

H2. PROJECT TIMELINE.....25

Table 14 – Project Timelines.....25

# A. PROJECT OVERVIEW

## A1. PROJECT TITLE - Overview

This filing is for (1) project seeking to validate and verify ERTs pursuant to the Advanced Refrigeration Systems 2.1 Methodology.

**Table 1 – Project Vintages and Locations**

<b>ACR Project ID</b>	<b>Vintage</b>	<b>Location</b>	<b>Project Name</b>
830	2021	US(NY,MN,NJ)	ARS2021002

## A2. PROJECT TYPE

Industrial Process Emissions

## A3. PROOF OF PROJECT ELIGIBILITY

Project is eligible under the “Methodology for the Quantification, Monitoring, Reporting, and Verification of Greenhouse Gas Emissions Reductions and Removals from Advanced Refrigeration Systems, Version 2.1. Certain project eligibility requirements are specified within the Methodology and others are specified within the ACR Standard, Version 7.0.

**Table 2 – Project Eligibility Criteria**

<b>Criterion</b>	<b>ACR Standard or Methodology Specific Requirement</b>	<b>Proof of Project Eligibility</b>
Geographic location	The project must be in North America	The large commercial refrigeration units include systems and are installed in NY,MN,NJ in the US.

Eligible Sectors	<p>The project must be in a sector and segment which has a low adoption rate for the relevant project activity ("Eligible Project Activity" &amp; "Eligible Refrigerator Sector/Segment") as defined in Table 1 of the Methodology.</p> <p>If the project activity involves replacement of CFC, HCFC or HFC based equipment with an advanced refrigeration system where the original equipment is decommissioned, any CFC or HFC in the original equipment must be recovered and destroyed in accordance with ACR or the California Air Resource Board ODS Destruction Methodology and any HFCs must be managed in accordance with EPA regulations (40CFR Part 82, Subpart F) under Section 608 of the Clean Air Act;</p> <p>Any refrigerant used in the advanced refrigeration system must be an acceptable substitute according to United States EPA Significant New Alternatives Policy (SNAP) program for use in commercial refrigeration end-uses in accordance with SNAP use conditions.</p>	<p>The project's system includes racks and stand alone equipment which fall within the Large Commercial Refrigeration sector and use lower-GWP refrigerants. The rack systems all far exceed the lower-end initial charge requirement of 50 lbs or more of refrigerant, as defined by the Advanced Refrigeration Methodology. The standalone systems do not exceed the lower- end initial charge requirement of 50 lbs or more of refrigerant, however due to the standard industry practice of building stores (10,000 SF or greater) with a rack system the baseline remains the same.</p> <p>This project involves both new construction and transition project types. The new construction project does not involve replacement of CFC, HCFC or HFC based equipment.</p> <p>The refrigerant(s) are an acceptable substitute under SNAP.</p>
Start Date	<p>Date for all projects other than AFOLU as the date on which the project began to reduce GHG emissions against its baseline.</p> <p>Non-AFOLU Projects must be validated within 2 years of the project Start Date.</p> <p>One exception applies to these timeframes:</p> <ul style="list-style-type: none"> <li>- Projects using a newly approved methodology or a newly approved modification that expands the eligibility of a previously published methodology may submit it for listing with ACR within 10 years of the project Start Date.</li> <li>- However, the date of listing submittal must be within 6 months of the methodology publication date, and the project must then be validated within 2 years of the listing.</li> <li>- The Start Date and the start of the Minimum Project Term shall be the same.</li> <li>- The Start Date and the start of the first Crediting Period are generally the same, unless otherwise allowable in the relevant methodology.</li> </ul>	<p>The project start date is 03/01/2021 determined by the earliest date of store initiation, as outlined in Table 10.</p>
Minimum Project Term	<p>The Minimum Project Term for specific project types is specified in the relevant ACR sector standard and/or methodology. Project types with no risk of reversal subsequent to crediting have no required Minimum Project Term.</p>	<p>There is no risk of reversal for this project type and, therefore, there is no required minimum project term.</p>

Crediting Period	The Crediting Period for non-AFOLU projects shall be ten (10) years.	This is a non-AFOLU project, therefore the Crediting Period is 10 years for each project.
Real	GHG reductions and removals shall exist prior to ERT issuance. ACR will not forward issue nor forward register a projected stream of future offsets.	GHG reductions occur from the replacement of baseline refrigerants in the operations of large rack refrigeration systems over 10 years from the project start date. ACR issues the full 10 years of emission reductions upon final Project Verification.
Emission or Removal Origin	Project Proponent shall own, have control, or document effective control over the GHG sources/sinks from which the emissions reductions or removals originate. If the Project Proponent does not own or control the GHG sources or sinks, the Proponent shall document that effective control exists over the GHG sources and/or sinks from which the reductions/removals originate.	<p>The Project Proponent is Therm Solutions, Inc. The Manufacturer and end use customer(s) Stew Leonard's, Coborn's, Inc and ShopRite of Lincoln Park Inc have maintained control over the GHG sources/sinks from which the emission reductions originate.</p> <p>Documentation showing effective control of GHG sources from which the reductions originate is maintained for this project.</p> <p>The manufacturer(s) maintained control over the equipment during the manufacturing and installation process. Once installed, control and title moved to the end customer(s), Stew Leonard's, Coborn's, Inc and ShopRite of Lincoln Park Inc</p>
Offset Title	Project Proponent shall provide documentation and attestation of undisputed title to all offsets prior to registration, including chain of custody documentation if offsets have ever been sold in the past. Title to offsets shall be clear, unique, and uncontested.	Documentation will be provided showing that title to the offset is clear, unique and uncontested and that the offsets have not been previously sold

