



**Daikin Industries, Ltd.**

Briefing on Sustainability

January 18, 2024

## Event Summary

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<b>[Company Name]</b>	Daikin Industries, Ltd.	
<b>[Company ID]</b>	6367-QCODE	
<b>[Event Language]</b>	JPN	
<b>[Event Type]</b>	Analyst Meeting	
<b>[Event Name]</b>	Briefing on Sustainability	
<b>[Fiscal Period]</b>		
<b>[Date]</b>	January 18, 2024	
<b>[Number of Pages]</b>	46	
<b>[Time]</b>	13:30 – 15:08 (Total: 98 minutes, Presentation: 45 minutes, Q&A: 53 minutes)	
<b>[Venue]</b>	Daikin Tokyo Office (Yaesu Central Tower, Tokyo Midtown Yaesu,2-2-1, Yaesu, Chuo-ku, Tokyo 104-0028) or Webcast	
<b>[Participants]</b>	On-site:34, Online: 100	
<b>[Number of Speakers]</b>	5	
	Katsuyuki Sawai	Senior Executive Officer, Responsible for CSR, Global Environment Affairs, External Relations
	Shoji Uehara	Executive Officer, Responsible for Global Operations Division
	Satoru Fujimoto	General Manager of CSR and Global Environment Center
	Kazuma Koyama	Senior Manager of Tokyo branch External Relations Department
	Kazuhiro Matoba	Department Manager of Corporate IR Group, Corporate Communication Department
<b>[Analyst Names]*</b>	Kentaro Maekawa	Nomura Securities
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\*Analysts that SCRIPTS Asia was able to identify from the audio who spoke during Q&A or whose questions were read by moderator/company representatives.

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## Presentation

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**Monri:** Thank you very much for joining us today despite your busy schedules. We are now going to start Daikin Industries, Ltd.'s briefing on sustainability.

As for the briefing materials, you can find them on our website as we have informed on our company website under the shareholders and investors section yesterday. Please prepare them at your convenience.

I will now introduce today's speakers. We have Katsuyuki Sawai, Senior Executive Officer, Responsible for CSR, Global Environment Affairs, and External Relations, Shoji Uehara, Executive Officer, Responsible for Global Operations Division, Satoru Fujimoto, General Manager of CSR and Global Environment Center, Kazuma Koyama, Senior Manager of Tokyo branch External Relations Department, and Kazuhiro Matoba, Department Manager of Corporate IR Group, Corporate Communication Department.

Please note that Mr.Miyazumi, who was scheduled to speak today, is absent due to illness. We apologize for any inconvenience.

I am Monri from the Corporate IR Group, Corporate Communication Department, and will be serving as the moderator today. Thank you in advance for your cooperation.

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## Today's Briefing Agenda

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### Contributing to the Realization of a Carbon Neutral Society through Our Business

- I . Situation Confronting Daikin and Our Carbon Neutrality Initiatives
- II . COP28 Participation Report
- III . Daikin Efforts in the Indian Market
  - Promoting both sustainable business growth and environmental consciousness–

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Here is the agenda for today's meeting. Firstly, Mr. Fujimoto will explain the current situation surrounding our company and our efforts towards carbon neutrality. Then, Mr. Koyama will report on the recent COP28 that we attended. Following that, our main topic for today, Mr. Uehara will discuss our initiatives in the Indian market.

After approximately 45 minutes of presentations, we will have a Q&A session.

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## I . Situation Confronting Daikin and Our Carbon Neutrality Initiatives



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**Fujimoto:** I am Fujimoto, primarily in charge of environmental matters. Thank you for having me today.

I would like to provide an overview of the current situation surrounding our company and our comprehensive efforts towards achieving carbon neutrality.

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## Strategic Management Plan Fusion 25

- Efforts for Environmental Vision 2050 have been made in close alignment with the strategic management plan Fusion.
- In the Fusion 25 Latter-Half Three-Year Plan formulated in 2023, we established “Challenge to Achieve Carbon Neutrality” as one of our growth strategy themes and are promoting initiatives for each theme.



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Our company is advancing toward carbon neutrality. This is centered on our group management philosophy, shown on the bottom left, which emphasizes contributing to the planet, cities, and people as part of our value creation, as explained on the upper right. We're coordinating this effort with our Environmental Vision 2050 and FUSION initiatives, which are indicated at the bottom.

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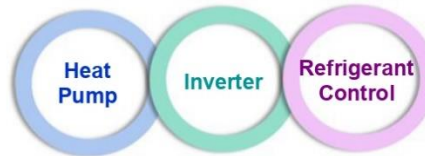
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## Environmental and Core Technologies of the Daikin Group

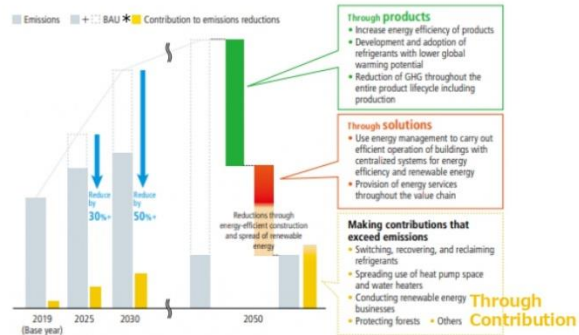
- Through **Environmental Vision 2050** and **Fusion 25**, we aim to achieve **carbon neutrality**, not only in our business activities, but also in the **greenhouse gas emissions that occur throughout the entire lifecycle of our products** (Company emissions typically fall under the Scope 3 category with 98% occurring downstream during product use and disposal.)
- Our three core environmental technologies of **inverters, heat pumps, and refrigerant control** have been further enhanced, and we promote **solutions** that are interconnected with electricity and construction. These solutions also **contribute to reducing greenhouse gas emissions outside the company (through contribution to emissions reduction).**

### Three core technologies supporting carbon neutrality

#### Environmental Vision 2050



#### Scenarios for achieving carbon neutrality



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The diagram on the left illustrates our Environmental Vision 2050, which aims to achieve a balance between air quality and environmental sustainability. It's not just about the vision; as indicated in the graph on the bottom right, the air conditioning market is growing rapidly, making the push toward carbon neutrality challenging. However, we have outlined a scenario to address this.

Our strategy involves reducing emissions as much as possible and ultimately, contributing to reductions outside of what's commonly known as Scope emissions.

The reductions achieved through our products are represented in green. Supporting this are our three core technologies: heat pump technology, inverter technology, and refrigerant control technology, particularly centered around R32.

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## Review of Environmental Initiatives

- In recent years, the importance of air conditioning has been reevaluated.
- The importance of saving energy used in air conditioning and reducing greenhouse gas emissions by refrigerants and heat pumps has also been quantitatively reevaluated, and evidence demonstrates the importance of our environmental technologies and products. Here we present the example of CLASP (NGO).

	Measures	Reduction Effect (vs BAU)	Other Contributions
<b>Air Conditioner</b>	<ul style="list-style-type: none"> <li>• Double efficiency by 2030 (inverter, etc.)</li> <li>• Achieve revised targets for refrigerants (R32, etc.)</li> </ul>	<ul style="list-style-type: none"> <li>• 2040 800M-ton CO<sub>2</sub>e</li> <li>• 2050 1.1B-ton CO<sub>2</sub>e</li> </ul>	<ul style="list-style-type: none"> <li>• Health and wellbeing</li> <li>• Economic growth, improved productivity</li> <li>• Heat stress improvement</li> <li>• Regional disparity correction</li> </ul>
<b>H/P Space and Water Heating</b>	<ul style="list-style-type: none"> <li>• Switch from fossil fuels to heat pumps by 2050</li> </ul>	<ul style="list-style-type: none"> <li>• 2040 (Space heating) 1.2B-ton CO<sub>2</sub>e</li> <li>• 2050 (Space heating) 1.8B-ton CO<sub>2</sub>e</li> <li>• 2040 (Water heating) 200M-ton CO<sub>2</sub>e</li> <li>• 2050 (Water heating) 300M-ton CO<sub>2</sub>e</li> </ul>	<ul style="list-style-type: none"> <li>• Air pollution improvement</li> <li>• Economic growth and improved productivity</li> <li>• Health and wellbeing</li> <li>• Green energy</li> </ul>

Source: Performed by CLASP (environmental NGO) by evaluating carbon neutral technology with reference to reports from UNEP, IEA, etc.

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In recent years, as will be discussed later, the importance of air conditioning has been re-evaluated at events like COP28, within the United Nations, the IEA, and by environmental NGOs. We have long advocated for the critical role of air conditioning in combating climate change, and it seems that this viewpoint is finally being recognized.

I'd like to briefly introduce an example from an NGO called CLASP, which gathers and organizes global data on this topic.

According to them, by doubling the efficiency of air conditioners and implementing the Kigali Amendment, we can reduce CO2 emissions by 1.1 billion tons by 2050. Additionally, they state that heat pump heating systems alone have the potential to reduce emissions by 1.8 billion tons just for space heating. This demonstrates the significant potential for emissions reduction that these technologies hold.

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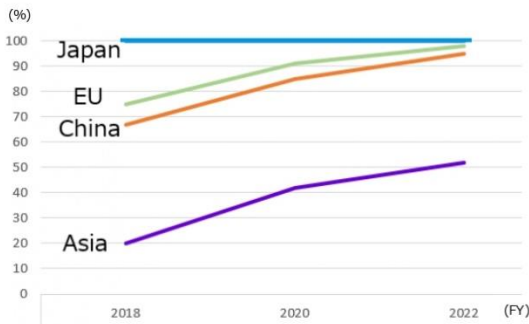
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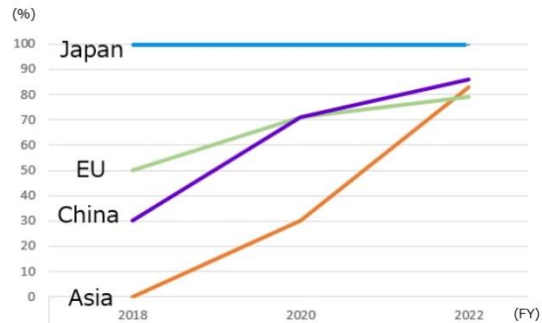
## Results of Efforts: Residential Market

- Daikin has worked for rule formation and provided technical support.
- The world is moving towards energy conservation and decarbonization, and the penetration rates for these have greatly increased over the past 10 years.

### Trends of Inverter Penetration Rate

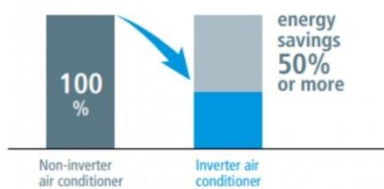


### Trends of R32 Penetration Rate



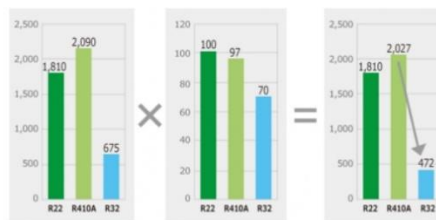
Source: JRAIA statics, UNEP report, and Daikin data

### (Reference) Comparison of Energy Consumption (example)



\*Calculated based on Daikin's demonstration testing.

### (Reference) R32 Global Warming Impact (1/3-1/4 of R410A)



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In our company's case, it's not just about what we can do independently, but rather we are making efforts to transform the entire market into one that is environmentally friendly. We've been actively involved in shaping market rules and providing technological support.

As a result, when we look at the current market penetration rate of inverters, they are nearing 100% in many regions. Asia is slightly behind, and the spread in America will be last, but gradually we are moving in that direction.

Regarding R32, as shown in the top-right graph, the penetration rate is rapidly increasing, nearing 80% in various regions. We expect America to be the last in this adoption as well. As indicated in the bottom-right graph, R32 has a lower GWP compared to other refrigerants, and it also requires a smaller charge amount. Therefore, we believe it has the potential to reduce the warming impact to about 1/4 of that of the refrigerants traditionally used.

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## Current Situation and Issues: Fusion 25 Latter-Half Plan

- In Fusion 25, we set forth “Challenge to Achieve Carbon Neutrality,” “Promotion of Solutions Business Connected with Customers,” “Creating Value with Air” as our three growth strategy themes.
- In the Fusion 25 Latter-Half Three-Year Plan, we announced that all factories, excluding chemical plants, and offices will aim to achieve net zero greenhouse gas emissions by 2030, and chemical factories will target net zero greenhouse gas emissions by 2050.

