

Oct 30, 2025

REEF + SPLC Present: Reduce Refrigerant Emissions Through Procurement Power Part 1 - Transcript

00:10:34

Aleisha Khan: My name is Alicia Khan. I am the executive director at Reef. I am really excited to be leading Reef's work to eliminate the impact of harmful refrigerants or fluorinated gases, which is the most potent super pollutant right now across the globe. Next slide. So, just a few minutes about us. Um, Reef is a nonprofit member-funded organization and we collaborate with the full spectrum of advocates, policy makers, and industry in the refrigerant space. Um, we're dedicated to finding solutions to eliminate the climate impact of refrigerants and specifically uh impact related to uh heating, ventilating, and air conditioning or HVAC equipment. uh where we find hydrofluorocarbons or HFC's that can have thousands of times the global warming impacts of carbon dioxide. So our approach at reef is to inspire action by aggregating and amplifying the buyer's voice for solutions. So this is an approach that recognizes the need for enduser representation as we all move toward reducing emissions. Um, we're also lowering risk and we're reducing costs for companies. And at Reef, we recognize that we're focused on reducing a key super pollutant at a time when greater access to cooling is a necessary response to extreme heat and uh expanding the installation of heat pumps is a critical part of electrification.

00:12:08

Aleisha Khan: So our strategy is really to work in step with electrification efforts and decarbonization goals with a focus on accelerating adoption of two things. One, the life cycle refrigerant management practices um that are best practices and we'll talk about

um in this webinar as well as advancing technology solutions toward those that have zero climate and environmental impact. So, our partnership with SPLC is a perfect fit and we're really excited to share more um about that with you uh later in the webinar. Next slide. But I want to get us going here. Let me do a make a few comments about um housekeeping for those that are new to the Google Meet platform. We are recording this and it'll be posted um on Reef's webinar or I'm sorry website under events with our other webinars. Um, as audience members, you're muted, but you can submit questions using the Q&A feature um, in the bottom right corner of your Google Meet screen. And please go ahead and do that during the webinar. You can also upvote um, so we'll be monitoring that and save some time for discussion at the end.

00:13:20

Aleisha Khan: Next slide. So this is our agenda um, for the next hour. We're going to get into an introduction of SPLC. uh talk about the role of procurement in refrigerant uh strategy. We'll walk through the new guidelines and give you a look at it and show you where things are um and how it works and then talk about kind of some tips and tricks to get started with your implementation and adoption and then have again time for Q&A and wrap up with um a call to action for you all to get started. Next slide. So with that, I will introduce um your speakers to you. We're going to start with um Chris Briano, who leads the program development and delivery efforts for SPLC. Uh in that role, Chris ensures an effective um and impact focused approach for advancing sustainable procurement efforts across institutional purchasing. Prior to SPLC, Chris was a supply chain sustainability manager at Cisco Systems, focused on supply chain, greenhouse gas emissions, environmental compliance, learning and development, and new products, uh, program management.

00:14:32

Aleisha Khan: After Chris, um, we'll hear from Tristan. He is co-founder and president at Effectera, Inc. And Effectera is a public benefits uh corporation that provides sustainability technical support to companies, investors, government entities and their partners. And Tristan spent most of his career before Effect implementing sustainability and engineering initiatives for Whole Foods Market as their director of sustainability and facilities. And I'll also mention that Tristan uh co-founded the North American

Sustainable Refrigeration Council, NASRC, as well as Reef. and he currently serves as our board chairperson. And last, we'll hear from Liz Swanson. Uh Liz brings many years of experience to managing um or on managing diverse sustainability initiatives, including uh university, nonprofit, corporate sustainability programs to her position as senior program manager at SPLC. And prior to this, Liz worked with BEAB to create a training program for hundreds of professionals across the US and Canada, working with companies to become certified uh BC corporations. So, we have a great lineup for you today. And with that, I will turn it over to Chris.

Kris Spriano: Thanks, Alicia.

00:15:48

Kris Spriano: And thanks for joining everyone. I see a lot of familiar faces in the audience, so hello to all of you. Um, next slide, Jamie. I just just like Alicia, I wanted to start with a quick introduction to the SPLC for those that aren't familiar with us. Similar to Reef, we are also a member-funded nonprofit organization bringing together purchasers, suppliers, and aligned NOS to really leverage the power of procurement to achieve a more environmentally, socially, and economically sustainable world. SPLC like Reef also works to aggregate and amplify the buyer's voice for more sustainable solutions ultimately intending to shift entire markets towards a more sustainable world. In our case, however, we really look for opportunities to do this across all common institutional purchasing. So, not necessarily just refrigerants or HVAC equipment. And that really includes, you know, anything from building equipment to office supplies to professional services and pretty much everything in between. So, while we focus more broadly on purchasing categories and also more broadly on addressing all sustainability impacts, we've certainly recognized that climate change in particular is one of the most existential threats in our lifetimes.

00:17:18

Kris Spriano: and uh and that it's important for us to address. It's also one of the key focus areas of our members. So, it was really a no-brainer to partner with Reef and the others that you'll see on the working group to see what we could accomplish together through more climate friendly refrigerants and life cycle management. Next slide, Jamie. And with that, in 2023, the refrigerant procurement climate collaborative, which

we're now calling the RPCC working group, was born with a shared goal to provide procurement resources that scale the reduction and avoidance of institutional hydrofluorocarbon or HFC refrigerants use. And I do see Joanna Anderson in the audience. So I want to call her out along with Tristram in really being, you know, key leaders in getting this effort started back in 2023. Um, but we had a lot of amazing people join us shortly after that. Our working group in total is uh well it's co-led by SPLC and now reef. It does include an amazing group of procurement, sustainability and industry experts across universities, governments, NOS's and the corporate sector aligned in an effort to make it easy for any organization's procurement team to join forces with their facilities team in an effort to shift towards more responsible refrigerants and refrigerants use.