Additional	<p>The Methodology requires Projects to pass the Regulatory Surplus Test and meet the ACR Practice-Based Performance Standard.</p> <p><u>Practice-Based Performance Standard:</u> The Methodology has already completed a market adoption analysis. Therefore, project proponents must only show that their project falls into one of the Eligible Sectors found in Table 1 of the Methodology to pass the Practice-Based Performance Standard.</p> <p><u>Regulatory Surplus Test:</u> The project proponent must demonstrate that the project maintains compliance with all laws, regulations, and other legally binding mandates directly related to project activities. To meet this requirement, project proponents will submit a written and signed attestation to the verifier acknowledging the compliance status of the project during each verification interval.</p>	<p>This project passes the ACR-approved Practice-Based Performance Standard and the Regulatory Surplus Test.</p> <p>Practice-Based Performance Standard: The project meets the criteria for Large Commercial Refrigeration, as defined in Table 1 of the methodology, which means it has a low adoption rate.</p> <p>Regulatory Surplus Test: The project passes the Regulatory Surplus Test as there are no federal, state, or facility specific regulations requiring the emission reductions associated with the project's transition from the baseline/default refrigerant to the project refrigerant.</p>
Regulatory Compliance	<p>Projects must maintain material regulatory compliance. In order to maintain material regulatory compliance, a project must complete all regulatory requirements at required intervals. Project Proponents are required to provide a regulatory compliance attestation to a verification body at each verification. This attestation must disclose all violations or other instances of noncompliance with laws, regulations, or other legally binding mandates directly related to project activities.</p>	<p>This project maintains material regulatory compliance for the entire reporting period.</p>
Permanent	<p>For projects with a risk of reversal of GHG removal enhancements, Project Proponents shall assess risk using an ACR-approved risk assessment tool.</p>	<p>There is no risk of reversal of GHG removal enhancements for this project type.</p>
Net of Leakage	<p>The Methodology has determined there is no market-shifting leakage and, hence is to be disregarded.</p> <p>Activity shifting leakage - If the Project Activity results in the equipment used in the baseline being transferred to another location or activity in which a refrigerant with a GWP greater than 15 is used, leakage effects are to be considered. If the baseline equipment is also used in the project or is decommissioned, then leakage is to be disregarded.</p>	<p>Leakage is not considered for this project, as detailed in section E3.</p>



Independently Validated and Verified	ACR requires third-party validation and verification, by an ACR-approved Validation/Verification Body (VVB), at specified intervals in order to issue ERTs. Governing documents for validation and verification are the ACR Standard, relevant sector standard, relevant methodology, and the ACR Validation and Verification Guideline.	According to ACR rules, the project benefits will be validated and verified by an independent auditor.
Community & Environmental Impacts	ACR requires community and environmental impacts to be net positive overall. Project Proponents shall document in the GHG Project Plan a mitigation plan for any foreseen negative community or environmental impacts and shall disclose in their Annual Attestations any negative environmental or community impacts or claims of negative environmental and community impacts.	<p>The project has only positive effects on the environment. The use of lower GWP Refrigerant avoids the loss of HFCs during the operation of the large refrigeration racks.</p> <p>Potential negative impacts were considered for this project and there were not found to be any.</p> <p>The project also addresses aspects of the UN Sustainable Development Goals.</p> <p>Additional detail regarding this topic can be found in section F.</p>

## A4. LOCATION

**Table 3 – Installation Locations**

Property	Location	GPS Coordinates
Stew Leonard's Yonkers	1 Stew Leonard Dr #1, Yonkers, NY	40.97393509908121, -73.86445995893128
Coborn's Cash Wise Willmar, MN	1300 5th St SE Willmar, MN	45.10970886953104, -95.04001460252313
Coborn's Buffalo, MN	630 Ryan's Way Buffalo, MN	45.17688021116977, -93.86413780859748
ShopRite Lincoln Park	60 Beaverbrook Rd Lincoln Park, NJ	40.92569965532933, -74.30983678830155

**Table 4 – Project Location**

ACR Project Numbers	Locations
830	US(NY,MN,NJ)

## A5. BRIEF SUMMARY OF PROJECT

### *Description of Project Activity*

The Project Activity is the installation of new lower-GWP refrigerant in large commercial refrigeration (systems) installed at the supermarket locations indicated in Table 3.

The systems are all newly manufactured and assembled on a production line at the facilities that would previously have manufactured these systems with high-GWP refrigerants. Refrigerant is injected into the systems during system startup process and then sealed within the system. End use customers have the option to purchase systems with high-GWP refrigerants at any given time, therefore only lower-GWP systems are incentivizeable.

This is considered an aggregated project and therefore general and project specific risk factors were assessed. (4) Virtual site visits were performed to verify the data documentation. In addition to virtual site visit, each location received a desk review verifying documentation was complete and matched. All locations within this aggregated project plan had consistent documentation as far as specific records within collection and retention of the data as well as consistent quality assurance processes to validate the documentation matched the project-based calculations and thus minimized risk of error by aggregation.

### ***Background Information***

Refrigerants are a necessary ingredient in the production of large commercial systems for retail food refrigeration. These refrigerants contain chemicals that release GHGs during manufacture, operation, and end-of-life (destruction). The Montreal Protocol has taken action to limit the use of high-GWP refrigerants and over the years the US EPA implemented the Significant New Alternatives Program (SNAP) to work with and guide industry in these transitions. The AIM Act (Dec. 2020) has also published a drawdown schedule, which ends in 2036 with a phased down rate 15% of 2021 baseline production. As a result, most refrigerants currently in the market today are HFCs. HFCs, while safer for the ozone layer compared to CFCs and HCFCs, are still powerful GHGs when released into the atmosphere.

There is an opportunity to reduce emissions beyond regulatory compliance by replacing HFC refrigerants with low-GWP refrigerants.

For the retrofit projects in this project plan, when commercial refrigeration equipment reaches the end of its useful life, grocers are tasked with the difficult decision of choosing which refrigerant type should replace it. The easy choice is to go with an HFC blend (that has high GWP values) as this is what the industry has relied on for the last few decades. They are less costly to install and technicians are used to working on these system types.

However, with the implementation of the AIM ACT and more scrutiny around fluorinated gases and their associated carbon emissions, the more sustainability focused grocers are choosing low GWP refrigerants such as CO<sub>2</sub> (GWP of 1). These system types often result in increased efficiency gains as well as significant savings in refrigerant costs throughout the system lifetime. At the end of the day, grocers need their product to stay cold so that they can make sales and do not want to have to worry about their refrigeration system. If the price premium of choosing a low GWP system vs. a legacy HFC system can be mitigated through carbon offsets, then the environmental benefits coupled with the system life capital savings far outweigh the concerns of adopting a novel technology type.