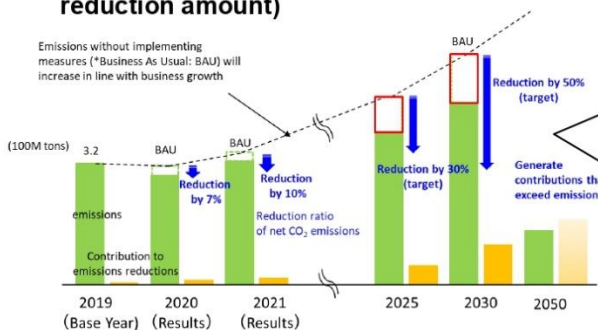
### Fusion 25 Latter-Half Three-Year Plan

Providing both “Carbon Neutrality” and “Air” while enhancing our “Solutions Business”



#### Carbon Neutrality Target

Reduction of 30% by 2025 and 50% by 2030  
(Actual reduction rate overall for Scope 1, 2, and 3:  
Emissions compared to BAU - contribution to reduction amount)



#### Reduction Efforts

- (1) Reduction efforts in manufacturing, etc. (development, manufacturing, office) (Scope 1 and 2)
- (2) Reduction efforts during product use and disposal (Scope 3)
  - Reduction of power consumption through inverters and similar technologies
  - Promotion of conversion from combustion heating and hot water supply to heat pumps
  - Promotion of initiatives for low-GWP refrigerants such as R32
- (3) New environmental businesses and technology development
  - Smart cities, energy creation, DAC, etc.
- (4) Increase in contribution to reduction amount (Scope 3)
  - Promotion of inverters in countries where adoption is lagging behind
  - Promotion of expanded use of heat pumps
  - Promotion of further R32 adoption outside our company
  - Work for greater refrigerant recovery and reclamation

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Now, let's discuss FUSION. We have been quantitatively developing our carbon neutrality strategy as part of our strategic management plan. The three boxes shaded in blue on the left indicate that carbon neutrality is one of the pillars of our growth strategy.

Below that, you can see our carbon neutrality targets, which first aim to lower the emission rate by 30% by 2025 and 50% by 2050, compared to a BAU scenario. This includes not only Scopes 1 and 2 emissions but also Scope 3, meaning we are committed to reducing emissions during the use of our products. We have set and are pursuing these targets.

As shown on the right, we focus on reducing emissions from manufacturing in our factories, product usage, disposal, and new business ventures. Additionally, we are expanding our contribution to the reduction amount.

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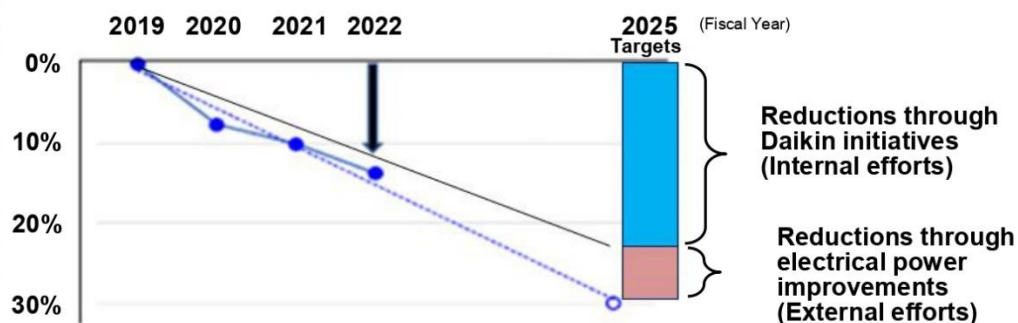
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## Current Situation and Issues: Progress in the Fusion 25 Latter-Half Three-Year Plan

- Progress is largely going as planned on a global scale for our carbon neutrality targets that include Scope 1, 2, and 3.

### Reduction rate of emission amount combines Scope 1, 2, and 3 (compared to FY2019 based on BAU standards)



#### Issue

- **The rate of improvement in emission factor from electricity** was lower than expected (refer to Bloomberg) . This is thought to be the result of increased coal consumption caused by the situation in Ukraine and electricity demand in developing countries.
- We are currently investigating **improvement measures and ways to cover the emission factor discrepancies from electricity.**

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I would like to introduce the progress of our carbon neutrality efforts. The base year is 2019, and we are working towards achieving a 30% reduction by 2025. The blue dotted line represents our target trajectory. As indicated here, we are progressing almost as planned.

There is a slight shortfall, which we believe is due to the situation in Ukraine, resulting in the electricity emission factor not decreasing as much as expected. However, as stated at COP28, there is a plan to triple renewable energy, which, although not certain, presents a possibility. Even if this does not materialize, we are also considering covering as much as possible through our own efforts.

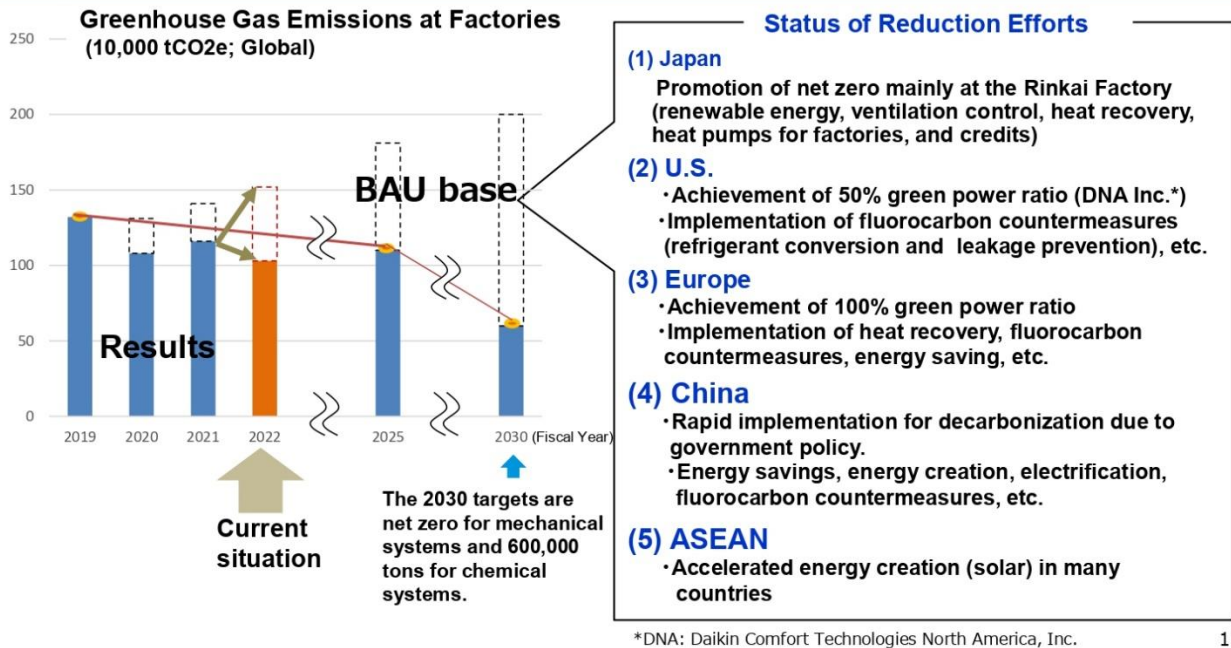
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## Current Situation and Issues: Progress in the Fusion 25 Latter-Half Three-Year Plan

- **GHG emissions fell by approximately 10%** in fiscal 2022 from initiatives to create carbon neutral factories, while production volume increased in all regions by 20-30% year on year due to greater air conditioning demand. The roughly 1.16 million tons of CO<sub>2</sub>e occurring in FY2021 were reduced to about 1.03 million tons of CO<sub>2</sub>e in FY2022, exceeding the reduction target.
- Having begun in each region, **measures are rapidly expanding worldwide and include the introduction of green electricity.**



I'd like to discuss our factory carbon neutrality. Reduction at chemical plants is indeed challenging and will take a little more time, but we aim to make factories related to machinery, air conditioning, and filters carbon neutral by 2030, striving for zero-emission factories. As you can see in the graph on the left, the orange line represents our target trajectory, and we are currently tracking below it.

In fact, despite a 20% to 30% increase in production volume in 2020 due to the expansion of air conditioning demand, we have managed to reduce CO<sub>2</sub> emissions by 10%, achieving a rapid reduction. This progress is a direct result of the Fusion management plan, where strategies were implemented across all regions at once.

The measures listed on the right side include our efforts. For example, in Japan, we are pushing for zero emissions at our factory in Sakai, Osaka. In the US and Europe, there are systems in place that make it easy to purchase green electricity, so we are buying approximately 50% green power in the US and almost 100% in Europe.

Furthermore, in China and Asia, we are covering our needs by installing as many solar panels as possible on the roofs of our own factories. I believe this is significantly advancing our progress towards carbon neutrality.

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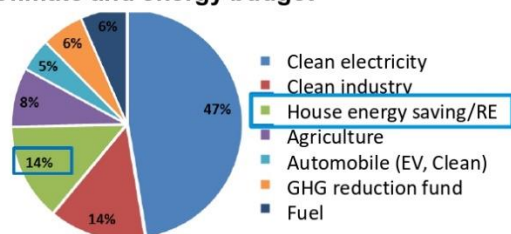
(Reference) Global Situation United States

- Enacted in the United States in August 2022, the Inflation Reduction Act (IRA), provides consumers with tax credits and rebates for heat pump purchases made to promote electrification as a replacement for space and water heating using gas or oil.
- Refrigerant regulations based on the American Innovation and Manufacturing Act (AIM Act) become effective in January 2025, requiring a shift to refrigerants with 700 or less GWP, such as R32.

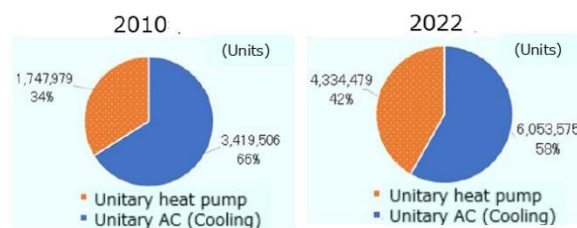
- **Inflation Reduction Act**

A total of \$369 billion was allocated for a climate and energy budget. **The budget for “renewable energy and energy efficiency for homes” is approximately \$46 billion, resulting in a proportional increase in heat pump shipments** in the United States. As part of the Biden administration’s environmental policy, the launch of the **Residential Cold Region Heat Pump Challenge program** has created a great opportunity for the spread of heat pumps.

Climate and energy budget



Share of heat pumps in U.S. AC shipment



- **AIM Act**

In October 2023, a regulatory proposal effective from January 1, 2025, was issued for refrigerant regulations. **The comprehensive regulations include GWP regulations and refrigerant management (recovery and reclamation).** Main refrigerants are expected to have a **GWP of 700 or less**, which should lead a shift to refrigerants like R32 and to refrigerant reclamation. \*Part of the regulations were revised in December 2023, and products manufactured by January 2025 will have a sales grace period until January 2026.

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This is just for your reference. Even in the US, with the passing of the Inflation Reduction Act (IRA) in August 2022, there has been an acceleration in the adoption of heat pumps and energy conservation efforts.

Regarding refrigerants, the AIM Act was enacted last October, and with refrigerant regulations starting in January 2025, the use of older refrigerants will be phased out, leading to a shift towards options like R32, which we use, and the competing refrigerant R454B, which I expect will also gain traction.

Additionally, in the US, there is a strong focus on refrigerant management. There's a possibility of a very distinctive regulation being implemented, mandating the use of reclaimed refrigerants.

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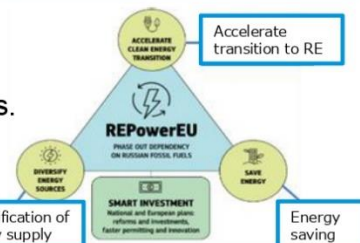


## (Reference) Global Situation Europe

- In Europe, many policies have emerged in line with “Fit for 55,” formulated in 2021.
- With the revision of F-gas regulations, stricter refrigerant regulations are being enforced.