00:18:50

Kris Spriano: So the toolkit that Liz is going to be sharing a bit later or sharing more about a little bit later is really the first output of this working group. And I do want to give a huge shout out to the entire team for reaching this milestone as well as a note of appreciation and thanks to the US Energy Foundation and IGSD for providing funding and support to help help things get over the finish line in this again this first phase. Next slide. So zooming back a little bit and you know really asking the question why the focus on providing resources to procurement in order to reduce greenhouse gas emissions. So where does procurement land in all of this right? Well, first, when it comes to an organization's total carbon impact, it's now pretty much common knowledge that what an organization buys accounted for in its scope 3 emissions often represents more than 80% of that organization's total carbon footprint. So if an organization and/or its stakeholders cares about climate change, they really have to engage procurement and their supply chain to be able to make meaningful decarbonization progress.

00:20:04

Kris Spriano: Next slide. And second, the the hidden gem, if you will, um the procurement process makes for a very effective vehicle to embed and scale more sustainable products and services. So think of a large contract that might be coming up in any of your own organizations. Let's say it's a contract for building management services. In the define phase of the procurement cycle, the very top there, sustainability

specifications can significantly shape the type of service or products that even qualify for a particular bid. During tender and selection, bid waiting criteria can signal priorities to suppliers, creating that demand for more sustainable goods and services. In the contract stage, expectations around reporting or emissions reductions can be built into agreements. And finally, through evaluation, organizations are able to hold suppliers accountable and even continuously improve upon their performance. And this cycle repeats and scales over time and across different kinds of purchasing within an organization. Which means procurement has an ongoing opportunity to influence not just internal operations but again entire supply chains and markets. And it's this opportunity that really sits behind the resources in our team's newly released toolkit.

00:21:31

Kris Spriano: And before we get into the details of that toolkit, Tristan is going to give us a little bit more background on refrigerants as a greenhouse gas reduction opportunity and talk a little bit about the latest regulatory requirements and landscape around that as well. Tristan

Tristam Coffin: Thank you, Chris. Uh, and thank you to, uh, the SPLC team for for the partnership. Uh, it has been fantastic. And, uh, I think what you're going to you're going to hear from from Liz and and the remainder of the presentation is that, um, this is really an an example of what you can do with collaboration. So, really excited to be having this conversation. And I have the pleasure, as as Chris just mentioned, of telling you why refrigerants. um why we uh why we started out on this journey about two years ago working together um using procurement as a as a leverage point to um really accelerate the uh yeah the management of these refrigerants and ideally transition to to alternatives. So next slide please.

00:22:31

Tristam Coffin: So refrigerants are oftentimes referred to as as a niche issue um that don't need to be addressed in in every sector of of of business. However, I'm here to tell you that that is absolutely not the case. This is not a niche issue whatsoever. Um, from your homes to your cars to office buildings to to data centers and including accelerated growth of that space uh to ice cream shops and factories to um cold chain to grocery stores to ice rinks toarmacies and pharmaceutical businesses. Refrigerants

uh are a part of our daily lives not only for cooling purposes but now even more so for heating purposes as we start to accelerate into the electrification of heating and the use of heat pump technologies which also utilize refrigerants as working fluids. So and I think the most important thing to note here is that these refrigerants uh have a range of impacts as it relates to a CO2 equivalency. So um if you see the red numbers here um ranging from anywhere between one on the best case scenario uh upwards to 4,000 in some some instances even higher than 4,000 as it relates to the global warming potential or GWP as we'll refer to it of these refrigerants which means that their impact uh really puts them squarely in the category of super pollutants.

00:23:49

Tristam Coffin: So the opportunity to leverage refrigerants both in the procurement stage as well as throughout the operations of your facilities and your buildings that you work in um and live in for that matter presents a really tremendous opportunity. Um to put that order of magnitude in perspective. Um refrigerants alone offer a .5 degrees Celsius opportunity to curb the warming curve by the end of this century. uh which means that by leaning in we have a tremendous opportunity uh with refrigerants in particular F gases to uh to to attack and use that as a as a really fantastic climate lever. Next slide please. So uh not all refrigerants are created equal as you started to see on the last slide in terms of the applications and where they're deployed. Um and most importantly there's been a long history of refrigerants. um uh it's certainly not linear uh as it's presented here on the slide, but this is one of the easier ways to kind of show the timeline of refrigerants over the long history of their use.

00:24:50

Tristam Coffin: So really beginning in the 1800s through the early 1900s, natural refrigerants were largely in use. However, they didn't come without their challenges and certainly as technological solutions have evolved uh as has the refrigerant timeline. uh CFCs and HCFCs were introduced in the early to mid 1900s. Uh but however, they came with some significant uh implications most importantly ozone depletion potential um that was causing a hole in the ozone layer. uh we'll talk a little bit about some of the measures that were taken uh at the global level under in particular the Montreal protocol which was a global treaty to address uh the H uh the CFC's and HCFC's uh which is

arguably one of the most successful global treaties uh ever uh and really reversed the challenge um and issue with the the ozone um depletion that we uh that we saw as a result of those refrigerants and other gases being used um widespread across across industries industries, excuse Excuse me. As we moved into the the 1990s, uh HFC's uh became the replacement. Also very efficient refrigerants.