### ***Project Purpose(s) and Objective(s)***

The purpose of these projects is to offset the GHG emissions that would have been produced by the manufacturing installation and operation of HFC refrigerants by transitioning to R-744 (CO<sub>2</sub>), a (1) GWP; R-290 (Propane), a (3) GWP and zero-ODP Refrigerant.

## **A6. PROJECT ACTION**

### ***Description of prior physical conditions***

The supermarket owners for this project have been using refrigeration equipment for the commercial and retail food market for many years and have historically used CFCs, HCFCs, and HFCs as refrigerants. Prior to the transition to new lower-GWP refrigerant, owners were using HFC refrigerants. While the owners still use high-GWP refrigerants in many of their supermarkets, the supermarkets included in this project were built with new lower-GWP refrigeration systems. They chose to go above and beyond regulatory requirements through this installation.

### **Description of how the Projects will achieve GHG reductions and/or removal enhancements**

The supermarket owners chose to install lower-GWP refrigerants and refrigeration systems for the supermarkets included in these projects. The voluntary transition to a lower-GWP refrigerant results in a reduced amount of GHG in the operation of the systems installed. The projects measure the amount of SNAP-approved, lower-GWP refrigerant used by the supermarket owners against the amount of baseline refrigerant, as listed in Table 6, set as the default by the methodology for large commercial refrigeration systems that would have been used to produce the same refrigeration capacity.

### **Description of projects technologies, products, services and expected level of activity**

The technologies, product, and services included in this project are cooling, in the form of advanced commercial refrigeration at supermarkets. The quantity of cooling and associated emissions reductions for the new systems installed during this project are as follows:

**Table 5 - Level of Activity**

<b>Property</b>	<b>Cooling Capacity (kbtu/hr)</b>	<b>New System Charge (lb)</b>	<b>Total Reduced Emissions (CO<sub>2</sub>e)</b>
Stew Leonard's Yonkers	-	3180	23996.1
Coborn's 3004 Cash Wise	-	1800	7403.0
Coborn's 2048	1248	1200	10901.6
ShopRite Lincoln Park	-	42	4724.8
<b>TOTAL</b>	<b>1248</b>	<b>6222</b>	<b>47025</b>

## **A7. EX ANTE OFFSET PROJECTION**

**Table 6 – Ex-Ante ERT Projection**

<b>Vintage</b>	<b>ACR Project Number and Location</b>	<b>Baseline Refrigerant<sup>1</sup></b>	<b>Project Refrigerant<sup>1</sup></b>	<b>Baseline Refrigerant GWP<sup>2</sup></b>	<b>Project Refrigerant GWP<sup>2</sup></b>	<b>Total ERTs (tonnes CO<sub>2</sub>e)<sup>3</sup></b>
2021	830 US(Yonkers, NY)	R-22 (HCFC-22)	R-744 (CO <sub>2</sub> )	1764	1	23,996.1
2021	830 US(Willmar, MN)	R-507A	R-744 (CO <sub>2</sub> )	3987	1	3,526.3
2021	830 US(Willmar, MN)	R-22 (HCFC-22)	-	1,764	-	3,876.7
2021	830 US(Buffalo, MN)	R-407a (50%) and R-404a (50%)	R-744 (CO <sub>2</sub> )	2934	1	10,901.6
2021	830 US(Lincoln Park, NJ)	R-402A	R-290 (Propane)	2572	3	3,307.3
2021	830 US(Lincoln Park, NJ)	R-402A	R-290 (Propane)	2572	3	1,417.5

*1 Baseline refrigerant and GWP is from Table 6 (Baseline Refrigerant (GWP for Large Commercial Refrigeration and Remote Condensing Units) in the methodology*

*2 GWP as published by GWPs listed are ARC standard 7.0, 100-year GWPs.*

*3 Total offsets created reflects the Methodology calculation that allows for all 10 years of reductions to be issued as ERTs upon Verification.*

## **A8. PARTIES**

The project is not in any GHG program under any governmental regulatory process. Therm is the developer of the offsets. Land title is not relevant to this project type.

### ***Therm- Project Proponent***

Therm is a registered Project Proponent with the ACR. Therm focuses on refrigeration and other related projects.

Contact Information:

Contact: Olivia Bonnes  
Address: 170 S. Poplar Road Lake Forest, IL 60045  
Phone: 720.545.5628  
Website: [www.therm.cool](http://www.therm.cool)

### ***ShopRite of Lincoln Park Inc***

Larri Wolfson, president and owner of the ShopRite of Lincoln Park, New Jersey, is a third-generation grocer. The family's start in the business began with Larri's grandfather, Raymond, who sold produce from a 1919 Model T truck, eventually opening a small store in 1932. Soon, his sons Harold and Morton joined him in the business, and they became Wakefern members in 1955. Larri started in the Wolfson family business as a young boy, becoming full-time in 1975 and taking over as owner in 1987. He was named president in 2001.

Contact information:

Contact: Keenan Reynolds  
Address: 60 Beaverbrook Rd, Lincoln Park, NJ 07035, USA  
Phone: (732) 906-5026  
Email: [keenan.reynolds@wakefern.com](mailto:keenan.reynolds@wakefern.com)  
Website: <https://www.shoprite.com/ShopRiteofLincolnPark>

### ***COBORNS; (CASH WISE)***

Our employee-owned company includes 120+ retail locations throughout the Midwest with more growth on the way. With more than 9,000 dedicated owners, we strive to be remarkable by inspiring happiness, healthy living and simplicity, one guest at a time.

Contact information:

Contact: Nathan Tykwinski

Address: 1921 Coborn Blvd, St Cloud, MN 56301  
Phone: NA  
Email: nathan.tykwinski@cobornsinc.com  
Website: <https://www.cobornsinc.com>

### **STEW LEONARD'S**

From its humble beginnings as a small dairy store founded in 1969 with seven employees, Stew Leonard's has grown to become not only the World's Largest Dairy Store, but one of the most renowned grocery stores, with annual sales of almost \$500 million and more than 2,500 Team Members.