### • REPowerEU Plan

In 2022, the EU Commission announced the REPowerEU Plan as a strategy to move away from dependency on Russian fossil fuels. **Its aim is to introduce a total of 10 million heat pump units over the next five years and a total of 30 million units by 2030.**



### • Energy Performance of Buildings Directive (EPBD)

In 2023, discussions on EPBD amendments aimed at reducing energy use and emissions in buildings were finalized. Specifics includes the **complete abolition of fossil fuel boilers in 2040 and the abolition of subsidies for individual fossil fuel boilers in 2025.**

### • Eco Design Regulations

For the requirements for air conditioners of 12kW or less, **consideration is being given for displaying efficiency on energy labels in terms of primary energy to ensure equal evaluation of HP and non-HP (combustion, electric heating)** in addition to raising the regulation values for energy savings.



### • The F-gases Regulation

A revised plan was agreed upon in October of this year. **Stationary refrigerators will be regulated to GWP 150 or less in 2025, integrated heat pumps will be regulated to GWP 150 or less in 2027, direct expansion air conditioners with power of 12kW or less will be regulated to GWP 150 or less in 2027, etc.**

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This is about Europe. As many of you may be aware, within the Fit for 55 package, there's the REPowerEU plan, which aims to introduce 30 million heat pumps.

Also, under the EPBD, the building energy regulations, there's a shift away from supporting or recommending old boilers and fossil fuel heating systems.

In terms of Eco Design regulations, boilers and heat pumps are starting to be assessed on similar scales, which I believe will lead to progress in adoption.

Under the F-gas regulation, a very stringent revision was agreed upon in October last year. Refrigerators or heat pumps will be regulated to have a GWP of 150 or less by 2025 and 2027, which means R32 will no longer be usable. Additionally, it is said that HFCs will be banned in the future, and we are facing significant challenges in responding to these changes.

With this, I conclude my presentation. Thank you very much for your attention.

**Monri:** Thank you, Mr. Fujimoto. Next, we will have Mr. Koyama report on his participation in COP28.

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## II . COP28 Participation Report



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**Koyama:** I am in charge of external relations; my name is Koyama. I will be presenting our participation in COP28 and the issues we are considering for the future.

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## 2023 Marks First COP Participation for Daikin

- The 28th Conference of the Parties to the United Nations Framework Convention on Climate Change (COP28) held in Dubai from November 30 to December 12, 2023, marked Daikin's first-time participation in COP.
- At COP28, the "the Global Stocktake" (=inventory of progress in reducing GHG emissions that is performed every five years), a mechanism for evaluating the worldwide status progress for the nationally determined contributions (NDCs) that each country established for itself based on the Paris Agreement was discussed for the first time after the Paris Agreement, and a global agreement was reached for a new target that reduces GHG emissions 60% by 2035 based on 2019.
- In addition to those from Japan (Head Office), our company had a total of 13 employees participating in COP28 from the United States, India, and the UAE.

### **Main Daikin activities at COP28**

- (1) **Exhibited for the first time at the Japan Pavilion** sponsored by the Japanese Ministry of the Environment and promoted "high-efficiency inverter air conditioners" that contributed to the COP28 decision of "doubling the annual rate of energy efficiency improvements."
- (2) Disseminated corporate initiatives related to energy efficiency and refrigerant lifecycle management through **presentations at side events jointly sponsored by the Japanese Ministry of Economy, Trade and Industry and the Ministry of the Environment.**
- (3) Made presentations at refrigerant-related side events sponsored by the United Nations Environment Program (UNEP) and JICA.
- (4) **Expressed solidarity for the "Global Cooling Pledge,"** aimed at realizing sustainable cooling led by UNEP and the host country UAE.
- (5) **Declared support for the "Buildings Breakthrough"** initiative led by France, Morocco, and UNEP and aimed to "net-zero decarbonization of buildings" by 2030.

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Firstly, although this information has already been covered by the media, COP28 was held in Dubai at the end of last year. It is said that over 80,000 people attended. My impression was that the venue was very spacious and bustling with attendees.

The outcomes of COP28 include the first-ever Global Stocktake, which is an inventory of progress towards greenhouse gas emission reduction targets, and an international agreement to achieve a 60% reduction by 2035.

Additionally, as Prime Minister Kishida mentioned during the summit, the commitment made at COP28 to triple the introduction of renewable energy and to double the rate of energy efficiency improvements is also seen as a key accomplishment.

For Daikin Industries, this was actually our first time participating. However, it wasn't just Japanese members from our team but our global members as well who joined forces, totaling 13 participants. We were able to enter areas of the COP venue that are typically restricted to negotiators and engage in the proceedings there.

I will outline five key activities we engaged in at COP28. Firstly, we made our debut at the Japan Pavilion, which was hosted by Japan's Ministry of the Environment. Here, we showcased our high-efficiency inverter technology as a means of conserving energy.

Secondly, we participated in a side event concerning air conditioners. This was co-hosted by the Ministry of Economy, Trade and Industry and the Ministry of the Environment, which I believe was a first. Mr. Sawai from Daikin was one of the speakers at this event.

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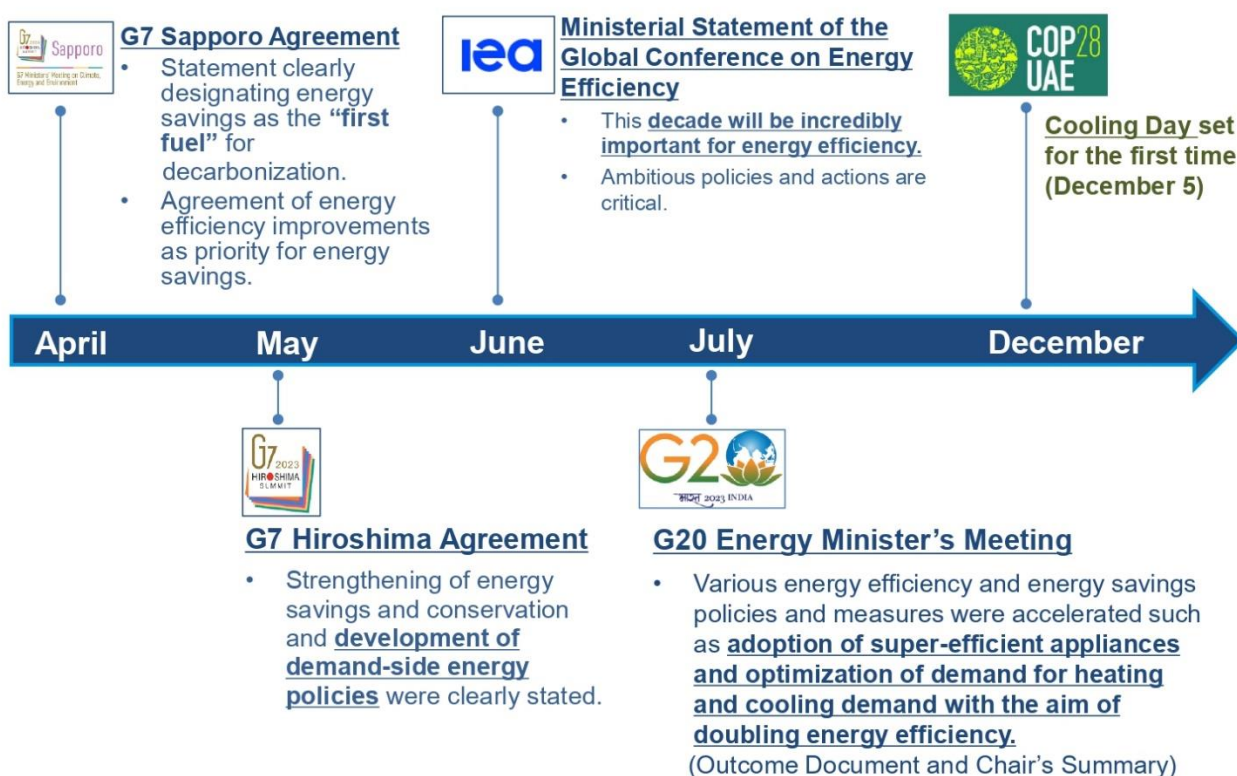
Thirdly, our team of 13 members took part as speakers in seminars at various national pavilions, as well as seminars hosted by JICA and UNEP.

Fourthly, COP28 was the first COP to focus on air conditioning, where the Global Cooling Pledge was announced, and we have expressed our support for it. I will provide more details on this later.

Lastly, on December 6, the Buildings Breakthrough was launched, led by countries like France and Morocco. This initiative is not just about air conditioning but also aims to advance decarbonization in the broader context of both buildings and construction. We have also expressed our support for this.

Today, I will delve a bit deeper into points one, two, and four from these activities.

## Emphasis in 2023 on Promoting Energy Conservation in Air Conditioning



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As I mentioned earlier, there has been a significant focus on energy conservation. Looking back to the period leading up to our participation in COP28, the topic of energy saving has been part of our communications since the G7 Sapporo Climate, Energy, and Environment Ministers' Meeting in April last year.

Energy efficiency has been dubbed the "first fuel" of decarbonization, and there has been a continuous dialogue within the contexts of the G7 and G20 about the need to double efficiency improvements.

In this light, we believe that our participation in COP28 at the end of the year came at an optimal time for us to advocate for energy efficiency.

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## Daikin Booth at the Japan Pavilion for COP28

- **“INVERTER Air Conditioners Make Immediate Impact, Exceptional Outcomes”** was decided as the booth theme.
- Inverter technology was promoted since its introduction would have an immediate and effective impact toward doubling energy efficiency.

### Booth Exhibition Results and Observations

- More than 1,000 people from about 50 countries visited our booth. Approximately 60% were government officials (mostly energy-related).
- Visitors to our booth came away with the understanding **that inverters are currently on the market and have immediate effectiveness that can be introduced right away.** They also learned that **inverters have a low penetration market rate in the United States** and that air conditioners play an important role in our lives and health, and expressed their understanding of the need to promote energy-efficient air conditioners.
- Whereas our American competitors also gave lectures at the U.S. pavilion, we were able to **provide in-depth explanations at our booth.** Consequently, we were able give detailed explanations to government officials with whom we would normally have difficulty meeting.

Major companies with booths at the Japan Pavilion besides Daikin included the Asahi Group, AGC, SB Power, Mitsui O.S.K. Lines, Taisei Corporation, Daihatsu, Toshiba, JGC, Panasonic, Hitachi, and Mitsubishi Heavy Industries.



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The Japan Pavilion booth at COP28 wasn't very large, but we made full use of it to promote our energy-saving inverter technology. It was a very unique booth, featuring wooden figurines.

We deliberated on how best to explain the technology of inverters so that visitors could understand and experience it. While I cannot show you a video today, there was a wooden model at the booth that could be spun by hand. By turning it, visitors could feel the difference in load when using an inverter compared to not using one. From there, we provided more in-depth explanations.

As a result, we welcomed over 1,000 visitors from more than 50 countries. We perceive the number 1,000 as quite significant, as there was a constant stream of people visiting. It was particularly valuable that we could speak directly to government officials from various countries involved in energy matters, individuals with whom it is usually difficult to arrange meetings. Being able to discuss our products in person while they viewed the actual devices, I believe, was a very fruitful outcome.

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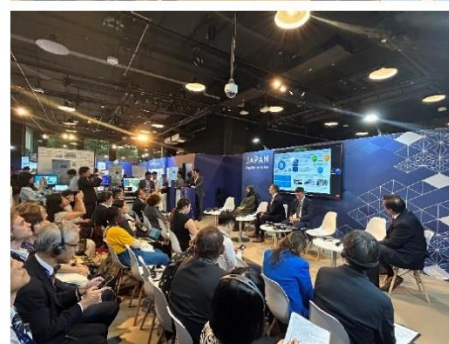
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## MOE and METI Co-Sponsor Side Events

- On December 5th, MOE and METI hosted the first ever “Panel Discussion with Major Countries and International Organizations Discussing Energy Savings in Air Conditioners and Refrigerant Recovery, Reclaiming, and Destruction Management” at the Japan Pavilion. Approximately 90 people attended, including online participants.