00:25:56

Tristram Coffin: However, um despite not having ozone depletion potential, they were continued to be high global warming potential refrigerants and as a result uh we began to continue to transition now to HFO uh refrigerants, which which are a blend with a moderate to lower GWP. Um however they do introduce other potential environmental concerns not the least of which is POS uh which as for those of you that are keeping up with regulation in this space uh is being regulated um largely in the EU and other parts of the world but there are many discussions at both the state uh and federal level about how POS will be regulated. So we're really even though this is a linear timeline we really are kind of coming full circle and moving towards natural refrigerants. Again, the benefit now today is that the technological solutions that are allowing us to deploy these natural refrigerants, though not there in every application, have come a very long way and have addressed some of the safety and other operational concerns associated with with utilizing those natural refrigerants. So, as I've said on numerous occasions and will continue to say um as it relates to refrigerants, there really is no silver silver bullet here.

00:27:02

Tristram Coffin: Fortunately, there has to be a bit more of a silver buckshot approach and it is going to be application application in terms of how we deploy said refrigerants and the applications that are being utilized in in the building portfolios that I was outlining on the previous slide. Next slide, please. So again, you know, we're talking about order of magnitude and that that these um these gases are not a niche issue and we have to address them really across the spectrum. Um but I think one of the more important things to note is that F gases refrigerants um so when I say F gases those are the fluorinated gases in particular the uh hydrofluorocarbons that are um the most common refrigerants in market today are the fastest growing greenhouse gases globally um and they're going to continue to accelerate. So, I'm not going to dive into the details of each

of these uh each of these charts here, but what I will tell you is that um we are going to continue to see an acceleration of refrigerant use for a number of different reasons.

00:27:58

Tristam Coffin: Not the least of which um is that already today 1 billion people lack access um to cooling um to remain safe and healthy, especially on a warming planet. As a result of that, we will see about three billion more room air conditioners uh and the like are expected to be installed globally by 2050. More importantly, as I alluded to before, building electrification is really driving the use of heat pump technologies. And as a result, we're seeing a growing need for refrigerants as the working fluid within those heat pump technologies. For those that aren't familiar with heat pumps, not to go deep into the technical weeds, um, but really the heat pump technology is just the refrigeration cycle in the reverse, if you may. So, um, you're effectively using, uh, heat pumps to create heating versus cooling. um and that there can also be reverse cycle so that you can also use those heat pumps for cooling purposes as well. Um, so one of the things that we oftentimes say and what we want to be very clear on is that Reef, SPLC, all the organizations that are working on refrigerants challenge are not looking to slow down building electrification and the uptake of heat pumps by any means, but we do want to make sure that there's awareness of the refrigerants that are being used in these these newer technologies.

00:29:05

Tristam Coffin: Um, so that we're not we're avoiding the trade-off um that oftentimes becomes a question as you're thinking about the refrigerants that may be utilized within those technologies. Next slide, please. So we uh it wouldn't be a refrigerance presentation without talking about the regulatory landscape and I mentioned uh I mentioned the global treaty that being the Montreal protocol uh and there has been some evolution as it relates to the Montreal protocol since its introduction um several decades ago uh including the Kigali amendment which we'll come on to here just in just a moment. Uh and we're not going to be able to spend a ton of time diving into the regulatory framework. uh it could probably be a number of sessions in and of itself, some of which we have uh we have done in the past and are always happy to answer questions offline as well. But we'll move into a quick timeline and we'll talk a little bit

about what the US regulatory landscape looks like today which can feel like a moving target on any given given day. Um but we'll try to uh we'll try to unpick it briefly for you and like I said always happy to answer questions offline as well.

00:30:07

Tristram Coffin: Next slide please. Uh so again, you know, really the refrigerant policy time lapse um and again, you know, as we moved um from 2022 into into recent years, there's certainly been a lot of changes. I'm not going to go through each and every one of um the points along this road map, but I think the most important one to point out is really in 2016. So I mentioned the Montreal Protocol. Uh in 2016, the Kigali amendment to the Montreal Protocol um introduced uh the phase down of the hydrofluorocarbons, the HFC's. So again, the Montreal protocol was really meant to address the ozone depleting substances that I previously mentioned and with the introduction of the Kigali amendment in 2016. Uh that was really uh the moment at which um the this global treaty was intended to address um the hydrofluorocarbons that being a high global warming potential refrigerants um to ensure that we were not only looking at it through an ozone depletion um issue but also through the lens of of a climate issue. Uh that being said, um the global phase down began and it looks different from country to country.

00:31:11

Tristram Coffin: Um I don't expect you to be able to read that image uh there, but you can start to see the the phase down. Um and and we're going to fast forward a little bit to the AIM Act in 2020, which we're going to go into a little bit more detail on. But effectively what that did it was a rule part um passed under the the first Trump administration um to effectively align the United States with with the Kigali amendment and that being the phase down of these HFC refrigerants um and we'll go into the details of of what that looks like um including the different facets of of the AIM act. Um and then there's been a number of other um rulemakings including the adoption of of the rules under the AIM act uh since then. The other thing I'll rewind back to in just a moment, uh, in 2017, uh, project drawdown, which was an independent, uh, research initiative, uh, issued a a very comprehensive report for those that aren't familiar. I highly would re highly recommend taking a look.