Contact: Patrick Dentato  
Address: 100 Westport Ave, Norwalk, CT 06851, USA  
Phone: (914) 844-3014  
Email: pdentato@stewleonards.com  
Website: [stewleonards.com](http://stewleonards.com)

## **B. METHODOLOGY**

### **B1. APPROVED METHODOLOGY**

These projects are submitted under the approved methodology entitled "Methodology for the Quantification, Monitoring, Reporting, and Verification of Greenhouse Gas Emissions Reductions and Removals from Advanced Refrigeration Systems, Version 2.1", issued in August 2021.

### **B2. METHODOLOGY JUSTIFICATION**

The project involve the transition of large commercial refrigeration systems from high-GWP refrigerants to lower-GWP refrigerants. The chosen methodology provides the quantification framework for the creation of carbon credits (ERTs) from the GHG reductions resulting from these activities.

### **B3. PROJECT BOUNDARIES**

The physical boundary for the project makes up the complete aggregated physical boundary of the locations. The physical boundary for the project includes the locations within North America where the systems are operated. The temporal boundaries for the project fall between as outlined in Table 7 below.

**Table 7 – Project Boundaries**

<b>ACR Project #</b>	<b>Physical Boundary</b>	<b>Temporal Boundary</b>	<b>Reporting Period</b>
830	US(NY,MN,NJ)	03/01/2021 - 02/28/2031	3/1/2021-11/8/2021

## B4. IDENTIFICATION OF GHG SOURCES AND SINKS

**Table 8 - GHG Sources and Sinks**

SSR	Source Description	Gas	Included (I) or Excluded (E)	Quantification Method
<b>1 Refrigerant Production</b>	Fossil fuel emissions from the production of refrigerants	CO2	E	N/A
		CH4	E	N/A
		N2O	E	N/A
	Refrigerant leaks during production	HFC	E	N/A
		Low GWP Refrigerant	E	N/A
<b>2 Refrigerant Transport</b>	Fossil fuel emissions from transport of refrigerants	CO2	E	N/A
		CH4	E	N/A
		N2O	E	N/A
	Refrigerant leaks during transport	HFC	E	N/A
		Low GWP Refrigerant	E	N/A
<b>3 Equipment Manufacture</b>	Fossil fuel emissions from the operation of the refrigeration system in the baseline and the project.	CO2	E	N/A
		CH4	E	N/A
		N2O	E	N/A
<b>4 Equipment Delivery and Installation</b>	Fossil fuel emissions from the delivery and installation of the advanced refrigeration system.	CO2	E	N/A
		CH4	E	N/A
		N2O	E	N/A
<b>5 Equipment Operation</b>	Fossil fuel emissions from the operation of the refrigeration system in the baseline and the project.	CO2	E	N/A
		CH4	E	N/A
		N2O	E	N/A
	Refrigerant leaks from the operation of the refrigeration system in the baseline and the project.	CFC	I	See Methodology Table 4
		HCFC	I	See Methodology Table 4
		HFC	I	See Methodology Table 4
		Low GWP refrigerant	I	See Methodology Table 4
<b>6 Equipment Service/Recharge</b>	Fossil fuel emissions from servicing refrigeration or A/C equipment or system to replace leaked refrigerant	CO2	E	N/A
		CH4	E	N/A
		N2O	E	N/A
	Refrigerant emissions occurring from servicing refrigeration or A/C equipment or system to replace leaked refrigerant	HFC	I	See Methodology Table 4
		Low GWP Refrigerant	I	See Methodology Table 4

<b>7 Equipment Disposal</b>	Emissions from the disposal of the equipment at end-of-life, including destruction of refrigerant.	CO2	E	N/A
		CH4	E	N/A
		CFCs	I	See Methodology Table 4
		HCFC	I	See Methodology Table 4
		HFCs	i	See Methodology Table 4

## B5. BASELINE

The baseline scenario is the use of the default refrigerant, as set by the Methodology, in the operation of large commercial refrigeration systems. Baseline quantities are calculated as shown in the table below. For retrofit projects, charge size for baseline systems are based off of data gathered from the baseline systems. For new construction projects, charge size for the baseline systems is based off of the calculations provided in the methodology.

**Table 9 - QBR, j,l**

Property	Baseline Refrigerant <sup>2</sup>	Charge Size (lbs)	Conversion (lbs to kgs)	QBR,j,l (kg) <sup>4</sup>
Stew Leonard's Yonkers	R-22 (HCFC-22)	5060	2.204622622	2295.2
Coborn's 3004 Cash Wise R-507A	R-507A	1600	2.204622622	725.7
Coborn's 3004 Cash Wise R-22 (HCFC-22)	R-22 (HCFC-22)	3000	2.204622622	1360.8
Coborn's 2048 R-407A (50%) and R-404A (50%)	R-407a (50%) and R-404a (50%)	3191.6	2.204622622	1447.7
ShopRite Lincoln Park- Rack D: R-402A	R-402A	800	2.204622622	362.9
ShopRite Lincoln Park- Rack E: R-402A	R-402A	800	2.204622622	362.9

**Table 10 – Baseline Scenario**

Property	BE <sub>y</sub> (MTCO <sub>2e</sub> )	Baseline Refrigerant <sup>2</sup>	ER <sub>REF, j</sub> (%) <sup>1</sup>	GWP <sub>REF, j</sub> (GWP) <sup>3</sup>	QBR,j,l (kg) <sup>4</sup>	Crediting Period
Stew Leonard's Yonkers	24,005	R-22 (HCFC-22)	59.29%	1764	2295.2	10
Coborn's 3004 Cash Wise R-507A	3527	R-507A	12.19%	3987	725.7	10
Coborn's 3004 Cash Wise R-22 (HCFC-22)	3877	R-22 (HCFC-22)	16.15%	1764	1360.8	10
Coborn's 2048 R-407A (50%) and R-404A (50%)	10903	R-407a (50%) and R-404a (50%)	25.67%	2934	1447.7	10
ShopRite Lincoln Park- Rack D: R-402A	3307	R-402A	35.44%	2572	362.9	10

ShopRite Lincoln Park- Rack E: R-402A	1418	R-402A	15.19%	2572	362.9	10
--	------	--------	--------	------	-------	----

1. Per methodology Table 4

2. Per methodology Table 6 assessed by property state

3. Per actual baseline data or methodology Table 6 based on project type

4. Calculated using Table 4 "Charge Size" categorization and cooling capacity of the new system

## B6. PROJECT SCENARIO

The project scenario is the use of lower-GWP project refrigerant in the operation of large commercial refrigeration systems.

