PROJECT PLANS

FEBRUARY 2021

ADVANCED REFRIGERATION PROJECTS FOR USE OF LOW-GWP STAND-ALONE REFRIGERATION UNITS IN UNITED STATES (EXCEPT CALIFORNIA), IN CALIFORNIA AND IN CANADA

ACR Project ID	Vintage	Location	Project Name
ACR479	2016	US (excluding California) - US49	Advanced Refrigeration - US49 ARS Project 001
ACR526	2016	California - CAL	Advanced Refrigeration - CAL ARS Project 001B
ACR527	2016	Canada - CAN	Advanced Refrigeration - CAN ARS Project 001C
ACR480	2017	US (excluding California) - US49	Advanced Refrigeration - US49 ARS Project 002
ACR528	2017	California - CAL	Advanced Refrigeration - CAL ARS Project 002B
ACR529	2017	Canada - CAN	Advanced Refrigeration - CAN ARS Project 002C
ACR481	2018	US (excluding California) - US49	Advanced Refrigeration - US49 ARS Project 003
ACR530	2018	California - CAL	Advanced Refrigeration - CAL ARS Project 003B
ACR531	2018	Canada - CAN	Advanced Refrigeration - CAN ARS Project 003C

True Manufacturing Co., Inc. and Dentons US LLP

Table of Contents

Table of Contents 2

A. PROJECT OVERVIEW 4

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 6

A4. LOCATION 11

Table 3 – Manufacturing Locations 12

Table 4 – Project Locations 12

A5. BRIEF SUMMARY OF PROJECT 12

A6. PROJECT ACTION 13

A7. *EX ANTE* OFFSET PROJECTION 14

Table 5 – Ex-Ante ERT Projection 14

A8. PARTIES 15

B. METHODOLOGY 17

B1. APPROVED METHODOLOGY 18

B2. METHODOLOGY JUSTIFICATION 18

B3. PROJECT BOUNDARIES 18

Table 6 – Project Boundaries 18

B4. IDENTIFICATION OF GHG SOURCES AND SINKS 19

Table 7 – GHG Sources and Sinks 19

B5. BASELINE 21

B6. PROJECT SCENARIO 21

B7. REDUCTIONS AND ENHANCED REMOVALS 21

B8. PERMANENCE 21
C. ADDITIONALITY 22
C1. REGULATORY SURPLUS TEST 23
C2. COMMON PRACTICE TEST 24
C3. IMPLEMENTATION BARRIERS TEST 24
C4. PERFORMANCE STANDARD TEST 24
D. MONITORING PLAN 25
D1. PARAMETERS MONITORED 26
D2. MONITORING PLAN 30
Figure 1 - Process flow diagram 33
E. QUANTIFICATION 34
E1. BASELINE EMISSIONS 35
E2. PROJECT EMISSIONS 35
E3. LEAKAGE 36
E4. PROJECT EMISSION REDUCTIONS 36
E5. UNCERTAINTY 36
E6. EX-ANTE ESTIMATION METHODS 36
F. COMMUNITY & ENVIRONMENTAL IMPACTS 37
F1. NET POSITIVE IMPACTS 38
F2. STAKEHOLDER COMMENTS 38
G. OWNERSHIP AND TITLE 39
G1. PROOF OF TITLE 40
G2. CHAIN OF CUSTODY 40
G3. PRIOR APPLICATION 40
H. PROJECT TIMELINE 41
H1. START DATE 42
Table 8 – Project Start Dates 42
H2. PROJECT TIMELINE 42
Table 9 – Project Timelines 42

A.
PROJECT OVERVIEW

A1. PROJECT TITLE - Overview

This filing is for nine (9) separate projects all seeking to validate and verify ERTs pursuant to the Advanced Refrigeration Systems 2.0 Methodology. The Projects are numbered according to vintage year and location in which ERTs are earned. Projects in the 001 series (ARS 001, 001B, and 001C) seek ERTs for vintage year 2016. Projects in the 002 series (ARS 002, 002B, and 002C) seek ERTs for vintage year 2017. Projects in the 003 series (ARS 003, 003B and 003C seek ERTs for vintage year 2018). The projects without a letter are for ERTs generated in the United States, excluding California, for the respective project year (US49). The projects with a letter "B" are for ERTs generated in the State of California for the respective project year (CAL). The projects with a letter "C" are for ERTs generated in Canada for the respective project year (CAN).