- Side event attendees included Yutaka Matsuzawa, Vice-Minister for Global Environmental Affairs, Shinichi Kihara, Director-General of International Policy on Carbon Neutrality, along with representatives from the International Energy Agency, the Asian Development Bank, the U.S. Department of Energy, the UAE Ministry of Industry and Advanced Technology, the Viet Nam Ministry of Natural Resources and Environment, and the Climate and Clean Air Coalition to Reduce Short-Lived Climate Pollutants (CCAC), and Daikin Industries and was facilitated by Makoto Kato, Director of the Overseas Environmental Cooperation Center.
- Daikin Senior Executive Officer Katsuyuki Sawai represented the industry and presented policy cooperation for the promotion of energy-saving inverter air conditioners and initiatives for proper fluorocarbon management.



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Additionally, at a side event, we focused on energy efficiency and another key theme: the lifecycle management of fluorocarbons, encompassing the recovery, recycling, and destruction of refrigerants. We held a panel discussion on these significant topics, inviting relevant personnel from various countries to participate.

Mr. Sawai from our company shared our initiatives in various countries and elaborated on the content previously mentioned by Mr. Fujimoto. In addition to Japanese government officials, we also had direct conversations with representatives from the IEA, the US DOE, and the government of the host country, the UAE. We believe this was a great opportunity that will lead to valuable connections in the future.

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## Support for the Global Cooling Pledge

- The Global Cooling Pledge began with its declaration at the COP28 and aim for doubling energy efficiency improvements for air conditioning by 2030 and accelerating proper refrigerant management.
- Timed with the announcement for the pledge on December 5th, we issued a press release expressing our support. (Competitors Carrier and Danfoss had already announced their support.) At that time, 63 countries, including the United States and Japan, had signed the agreement.

### Main Points of the Global Cooling Pledge

- Commit to work together with the aim of reducing cooling-related emissions 68% (compared to 2022) worldwide by 2050.
- Support the market adoption of high-efficiency air conditioners and work together to double by 2030 (compared to 2022) the global average energy efficiency level of air conditioners sold.
- Reflect by 2026, the phased reduction plan for HFC refrigerants in GHG reduction targets based on the Paris Agreement.
- Promote efforts for lifecycle refrigerant management through proper recovery of HFC refrigerants and similar initiatives.

### Stance of this Company

- The content stated in the declaration is **consistent with the advocacy policy that we have worked for and promoted for many years and support our activities.**
- Specifically, efforts for "widespread adoption of inverters" and "refrigerant recovery and reclamation" have been set as goals to achieve by countries that signed the "Global Cooling Pledge" and will be used in future advocacy activities in each region.



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Returning to the Global Cooling Pledge that I mentioned earlier, December 5 at COP28 was designated as Cooling Day, marking the first time a day at COP has been given this focus. On this day, the Global Cooling Pledge was announced.

As noted in the middle of the slide, the content of the pledge emphasizes the significant role of energy efficiency in the face of rising demand for cooling and the consequent increase in energy needs. It reiterates the commitment to doubling the rate of energy efficiency improvements. Additionally, it includes the proper management of refrigerants, including HFCs, and the pledge encourages international efforts to progress in this area.

63 countries, including Japan, Europe, and the US, have signed this pledge. The commitments within the pledge are made by national governments, outlining what they are expected to uphold.

We have declared our support for this initiative on Cooling Day and intend to continue endorsing the policies advanced by governments. The pledge is aligned perfectly with our past efforts and what we must continue to work on in the future.

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## Future Initiatives Building On COP 28

- The first global stocktake (GST) decision was adopted at COP28. In response to this, countries are accelerating the setting of GHG reduction targets by 2035 in preparation for COP30, which will be held in Brazil in 2025. A drastic increase in reduction targets is expected to be discussed.
- COP29 is scheduled to be held in Azerbaijan in 2024. We will build momentum by leveraging opportunities such as the G7 and G20 to re-accelerate the conversion to heat pumps.

### **Effects of Global Stocktake** (Excluding those relating to the Global Cooling Pledge)

- **Emissions reduction targeting all gases and all sectors...** All refrigerant gases that have a greenhouse effect, including HCFCs, HFCs, HFOs, and natural refrigerants, are being added in the framework of the Paris Agreement, and efforts will be made for reductions.
- **Transition to a sustainable lifestyle...** In addition to energy savings for individual devices, we also incorporate emissions reductions through energy savings in operational aspects, such as increasing the set temperature while maintaining an appropriate temperature.
- **Resource circulation approach...** Efforts are consistent with the Circular Economy and Resource Efficiency Principles (CEREP) and the Global Circulation Protocol (GCP) approved at the G7 Hiroshima Summit.

### **Responding to Changes in Trends**

- In the air conditioning field, the regular meetings of the Montreal Protocol (under UNEP) are the international main stage, and our company actively participates in each one.
- However, as energy conservation and refrigerant measures were taken up at COP28, the U.S. and Indian refrigeration and air conditioning industry associations, International Institute of Refrigeration, as well as competitors such as Trane, Johnson Controls, Carrier, and Danfoss participated. Many machinery manufactures also participated.
- Through our participation in COP28, we recognized that measures in the air conditioning field may become a more central theme in future COPs, and we plan to analyze and respond to both the discussions at the upcoming Montreal Protocol meeting and the COP's movements.

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That concludes our overview of participation in COP28. Based on this experience, I will now discuss our current considerations for future engagements.

As I mentioned at the beginning, one key outcome from the Global Stocktake at COP28 includes several decisions, notably the international commitment to a 60% reduction by 2035. We anticipate that national CO2 reduction targets will be revised and discussed over the next year or year and a half.

Naturally, Japan, among other nations, will need to be involved in this process. In our particular domain, it has been agreed to include all gases and sectors in the scope of the Paris Agreement. We will need to analyze how this inclusion, for example, relates to our refrigerant management and initiatives.

Secondly, there is a transition towards sustainable lifestyles, and in Japan, the Ministry of the Environment is promoting decarb activities. Behavioral change among individuals is deemed necessary. We are considering what policy support is needed to ensure our air conditioning units are used at appropriate temperatures.

Thirdly, there's the circular resource approach, which suggests that efficient use of resources contributes to decarbonization. This extends beyond equipment to how refrigerants can be effectively utilized, and we plan to discuss this further with the government.

Regarding changing tides and our response, we have been part of various international conferences, and although COP28 was our first, we have previously participated in meetings focused on the Montreal Protocol and other air conditioning-related international conferences and agreements. Looking ahead, next year, COP29 will be held in Azerbaijan.

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For instance, we are considering how heat pumps will be addressed within the framework of COP and including such aspects, we aim to step up our international response, advocacy, and rulemaking in the future.

Thank you for your attention.

**Monri:** Thank you for the presentation. Next, Mr. Uehara will provide an update on our initiatives in the Indian market. Please go ahead.

### III. Daikin Efforts in the Indian Market – Promoting both sustainable business growth and environmental consciousness–



1. Introduction to the Indian Market and  
Daikin Air Conditioning India Pvt. Ltd. (DAIPL)
2. Initiatives for Sustainable Business Expansion
3. Summary

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**Uehara:** Thank you once again for being here today. I am Uehara, and I oversee the air conditioning business in Asia and emerging markets at Daikin.

Today, I will talk about our initiatives in the Indian market, focusing on the balance between sustainable business expansion and environmental consideration. I will start with an introduction to the Indian market and Daikin India, followed by a discussion of our specific efforts in this area.

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## Economic Trends in India

- According to the UN, **India's population reached 1.4286 billion people in 2023, surpassing China as the world's largest population.**
- With its remarkable economic development, personal consumption is expected to be around \$6 trillion dollars by 2030, **making it the world's largest consumer market.**
- The Indian government **actively works to attract foreign investment.** To **accelerate domestic production**, the number of items subject to standards requiring mandatory certification is increasing.
- The **Make in India policy** is steadily being implemented, and private companies are encouraged to "Make in India & Make for the World."

### Huge and Attractive Domestic Market

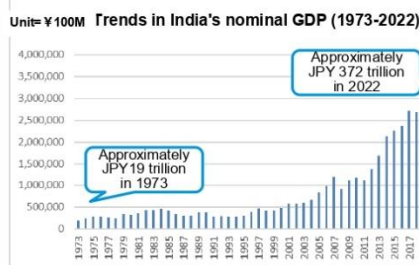
**Secure Economic Foundation**

- GDP: \$3.2T (Ranked 5th)**  
To rise to 3rd by 2030
- GDP growth rate: 6.3%**  
(Average of next 5 years) Highest growth rate among G20 countries
- Mfg. growth: \$447B (14%)**  
To reach 21% of GDP in 2028
- Inflation rate control: 5.66%**  
**Corporate tax reduction: 25% → 15%**  
(Applicable only to newly entered manufacturing industries)

**Huge Population with Underlying Growth Potential**

- Population: 1.4B people**  
World's No. 1
- Labor Force: 0.95B people**  
To reach peak in 2052  
IT HR will double to 10M
- Urbanization rate: 36%**  
Will increase to 43% by 2030
- Cellphone ownership rate: 86%**  
**Smartphone ownership rate will climb from 38% to 58% by 2025**

### Transforming into the world's 3rd largest economic power in 2027



India aims to be the world's leading manufacturing and exporting country by leveraging its "potential domestic market scale" and "sizable, low-cost labor."

- Not only domestic demand, but scale of overseas exports is expanding.

Bilateral trade agreements:

- (1) FTA has been concluded with Australia and the UAE.
- (2) Discussions are underway with the UK and the EU.

BCG Analysis

Countries	Labour Wages USD/month	Power cost USD/kWh	Water cost USD/m <sup>3</sup>
China	350-400	0.15-0.16	55-60
India	160-180	0.10-0.12	14-20
Bangladesh	115-120	0.09-0.11	20-32
Vietnam	190-200	0.08-0.10	50-80
Ethiopia	80-90	0.12-0.14	30-40

Improving Mfg. Competitiveness and Promoting Overseas Exports 24

First, I will give an introduction to the Indian market and Daikin India.

This slide is about economic trends. As you may already know, India surpassed China in 2023 with a population of 1.428 billion, becoming the world's largest country. Accompanying this demographic shift is significant economic growth, and India is emerging as one of the largest consumer markets in the world.

The Indian government is actively inviting foreign investments and, with its Make in India policy, is offering various incentives to attract manufacturing industries. As shown in the bottom left chart, India is projected to become the world's third-largest economy by 2027.

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# Indian Residential AC Market

## Amazing Growth in Domestic Residential AC Market

- Many regions in India face high temperatures and humidity and there are deaths from heat waves, but the **penetration rate of air conditioners in general households remains at around 7%** (representing roughly 20 million households owning an air conditioner out of 290 million).
- With an expanding middle class, air conditioners are the fastest growing home appliance in India, and AC demand will clearly continue to rapidly grow in the future. **More than 1 billion air conditioning units, or 40 times the number of units in 2016, are expected to be used in 2050.**

## Market Size Trends

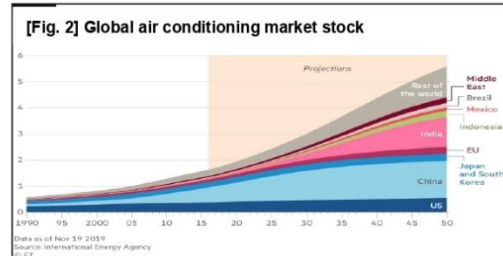
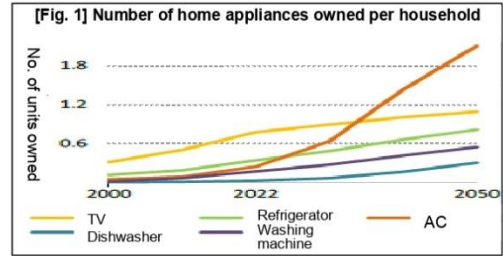
- Even though a temporary decline was seen in 2020 due to the impact of COVID-19, the market volume of residential air conditioners has been on the rise since 2015.
- Market size in 2022 was about 6 million units (Daikin estimate)
- The market is expected to reach 10 million units in 2025.

## Competitive Situation in India

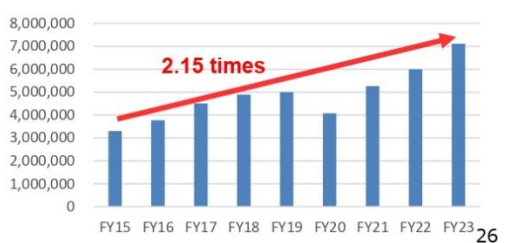
- In addition to India's ample, low-cost labor force and growth potential, the Indian government's "Make in India" policy to promote local production has been a boost, and manufacturers from various countries are actively investing in India.