00:32:05

Tristam Coffin: And that, uh, that effort has continued through to today, um, with great success and that they're really identifying solutions to address climate change. Uh and in 2017 when they published it, refrigerants rose to the top of that list um being the number one opportunity to to really address climate change as a as a robust solution. It actually still today is a number one solution. Um however, they've split the categories into refrigerant management and alternative refrigerants. But if you add those two solution sets together, they still rise to the top as the number one solution. Um, we'll go to the next slide and dive into a little bit more detail on the AAX and uh and how this may impact you uh in in your day-to-day operations including procurement of uh of new solutions. So really um the AAX as I mentioned before uh was really the the phase down in production uh of HFC refrigerants. Uh and we've already gone through what we'll call the first major cliff with Chapen in 20 2024. Um so that was a 40% reduction.

00:33:06

Tristam Coffin: um and we're going to get to an 85% reduction below um below the baseline that was calculated by the production on the 2012 and 2013 um time frame. We won't go into the details of how they created that benchmark um but really important to note that um we are reducing down. Really critical to understand that the phase down is written into law and is continuing. It was recently upheld in the courts um and it's also part of a global treaty. So there's been a number of questions that I'll just address outright. people questioning whether or not this phase down will go away. The short answer is anything is possible. Um but from where things sit today, it would take an act of Congress to not only um remove the phase down um but also uh remove us from from the global global treaty that was ratified um a couple of years ago. The pieces that could be an evolution and may change are really the two demands mechanisms to which they were meant to balance the the reduction in supply as a result of that phase down.

00:34:03

Tristram Coffin: And that's the technology transition rules known as subsection I and the emissions reduction and reclamation program known as subsection H of the AIM act. Uh and really the reason that these were put into place uh was lessons learned out of the EU when they implemented their phase down uh which really drove a lot of volatility into the market largely because there weren't these demand mechanisms to address the the reduced supply. Um so the technology transition rules uh really what it does is it puts um limits in place for specific applications as it relates to the GWP levels of the gases that can be utilized in those applications. And then the refrigerant management rule, otherwise known as subsection H, um really puts other mechanisms into place to address um the use, tracking, and reporting uh of these refrigerants and and other mechanisms like utilizing reclaimed refrigerants um uh for servicing come 2029. Um we can't go into a whole lot of detail because we're running short on time here in regards to the moving target and some of the proposed rule changes. Um but again always happy to talk offline but as things sit today um generally speaking these rules remain in place um and are moving forward uh as as detailed.

00:35:13

Tristram Coffin: So um next slide please. I'm now going to hand it over to uh to Liz who's going to go through the details of uh of the toolkit that uh has been a labor of love over the last two years amongst the working group that Chris uh so kindly introduced. And it's really been a been a pleasure working with the team and uh and hopefully you find the toolkit that Liz will will roll through here uh as helpful as as we believe it should be. So off to you Liz.

Elizabeth Swanson: Great. Thanks so much, Tristan. And thanks again to everyone for joining today. Um, as you know, Chris and Tristan so wonderfully laid out, um, you know, we as a working group have, uh, been convening for the past, uh, nearly two years to really address all of the issues that Chris and Tristan outlined and create at least one small piece of the solution, uh, that purchasers can uh, leverage um, to really do their part uh, in reducing emissions from refrigerants. So, uh, next slide.

00:36:12

Elizabeth Swanson: Um, today I'll be spending a few minutes walking you all through uh what this new toolkit looks like, how to access it, um, and just pulling out some key components that you might take note of. And as I'm walking through um each document, um please use the Q&A uh function in the webinar and and be sure to jot down your questions that come up as I walk through this so that we can spend the last part of our time together answering any specific questions you have that may come up. Um but as as we mentioned the new toolkit was released um just recently about uh just this past month and uh was really as Tristan said a labor of love and also the willingness of the working group to roll up their sleeves and really dig into the work together. um I'm um you know certainly don't bring the refrigerants um you know technical background and so we really looked to this group of subject matter experts to weigh in and make this the most robust toolkit uh possible within this first phase.

00:37:15

Elizabeth Swanson: So, the outputs of that include um a full guidance document uh that really covers everything you would need to know about sustainable refrigerant management from purchasing all the way through to end of life disposal. And I'll walk you through that. Um there is a policy and specifications document um that is intended to model specific contract and policy language. Um, and really that's meant to be a tool that can be copied and pasted directly into your organization's uh, procurement policies or RFPs and other um, policy language or contract language. Um, as well as an inventory workbook that's designed to really help organizations take inventory of your current refrigerants and identify areas for opportunity um, for improvement. So, next slide. Um, so as I mentioned, these are the tools and you're going to need to bear with me just a little bit as I take over uh driving this presentation and I'm going to switch between screens. Um, and so there there might be just little moments of um imperfection in the technology. So bear with me. Um, but I will walk you through what our public website uh looks like and you should be able to see my screen now.

00:38:35

Elizabeth Swanson: So, the landing page for this work um is here and each one of these

documents is linked um as well as a little bit of overview of how we developed the work. And I just wanted to take note before I dig into the contents of each one of these that as you click on each document, you will be prompted um to fill out a oop, let me see, let me just make sure you're seeing what I'm seeing. You'll be prompted to fill out a a brief intake form. And this is just our organization's way, SPLC's way of making sure that we know who's interacting with our tools so that we can um track and improve over time. So, that's just a quick note. Um, and I do have a tip and trick. If you want to bypass filling out that form with each document, um, you can actually simply download the first one, so the one pager, and that will take you to this document. Again, bear with me. All right. So, that will take you to this one pager.