Table 1 – Project Vintages and Locations

ACR Project ID	Vintage	Location	Project Name
ACR479	2016	US (excluding California) - US49	Advanced Refrigeration - US49 ARS Project 001
ACR526	2016	California - CAL	Advanced Refrigeration - CAL ARS Project 001B
ACR527	2016	Canada - CAN	Advanced Refrigeration - CAN ARS Project 001C
ACR480	2017	US (excluding California) - US49	Advanced Refrigeration - US49 ARS Project 002
ACR528	2017	California - CAL	Advanced Refrigeration - CAL ARS Project 002B
ACR529	2017	Canada - CAN	Advanced Refrigeration - CAN ARS Project 002C
ACR481	2018	US (excluding California) - US49	Advanced Refrigeration - US49 ARS Project 003
ACR530	2018	California - CAL	Advanced Refrigeration - CAL ARS Project 003B
ACR531	2018	Canada - CAN	Advanced Refrigeration - CAN ARS Project 003C

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 2.0". Certain project eligibility requirements are specified within the Methodology and others are specified within the ACR Standard, Version 5.1.

Table 2 – Project Eligibility Criteria

Criterion	ACR Standard or Methodology Specific Requirement	Proof of Project Eligibility
Geographic location	The Project must be located in North America	The stand-alone commercial refrigeration units are manufactured by True Manufacturing, Inc. (True) at their facilities located in Missouri and distributed for operation to locations within North America
Eligible Sectors	The Project must be in a sector and segment which has a low adoption rate for the relevant project activity ("Eligible Project Activity" & "Eligible Refrigerator Sector/Segment") as defined in Table 1 of the Methodology. If the project activity involves replacement of CFC, HCFC or HFC-based equipment with an advanced refrigeration system where he 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 win accordance with EPA regulations (40CFR Part 82, Subpar F) under Section 608 of the Clean Air Act; 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.	The Projects fall within the Stand-Alone Commercial Refrigeration sector and use low-GWP refrigerants. The project does not involve replacement of CFC, HCFC or HFC-based equipment. The refrigerant is an acceptable ;substitute under SNAP.

Criterion	ACR Standard or Methodology Specific Requirement	Proof of Project Eligibility
Start Date	Date for all projects other than AFOLU as the date on which the project began to reduce GHG emissions against its baseline. Non-AFOLU Projects must be validated within 2 years of the project Start Date. One exception applies to these timeframes: - 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. - 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. - The Start Date and the start of the Minimum Project Term shall be the same. - The Start Date and the start of the first Crediting Period are generally the same, unless otherwise allowable in the relevant methodology.	The Projects have start dates of 01/01/2016, 01/01/2017, and 01/01/2018. Project Plans for ARS 001, 002, & 003 were originally submitted in March 2019, within 6 months of approval of V 2.0 of the Methodology. These projects would not have been possible under V 1.0 of the Methodology. This revised Project Plan includes the same facilities and units and splits the projects into the following locations: ARS 001, 002, 003 = US49 ARS 001B, 002B, 003B = CAL ARS 001C, 002C, 003C = CAN

Criterion	ACR Standard or Methodology Specific Requirement	Proof of Project Eligibility
Minimum Project Term	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.	There is no risk of reversal for this project type and, therefore, there is no required minimum project term.
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 manufacturing and operation of stand-alone refrigeration units 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.	The Project Proponent is True Manufacturing Co., Inc. True owns and operates the plant sites involved and has control over the GHG sources/sinks from which the emission reductions originate. Documentation showing effective control of the GHG sources from which the reductions originate is maintained for this project. True maintains title and control by contract of these emissions.

Criterion	ACR Standard or Methodology Specific Requirement	Proof of Project Eligibility
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 offsets is clear, unique, and uncontested and that the offsets have not been previously sold.
Additional	The Methodology requires Projects to pass the Regulatory Surplus Test and meet the ACR Practice-Based Performance Standard. <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. <u>Regulatory Surplus Test:</u> The project proponent must demonstrate that 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.	This project passes the ACR-approved Practice-Based Performance Standard and the Regulatory Surplus Test. <u>Practice-Based Performance Standard:</u> The project meets the criteria for Stand-Alone Commercial Refrigeration, as defined in Table 1 of the methodology, which means it has a low adoption rate. <u>Regulatory Surplus Test:</u> 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.

Criterion	ACR Standard or Methodology Specific Requirement	Proof of Project Eligibility
Regulatory Compliance	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.	This project maintains material regulatory compliance for the entire reporting period.
Permanent	For projects with a risk of reversal of GHG removal enhancements, Project Proponents shall assess risk using an ACR-approved risk assessment tool.	There is no risk of reversal of GHG removal enhancements for this project type.
Net of Leakage	The Methodology has determined there is no market-shifting leakage and, hence is to be disregarded. 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.	All of the stand-alone units in this project are new, therefore, there is no baseline equipment. Leakage is not considered for this Project.

Criterion	ACR Standard or Methodology Specific Requirement	Proof of Project Eligibility
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.	The project has only positive effects on the environment. The propane refrigerants are manufactured in sealed units. The use of propane avoids the loss of HFCs during the operation of stand-alone units. Potential negative impacts were considered for this Project and there were not found to be any. The Projects also address aspects of the UN 2030 Sustainability Goals

A4. LOCATION

While the units in these Projects are manufactured at True's facilities located in Missouri (Table 3), the Project Locations are determined by where the units are operated. Thus, we have separated these Projects out by locations in the United States (excluding California), California, and Canada.