[Fig. 4] Market share trends

	FY15		FY19		FY22	
1st	Voltas	16.4%	Voltas	19.0%	Daikin	18.4%
2nd	LG	15.9%	Daikin	17.3%	Voltas	17.0%
3rd	Daikin	13.4%	LG	11.4%	LG	13.3%



[Fig. 3] Residential AC market volume



Next, I'd like to introduce the residential air conditioning market in India. As mentioned, the residential air conditioners' market in India is expected to grow explosively. India, which has been experiencing deadly heatwaves recently, has many high-temperature and high-humidity regions, leading us to believe that there is a substantial latent demand for air conditioning.

However, the penetration rate of residential air conditioners in India currently remains at just about 7%. With the middle class expected to expand further, we anticipate a rapid increase in demand.

The middle section is about the market size trend. According to our estimates for FY2022, the market size for residential air conditioners is approximately six million units. We expect this to reach 10 million units by 2025.

Furthermore, following Prime Minister Modi's Make in India policy, not just Daikin but various air conditioner manufacturers are increasingly investing in India.

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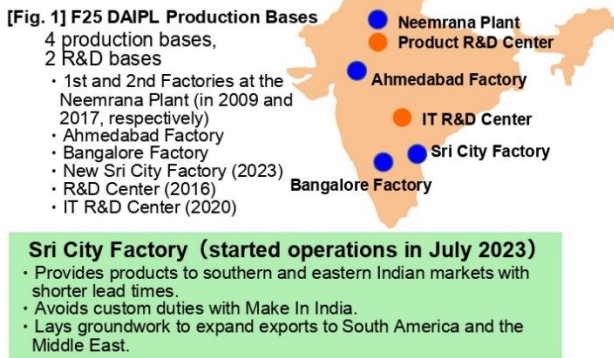
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# Overview of Daikin Airconditioning India Pvt. Ltd. (DAIPL)

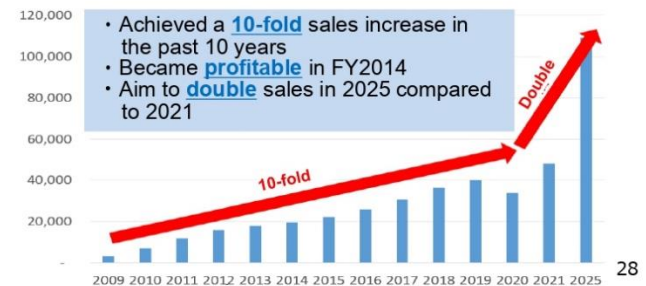
## Developing Community-Base Business for No. 1 AC Brand

- Localization of Production Development**  
 A production base was established in 2009 with an expanded production lineup in 2012 and localized development in 2016.
- Localization of Senior Management**  
 Instead of assigning a Japanese national, an Indian national was selected as company managing director. Because of this, the managing director has extensive knowledge of local needs and has established a system to respond to demand in a timely manner.
- As a Local Company**  
 In 2020, MD Jawa became president of the Indian Refrigeration and Air-Conditioning Manufacturers Association (RAMA) and leads the public-private collaboration in the Indian market by exploring energy-saving performance and making recommendations for the development of standards and regulations.

<b>Company Name</b>	DAIKIN AIRCONDITIONING INDIA PVT. LTD. (DAIPL)
<b>Established</b>	April 2000 (Established as Daikin Shriram Airconditioning Pvt. Ltd.)
<b>Location</b>	Headquarters: Gurgaon, Haryana Factories: Neemrana Plant 1st Factory (est. 2009) Neemrana Plant 2nd Factory (est. 2017) Sri City Plant (launched from July 2023)
<b>Capital</b>	8.029 billion rupees (approx. 13.2 billion yen)
<b>Sales</b>	67.8 billion rupees (approx. 108.5 billion yen) (FY2022)
<b>Shareholders</b>	Wholly-owned subsidiary of Daikin Industries since December 2004
<b>Employees</b>	Approximately 6,000 employees (including 4,900 employees at factories) (30 dispatched Japanese people)
<b>Areas of Business</b>	Manufacture and sale of air conditioners and chillers along with related after sales services



**[Fig. 2] Sales Trends**  
(Million rupees)



Next is a brief overview of Daikin India. With its headquarters located in Gurgaon, close to Delhi, Daikin India is developing rooted local business activities toward becoming the number one air conditioning brand.

As shown on the left side of the slide, we have been focusing on the localization of production and development. In 2009, we established a production base in Neemrana, Rajasthan, near Gurgaon, and expanded our production capacity in 2012. In 2016, we localized product development and have been pushing forward with further localization efforts. As part of these efforts, we appointed a local Indian, Mr. Jawa, as president early on and have been localizing our executive team as well.

As depicted in the bottom left diagram, we currently operate four manufacturing plants and two R&D centers in India. Additionally, we have built another factory in Sri City, about 70 kilometers north of Chennai, which started operations in July. For FY2022, our sales exceeded JPY100 billion.

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## History of DA IPL

Localized production has been accelerated and business scale expanded since the 2010s



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This slide shows the history of Daikin India. Daikin entered India in the year 2000 as Daikin Shriram Airconditioning Pvt. Ltd. By 2004, Shriram Airconditioning had become a wholly owned subsidiary of Daikin.

In 2009, Mr. Jawa took over as president, and concurrently, we established our production base in Neemrana. In 2012, we commenced the production of residential air conditioners, and in 2016, we established an R&D center.

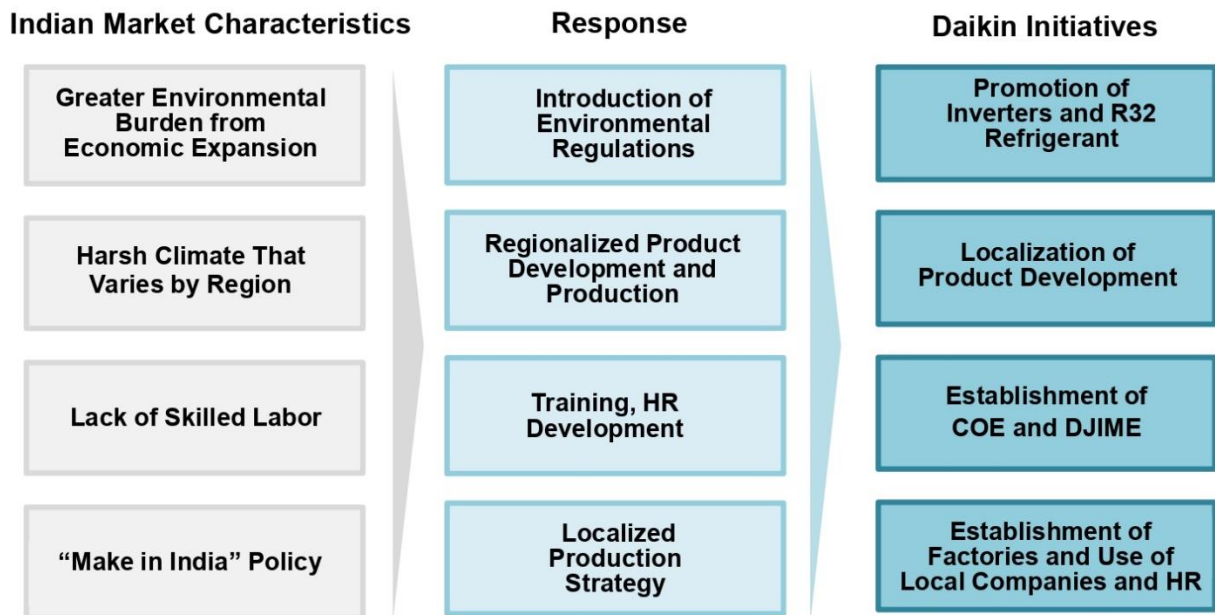
That was a brief introduction to the air conditioning market in India and Daikin India.

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## Daikin Initiatives for 2050



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Now, let's move on to our sustainable business expansion initiatives. I will cover both product initiatives and human resource development.

Daikin's initiatives towards 2050 are shown on this slide. Particularly on the left side, we have summarized the characteristics of the Indian market. First, there is an explosive expansion of the air conditioning market driven by economic growth. As a result, we expect an increase in electrical power consumption and environmental load due to the proliferation of air conditioning.

Moreover, we face the challenge of adapting to the region's harsh climate. For example, some areas experience temperatures exceeding 50 degrees Celsius. Simply transplanting air conditioners used in developed countries, like those in Japan, to India can result in frequent failures and reduced lifespan due to extreme conditions. We need to address these issues.

Additionally, there is a shortage of skilled labor. By 2025, there will be a need for about 200,000 skilled workers, especially on-site installers and technicians. The overwhelming shortage of these technicians and the Make in India policy are considered significant characteristics of the market.

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## Creating an Inverter Market

- We aim to promote the use of highly energy-efficient inverter air conditioners to **reduce CO<sub>2</sub> emissions from electricity consumption when using air conditioners.**
- To promote inverter adoption, we lobbied the Bureau of Energy Efficiency (BEE, India) for **introduction of energy-saving labels and enactment of stricter energy-saving regulations** in leading the industry in promoting inverters.
- The increased cost of regulatory compliance also affects our company and creates difficult conditions for us, but as a leading company, we intend to **continue lobbying government agencies to respond to social issues in India.**

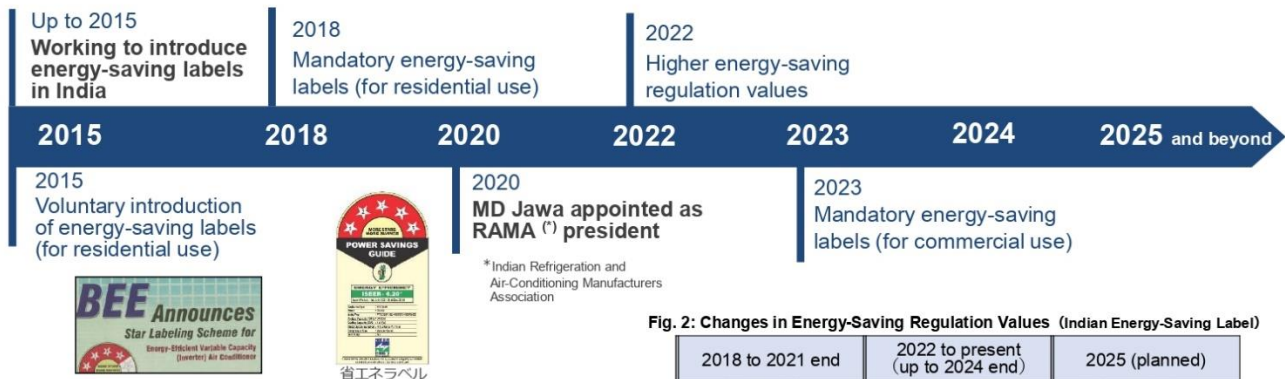


Fig. 1: Market for Inverter-Type AC and Daikin Targets

	2015	2018	2020	2022	2025
Market	13%	28%	35%	70%	90% and above
Daikin	22%	43%	50%	70%	90% and above

Fig. 2: Changes in Energy-Saving Regulation Values (Indian Energy-Saving Label)

2018 to 2021 end			2022 to present (up to 2024 end)			2025 (planned)		
Rating	Maximum	Minimum	Rating	Maximum	Minimum	Rating	Maximum	Minimum
5★		4.50	5★		5.00	5★		5.30
4★	4.49	4.00	4★	4.49	4.40	4★	5.29	4.70
3★	3.99	3.50	3★	4.39	3.80	3★	4.69	4.10
2★	3.49	3.30	2★	3.79	3.50	2★	4.09	3.80
1★	3.29	3.10	1★	3.49	3.30	1★	3.79	3.50

※Numbers represent seasonal energy efficiency ratio (SEER) values in India.

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For product initiatives, I will introduce three key areas: creation of the inverter market, promotion of low global warming potential (GWP) refrigerants, and development of region-specific products.

Firstly, for the creation of the inverter market, many of you may be familiar with inverter air conditioners. Inverters control the current, voltage, and frequency to efficiently regulate the compressor motor, which is the heart of the air conditioner, reducing power consumption.