**Table 11 - Project Emissions**

Property	PE <sub>y</sub> (MTCO <sub>2</sub> e)	Project Refrigerant	AR <sub>k,i</sub> (kg)	ERA <sub>REF, k</sub> (%)	GWP <sub>REF, k</sub> (GWP) <sup>3</sup>	Number of Years in Crediting Period
Stew Leonard's Yonkers	8.6	R-744 (CO <sub>2</sub> )	1442.4	59.29%	1	10
Coborn's 3004 Cash Wise R-507A	1	R-744 (CO <sub>2</sub> )	816.5	12.19%	1	10
Coborn's 3004 Cash Wise R-22 (HCFC-22)	-	-	0	16.15%	0	10
Coborn's 2048 R-407A (50%) and R-404A (50%)	1.4	R-744 (CO <sub>2</sub> )	544.3	25.67%	1	10
ShopRite Lincoln Park- Rack D: R-402A	0.1	R-290 (Propane)	9.5	35.44%	3	10
ShopRite Lincoln Park- Rack E: R-402A	0	R-290 (Propane)	9.5	15.19%	3	10



## B7. REDUCTIONS AND ENHANCED REMOVALS

The project is based on a simple premise of product replacement and mass-balance. The baseline/default refrigerant has a high-GWP that produces a significant amount of GHG during the manufacturing, operation, and end-of-life of refrigeration rack systems. The project refrigerant has a lower-GWP and emits virtually no GHG during the lifetime of the systems. Baseline/default refrigerant GHG emissions minus project refrigerant GHG emissions equals the project emission reductions and enhanced removals.

**Table 12 - Project Emissions Reductions**

<b>Property</b>	<b>BE<sub>y</sub> (MTCO<sub>2</sub>e)</b>	<b>PE<sub>y</sub> (MTCO<sub>2</sub>e)</b>	<b>ER<sub>y</sub> (MTCO<sub>2</sub>e)</b>
Stew Leonard's Yonkers	24,005	8.6	23996.1
Coborn's 3004 Cash Wise R-507A	3527	1	3526.3
Coborn's 3004 Cash Wise R-22 (HCFC-22)	3877	-	3876.7
Coborn's 2048 R-407A (50%) and R-404A (50%)	10903	1.4	10901.6
ShopRite Lincoln Park- Rack D: R-402A	3307	0.1	3307.3
ShopRite Lincoln Park- Rack E: R-402A	1418	0	1417.5

## B8. PERMANENCE

There is no risk of reversal. Once the refrigeration product is produced with the lower-GWP refrigerant, the product is made and the associated GHG reductions are fixed. This applies to all aggregated sites in this project plan.

## C. ADDITIONALITY

Assessment of the Additionality of a Project under this Methodology is defined in the Methodology itself. It is made based on passing the following two tests:

1. Regulatory Surplus Test, and
2. Practice-Based Performance Standard

## C1. REGULATORY SURPLUS TEST

To pass the regulatory surplus test a project must not be mandated by existing laws, regulations, statutes, legal rulings, or other regulatory frameworks in effect as of the start date that directly or indirectly affect the credited offsets.

The project is not mandated by existing laws, regulations, statutes, legal rulings, or other regulatory frameworks in effect as of the start date that directly or indirectly affect the credited offsets.

In the United States, requirements with respect to the GHG potency first arose from implementation of the Montreal Protocol and more recently by its Kigali Amendments. The former targeted Ozone Depleting Substances (ODS) and the latter is directed at high-GWP HFC's. Title VI of the 1990 Clean Air Amendments addresses Stratospheric Ozone Protection and includes authority for EPA to regulate ODS's. That led EPA to adopt rules to disallow use of ODS through a progression of rulemaking actions, which includes what are colloquially referred to as Significant Use Alternative Policy or SNAP.

Today, there is still a predominately used ODS containing refrigerant in use due to its large portion of the market share throughout the last few decades. This refrigerant is HCFC-22, more commonly known as Freon. The 2014 ruling from the EPA gave allowances to HCFC-22 phase down through 2019 that resulted in a slower phase down of production and import of HCFC-22 for an end use within the air-conditioning and commercial refrigeration markets. As of 2020, HCFC-22 can no longer be produced or imported in the United States, however, all legacy equipment using this refrigerant can continue to be used for as long as needed by using reclaimed or stockpiled HCFC-22. Additionally, there is no ruling from the EPA to force premature retirement of equipment containing this HCFC. As such, retrofit projects that utilize HCFC-22 as the baseline refrigerant pass the regulatory surplus test.

In 2015 and 2016, the EPA adopted an extensive set of amendments to its SNAP rules of which rules 20 and 21 are particularly relevant. The SNAP 20 regulations were invalidated by the Circuit Court of Appeals for the District of Columbia, to the extent they replaced allowable HFCs with lower GWP HFCs, as exceeding EPA's statutory authority. That decision then led to the Court also invalidating SNAP 21 in 2019. By then, the then-new administration had declared it would not enforce the SNAP 20 and 21 rules unless and until it underwent a new rulemaking action to address the court's decision and rationale and in 2018 EPA stated it will not enforce those rules until further rulemaking is completed. 83 Fed. Reg. 18431 (April 27, 2018). No further action has been taken by EPA to re-adopt these SNAP rules.

On December 27, 2020, the American Innovation and Manufacturing (AIM) Act of 2020 was enacted as section 103 in Division S, Innovation for the Environment, of the Consolidated Appropriations Act, 2021 (H.R. 133 (116th): Consolidated Appropriations Act, 2021 [Including Coronavirus Stimulus & Relief]). The AIM Act directs EPA to address HFCs by providing new authorities in three main areas: to phase down the production and consumption of listed HFCs, manage these HFCs and their substitutes, and facilitate the transition to next-generation technologies.