Table 3 – Manufacturing Locations

Manufacturing Locations	GPS Coordinates
O'Fallon MO, 2001 East Terra Lane O'Fallon, MO 63366	Lat 38.804; Long -90.666
Bowling Green MO, 16755 Industrial Park Drive, Bowling Green, MO 63334	Lat39.350; Long -91.235
Pacific MO, 900 Integram Drive, Pacific, MO 63069	Lat 38.483; Long -90.784
Mexico MO, 2525 Lakeview Road Mexico, MO 65265	Lat. 39.158; Long -91.91

Table 4 – Project Locations

ACR Project Numbers	Locations
479, 480, 481	United States (excluding California) – "US49"
526, 528, 530	California – "CAL"
527, 529, 531	Canada – "CAN"

A5. BRIEF SUMMARY OF PROJECT

Description of Project Activity

The Project Activity is the transition from high-GWP refrigerants to a low-GWP refrigerant (R-290/ propane) in stand-alone commercial refrigeration units (units) manufactured by True at their manufacturing facilities (Table 3) and then shipped for operation across North America (Table 4).

The units are all newly manufactured and assembled on a production line at the facilities and were previously manufactured with high-GWP refrigerants. Refrigerant is injected into the unit during this process using a high-pressure delivery system and then sealed within the unit. True has the continued option to produce units with high-GWP refrigerants at any given time, therefore, only units produced with low-GWP refrigerants qualify for this project.

Background Information

Refrigerants are a necessary ingredient in the production of stand-alone units 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 and the US EPA implemented the Significant New Alternatives Program (SNAP) to work with and guide industry in these transitions. As a result,

the majority of 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.

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

Project Purpose(s) and Objective(s)

The purpose of this project is to offset the GHG emissions that would have been produced by the manufacturing and operation of HFC refrigerants by transitioning to R-290 (Propane), a near zero GWP and zero-ODP Refrigerant.

Delineation of ERTs by Geography

The methodology recognizes credits based on where the unit is put into use. True maintains a robust manufacturing and shipment database that tracks the shipment location for each unit. This allows the Projects to delineate the geographic location where the unit is placed into service, thus satisfying the ARS 2.0 methodology criteria.

A6. PROJECT ACTION

Description of prior physical conditions

True has been manufacturing refrigerators 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 propane, True was using R-22, R-404a, and R-134a. While True still uses R-22 and R-134a in some of their products, the units included in this project were transitioned to propane. True chose to go above and beyond regulatory requirements by adding manufacturing capabilities to use propane, a low-GWP refrigerant, in the manufacture of stand-alone commercial refrigeration units.

Description of how the Project will achieve GHG reductions and/or removal enhancements

True chose to transition to low-GWP refrigerants for the units included in this project. The voluntary transition of True to a low-GWP refrigerant results in a reduced amount of GHG in the manufacturing and operation of the units produced. The Project measures the amount of SNAP-approved, low-GWP refrigerant used by True in 2016, 2017, and 2018 against the amount of baseline refrigerant (a blend of R-134a and R-404a set as the default by the methodology for stand-alone commercial refrigeration units) that would have been used to produce the same quantity of stand-alone units.

Description of project technologies, products, services and expected level of activity

True manufactures refrigeration equipment that includes refrigerants on a daily basis. Therefore, this project activity is ongoing throughout the year as it produces stand-alone units.

A7. *EX ANTE* OFFSET PROJECTION

Table 5 – Ex-Ante ERT Projection

Vintage	ACR Project Number and Location	Baseline Refrigerant[1]	Project Refrigerant	Baseline Refrigerant GWP[2]	Project Refrigerant GWP[1]	Total ERTs (tonnes CO2e)[3]
2016	**ACR479** (US49)	R-134a and R-404a blend	R-290 (Propane)	2,053	3	199,624
	ACR526 (CAL)	R-134a and R-404a blend	R-290 (Propane)	2,053	3	21,141
	ACR527 (CAN)	R-134a and R-404a blend	R-290 (Propane)	2,053	3	17,453
2017	**ACR480** (US49)	R-134a and R-404a blend	R-290 (Propane)	2,053	3	324,357
	ACR528 (CAL)	R-134a and R-404a blend	R-290 (Propane)	2,053	3	41,381
	ACR529 (CAN)	R-1234 and R 202a blend	R-290 (Propane)	2,053	3	32,468
2018	**ACR481** (US49)	R-134a and R-404a blend	R-290 (Propane)	2,053	3	371,461
	ACR530 (CAL)	R-134a and R-404a blend	R-290 (Propane)	2,053	3	52,251
	ACR531 (CAN)	R-134a and R-404a blend	R-290 (Propane)	2,053	3	37,043

Baseline emissions are calculated using the number of stand-alone units manufactured with the project refrigerant (propane) and shipped for operation in the U.S., in California and in Canada, in respective Reporting Periods, multiplied by the baseline default charge size for each unit,

[1] Baseline refrigerant and GWP is from Table 4 (Baseline Default Assumptions) in the methodology

[2] GWP as published by GWPs listed are IPCC AR4 (2007), 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.

multiplied by the baseline default refrigerant GWP for each unit, multiplied by the default annual emission rate (7.75%), multiplied by 10 (10 years).