To promote the proliferation of inverter air conditioners, we have been leading the industry in India by advocating for the introduction of energy-saving labels and stricter energy efficiency standards with the BEE.

As a result, energy-saving labels were introduced in 2015, and their use became mandatory in 2018. By applying these labels to all air conditioners, consumers can now easily identify which models are energy-efficient. Furthermore, in 2022, the energy-saving regulation values were raised, further advancing the adoption of inverter technology. Going forward, another increase is scheduled for 2025.

As shown in the bottom left chart (Figure 1), the inverter rate is said to have exceeded 70% as of 2022. With the additional increase in energy-saving regulation scheduled for 2025, we expect the adoption of inverter technology to progress to around 90%.

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## Promoting the Adoption of Low GWP R32

- To lead the industry in environmental protection activities, **Daikin developed R32, which is a low GWP refrigerant, and led other companies** to create market interest in refrigerants with low environmental impact.
- R32 complies to high efficiency and energy-saving regulations and to various environmental protection regulations.
- Currently, all manufacturers use R32 refrigerant in residential air conditioners.



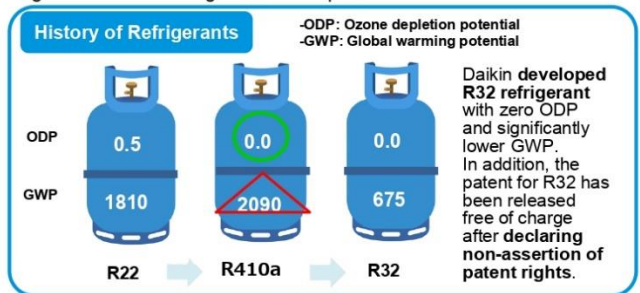
Fig. 1: Kigali Revised Schedule

	Developed Countries	Developed Countries Group 1	Developed Countries Group 2
Baseline Years	2011 to 2013	2020 to 2022	2024 to 2026
Standard value (HFC + HCFC)	Average HFC production and consumption for each year +HCFC standard value X 15%	Average HFC production and consumption for each year +HCFC standard value X 65%	Average HFC production and consumption for each year +HCFC standard value X 65%
Moratorium	None	2024	2028
Reduction Schedule	2019: -10% 2024: -40% 2029: -70% 2034: -80% 2036: -85%	2029: -10% 2035: -30% 2040: -50% 2045: -80%	2032: -10% 2037: -20% 2042: -30% 2047: -85%

India is in the second group of developing countries



Fig. 2: Proactive Refrigerant Development



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Next is the promotion of low-global warming potential (GWP) refrigerants. Daikin has pioneered the development and market introduction of the low-GWP refrigerant R32.

In India, we were quick to start the production of air conditioners for residential use in 2012, simultaneously introducing products that use R32 refrigerant. In 2019, Daikin decided not to exercise its patent rights for R32 to promote its wider adoption. Now, it's believed that virtually all air conditioner manufacturers use R32 for their residential air conditioners.

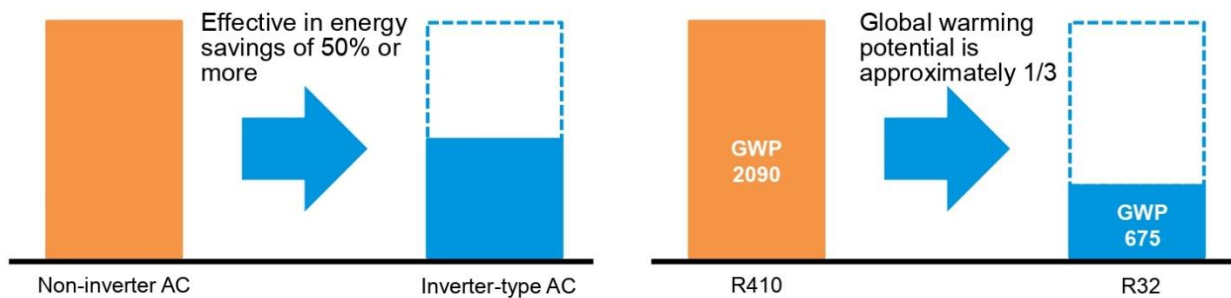
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## Reference: Impact of Switching to Inverters/R32

- Air conditioners equipped with inverters can reduce the amount of electric power consumed by 50% or more compared to non-inverter air conditioners.
- Also, the refrigerant R32 has nearly one-third the GWP compared to the conventional refrigerant R410.
- Promoting the adoption of inverter-type air conditioners equipped with R32 contributes to achieving carbon neutrality in the Indian market.



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For your reference, the graph depicts the effectiveness of air conditioners equipped with inverters. Compared to non-inverter air conditioners, those with inverters are expected to offer roughly a 50% energy-saving effect.

Furthermore, the low-GWP refrigerant R32, compared to the traditional R-410A refrigerant, has approximately 1/3 the global warming potential. By introducing products that use R32 refrigerant inverter air conditioners to the market, we expect a synergistic effect that can lead to even greater energy efficiency. In this way, we have been vigorously promoting the adoption of R32 inverter air conditioners in the Indian market.

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## Developing Region-Specific Products

- Issues and product needs vary by region.
- **Product development was localized in 2016** to develop products that meet the needs of each customer in India.

### 1. Unstable Power Supply

Air conditioner that withstands unstable power supply and doesn't break down  
Air conditioner that can operate at low voltage without need of an AC stabilizer



### 2. Product Damage from Underdeveloped Infrastructure and Transportation

Air conditioner that survives intact even when dropped from 1m



### 3. Household Effluent/ Air Pollution

Air conditioner that resists corrosion even in a nitric acid environment

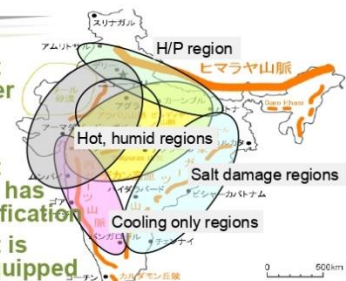


### 4. Harsh Climate

Air conditioner that operates even under high outdoor temperatures

Air conditioner that is cooling only and has powerful dehumidification

Air conditioner that is inexpensive and equipped with H/P



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Regarding the development of products suitable for the Indian market, it's important to note that India still faces significant instability in its power supply, with frequent power outages. Sometimes, the voltage can surge up to around 500 volts. To accommodate such conditions, Daikin has been selling air conditioners equipped with specially designed electronic circuit boards that do not break even under 500 volts of voltage.

Moreover, the road conditions are quite poor, and air conditioners transported by truck often get severely jostled. As a result, we use a thicker and more robust type of frame compared to the ones used in Japan.

Air pollution is also a serious issue in India, leading to the corrosion of components like aluminum used in air conditioners. Therefore, we are selling air conditioners equipped with parts that do not corrode even in India's atmospheric conditions.

In this extremely harsh climate, we are continuously localizing the development of our products to create air conditioners that do not easily malfunction. The biggest challenge to popularizing inverter air conditioners in India is the cost increase associated with incorporating inverters.

Furthermore, addressing the unique environmental challenges of India leads to additional costs. Nevertheless, we are vigorously working on cost reduction to ensure that inverter air conditioners can be widely used in India. We aim to achieve widespread adoption of energy-efficient air conditioners through this balance.

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## Backstory of Daikin India's HR Development: Social Issues

### [Major HR Challenges in India]

- Job creation to give opportunities to a growing population
- Skilled worker shortage
- Promotion of gender diversity
- Income inequality

### 《Current Conditions》

In India, there is a population of 1.428 billion with a labor force participation ratio of 36%

#### Scale and ratio of skilled engineers

Japan – 80% | U.S. – 68%  
China – 24% | India – 4.7%

**Estimates for the air conditioning industry alone suggest that approximately 200,000 skilled engineers will be needed over the next five years.**

Source : World Bank 2022, other sources

### [Daikin Initiatives]

- Aiming to be an industry leader in HR development, we will continue to collaborate with academic institutions and the governments of both Japan and India.
- Through various HR development initiatives such as the Centre of Excellence (COE) and the Daikin Japan Institute of Manufacturing Excellence (DJIME), we are leveraging the collaboration of industry, government, and academia to train 150,000 engineers by 2025.

Towards 2025

150,000 people



	Technical training/ Trainer training	Technical training for service engineers	AC technology course COE	Japanese-style Mfg. school DJIME
	Core Level		General Level	Beginner Level
Target	DAIPL employees		Technology-related students	Youth with technical aspirations
		Partner dealers/service shops		
Content	Based on production technology and theory starting with general explanation	Support for techniques related to AC installation/ maintenance, etc.	Support for course instructors, free provision of air conditioners, etc.	Support for basic AC knowledge, techniques, etc.
Sponsor	DAIPL	DAIPL	DAIPL Local vocational schools	DAIPL Japanese/Indian governments

Next, I'll introduce two initiatives related to human resource development.

This slide is about human resource development in Daikin India. As noted on the bottom left, there is a significant shortage of skilled technicians, with an estimated need for 200,000 in the next five years. The Indian government, under the Make in India policy, is attempting to attract manufacturing industries, and Daikin is collaborating with educational institutions and both the Japanese and Indian governments to address this gap.

Among the main initiatives are the establishment of industry-academia collaborative training institutions and a Japanese-style manufacturing school. Through these efforts, Daikin aims to train 150,000 technicians by 2025.

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## Skill Improvement at Industry-Academia Collaborative Training Institutions

- In **collaboration with educational institutions** such as universities, we have been continuously training air conditioning engineers since 2016. From 2021 to 2025, the company aims to become a **base for training 150,000 personnel across India**.
- This is intended for not only engineers at partner dealers but is also applied for student training in regions where training center operate. We will work to supplement the skilled labor force by employing at dealers, etc., the young human talent who study there.
- In addition to expansion in India, we are expanding to Sri Lanka and East African countries.



### Industry-Academia Collaborative Training Institutes: Centre of Excellence (COE)

- In August 2016, we opened our first COE at a YMCA school in Faridabad, Haryana, and currently have 18 COEs in operation in India, along with one in Sri Lanka, and two in East Africa.
- In fiscal 2023, we have planned to provide training to approximately 3,000 participants in total.

### Training for Dealer Engineers

- Training centers are widely used as a place for practical training, especially in product installation, troubleshooting, commercial air conditioning services, etc.

### Refrigerant and AC Technology Training for Local Students

- A community college is opened within the YMCA, and lectures are given by Daikin instructors.
- The curriculum changes according to the specialty of the school with practical training held in the 2nd to 4th semesters.
- Students attending this course often express the desire to work at a Daikin dealer after graduation.

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The first initiative is skill enhancement through industry-academia collaborative training institutions. In partnership with universities and educational institutions, we have been cultivating air conditioning engineers since 2016, with the goal of training 150,000 personnel by 2025.

Not just at Daikin, but I believe this is true for other companies as well. Individuals who undergo this kind of training often become sales representatives or engineers who install air conditioners. However, our efforts go beyond this. We refer to our industry-academia collaborative training institutions as Centre of Excellence (COE) so that they can work at our factories, and we have established 18 COEs in India.

Additionally, by expanding horizontally, we have already operationalized one Centre of Excellence (COE) each in Sri Lanka and in East Africa, specifically in Kenya and Tanzania. In FY2023, we have conducted training for nearly 3,000 participants across these COEs.

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## HR Development through the Japan-India Institute for Manufacturing (DJIME)

- In cooperation with the Japanese and Indian governments, we have been training young Indian people in Japanese manufacturing since 2017 as we aim to raise the level of skilled human resources in India.
- The first initiative was **directed specifically toward women** and involved training female skilled engineers to promote gender diversity.
- Educational opportunities are provided to women and young people in rural areas to eliminate the income inequality between rich and poor.