The AIM Act, which was included in the Consolidated Appropriations Act, 2021, directs EPA to phase down production and consumption of HFCs in the United States by 85 percent over the next 15 years. A global HFC phasedown is expected to avoid up to 0.5° Celsius of global warming by 2100.

This final rule is the first regulation under the AIM Act to address HFCs, which are potent greenhouse gases commonly used in refrigerators, air conditioners, and other applications. This final rule sets the HFC production and consumption baseline levels from which reductions will be made, establishes an initial methodology for allocating and trading HFC allowances for 2022 and 2023, and creates a robust, agile, and innovative compliance and enforcement system.

State-specific laws in the applicable states for this project US(NY,MN,NJ) did not prohibit HFC production and commercial use at time of project. The GWP baselines for this project reflect the status of all laws passed at the time of project.

New York subsequently passed 6 NYCRR Part 494, Hydrofluorocarbon Standards and Reporting adopting SNAP Rules 20 & 21 in new supermarket refrigeration systems effective January 1, 2021. The refrigerants used in this project have far lower GWPs than those mandated by this legislation and legislative requirements are reflected in the GWP baselines used for this project.

Minnesota is a member of the US Climate Alliance but has not committed to regulating HFC refrigerants.

In alignment with the federal EPA SNAP Rules 20 and 23, New Jersey enacted A-5583, prohibiting certain HFCs in specific stationary refrigeration and air-conditioning end-uses, effective July 1, 2020.

HFC production and commercial use is not prohibited or mandated at the time of the project.

## C2. COMMON PRACTICE TEST

Not applicable.

## C3. IMPLEMENTATION BARRIERS TEST

Not applicable.

## C4. PERFORMANCE STANDARD TEST

The Methodology has already completed a market adoption analysis. Therefore, project proponents must only show that their project falls into one of the eligible segments found in Table 1 of the Methodology to pass the Practice-Based Performance Standard.

The project falls into the Large Commercial Refrigeration segment listed in Table 1 of the Methodology.

# D. MONITORING PLAN

## D1. PARAMETERS MONITORED

<a href="#">Parameter</a>	<a href="#">QBR<sub>i,j</sub></a>
<a href="#">Units</a>	<a href="#">kg</a>
<a href="#">Description</a>	<a href="#">Quantity of refrigerant j in equipment i used in baseline system (charge size of equipment in kgs). Other than for Large Commercial Refrigeration projects where an existing system is being replaced, use the Refrigerant Charge size default values in Table 4. For Large Commercial Refrigeration projects where existing equipment is being replaced, use regulatory compliance reporting or verifiable historical operating records to establish the charge size of the replaced baseline systems.</a>
<a href="#">Data Source</a>	<a href="#">Calculated from new system design cooling capacity (system specifications) and charge size assumption (specified in Table 4)</a>
<a href="#">Measurement Methodology</a>	<a href="#">For each location new system design cooling capacity (system specifications) and charge size assumption is assigned as specified in Table 4 of the Methodology</a>
<a href="#">Equation #(s)</a>	<a href="#">Equation 1</a>
<a href="#">Data Uncertainty</a>	<a href="#">Methodology sets parameters</a>
<a href="#">Monitoring Frequency</a>	<a href="#">Determined once</a>
<a href="#">Reporting Procedure</a>	<a href="#">Manufacturer Records</a>
<a href="#">QA/QC Procedure</a>	<a href="#">Verified that the system indicated on specification matched with the Bill of Lading for each location</a>

<b>Parameter</b>	$AR_{k,i}$
<b>Units</b>	kg
<b>Description</b>	Quantity of alternative refrigerant k used in project system i.
<b>Data Source</b>	Certified charge size documentation from refrigeration contractor
<b>Measurement Methodology</b>	Charge size x # of units
<b>Equation #(s)</b>	Equation 2
<b>Data Uncertainty</b>	Methodology sets parameters
<b>Monitoring Frequency</b>	Determined once
<b>Reporting Procedure</b>	Electronically
<b>QA/QC Procedure</b>	Verification of invoices

<b>Parameter</b>	$ER_{REF,j}$
<b>Units</b>	% per year
<b>Description</b>	Annual amortized emission rate of refrigerant j in baseline system (%).
<b>Data Source</b>	Table 4 - Annual Amortized Emission Rate
<b>Measurement Methodology</b>	Table 4 of Methodology
<b>Equation #(s)</b>	Equation 1
<b>Data Uncertainty</b>	Methodology sets parameters
<b>Monitoring Frequency</b>	Determined once
<b>Reporting Procedure</b>	Table 4 - Annual Amortized Emission Rate
<b>QA/QC Procedure</b>	Refer to Table 4 of ARS Methodology - Annual Amortized Emission Rate

<b>Parameter</b>	$GWP_{REF,j}$
<b>Units</b>	Global Warming Potential (GWP)
<b>Description</b>	GWP of refrigerant j used in baseline system.
<b>Data Source</b>	GWP default values in Table 6
<b>Measurement Methodology</b>	Table 6 of Methodology
<b>Equation #(s)</b>	1
<b>Data Uncertainty</b>	Methodology sets parameters
<b>Monitoring Frequency</b>	Determined once
<b>Reporting Procedure</b>	Refer to Table 6
<b>QA/QC Procedure</b>	Refer to Table 6

<b>Parameter</b>	$ER_{REF,k}$
<b>Units</b>	% per year
<b>Description</b>	Annual emission rate of alternative refrigerant k used in project system
<b>Data Source</b>	Set equal to the emission rate of the baseline system.
<b>Measurement Methodology</b>	Table 4 of methodology
<b>Equation #(s)</b>	2
<b>Data Uncertainty</b>	Methodology sets parameters
<b>Monitoring Frequency</b>	Determined once
<b>Reporting Procedure</b>	Determined once
<b>QA/QC Procedure</b>	Refer to Table 4 of ARS Methodology