ACR has granted a "Forward Crediting Policy Revision" in relation to the Methodology. The revision states the following: "An advanced refrigeration transition project must result from an action that has already occurred (the transition to a low-GWP refrigerant) and that action must be verifiable. In order to quantify avoided emissions associated with the transition to a low-GWP refrigerant, it is necessary to utilize modeled emission rates over a 10-year crediting period. These avoided emissions are quantified during the project's reporting period and, pending a successful verification, Emission Reduction Tonnes (ERTs) are granted for the full 10 years of avoided emissions." The emission rates found in the Methodology are derived from EPA sources and were accepted for use in the ACR methodology development process.

ACR's forward crediting prohibition shall not apply to refrigerant transition projects utilizing ACR's "Methodology for the Quantification, Monitoring, Reporting, and Verification of Greenhouse Gas Emissions Reductions and Removals from Advanced Refrigeration Systems, Version 2.0."

A8. PARTIES

The project is not in any GHG program under any governmental regulatory process.

True is the owner of the offsets. Land title is not relevant to this project type.

True Manufacturing – Project Proponent Retail Food Refrigerator Manufacturer

True manufacturers stand-alone refrigeration units, a category of retail food refrigeration equipment, at four locations in Missouri, included in the Project Plan.

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Dentons – Project Management

Dentons is a multinational law firm founded in March 2013 by the merger of SNR Denton, Fraser Milner Casgrain and Salans. It now has more than 158 offices across over 75 countries, with over 10,000 lawyers and professionals.

Dentons' Environmental Markets Advisory Services Team consists of lawyers and senior advisors that are architects of emissions trading and strategists behind greenhouse gas regulation, emission reduction solutions and monetization.

Jeffrey Fort (Partner) and Susan Wood (Associate Managing Director) are the project managers for this Project. Dentons and Susan Wood are also the authors of the ACR Methodology being used for this Project.

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B.
METHODOLOGY

B1. APPROVED METHODOLOGY

This project is 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 2.0", issued in September 2018.

B2. METHODOLOGY JUSTIFICATION

The Project involves the transition of stand-alone commercial refrigeration from high-GWP refrigerants to low-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 this Project makes up the complete aggregated physical boundary of the Project. The physical boundary for the Project includes the location of the stand-alone unit manufacturing facilities and the locations within North America where the units are operated. The temporal boundaries for the Projects fall between January 1, 2016 and December 31, 2027 (See Table 6).

Table 6 – Project Boundaries

ACR Project #	Physical Boundary	Temporal Boundary
ACR479	United States (excluding California)	January 1, 2016 – December 31, 2025
ACR526	California	
ACR527	Canada	
ACR480	United States (excluding California)	January 1, 2017 – December 31, 2026
ACR528	California	
ACR529	Canada	
ACR481	United States (excluding California)	January 1, 2018 – December 31, 2027
ACR530	California	
ACR531	Canada	

B4. IDENTIFICATION OF GHG SOURCES AND SINKS

Table 7 – GHG Sources and Sinks

SSR	Source Description	Gas	Included (I) or Excluded (E)	Quantification Method
1 Refrigerant Production	Fossil fuel emissions from the production of refrigerants	CO_2	E	N/A
		CH_4	E	N/A
		N_2O	E	N/A
	Refrigerant leaks during production	HFC	E	N/A
		Low GWP Refrigerant	E	N/A
2 Refrigerant Transport	Fossil fuel emissions from transport of refrigerants	CO_2	E	N/A
		CH_4	E	N/A
		N_2O	E	N/A
	Refrigerant leaks during transport	HFC	E	N/A
		Low GWP refrigerant	E	N/A
3 Equipment Manufacture	Fossil fuel emissions from the operation of the refrigeration system in the baseline and the project.	CO_2	E	N/A
		CH_4	E	N/A
		N_2O	E	N/A
4 Equipment Delivery and Installation	Fossil fuel emissions from the delivery and installation of the advanced refrigeration system.	CO_2	E	N/A
		CH_4	E	N/A
		N_2O	E	N/A
5 Equipment Operation	Fossil fuel emissions from the operation of the refrigeration system in the baseline and the project.	CO_2	E	N/A
		CH_4	E	N/A
		N_2O	E	N/A

SSR	Source Description	Gas	Included (I) or Excluded (E)	Quantification Method
	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
6 Equipment Service/Recharge	Fossil fuel emissions from servicing refrigeration or A/C equipment or system to replace leaked refrigerant	CO_2	E	N/A
		CH_4	E	N/A
		N_2O	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
7 Equipment Disposal	Emissions from the disposal of the equipment at end-of-life, including destruction of refrigerant.	CO_2	E	N/A
		CH_4	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 stand-alone commercial refrigeration Units.