00:39:54

Elizabeth Swanson: And um the onepager is really intended to be just like a a handout that you can use with your leadership or within your internal teams to give just a brief overview into the benefits of um addressing proper uh life cycle refrigerant management. And within this document, each of those resources um is actually linked directly. So from here, you know, you can um follow those links um directly from this document. So I will walk you through each one of those now. Starting with the full guidance document. Excuse me while I just scroll up. So this is what our guidance our full guidance document looks like. And this was really a revamp and expansion and an improvement upon um a document that we had u published back in 2021 on climate friendly refrigerant management. And as Tristan alluded to, this is an evershifting landscape. And we recognize that in order for our tools to be valuable and useful in the procurement community, we really need to invest time and energy into um comprehensively uh updating those documents.

00:41:06

Elizabeth Swanson: So this was the process that we or this is the the final output of that process and we were able to really hone um hone this document to to focus on what matters most um and so we were able to sort of make it less clunky, easier to navigate and um I'll walk you through the three sections just briefly at a high level um and how you can get started using these document or using this document. So, the first section really um digs into how to create a refrigerant management um plan and purchasing

policy getting into a lot of the background uh that Tristram um and Chris just laid out for you all. Uh and within that section, um there are five strategies outlined. So the first strategy really helps um folks understand how to create a refrigerant management plan and purchasing policies in terms of what key elements to consider as you are going through that process internally with your organization. The second strategy focuses on uh purchasing efficient low GWP equipment and we get into small equipment and appliances, medium size as well as large commercial systems as well.

00:42:31

Elizabeth Swanson: And all of the resources that are outlined in this document are really up to date with um all policies and all legislation. And um you know we have a commitment to continuing to keep this document as updated as possible. Uh getting into strategy three, we we dive into how to really drive the market. So communicating the demand um so that you're really placing appropriate pressure on suppliers um and also um just helping to be a part of driving the market for more of these uh resources to be available. Strategy four is proper installation, installation, maintenance and use of reclaimed refrigerant. And section five uh gets into proper disposal and uh materials recycling within the refrigerant life cycle process. Uh section two is just briefly looking at some additional tools uh resources, certifications and product lists that are available across um industries and in the market. And section three um speaks briefly to procurement uh specifications and policy measures because we decided um what was most useful in the procurement world was to pull out that that piece of the puzzle and to put some um shape to that on its own so that folks who aren't necessarily looking for like a full guidance document like the one I just showed you, but are just really looking for specific contract language or specific policy language, they could just go straight to this document uh which is the climate friendly refrigerant policy and specifications.

00:44:20

Elizabeth Swanson: So um these again are are really intended to be sort of a copy and paste um option for any anybody who is involved with either um you know the facility whether you're in the facility side of things or in the purchasing side u to be able to leverage this document appropriately. So you'll see here we we get into some good um level of detail around who this polic who this is really for and you know how how these

um h how this language can really help you come into compliance and then go above and beyond. Um and you'll see down below that the policy measures that are outlined really get into a few subcategories. So one is the purchase of refrigerants um and new equipment. So you'll see within each section there's the cut there's um either procure or provide. So that is just meant to be a placeholder um so that you can really leverage um this um language however is most appropriate for your use case. Um so again we start with the purchase of new equipment.

00:45:35

Elizabeth Swanson: we get into what kind of uh policy or or uh specifications you might be looking for in regard to installation and preventative maintenance, service and repair of existing equipment as well as end of life management. Um and we recognize across both of these documents that um it's so much more than just purchasing new equipment. It's uh there's a huge huge opportunity um really when we are talking about proper management and leak detection and repair. So we spend quite a bit of uh we spent quite a bit of time making sure that these documents really gave uh will we'll give users everything you need um to insert this language around leak detection and automatic and and uh disposal as well. And then we do speak a little bit to the refrigerant inventorying tracking and reporting as well. So again, this is uh language around requirements for contractors or technicians around their process for tracking and inventorying and um reporting. Uh the last document that I will share and this will be brief and then hopefully we'll have plenty of time for questions and answers.

00:46:54

Elizabeth Swanson: Um if I can going to present the last thing which is our workbook and Reef really led the charge in developing um this workbook um which is really meant to serve as a starting place. So, if you're just getting started with um you know, figuring out like where where to even begin, this is a great tool. Um or if you have a current inventories inventorying system that could perhaps use some some improvement, this is a great resource as well. So you'll see here that the overview kind of um gives you that uh general sense of how to use the tool and then the tracker is here um and really gets into what areas to be thinking about as you look across your systems. um and and what information uh you can be collecting that will be um you know most valuable in

identifying areas for opportunity going forward. So it's it's a simple starting place and also it is um you know we we recognized it as a gap um in the market and so we were very excited to be able to release this as a part of our toolkit.

00:48:12

Elizabeth Swanson: Um, and actually maybe I will ask Jamie to take over again and go to the next slide at this point. Now I I spoke to this a little bit already um but just to highlight you know one one use case. So, as you can see, you know, each part of this toolkit might serve various needs to both your procurement and facilities teams depending on where you are, what next steps you hope to take with implementing uh climate friendly refrigerants and practices. Um, but as an example, and getting back to the procurement process opportunity that Chris described, you might consider leveraging some or all of the procurement specifications referenced in the policy and specifications resource uh for an upcoming building management service request or proposal or RFP. Um, and ultimately this can help you to weed out vendors that are not able to meet um those requirements. Um, and so again, this is just one of the many possible opportunities to leverage the resources contained within the toolkit. Um, and we're excited uh to be able uh to share at our our upcoming webinar actually a use case um of an early adopter who's been able to to lean in and and leverage this tool to make some some big uh procurement changes.