### Daikin Japanese Institute of Manufacturing Excellence (DJIME)

- In 2017, the Japan-India Government Manufacturing Skills Transfer Promotion Program was developed in collaboration with the Ministry of Economy, Trade and Industry of Japan and the Ministry of Skill Development and Entrepreneurship of India. Daikin participated and opened DJIME as a Japanese-style manufacturing school.
- The one-year course includes lectures on air conditioning and Japanese manufacturing, as well as practical training in brazing, welding, and assembly. (Only the first fiscal year was a 2-year course.)
- Currently, two types of short-term, three-month courses are offered to further develop human resources.
- Thus far, more than 300 students have graduated to become employees of DAIPL, Daikin dealers, or other Daikin-related entities, and are currently engaged in Daikin business.
- Main training programs:
  - Discipline, Manners, and 5S
  - KAIZEN
  - Basic knowledge related to air conditioning technology (assembly, mathematics, drawings, etc.)
  - English



Changes in the ratio of female workers at Daikin India (Neemrana Plant)

FY2015  
10 people  
(less than 1%)



FY2023  
500 people  
(14%)

Female employees increased about 50 times more than in 2015

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I would like to briefly introduce the human resource development at the DJIME, Daikin Japanese Institute of Manufacturing Excellence. This project is a joint initiative of the Japanese and Indian governments, aimed at training Indian youth in Japanese manufacturing techniques to elevate the skill level of the Indian workforce. Daikin was invited to participate in this project among other companies, and we are involved in the project.

The course, focusing on air conditioning and manufacturing, includes classroom learning as well as practical skills like brazing and welding. It's a one-year program where participants learn air conditioning technology. Additionally, for those who find one year too long, we have introduced a three-month short course to continue our efforts in talent development.

In India, women often have limited opportunities to work, and people from rural areas may not have access to education, resulting in restricted social advancement. Therefore, for the first batch, we specifically targeted women, focusing on developing female technicians and promoting gender diversity.

As shown below, the number of female workers at Daikin India's Neemrana factory was only 10 in 2015, but it increased to 500 by 2023, many of whom are graduates of this Daikin Japanese Institute for Manufacturing.

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## Summary of Initiatives for Sustainable Business Expansion

- Introduction of inverter-type air conditioners and development of the R32 refrigerant
- Advocacy activities for raising energy-saving regulations
  - ⇒ Aim to higher regulatory values through advocacy activities to improve the market inverter ratio
  - ⇒ Expand sales of high energy-saving products among inverter ACs



### Promotion of Inverters and R32 Refrigerant

- Development of air conditioning engineers through intergovernmental and academic cooperation
- Provision of opportunities for people lacking the opportunity to acquire specialized knowledge
  - ⇒ Increase the number of schools and ensure that it leads to more opportunities
  - ⇒ Accelerate collaborations and ensure that they lead to business expansion

### Establishment of COE and DJIME



### Localization of Product Development



- Localization of product development since 2016
- Development of inexpensive products compatible with India's unique environments
  - ⇒ Respond to local usage environment
  - ⇒ Strengthen costs control capabilities to ensure affordable pricing

### Establishment of Factories and Use of Local Companies and HR



- Establishment of a new factory in Southern India
- Investigation of local company collaborations
  - ⇒ Build sales and direct sales store networks
  - ⇒ Promote shared services that utilize India's abundant human resources

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That concludes our presentation on Daikin's sustainable business expansion efforts in India.

In summary, we are promoting the adoption of R32 refrigerant inverter air conditioners, including efforts to lobby the government for higher energy efficiency standards.

Furthermore, we are developing air conditioners that can withstand the unique challenges of India, and we are working on cost reduction strategies to offset the increased costs, thus making energy-efficient air conditioners accessible to the general public. In addition, through initiatives like DJIME and COE shown on the right side, we are committed to the development of skilled technicians.

Finally, Daikin plans to continue investing in India. By establishing factories and utilizing local suppliers, we aim to employ many people and contribute to India's development.

That is all from me. Thank you very much for your attention.

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## Question & Answer

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**Monri [M]:** We will now begin the Q&A session. If you have any questions, please raise your hand.

**Maekawa [Q]:** I am Maekawa from Nomura Securities. Thank you for your time today. I have two questions.

First, I would like to inquire about the Indian market. According to your explanation, the inverter ratio in the Indian market has become quite high, at about 70%.

I believe this is a result of Daikin's increasing market share and the manifestation of your company's strengths. How do you see the competitive environment evolving in the future? For example, in China, the volume zone faces fierce competition, and in some cases, the entire market has become a red ocean. With this in mind, could you tell us your outlook for the Indian market?

**Uehara [A]:** Thank you, Mr. Maekawa.

In the Indian market, our main focus is on expanding our share in the volume zone. Therefore, we are actively working on cost reduction and developing products that can compete effectively in the volume zone.

One characteristic of the Indian market is that local manufacturers like Voltas and Blue Star are our competitors. Additionally, as I mentioned earlier, energy-saving regulation values have significantly increased. In this sense, it's turning into a battle in Daikin's favored arena of inverter air conditioners, and I believe we are well-positioned to compete.

However, I think local manufacturers will continue to gain strength, so we need to make further efforts in two major areas.

One is in devices. Daikin plans to locally produce essential components such as compressors and motors in India. In the new factory in Sri City that I mentioned earlier, we will also start a factory for compressors and motors, localizing the production of these core components. The other area is suppliers. We will actively attract suppliers to India. By focusing on these two areas, we aim to achieve both cost reduction and quality, and to compete effectively against local manufacturers.

**Maekawa [Q]:** I understand that the President of Daikin India is also the Chairman of the Refrigeration and Air-conditioning Manufacturers Association (RAMA) in India. I think your company is very skilled at lobbying and creating systems, especially in terms of regulations. Could you tell us if such efforts are going well in India?

**Uehara [A]:** The goal of RAMA is to contribute to the development of the air conditioning sector in India. We are actively promoting energy-efficient air conditioners, which is also beneficial for the growth of the industry in India, and we are working on raising the energy-saving regulation values.

Moreover, importing core components does not align well with the Make in India policy. Therefore, as an industry association, we are lobbying the government to add various incentives for device factories, including production-linked incentives (PLI). We are sharing our direction with the government's goals, and they are supportive of our initiatives. I believe we are making good progress in this area.

**Maekawa [Q]:** My second question is about refrigerants. In the US, as refrigerant regulations become stricter, I understand that R32 is seen as a growing opportunity. However, there is competition with R-454B, and I wonder if the way these regulations are set could disadvantage R32.

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Also, regarding Europe, where regulations are expected to become stricter, I haven't seen any innovative refrigerants, like natural refrigerants, emerging from companies. Is there a risk that regulations will become stricter without viable alternative refrigerants? Or is there a possibility that air conditioners will start using natural refrigerants?

Could you provide more details about refrigerants in both Europe and the US?

**Fujimoto [A]:** Firstly, in the US, the ratification of the Kigali Amendment has been slow, but it's finally starting to take off. We believe this presents an opportunity for the spread of R32, which we've been anticipating. While R-454B, a competitor, is also an excellent refrigerant, it is a blend and, in a sense, more challenging to handle. There are concerns about its unpredictable behavior in the refrigerant circuit of air conditioning systems.

We see three main advantages for R32. First, it has a proven track record with sales of hundreds of millions of units worldwide. Second, as a single-component refrigerant, R32 is easier to recover and recycle compared to the blended R-454B. Third, R32 offers better performance as a refrigerant for air conditioners, allowing for more compact equipment design.

The disadvantage, however, is that R-454B has a lower global warming potential, but when considering the overall product lifecycle, including refrigerant performance, the difference may not be as significant.

Regarding Europe, we are aware of the very strict refrigerant regulations. However, once the laws are in place, we have no choice but to comply, so we are progressing with the development of new refrigerants.

Propane is an excellent natural refrigerant but it is hazardous. We believe that the range of control within the manufacturer's capabilities is manageable. However, it's challenging for manufacturers to control all aspects, such as transportation, servicing, and disposal. Therefore, we think it's necessary to establish a proper societal system before introducing such refrigerants widely. We are planning to create guidelines and involve other companies in this initiative.

We are also in the process of developing safer refrigerants other than propane, with the help of NEDO.

So, for the time being, we will continue to focus on the recovery and recycling of R32, and in the future, we will explore various possibilities, adapting to the situation and regulations of each country. This is our approach to refrigerants.

**Maekawa [Q]:** So, R32 can still be used after 2027 as it can be recovered and recycled, which gives you some time to transition.

**Fujimoto [A]:** Yes, exactly. We are working on transition measures and considering future strategies.

**Maekawa [M]:** Understood. Thank you very much.

**Sawai [A]:** I would like to add one point about the F-gas regulations. The clause includes a provision for a reassessment of the regulations in 2030. However, as it stands now, F-gases are banned.

As Mr. Fujimoto mentioned, we are exploring the use of natural refrigerants, but R-290 has safety issues, and CO2 results in larger equipment and lower energy efficiency. So, we are currently discussing the advocacy direction for 2030, considering the usefulness of F-gases.

**Monri [M]:** Next question, please.

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**Gunji [Q]:** Thank you for the explanation. My name is Gunji from Capital. I have two questions.

First, if the US administration changes and the IRA is partially amended, what impact do you foresee? Even without the benefits of the IRA, do your products have selling points that appeal to consumers, such as being more power saving? Could you elaborate on this?

**Fujimoto [A]:** Thank you for your question.

I believe that the US is quite polarized, and even if the administration changes, I think that energy conservation will advance significantly at the local and state levels. I don't expect the current major trends to change drastically. Of course, there will be some impact, but I don't foresee a complete reversal.

**Sawai [A]:** Regarding Daikin's product advantages, even without regulations, how we fare depends partly on how electricity prices move in the US. However, the energy-saving of our inverter-equipped products advantages compared to conventional ones remains unchanged.

Considering the refrigerant characteristics of R-454B and our R32, our R32 has superior thermal properties. Furthermore, while not unique to Daikin, Japanese manufacturers are quite advanced in inverter technology. We believe these aspects give our products a technical and competitive product advantage.

**Fujimoto [A]:** I think California holds the key. Even if there's a change in administration, I expect California's environmental promotion division, CARB, to continue leading aggressively. I believe their actions will influence various other states.

We have been in close discussions with CARB, so we intend to continue our advocacy efforts in that direction.

**Gunji [Q]:** My other question concerns the possibility of a change in the US administration leading to policies such as a 10% tariff on all imports. Your company has recently built a factory in Mexico and seems to be restructuring its supply chain.

What risks do you foresee in this regard, particularly if America First policies intensify?

**Sawai [A]:** When tariffs were previously imposed, we temporarily froze our plans for the Mexico factory and shifted to importing components from Southeast Asian countries like Thailand.

However, the Mexico factory is now operational. Therefore, even if such a situation arises after the new president takes office in November, I believe discontinuing production in Mexico is highly unlikely.

Considering the shipping costs for products currently imported from Asia, it could still be more economical to import from Mexico, even with tariffs. At present, our Asian factories are highly productive, and Mexico is just starting, so there are some disadvantages. However, in the long run, we are building a cost-effective manufacturing base in Mexico. I don't see a need for a significant change in strategy at this point.

**Uehara [A]:** Our Houston factory currently manufactures our main residential unitary products. If import tariffs are imposed, it could actually work in our favor.

The products we manufacture in Mexico, mainly small room air conditioners, are partly imported from Thailand and Malaysia, so as Mr. Sawai mentioned, even with a 10% tariff, the transportation costs might offset the tariff, which could turn out to be an advantage for us. So, even if there's a change in administration and tariffs are imposed, I don't see it having a significant impact.

**Gunji [M]:** Thank you, that was very insightful.

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**Monri [M]:** Thank you.

**Mizuno [Q]:** Thank you for your time. I am Mizuno from UBS Securities.

Firstly, I have a question about India. I would like to know about the price difference between Daikin and competitors like Voltas and LG, and then, could you explain what President Togawa means when he says he aims to be not just number one, but overwhelmingly number one in India? What is required to achieve this?

**Uehara [A]:** Thank you for your question.

When we entered the Indian market, the Korean manufacturer LG was strong. We increased our sales volume in room air conditioners through various marketing efforts. We have priced our products considering various added values, and currently, we recognize about a 10% price difference with LG.

Now, our competitors have shifted to local manufacturers like Voltas and Blue Star. At the same time, energy efficiency regulations have been raised, and the market has shifted towards inverter models. We are also selling at about a 10% price difference compared to Voltas. Despite this, we have managed to overtake local manufacturers and become the number one in residential market share.

There are various aspects to being overwhelmingly number one, as our president mentioned. It's not just about sales, but also includes manufacturing. To my understanding, we aim to be number one not only in residential but also in commercial applications like building and factory air conditioners. While I have only discussed the residential market, the Indian market for commercial applications is also expected to expand significantly.