B6. PROJECT SCENARIO

The project scenario is the use of low-GWP project refrigerant in the operation of stand-alone commercial refrigeration units.

B7. REDUCTIONS AND ENHANCED REMOVALS

The Projects are 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 stand-alone units. The project refrigerant has a low-GWP and emits virtually no GHG during the lifetime of the units. Baseline/default refrigerant GHG emissions minus project refrigerant GHG emissions equals the Project emission reductions and enhanced removals.

B8. PERMANENCE

There is no risk of reversal. Once the refrigeration product is produced with the low-GWP refrigerant, the product is made and the associated GHG reductions are fixed.

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

In order 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 and in Canada, requirements with respect to the GHG potency first arose from implementation of the Montreal Protocol and more recently by its Kigali Amendments. Title VI of the 1990 Clean Air Amendments addresses Stratospheric Ozone Protection and includes authority for EPA to also regulate Ozone Depleting Substances (or ODS). 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.

In 2015 and 2016, EPA adopted an extensive set of amendments to its extant SNAP rules Of particular note are SNAP 20 and 21. 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.

California did adopt legislation to require compliance with the SNAP 20 requirements, but those requirements did not become enforceable until January 1, 2019, after the project period covered in these projects. Other states have also adopted requirements to enforce the EPA rules, but those have effective dates later than those set by California.

Canada has also adopted regulations limiting GWP levels in refrigerants but those requirements have effective dates after 2019 and are not applicable to these Projects.

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 Stand-Alone Commercial Refrigeration segment listed in Table 1 of the Methodology.

D.
MONITORING PLAN

D1. PARAMETERS MONITORED

DATA OR PARAMETER MONITORED	$\mathbf{Q_{BR,j,i}}$
UNIT OF MEASUREMENT	Kg
DESCRIPTION	Quantity of refrigerant (sum of individual charge sizes) of the equipment used in baseline system.
DATA SOURCE	Default charge size listed in Table 4 of methodology, shipping and BOL information.
MEASUREMENT METHODOLOGY	For each project the charge size is assigned as specified in the Methodology for the refrigerant unit type, and the number of the refrigeration units of that type is multiplied.
EQUATION #(S)	1
DATA UNCERTAINTY	Data is established by the methodology.
MONITORING FREQUENCY	Throughout the reporting period depending upon type of equipment (annual summation).
REPORTING PROCEDURE	Sales, shipments and manufacturing records (electronic)
QA/QC PROCEDURE	A root item number assigned to each equipment type and the full list of Bill of Ladings [BOL] is generated. Each audited item requested was pulled from the company data bases showing full BOLs including model, serial number(s) and shipped to location.

DATA OR PARAMETER MONITORED	$\mathbf{AR_{k,i}}$
UNIT OF MEASUREMENT	Kg
DESCRIPTION	Quantity of low-GWP refrigerant used in the stand-alone units

DATA SOURCE	Manufacturing records, BOMs[4].& default charge size of 0.15kg/unit (per EPA SNAP regulations)
MEASUREMENT METHODOLOGY	Default charge size (0.15 kg/unit x number of units produced
EQUATION #(S)	2
DATA UNCERTAINTY	Very certain
MONITORING FREQUENCY	Throughout the reporting period depending on the type of equipment (annual summation).
REPORTING PROCEDURE	Sales, shipments and manufacturing records (electronic).
QA/QC PROCEDURE	Sales records & BOMs comparisons

DATA OR PARAMETER MONITORED	$\mathbf{ERA_{REF,j}}$
UNIT OF MEASUREMENT	% per year
DESCRIPTION	Annual emission rate of refrigerant of equipment used in baseline scenario.
DATA SOURCE	Default emission rate listed in Table 4 of methodology
MEASUREMENT METHODOLOGY	Table 4 of methodology
EQUATION #(S)	1
DATA UNCERTAINTY	Data is established by methodology.
MONITORING FREQUENCY	Once, at the beginning of the project.
REPORTING PROCEDURE	Table 4.

[4] A BOM (or Bill of Materials) is a compilation of all materials used to manufacture a unit.

QA/QC PROCEDURE	Table 4.

DATA OR PARAMETER MONITORED	$\mathbf{ERA_{REF,k}}$
UNIT OF MEASUREMENT	% per year
DESCRIPTION	Annual emission rate of the low-GWP refrigerant of equipment used in the project.
DATA SOURCE	Table 4 of methodology.
MEASUREMENT METHODOLOGY	Table 4 of methodology.
EQUATION #(S)	2
DATA UNCERTAINTY	Is set by methodology.
MONITORING FREQUENCY	Once, at beginning of the project.
REPORTING PROCEDURE	Once, at the beginning of the project.
QA/QC PROCEDURE	Reference Table 4 of methodology.