00:49:28

Elizabeth Swanson: So excited to share more about that next month and also answer any questions you have today. So, with that, um, I think we wanted to spend some time on tips and tricks, and I believe, uh, Chris was going to kick us off with that section.

Kris Spriano: I am. Yep. Thanks, Liz and Tristan. So, um, we're gonna give just a a few higher level tips and tricks. Liz already kind of spoke to how to use the document, a few tips and tricks in there as well. But again, kind of zooming zooming out. Um recognizing that, you know, there are certainly organizations just beginning to think about integrating sustainability at large into your procurement, maybe through refrigerants for the first time, right? And I did want to point out that um the SPLC has two free making the business case white papers that provide insights into you know really bringing along executive management end users and others in order to move forward with these types

of projects. That's really the the key to implementation success, right?

00:50:37

Kris Spriano: Rallying everyone around that common goal. So, while these white papers aren't specific to refrigerants, they're a really good set of practical tips from practitioners on how and when to engage those stakeholders to demonstrate sustainability practices are not only good for the environment and people, but also good for the bottom line. Next slide, Jamie. And then double click clicking down a little bit into specific strategies that are most helpful for refrigerants. Um, one of the things that that the SPLC, you know, always recommends in particular in in these examples of refrigerants usage would be really um making that business case by taking a total cost of ownership approach or at least including a total cost of ownership approach as you embark on that business case. So um during the procurement process especially when cost of a more sustainable solution is perceived to be higher than the more traditional solution. So TCO for short means taking a look at not only the initial purchase cost of a product but also adding in the costs that come along with its use over time.

00:51:55

Kris Spriano: So, for example, adding the cost to have it delivered, installed, maintained, and eventually recycled or disposed of. And again, by doing so, you're really able to make that purchasing decision, which is often heavily dependent on cost, right? We all know that based on the actual cost of the product or service over its useful life. Um, in many cases, this really helps to justify the upfront cost of more sustainable choices. And again, TCO is especially helpful for capital equipment um transitions like HVAC equipment, refrigerators, freezers, all within scope of the the uh toolkit that we're releasing today. And Tristan, you're going to I think go into a little bit more detail on the refrigerant side of business cases.

Tristam Coffin: Alicia and I are gonna tag team. So Alicia, you

Aleisha Khan: We're gonna tag team. So, I'll go I'll go first.

Kris Spriano: Oh, sorry, Alicia.

Aleisha Khan: No, it's okay. And just to, you know, highlight and expand on a few things that Liz and and Chris was just talking about. I mean, we recognize that making the business case is really, really critical.

00:53:04

Aleisha Khan: So, it's worth it's worth another slide to go into some of the the levers and and what that looks like specifically when we're talking about refrigerants. So, you know, for the first one, you know, Chris was just talking about this um building the total cost of ownership. Um but, you know, one action you could take is to quantify leak related losses. Every pound of refrigerant gas that's leaking has to be um replaced through a recharge. So that's lost dollars and you can um you know create a model to show payback from efficient equipment and leak prevention and recovery programs. You can set a target for that. For example, maybe um a 10 to 20% reduction in annual refrigerant related costs within two years just as an example. Um also risk mitigation is gets people's attention is super important. So um one of the things about getting ahead on refrigerants is you're avoiding fines and disruptions by meeting um the AI act uh regulations and kegal early. You're not scrambling um at the end to get things in place but actually building compliance into your procurement contracts now.

00:54:18

Aleisha Khan: So a target there could look like uh trying to get to 100% of new supplier agreements um that include compliance clauses by mid next year for example. Um anyone who works on operations know that knows that efficiency is is key and better maintenance means that you have fewer breakdowns, you have longer asset life for your equipment. Um, and here one of the things you could do is track refrigerant charge and leaks and recovery um, in a centralized system. We recognize a lot of people aren't tracking that right now. So you could target reducing equipment downtime and refrigerant loss by 20%. And see how um, the work that you're doing affects that loss or that downtime. Uh this fourth one here, staying ahead of carbon pricing and refrigerant bands and ESG expectations can be a big uh driver um and uh get attention um in different organizations. And so you could position your organization for green financing and credits um or public recognition and set uh targets here. So maybe you want to qualify for one incentive award or marketbased program by next year.

00:55:37

Aleisha Khan: And the final lever that we wanted to just highlight here is um brand and stakeholder value. So um it kind of builds on that last one, but showing your progress in your ESG or sustainability reports. um working to build your customer trust by disclosing refrigerant data transparently and um easily set some targets for that like including metrics for refrigerants in your annual disclosures by next fiscal year. It's an example. Next slide. So, um, just to make just one more to make these real, um, you know, you're like, "Okay, the lovers sound good, but okay, give me like a specific thing that, um, I can do." And we recognize everyone's coming from a different place. So, just some food for thought. Um, you know, you can build, um, compliance into your contracts now. So by next quarter or say the second quarter in 2026, you could set a goal to update all your new procurement contracts to include compliance clauses aligned with EPA's AIM act and the Kaggali amendment. You could require vendors to provide documentation of low GWP alternatives and adherence to regional phase down schedules as a best practice.

