

## Industrials/Multi-Industry

# AHR: resi uncertainty, mixed light commercial, strong applied

Industry Overview

### Resi volumes in 4Q worse than expected

On 1/22 we attended the AHR Expo in Chicago (largest HVAC B2B trade show) and met with a number of industry names including Carrier, Copeland, Daikin, Madison Industries, Midea, Parker, and Watsco. Various applications of heat pump technology were front and center at the exhibit. The refrigerant transition was another key topic of interest. For resi, volumes appear to have ended the year below expectations on destock and regulatory concern, light commercial commentary was mixed, applied commentary was broadly constructive. Residential 4Q23 volumes were weaker than expected and we were told residential units were likely to be down 20-30% and no improvement in January. AHRI data that came out on 1/12 showed shipment volumes for resi down 36% y/y in November. There seems to be limited resi visibility into '24 with easy 2H23 comps potentially driving the growth again. The EPA's initial rules for refrigerant transition released in the fall of '23 prohibited sale of the old resi units considered a system in '25 which led to an industry destock. The rules have been updated to allow a one-year grace period. We heard multiple concerns about the state of the consumer as the stimulus savings have run out, interest rates are higher than a year ago, there is less financing available, and the real estate market has slowed.

### Opinions mixed on light commercial

Previously in our [4Q channel checks](#) we had a distributor calling for the peak of light commercial in 1H24. During the show we heard several comments that light commercial was starting to soften. However, we also heard that light commercial still has backlog to work through. Light commercial inventory was still relatively high with the potential for destock ahead of the refrigerant regulation. One company we spoke to said light commercial unit volumes in 2024 could potentially be down 0-5%. However, we heard pushback on the light commercial peaking thesis. One comment was that the light commercial weakness could be a 2025 story driven by the refrigerant transition.

### Questions raised on the cost of new refrigerant units

It seems broadly the consensus on pricing for new units would be a 10-20% price increase. However, we heard outliers on the pricing debate at the conference and our distributor day. During our distributor day, one distributor thought the new refrigerant units could be 30% more expensive with another commenting that the 30% would be possible over a period of ~24 months. While those we spoke to at the show broadly pushed back at the 30%, one company thought that industry price increases could include a wide range from 5-35% depending on the product.

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HVAC: heating, ventilation, and air conditioning

EPA: Environmental Protection Agency

OEM: original equipment manufacturer

VRF: variable refrigerant flow

GWP: global warming potential

AHR: Air-Conditioning, Heating, Refrigerating

AHRI: Air-Conditioning, Heating, and Refrigeration Institute

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## The debate on R-32 vs R453b

With the upcoming refrigerant shift some companies are electing to use R-32 vs R454b. Broadly for resi most OEMs are opting for R454b, with Daikin being the notable OEM opting for R-32, which it manufactures. When comparing the refrigerants, we heard that while the R454b units were easier to manufacture/design, the R-32 units were easier to service. R454b was explained as harder to service because the refrigerant is a blend and if there was a leak it would be required for all the refrigerant to be drained. However, we note that for the current refrigerant, R410a, if there is a leak, all the refrigerants would need to be drained, v. R-32 that can be topped off. So, technicians are likely knowledgeable on how to replace these refrigerants. Overall, there doesn't seem to be much difference in terms of performance or basic product design between the two types of refrigerants. R-32 is more prevalent outside of the US so one of the drivers of the refrigerant choice is seemingly whether the product has originally been launched outside the US.

While many are considering the 2025 refrigerant change, we also heard about the next step down in refrigerants anticipated for 2029. The next step down in emissions seems more theoretical at the moment as there was little consensus on whether or not the next emissions step down would be another refrigerant change. However, we heard that California may be considering lowering the GWP emissions threshold levels before 2029, forcing another refrigerant transition as new refrigerants like R-32 could potentially be below the allowed levels.

## New EPA guidelines

Initially the EPA mandated ban on sales of residential units deemed systems with the old refrigerant after '24. However, after industry pushback, the EPA provided updated guidance on the refrigerant transition. The new guidelines allow split systems to have a one year sell through, packaged products to have a three year sell through, and components for the old units are allowed to continue being manufactured so long as it is going into an already installed unit.

## Meeting at Carrier booth

Carrier hosted a very well attended tour of its booth, highlighting a breadth of new offerings across the range. Product demos included building controls, commercial chillers and heat pumps, new light commercial offering, vrf, and resi.

In the buildings control area Carrier highlighted its Abound platform which can be used across the product range to access the building's data. Abound can be used for energy and carbon emissions tracking.

During the presentation Carrier highlighted: AquaForce, a water-cooled screw chiller that utilizes the Toshiba Carrier VRF systems. AquaEdge, Carrier's water-cooled chiller was highlighted as an approach to efficient heating and cooling with low GWP refrigerants.

On light commercial we saw the new refrigerant unit that will utilize R454b that will likely be available in 3Q/4Q, while resi may be released earlier. The company highlighted the hybrid capabilities of the unit which allow it to run on gas when the low temperatures necessitate it.

The Infinity variable speed resi air conditioner with Greenspeed Intelligence was highlighted for its fully communicating systems. The connectivity of the product allows for the assessment whether the unit should be using electric or gas to run the unit depending on utility/gas pricing in the area.

The company also highlighted its VRF systems which allow for the heating and cooling of different spaces at the same time. Carrier noted that it would make resi product with new refrigerant available sometime before the rollout of the commercial products later in the year.

Carrier's resi and light commercial products will use R454b. However, some of the company's chillers will utilize R-32 because the product was originally designed with Europe in mind where the standard has been R-32. Based on channel checks we think Carrier will be one of the first OEMs to release its new resi refrigerant units.

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