DATA OR PARAMETER MONITORED	$\mathbf{GWP_{REF,j}}$
UNIT OF MEASUREMENT	Multiplier
DESCRIPTION	Global warming potential (GWP) of refrigerant of the equipment used in the baseline system
DATA SOURCE	Table 4 of methodology.
MEASUREMENT METHODOLOGY	Table 4 of methodology.

EQUATION #(S)	1
DATA UNCERTAINTY	Is determined by IPCC and set by methodology.
EQUATION #(S)	1
MONITORING FREQUENCY	Once, at beginning of the project.
REPORTING PROCEDURE	Once, at the beginning of the project.
QA/QC PROCEDURE	Reference Table 4 of methodology.

DATA OR PARAMETER MONITORED	$\mathbf{GWP_{REF,k}}$
UNIT OF MEASUREMENT	Multiplier
DESCRIPTION	Global warming potential (GWP) of refrigerant of the equipment used in the project
DATA SOURCE	Table 4 of methodology.
MEASUREMENT METHODOLOGY	Table 4 of methodology.
DATA UNCERTAINTY	Is determined by the IPCC and set by methodology
EQUATION #(S)	2
MONITORING FREQUENCY	Once, at beginning of the project.
REPORTING PROCEDURE	Once, at the beginning of the project.
QA/QC PROCEDURE	Reference Table 4 of methodology.

D2. MONITORING PLAN

Organization and responsibilities of the parties involved in the Monitoring Plan

- True Manufacturing – Project Proponent Retail Food Refrigerator Manufacturer.
    - True manufacturers stand-alone refrigeration units, a category of retail food refrigeration equipment, at four locations in Missouri, included in the Project Plan. Charles Hon leads the Project.
- Dentons – Project Management
    - Dentons is a multinational law firm founded in March 2013 by the merger of SNR Denton, Fraser Milner Casgrain and Salans. It now has more than 158 offices across over 75 countries, with over 10,000 lawyers and professionals.
    - Dentons' Environmental Markets Advisory Services Team consists of lawyers and senior advisors that are architects of emissions trading and strategists behind greenhouse gas regulation, emission reduction solutions and monetization.
    - Jeffrey Fort (Partner) and Susan Wood (Senior Advisor) are the project managers for this Project. Dentons, True Manufacturing and Susan Wood are also the authors of the ACR Methodology being used for this Project.

Project implementation

- True has extensively modified its manufacturing systems to use propane, instead of high-GWP HFCs, as the refrigerant in its stand-alone units.
- Most of the manufacturing lines are dedicated to install only R-290 (propane) refrigeration systems. Other lines, which continue to produce units using HFCs as the refrigerant, are not included in this Project.
- The propane is delivered to each True facility by tanker trucks.
- The propane, which must qualify under stringent purity standards, is off-loaded and stored in outdoor tanks until required for use, at which point it is then delivered through pipes and past the flow meters into the stand-alone units as they are assembled.
- After assembly is completed, the propane-cooled units are packaged and transferred to areas for storage until shipped to customers.

Technical description of the monitoring task

- The data that requires monitoring is the number of units produced, sold, and location sold to. This data is collected from Engineering Bills of Materials (BOM) files which record the number of units produced and the sales distribution information.
- Each unit shipped has a product ID, which identifies the information necessary for this project and emission reduction.

- Using this information, the product charge size for the categories listed in Table4 of the Methodology is matched to the product shipped.

Data to be monitored and collected

- Sales files, engineering BOMs, and product ID info, record the number of units sold.
- True has sales data by vintage (year) and state and shipment information for each unit delivered to locations across North America where the units are put into service.
- Baseline emissions are calculated using the charge sizes included in Table 4 of the Methodology multiplied by the number of units sold.

Overview of data collection procedures

- Engineering Bills of Materials (BOM) files record the number of units produced and the sales distribution information.

Frequency of the monitoring

- At the end of each year the full year sales of all products by serial number, including exact model details, date of build and "sold to" information for California and each other state and province in the United States and Canada is extracted and recorded.

Quality control and quality assurance procedures

- A root item number, assigned to each equipment type defining the exact structure of the unit, with the product ID information for individual units, and the full list of Bill of Ladings (BOL) is generated. Each audited item, by root item number, requested was pulled from the company data bases to match to full BOLs including model, product ID, and shipped to location. The data was collected and audited to produce the emission reductions calculated.

Data archiving

- Records showing the unit was filled with propane are maintained on file since 2016. The electronic spreadsheets are updated throughout the year and maintained on True's computer server indefinitely.