00:56:57

Aleisha Khan: Uh number two, you can train. um a lot of people this is new to them and um training 100% of your facility managers and procurement staff goes a long way. So setting a goal to do that within say six months. Um focusing on refrigerant impacts and labeling and leak prevention. Uh you can use reef and SPLC training modules to get that going and integrate that into annual onboarding or vendor qualification programs as a as an idea. Um three starting small you know pilot piloting just you know one project using natural refrigerants for example. So uh that would be carbon dioxide ammonia or hydrocarbons. Uh pilot in a controlled facility or system by the end of the year and then document that performance and safety and energy metrics and then build use that to build a case to expand that um across your organization. Number four, uh leveraging shared learning networks. Um there's SPLC's action team, there's Reef's peer learning circle. Um there's, you know, ways to set a goal around uh joining one of those next year and um sharing your supplier insights and case studies and benchmarks across different markets.

00:58:18

Aleisha Khan: And then finally, integrating uh refrigerant emissions and reduction targets into your uh organization's annual ESG report. Um you could, you know, set a goal to start in fiscal year 26 and then you're publicly reporting your progress toward at least a 50% reduction in GHD intensity um say uh from refrigerants by 2030. And this would be in alignment with scope one and and three protocols. So the lot you can do again recognizing that um not everyone can start in the same place but just getting started um is the first step and with that I will uh tag over to Tristan

Tristam Coffin: Yeah. So, I'll uh I'll try to make this fairly quick because we want to leave plenty of time for for questions from the audience. Um but I want to you know it's always good to end on you know there are market incentives that are also driving um you know the direction of which we've outlined in the toolkit and and some of the best practices that Alicia and team were just outlining. Uh you know they're not as robust as uh we'll call it energy efficiency opportunities.

00:59:25

Tristam Coffin: Um but we are seeing an uptick of both state level uh even local level and in some instances utility level incentive programs really driving the adoption of of sustainable refrigerants. Um California for example has a first of its kind program known as the FG gas reduction incentive program um or FRIP for short. Um that program is largely focused on commercial industrial refrigeration right now. Um but they are continuing to look at um how they can um segue that into the HVAC space. Um that was a \$65 million total grant program here in California that will hopefully reup uh other states which you you'll see in the next slide here um like like New York and Washington and others are looking at um various incentive programs too. I'll skip back to the next one and we'll kind of roll through that. But as as states are starting to um look at implementing um we'll call it the stick, they're also looking at the carrot, right? Which I think is really important and how we can move folks in the right direction.

01:00:24

Tristam Coffin: And I think given the um the lack of literacy in some instances as it relates to managing refrigerants and the challenges that come along with them and I

did see a question in regards to to measurement and tracking uh of refrigerants come through and we'll talk a little bit more about that in just a moment. Uh it is not as easy to incentivize these type programs as it has been energy efficiency because energy for example is is a metered resource whereas refrigerants are not. They're more difficult to track. However, um you know, a lot of programs are also looking at um total system benefits. So, where there's energy efficiency tied to also utilizing, for example, low GWP technologies, there's opportunities that can be leveraged in different um different markets across the country. Um and then you'll also see programs, grant funding programs, um both at the state um and to a certain degree up until recently the federal level um really looking to push innovative solutions in the HVAC space. Um, you know, we've had recent conversations here with commercial providers that are going to hopefully pick up where some of the federal programs um have since stalled out um to really continue to to press um on the market to ensure that um you know the prices associated with these alternative and newer technologies coming to market um can meet par as quickly as possible with the existing solutions out there.

01:01:43

Tristram Coffin: um you know and I think continuing to highlight the importance of these localized efforts to really foster the market readiness um across the board from workforce development through to um the adoption of these technologies and then the servicing as Chris was outlining in the total cost of ownership equation it's really critically important um so how we can further incentivize um you know total cost of ownership throughout the life cycle uh of these appliances and the maintenance of those appliances is really critical so um I think the really other important thing to note here is as you're starting to think about um your your refrigerant journey um from procurement through to management um and and then disposal and and restarting um you know starting to think about roadmap for for scaling these climate solutions is critical um you know there are requirements um in certain states like New York for example um that are that are at least of some industries are looking to um really leverage a roadmap to move away from these higher global warming potential refrigerants to um the next gen of of applications.

01:02:45

Tristam Coffin: And I think doing that on a more voluntary basis, regardless of where you're located in in the US or elsewhere is a really critical first step in in the process. And um we're not encouraging people to run out and start swapping out their high GDBP refrigerants. I think it does need to be balanced with um you know, end of life and other maintenance concerns, etc. Um, but this toolkit really is here to give you the uh the mechanisms by which you can start to understand how you can most effectively do that. So, um, I know we have a couple more things we just want to run through quickly and then we we'll get to questions. So, I'll turn it back over to the team.

Aleisha Khan: Great. Thanks, Tristan. And I think what we'll do is we'll take a few questions now and then we'll save a minute at the end just to do a quick wrap-up. So, um, looking at, uh, looking at the questions and some people have nicely, uh, thumbmed up a few that, um, are really interesting to them.

01:03:39

Aleisha Khan: Uh, let me throw this one out to the team. Um, the question is, is anyone aware of any kind of data platform or AI tool that tracks refrigerant refills that is or could be used by all of these small vendors? So, they're this person is trying to think through how to work through a more robust process for tracking actual refrigerant refills at scale versus using estimated values, which I think is a shared problem um among many many people. So, uh does someone want to speak to that?