<b>Parameter</b>	$GWP_{REF,k}$
<b>Units</b>	Global Warming Potential (GWP)
<b>Description</b>	GWP of alternative refrigerant k used in project system.
<b>Data Source</b>	IPCC, published governmental reference (e.g., EPA SNAP) or scientific, peer reviewed publication
<b>Measurement Methodology</b>	Table 4 of Methodology
<b>Equation #(s)</b>	2
<b>Data Uncertainty</b>	IPCC, published governmental reference (e.g., EPA SNAP) or scientific, peer reviewed publication sets parameters
<b>Monitoring Frequency</b>	Determined once
<b>Reporting Procedure</b>	Determined once
<b>QA/QC Procedure</b>	Refer to Table 4 of ARS Methodology

## **D2. MONITORING PLAN**

### **a) Project Implementation**

The manufacturer(s) design(s) systems and ship(s) materials to installation locations. Contracted refrigeration contractors then install the specified systems at the supermarket and fill the system with the new lower-GWP Refrigerant, conduct start up and system commissioning.

### **b) Technical Description of Monitoring Task**

Monitoring is conducted exclusively through review of official documents identifying data outlined in section c) as well as photos confirming systems were installed where specified. Due to the complex and dispersed nature of these systems, documentation provides the most reliable form of monitoring.

### **c) Data to be Monitored and Collected**

The following data requires monitoring for this project. Once obtained, this information provides the required metrics to calculate Baseline Emissions (Equation 1), Project Emissions (Equation 2), and Project Emissions Reductions (Equation 3):

- Project system cooling capacity - Project system cooling capacity is specified by design documents created during system design. Installed systems are then validated via purchase, shipping, and commissioning records. Additional validation occurs via photos of the installed systems.
- Alternative refrigerant charge size - Project system charge size is determined by charge and purchase records created during initial installation of the refrigeration systems.
- Location sold to - Location sold to is determined by purchase and shipping records.
- System operational date - System operational date is determined by publicly-available store opening dates.

All other data is determined as outlined in Section D1.

### **d) Overview of data collection procedures**

Records showing the systems were filled with the refrigerant are maintained on file by Stew Leonard's, Coborn's, Inc and ShopRite of Lincoln Park Inc, as required by the EPA. All owners use digital recordkeeping systems for data storage. Emission reductions will be achieved at time of construction, and cannot be reversed, however all owners use digital recordkeeping systems for data storage and Therm keeps a digital copy of these records indefinitely.

### **e) Frequency of the Monitoring**

Monitoring will be conducted once at a date after the opening date for the final supermarket included in this project plan.

### **f) Quality Control and Quality Assurance Procedures**

Quality control and quality assurance are conducted by cross-referencing multiple forms of documentation with confirming information and further by photographs of installed equipment.

### **g) Data Archiving**

Records showing the systems were filled with are maintained on file by Stew Leonard's, Coborn's, Inc and ShopRite of Lincoln Park Inc, as required by the EPA. All owners use digital recordkeeping systems for data storage. Emission reductions will be achieved at time of construction, and cannot be reversed, however all owners use digital recordkeeping systems for data storage.

### **h) Organization and Responsibilities of the Parties Involved in the Above**

Therm Solutions – Project Proponent and Developer. Therm works with customers to successfully manage the refrigerant transition process. Olivia Bonnes, Director of Operations leads the Project. The Manufacturer provides all specifications and data as required by the monitoring plan.

**i) Calibration Procedures**

Calibration is not applicable for this project type. While routine maintenance is performed on the new systems and refrigerant leakage is monitored, that data is irrelevant to the calculations associated with the project.

**j) Sampling Methods**

Not required for this project

**E. QUANTIFICATION**

**E1. BASELINE EMISSIONS**

Baseline emissions will be calculated according to the following formula:

**Equation 1**

$$BE_y = \sum_i [(Q_{BR,j,i} \div 1000) \times ERA_{REF,j} \times GWP_{REF,j}] \times 10$$

**WHERE**

BE <sub>y</sub>	Baseline emissions in year <b>y</b> (MT CO <sub>2</sub> e)
Q <sub>BR,j,i</sub>	Quantity of refrigerant <b>j</b> in equipment <b>i</b> used in baseline system (Charge Size of equipment in kgs). Other than for Large Commercial Refrigeration projects where an existing system is being replaced, use the Refrigerant Charge Size default values in Table 4. For Large Commercial Refrigeration projects where, existing equipment is being replaced, use regulatory compliance reporting or verifiable historical operating records to establish the charge size of the replaced baseline system.
ERA <sub>REF,j</sub>	Annual amortized emission rate of refrigerant <b>j</b> in baseline system (%). Other than for Large Commercial Refrigeration projects where an existing system is being replaced, use the Annual Emission Rate default values in Table 4. For Large Commercial refrigeration projects where, existing equipment is being replaced, use regulatory compliance reporting or verifiable historical operating records to establish the annual leak rate of the replaced baseline system which shall be based on the average of the previous two years of baseline system operation prior to installation of advanced refrigeration system.
10	Number of years in the crediting period <sup>17</sup>
GWP <sub>REF,j</sub>	Global warming potential of baseline refrigerant <b>j</b> . Other than for Large Commercial Refrigeration projects where an existing system is being replaced, use the GWP default values in Tables 5 and 6. For Large Commercial refrigeration projects where existing equipment is being replaced, use regulatory compliance reporting or verifiable historical operating records to establish the type of refrigerant historically used. <sup>18</sup>

## E2. PROJECT EMISSIONS

Project emissions will be calculated according to the following formula:

Equation 2

$$PE_y = \sum_i [(AR_{k,i} + 1000) \times ERA_{REF,k} \times GWP_{REF,k}] \times 10$$

WHERE

$PE_y$	Project emissions in year $y$ (MT CO <sub>2</sub> e)
$AR_{k,i}$	Charge size of alternative refrigerant $k$ used in project system from manufacturer specifications $i$ (kgs) <sup>19</sup>
$ERA_{REF,k}$	Annual emission rate of alternative refrigerant $k$ set equal to emission rate for baseline system (% per year).
10	Number of years in the crediting period
$GWP_{REF,k}$	Global warming potential of alternative refrigerant $k$ used in the project.