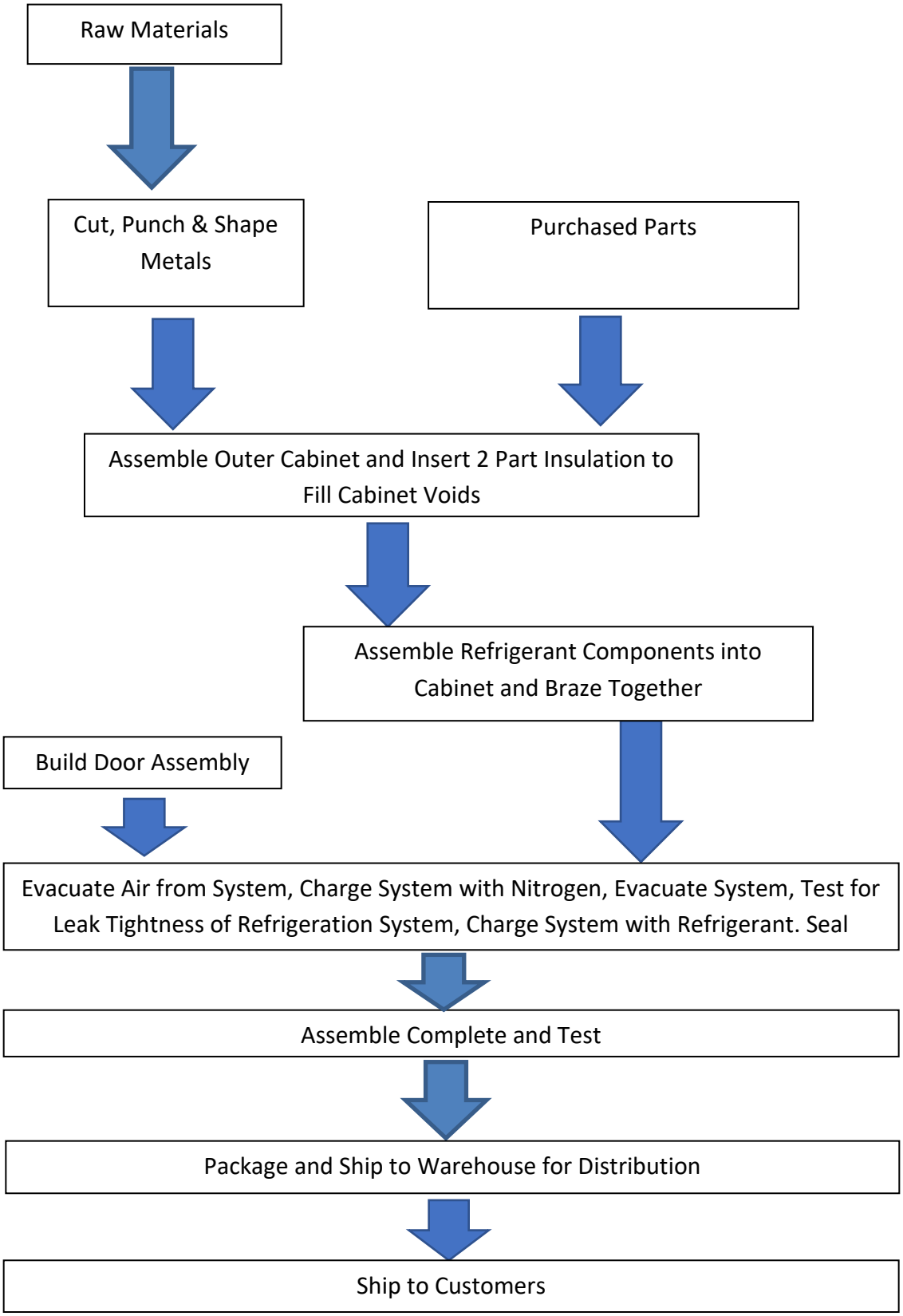
Identifying and logging the equipment/systems to be installed

- True has been transitioning its product line from HFCs to propane since 2016. The transitions are made when the True customer approves the use of propane as the refrigerant.
- True has "as-built" sheets on every unit they manufacture.

Documentation of the charge size of the alternative refrigerant used in the project from manufacturer specifications

- Project emissions are calculated using a charge size of 0.15kg/unit which is the maximum charge size allowed by EPA SNAP regulations.
- Per the methodology, the units were each assigned a leak rate of 7.75% per year

Figure 1 - Process flow diagram



E.
QUANTIFICATION

E1. BASELINE EMISSIONS

Baseline emissions will be calculated according to the following formula:

Equation 1

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

WHERE

BE_y	Baseline emissions (tonnes CO_2e)
$Q_{BR,j,i}$	Quantity of refrigerant (summation of charge size) of the equipment used in baseline system is based on the default charge sizes listed in Table 4 of the methodology.
$ERA_{REF,j}$	Annual emission rate of refrigerant of the equipment used in baseline system is based on the default charge sizes listed in Table 4 of the methodology.
10	Number of years in the crediting period[5]
$GWP_{REF,j}$	The global warming potential (GWP) of refrigerant of the equipment used in baseline system is based on the default GWPs listed in Table 4 of the methodology.