Tristam Coffin: Yeah, happy to happy to take it. Um, and I would love to have a further conversation offline because it's a great question. Uh, unfortunately, the short answer is no. Um, the the longer answer and I'm again happy happy to discuss more offline too is uh there are refrigerant management systems out there. Um and those refrigerant management systems are effectively both compliance tools as well as um you know databasing tools that are utilized to track the the usage of of refrigerants um across your appliance portfolio. Uh they unfortunately rely on human inputs, right?

01:04:47

Tristam Coffin: So from your service providers um that take the measurements of gas that they're either inputting and or recovering from um any given appliance in your

portfolio into into that database. there is no tool um that you know measures and automatically inputs that data into a system. Um that's hence my answer being no. Um there have been a number of discussions around what that could look like. Um there's also a common misunderstanding related to automatic leak detection systems that those systems are detecting leaks and then in turn inputting that um information into into an RMS or refrigerant management system. Um, unfortunately that's a false reality that doesn't that that's not how it works. Automatic leak detection is detect leaks, notify a service provider um that there is a leak and then those leaks are then addressed and again in that instance that service provider then has to input that data manually into this refrigerant management system. Um so it's a very arduous process uh and that's why refrigerants have have oftentimes been under reported undermanaged um because of um the very manual process that that needs to take place.

01:05:54

Tristam Coffin: Now, are there tools that are advancing the efficiency of doing that? Yes, including the RMS tools, including the leak detection solutions um both direct and indirect solutions that are um looking to better monitor um these gases as they um hopefully don't enter the atmosphere, but as they do, making sure that we're avoiding that by all cost. So, again, short answer is no, but it's very nuanced. Um, and I do believe that we're going to continue to see technological advancements that will hopefully address the very manual process, but also ensure that these refrigerants don't enter the atmosphere as uh as rapidly and unfortunately widespread as they are today.

Aleisha Khan: Thanks, Tristan. I think we just have time for one more and I'm going to quickly grab this question which I think Tristan also if you could answer. Um, someone's looking for where they can get the latest GWP factors of various refrigerants. So, can you recommend a good site to go to?

Tristam Coffin: Yeah. Yeah, absolutely. Uh I mean the EPA does uh I'm assuming it's still on their website does have a list um as does the California Resources Board.

01:06:57

Tristam Coffin: But really um if you're looking for the latest and greatest science, the best uh the best place to go to and even though you're going to have to weed through it, um but with the help of AI, it should be pretty easy these days is the IPCC um

assessment reports. Um, and what you will notice is that if you look at the different assessment reports, and for those that that aren't familiar, um, they're issued on a periodic basis, the latest, uh, report out is, uh, assessment report six. Um, the the GWP values associated with the refrigerants are going to differ for from example AR4, which is been the basis of many of the um, regulatory compliance frameworks to AR6. So the um and then the other important thing to note is that if you're using the latest and greatest science and this is an ongoing debate in the industry is whether or not you should be using a 100red-year GDP value or a 20-year GDP value. Arguably for these shortlived climate fluence of which fases um fall into that category um the science would really point you to using a 20-year value.

01:07:52

Tristam Coffin: Um but to answer your your short question uh the IPCC reports use the latest and greatest. Um, but if you're in a reporting uh situation, um, you're really going to want to talk with your your carbon accounting team uh to understand what uh framework they're using and whether or not they're using AR4undred-year values because your benchmarking may otherwise shift and it's it becomes a bit of a moving target. So, and that's why a lot of the compliance frameworks and a lot of the methodologies have really pointed folks toward using, you know, a single metric throughout their process. Um, otherwise you really have to kind of think about changing everything all at once.

Aleisha Khan: Perfect. Thank you. Uh Chris, can I turn it back to you to wrap us up?

Kris Spriano: You bet. You bet. Well, thanks everyone for for joining us today. Um recommended next steps for all of you. Use the toolkit. It's free. Download it at the website. Um certainly stayed and join us for part two.

01:08:53

Kris Spriano: I think Alicia mentioned we'll be having um an organization come in to talk about what's it like so far implementing these guidelines the early adopters right lessons learned um that's on November 18th you can register at the link that you see and then please do reach out to us directly we're kind of funneling all emails through the info at email address that you see here um if you need technical support email us we'll get that over to reef. Um, if you want to provide feedback on the toolkit, that goes to Liz.

We'll get that to her. Um, ideas for phase two. And are you interested in participating in phase two? Um, we do have an idea, a proposal that's starting to float around for a multistakeholder collaborative. I'm calling it the users group here for now. Um, think of this as a working group on steroids of sorts, a support group for those that are implementing the guidelines and and climate friendly refrigerants and usage, but also, you know, continued work together on the resources, keeping up with regulation, you know, introducing additional tools that re really can make an impact. So, if that all sounds good to you and you're interested in joining us for that, um, it is a proposal right now. Uh we're working together with Reef to see what kind of funding we can get for that. Um but we are just taking names right now in terms of understanding who's interested and and who might want to be in on that um if we're able to take it forward. So info at is the way to to reach any one of us. Alicia

Aleisha Khan: Yeah, thanks Chris. And if uh refrigerants sound like your new jam and you want more, uh just uh go to Reef's website and um we're really happy to work with you in many many ways and there's a lot of great information and resources on our site. So with that, I'll say thank you.

Elizabeth Swanson: Thanks everyone. Take care.

Transcription ended after 01:11:08

This editable transcript was computer generated and might contain errors. People can also change the text after it was created.