## E3. LEAKAGE

By installing an advanced refrigeration system, the project is not increasing overall market demand for refrigeration systems. Thus, there would be no “market-shifting” associated with this project type. Regarding “activity-shifting” leakage, the refrigerant from the existing system, which was replaced by a lower-GWP refrigerant, should not be considered as leakage. This is due to the quantification of emission reductions in the methodology that do not take into account the emissions occurring from the refrigerant recovered when that system is replaced. For example if X lb’s of baseline refrigerant is recovered when the system is replaced with the lower-GWP system today, the same amount of baseline refrigerant can also be assumed to be recovered if the system is replaced after ten years. The quantifications of emission reductions does not take into account the emissions from the baseline refrigerant recovered after ten years (if that existing system would have continued to be used for the next ten years). The emissions from the baseline refrigerant recovered today also does not have to be accounted for (or considered leakage). Even if they both were accounted for, they would cancel each other out. Thus, leakage is not considered for this project.

## E4. UNCERTAINTY

There is no uncertainty with respect to the projected emission reductions. All calculations are based on existing production, financial information, and units placed into service. The equations used for the calculations are precise since the products involved must be manufactured based on quality control requirements for the finished products.

## E5. PROJECT EMISSION REDUCTIONS

Equation 3

$$ER_y = [BE_y - PE_y]$$

WHERE

$ER_y$	Emission reductions in year $y$ (MT CO <sub>2</sub> e)
$BE_y$	Baseline emissions in year $y$ (MT CO <sub>2</sub> e)

## E6. EX-ANTE ESTIMATION METHODS

Emission reductions created from this project are calculated using the baseline refrigerants specified in Table 9, as set by the Methodology, and the project refrigerant GWP values and the cooling capacity and charge sizes of systems put into service in the Reporting Period (Specified in Table 11). The equations in the Methodology calculate the GHG reductions over the first 10 years. There is only one reporting period for each project that will issue all 10 years of ERTs upon final Verification.

# F. COMMUNITY & ENVIRONMENTAL IMPACTS

## F1. NET POSITIVE IMPACTS

The potential impacts on the local community and the environment were considered. Positive community impacts from the project include the reduction of GHG emissions from refrigeration equipment manufacturing and operation, both at the local level (near the installed equipment locations) and globally. There were no foreseeable negative impacts to the community or the environment that resulted from this project.

The project meets and fulfills the applicable UN Sustainable Development Goals as articulated by the UN Department of Economic and Social Affairs, in #Envision2030:

**Goal #9 - Industry, Innovation, and Infrastructure:** This project fulfills this goal, specifically subsection 9.4, in that the adoption of low-GWP refrigeration systems is a sustainable upgrade with substantially reduced CO<sub>2</sub> emissions per unit of value (in this case food distribution and sale) added. Low-GWP refrigeration systems both reduce emissions from refrigerant leakage (addressed in this project) and reduce emissions from typically lower energy consumption than comparable HFC or HFC/HFO systems.

**Goal #11 – Sustainable Cities and Communities:** This project fulfills Goal #11 by reducing climate-damaging emissions which cause natural disasters. Successfully reducing these emissions at scale, for example through use of low-GWP refrigerants, will help prevent the human and economic losses associated with natural disasters.

**Goal #12 - Responsible Consumption and Production:** This project fulfills Goal #12 in several ways related to food production. It reduces the material footprint per capita for supermarkets (12.2) by using lower footprint low-GWP refrigerants. It achieves environmentally sound management of chemicals throughout their life cycle (12.4) by using chemicals that are minimally damaging to the climate and local communities when leaked during use and at time of decommissioning. Finally, it fulfills the goal for companies to adopt sustainable practices (12.6).

**Goal #13 – Climate Action:** This project fulfills Goal #13 by taking direct climate action through the choice to use a low-GWP refrigerant. Paul Hawken's Drawdown ranks refrigeration as the #1 global drawdown opportunity, based on the total amount of greenhouse gases it can potentially avoid or remove from the atmosphere. Bill Gates' How to Avoid a Climate Disaster calls F-Gases used in traditional AC and refrigeration "extremely powerful contributors to climate change". This project directly addresses one of our world's most meaningful solutions for climate change.

## F2. STAKEHOLDER COMMENTS

Not applicable for this project type.



## G. OWNERSHIP AND TITLE

### G1. PROOF OF TITLE

Therm owns the title and rights to the carbon offset credits involved in this Project. Therm, Stew Leonard's, Coborn's, Inc and ShopRite of Lincoln Park Inc have a signed Refrigeration Carbon Development Agreement in place, confirming the transfer of title to Therm.

### G2. CHAIN OF CUSTODY

The projects have not produced any offsets to date and, therefore, no offsets have been bought or sold previously. Nor do the Projects have a forward option contract in place.

### G3. PRIOR APPLICATION

These activities have not previously been the subject of an offset project.

## H. PROJECT TIMELINE

### H1. START DATE

The start dates for this Project and how it was determined are as follows:

**Table 13 – Project Start Dates**

ACR Project Numbers	Project Start Date	How Determined
830	March 1, 2021	Earliest project start date for aggregated projects:  Stew Leonards Yonkers- 03/01/2021, Coborn's 3004- Cash Wise Willmar, MN- 09/13/2021, Coborn's 2048- Buffalo, MN- 11/08/2021, ShopRite Lincoln Park Inc- 04/07/2021

### H2. PROJECT TIMELINE

**Table 14 – Project Timelines**

ACR Project Numbers	830
Initiation of Project Activities	March 1, 2021
Project Term	N/A
Relevant Project Activities in GHG Project Cycle	The collection of location specific refrigeration data cross referencing monitoring and verification validation.
Crediting Period	3/1/2021-2/28/2031
Reporting Period	3/1/2021-11/8/2021
Frequency of Reporting	Once
Monitoring Period	3/1/2021-11/8/2021
Frequency of Monitoring	Determined once
Frequency of Validation	Once in 2023
Frequency of Verification	Once in 2023