E2. PROJECT EMISSIONS

Project emissions will be calculated according to the following formula:

Equation 2

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

WHERE

PE_y	Project emissions (tonnes CO_2e)
$AR_{k,i}$	Charge size of alternative refrigerant used in the project (summation)
$ERA_{REF,k}$	Annual emission rate of low-GWP refrigerant used in the project (% per year).
10	Number of years in the crediting period

[5] All offsets for a project over the 10-year crediting period will be issued following verification.

$GWP_{REF,k}$	Global warming potential of the low-GWP refrigerant used in the project.

E3. LEAKAGE

By installing an advanced refrigeration system, a 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, all of the stand-alone units in this project are new, therefore, there is no baseline equipment. Leakage is not considered for this Project.

E4. PROJECT EMISSION REDUCTIONS

Equation 3

$$\mathbf{ER_y = [BE_y - PE_y]}$$

WHERE

ER_y	Emission reductions (tonnes CO_2e)
BE_y	Baseline emissions (tonnes CO_2e)
PE_y	Project emissions (tonnes CO_2e)

E5. 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.

E6. EX-ANTE ESTIMATION METHODS

Emission reductions created from this Project are calculated using the baseline refrigerants (HFC-134a and R-404a), as set by the Methodology, and the project refrigerant (R-290/ Propane) GWP values and the number of units put into service in the Reporting Periods (2016, 2017, 2018). 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 refrigerator manufacturing and operation, both at the local level (near the manufacturing facilities) and globally. There were no foreseeable negative impacts to the community or the environment that result from this project.

The Project meets and fulfills the applicable sustainability goals as articulated by the UN Department of Economic and Social Affairs, in #Envision2030:

Goal #9, [Industry, Innovation and Infrastructure] is met because the use of low-GWP blowing agents for manufacturing in industrial sectors for insulation products (where there has been very little adoption of such) and such is incentivized and rewarded by the projects, such as this one, under the FBA methodology. The technology can be used in developing countries since it is a drop in technology with only small adjustments to manufacturing techniques required. Goal #12 [Responsible Consumption and Production] is met because the Project produces virtually no waste in the foam manufacturing process and involves a closed loop manufacturing process with virtually no releases to the environment, to produce the insulated product. Goal #13 [Climate Action] is met because the Ecomate blowing agent [<5GWP] being used in the project was invented to anticipate and meet climate goals and is continuing to be refined and its use expanded, including to manufacturing in developing countries.

F2. STAKEHOLDER COMMENTS

Not applicable for this project type.

G.
OWNERSHIP AND TITLE

G1. PROOF OF TITLE

True Manufacturing, the manufacturer of refrigeration units in this project, owns the title and rights to the carbon offset credits involved in this Project. True claims title to any and all environmental attributes associated with this project activity. "Any and all environmental attributes, including environmental offset credits with respect to TRUE® refrigeration units manufactured after September 1, 2015 shall remain the property True Manufacturing Company and are not transferred." www.truemfg.com/Support/Warranty-Support and navigate to Warranty Statement (pdf).

G2. CHAIN OF CUSTODY

The Project has not produced any offsets to date and, therefore, no offsets have been bought or sold previously. Nor does the Project 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 8 – Project Start Dates

ACR Project Numbers	Project Start Date	How Determined
479, 526, 527	January 1, 2016	Service records for manufacturing products with propane as the refrigerant.
480, 528, 529	January 1, 2017	Service records for manufacturing products with propane as the refrigerant.
481, 530, 531	January 1, 2018	Service records for manufacturing products with propane as the refrigerant.

H2. PROJECT TIMELINE

Table 9 – Project Timelines

ACR Project Numbers	**479, 526, 527**	**480, 528, 529**	**481, 530, 531**
Initiation of Project Activities	January 1, 2016	January 1, 2017	January 1, 2018
Project Term	N/A	N/A	N/A
Crediting Period	1/1/16 - 12/31/25	1/1/17 - 12/31/26	1/1/18 - 12/31/27
Reporting Period	1/1/16-- 12/31/16	1/1/17-- 12/31/17	1/1/18-- 12/31/18
Frequency of Reporting	Once for 2016	Once for 2017	Once for 2018
Monitoring Period	1/1/16 - 12/31/16	1/1/17 - 12/31/17	1/1/18 - 12/31/18
Frequency of Monitoring	Ongoing throughout 2016	Ongoing throughout 2017	Ongoing throughout 2018
Frequency of Validation	Once in 2020-21	Once in 2020-21	Once in 2020-21
Frequency of Verification	Once in 2020-21	Once in 2020-21	Once in 2020-21