We do end-to-end business from room air conditioners to large models, while local manufacturers are still focused on residential models. Dominating in all applications is probably what being overwhelmingly number one means. By doing so, we can achieve the top sales in the market, significantly outperforming our competitors.

**Mizuno [Q]:** For my second question, I understand that the margin for the Indian air conditioning business is currently around 5%. First, I would like to confirm if this is accurate and then, looking forward, do you see the Indian market evolving like China, where expansion in scale and improvement in profit margins occur simultaneously? Your earlier explanation suggested a focus on both residential volume zones and commercial, which sounds slightly different from China. I would appreciate it if you could explain your future profit margin targets, possibly in comparison with China.

**Uehara [A]:** The profit margin is a bit higher than 5%, but it is indeed lower compared to China. The reason is that China strategically sells high value-added multi-products to residential customers through PROSHOP, resulting in higher profit margins.

When I recently visited regional cities in India, I saw scenes reminiscent of China 20 years ago, with luxury apartments being built, young people working in IT companies living in them, and commuting in high-end foreign cars.

Whether the wealthy class in India will expand at the same speed and in the same way as in China is debatable, but I believe the number of people with a luxury-oriented mindset will increase as the wealthy class expands in India. In India too, we are already working on selling multi type –air conditioners through Daikin's exclusive stores, growing sales by about 30% to 40% annually.

While room air conditioners still make up a large volume, the composition of multi type air conditioners and high value-added products will increase, which will naturally improve profit margins. We are currently in a

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phase of growth investment, such as in new factories, so it may take some time, but we expect profit margins to improve gradually.

**Mizuno [M]:** Thank you very much.

**Pan [Q]:** I am Pan from Macquarie Capital Securities. Thank you for your time.

Thank you for disclosing your company's market share in the Indian market on page 26. The room air conditioner market in India currently includes a wide variety of brands, likely over 20 to 30, through OEMs and local EMS providers, and the production capacity of these local EMS factories is quite high.

In such a market environment, by focusing on high-value products as you explained earlier, will your company's market share increase further? Are you aiming for a market share of over 20%? Or rather than focusing on market share, is your strategy to prioritize margins by concentrating on high-value products?

**Uehara [A]:** Thank you for your question.

Currently, the Indian government is raising tariffs as part of its Make in India policy, particularly on core components like compressors and motors in air conditioners, which are currently at 15% but are expected to rise to 20% or 25%.

Many OEM manufacturers import components from China and Asia, so further tariff increases will impact them. However, as Daikin manufactures compressors and motors in India, we can avoid tariffs and have an advantage in local production, including core components. With cost competitiveness comparable to OEM manufacturers in India, we aim to increase our market share.

Considering the impact of tariffs on OEM manufacturers' procurement costs, their selling prices will likely rise. By leveraging Daikin's pricing strategy in light of other companies' movements, we believe we can improve profitability. Therefore, we see the potential for both increased market share and profitability improvement.

**Pan [Q]:** Thank you. Do you have any specific market share targets, like over 20% or 30%?

**Uehara [A]:** In Asia, we have achieved nearly 30% market share in high-share regions and about 20% in lower share regions. While it's a challenging target, we aim to reach around 25% to 30% in India.

**Pan [Q]:** Could you update us on the current status of PLI? I believe there are higher government subsidies for core component production, like compressors. Have you received any tariff concessions or subsidies from the government?

**Uehara [A]:** PLI stands for Production Linked Incentive, meaning incentives are given based on production volume. We started compressor production last August and have been incorporating them into Daikin products since then. The application for this fiscal year's incentive will be closed in March, and we will receive incentives corresponding to our production volume during that period.

**Pan [Q]:** Do you expect higher margins in India next year due to the impact of these incentives?

**Uehara [A]:** While it depends on whether the incentives are directly incorporated into production costs, they naturally contribute positively. In that sense, they will lead to an improvement in margins.

**Pan [Q]:** My second question is about refrigerants in the US. Beyond the strategy differences between your company and competitors, what impact do refrigerants have on your margins? Will the unavailability of R-410A in the future make it easier to penetrate the market with high-value-added products?

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Also, will the competitors' switch to R-454B increase their production costs? Since R-454B is a blend that includes R32, does its production cost higher? I'd like to hear your thoughts on this.

**Fujimoto [A]:** Comparing R32 with its competitor R-454B, the cost of R32 is significantly lower. This is because R-454B is a blend with R-1234yf, which is exceptionally costly, thereby increasing the overall cost. Therefore, we believe the manufacturing cost for R32 will be lower.

Regarding the impact of refrigerant conversion on margins, refrigerant costs are less than 10% of the overall cost, so while there is some impact, I don't believe it to be significant.

**Pan [Q]:** What about the costs associated with core components like compressors and motors, the experience of engineer, or the number of laborers required for distribution and installation? Do those costs remain unchanged?

**Fujimoto [A]:** Firstly, R32 is a highly energy-dense refrigerant, requiring significantly less circulation, allowing for thinner piping. Material-wise, this is advantageous, leading to cost reductions. In fact, compared to older R410 models, we can produce them at a slightly lower cost. Also, while R32 is mildly flammable, which requires specific training, this is also the case with R-454B. Both are mildly flammable refrigerants, so there's no difference in that respect.

**Pan [Q]:** Is there any benefit to the expansion of your FIT sales in the US as a result of switching to R32 refrigerant?

**Fujimoto [A]:** R32 refrigerant has a proven track record globally. One of its benefits is that various customers, installers, and distributors can use it with confidence.

**Pan [M]:** I understand. Thank you.

**Monri [M]:** Thank you. Now, I would like to ask Isayama for his question.

**Isayama [Q]:** I'm Isayama from Goldman. My question concerns both the American and Indian markets.

Regarding the recent EPA update in America, I understand there's a shift in refrigerant regulations, moving from the initially planned January 1, 2025, to partly January 1, 2026. Also, refrigerant recovery and recycling have been a point of discussion, and the cost seems high.

Last year, it appeared that R32 might be affected by US refrigerant regulations, but currently, it seems that the focus is on whether R-454B can meet the regulations in time. I perceive that your company might be benefiting from this situation as a tailwind, possibly due to your advocacy efforts.

Do you think the approval schedule change affects your company? Earlier, you mentioned that shifting to R32 refrigerant wouldn't significantly impact costs. However, I believe American competitors using R-454B might pass on the cost increase to their prices, possibly creating a tailwind for your company. Could this change in refrigerants lead to cost competitiveness?

Could you disclose how these refrigerant discussions have impacted your company and any changes you've observed?

**Fujimoto [A]:** We anticipate that the Kigali Amendment will be ratified in the United States, and we have been preparing for this for a considerable amount of time. Our preparation primarily revolves around the fact that the US is averse to highly flammable refrigerants. To address this, we have been actively involved in various committees for planning and guideline development to facilitate the use of mildly flammable refrigerants, and

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we believe our efforts have been fruitful. We are proud of this achievement and the hard work everyone has put in.

In addition to our activities in the US, the widespread adoption of R32 refrigerant worldwide is a positive development for our company. A particular advantage for us is the AIM Act, which mandates the use of recycled refrigerants. R-454B, being a blend of low and high-pressure refrigerants, presents significant challenges in recovery and recycling.

In contrast, R32, as a single refrigerant, is much easier to recycle compared to mixed refrigerants. Therefore, with the mandatory use of recycled refrigerants under the AIM Act, we see a significant advantage. Overall, despite facing numerous competitors, we believe we have a strong chance of success.

**Isayama [Q]:** Just to clarify, by 2025 or 2026, will it not just be either R32 or R-454B being ratified, but both being used in the US market?

**Fujimoto [A]:** Yes, I believe both refrigerants will coexist.

**Isayama [Q]:** Will your company benefit from competitors using R-454B, which is costlier and poses challenges for distributors, possibly leading to price increases? Also, does transitioning to R32-compatible devices enhance your product value, potentially resulting in higher prices and an improved mix?

**Fujimoto [A]:** We have reflected price increases for new product launches and added value in the past, including with inverter-equipped and R32 models. We aim to enhance profitability by developing products in line with market environments and regulatory trends.

**Isayama [Q]:** Regarding India, I have some questions about pricing, which is something that caught my attention during your discussion with Mr. Mizuno. On page 26, there's a slide showing a sharp increase in unit sales towards the late 2020s. The current per capita purchasing power in India is about USD2,000 to USD3,000. What is the price range of your best-selling air conditioners there?

You mentioned earlier that high-mix products for the affluent class are selling well. Does this imply that sales are surging among the middle class or upper middle class, resulting in a higher market share? Or is it the general volume zone that's expanding, possibly due to the Make in India policy?

Which segment is driving this growth? Are you focusing on expanding sales in the volume zone to increase margins, or shifting towards high-value products? I would like to know the pricing and target segments for your best-selling products. Please tell us about the situation at Daikin rather than the industry in general.

**Uehara [A]:** Currently, the volume zone for room air conditioners in India is mainly three-star inverters, which are in the middle of the five-star rating system. However, the penetration rate in India is still around 7%, so the primary market is a bit below the affluent class rather than the middle class.

As the middle class expands, sales in this segment are expected to surge, growing from the current 5 million to 6 million units to 10 million units by 2025, and 20 million to 25 million units by 2030. Thus, sales are certain to grow in the middle class.

With energy efficiency regulations becoming stricter by 2025, higher-value products will be sold, but the profit margins on these are not very high currently. We hope to improve margins in the volume zone as prices increase.

In India, larger units are more common due to bigger room sizes, though they are priced lower compared to other regions, around USD300 for standard models and USD500 for higher-end models. Flagship models may

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reach around USD1,000. Despite the higher prices for larger units, this segment is a strength for Daikin, giving us a competitive advantage.

As I mentioned earlier, we are working on improving margins through high-value multi-products while maintaining a strong share in the volume zone, including the middle class, balancing market share and profitability in the Indian market. In this way, we aim to establish the dominant number one position in the Indian market.

**Isayama [Q]:** Regarding the 20 million households with air conditioners mentioned on page 26, what proportion of them would you classify as middle class and above or the affluent and above?

**Uehara [A]:** It's difficult to say. The middle class is often defined as those earning above USD3,000. I can't provide exact figures, but I believe the top 10% of the population might still be the primary target.

**Isayama [M]:** Thank you for the clear explanation.

**Monri [M]:** Thank you. Due to time constraints, we will take one last question.

**Asano [Q]:** Thank you for today. I am Asano from Tokio Marine Asset Management.

On page nine, you provided an overview of your CO2 reduction plan. Until now, the focus has been on reductions compared to the business-as-usual scenario, which inevitably leads to an absolute increase in emissions. However, from 2030 to 2050, the graph seems to indicate a phase where absolute emissions will actually decrease, which I believe will be the most challenging period. You've mentioned initiatives involving inverters, heat pumps, and refrigerants, as well as three or four new developments in technology.

I'm not sure if you can provide specific figures, but when it comes to reducing absolute emissions from 2030 to 2050, which areas do you think will contribute the most?

**Fujimoto [A]:** Thank you for your question.

While we don't yet have a concrete outlook for the period from 2030 to 2050, we anticipate that heat pumps will play an increasingly significant role. This is because inverters are already widely adopted. Additionally, for commercial and building multi-use systems, the adoption of R32 refrigerant is expected to have a substantial impact, but the most significant contribution might come from heat pumps.

Moreover, a greater impact is expected from the advancement of renewable energy. We foresee considerable emissions reduction due to the proliferation of energy-efficient buildings and renewable energy, so there is a sense of anticipation for rapid progress in these areas.

Simultaneously, the contribution to emissions reduction is now being increasingly recognized. It was challenging to discuss this in the past, but now it's becoming more openly acknowledged, indicating that the expansion of the air conditioning market will lead to increased contributions to emissions reduction. Thus, we are focusing on further enhancing our contributions.

**Koyama [A]:** To add to that, we have already committed to achieving zero emissions in our mechanical factories by 2030 in the FUSION 25 latter half plan. Post-2030, the challenge will be CO2 emissions from our chemical plants, which fall under Scopes 1 and 2, while over 90% of our emissions are Scope 3.

Regarding the contribution to emissions reduction, we are actively participating in the rule-making process, engaging in discussions with the Japanese government and GFANZ. We are currently involved in various dialogues and negotiations.

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On the other hand, concerning the GHG Protocol's Scope 3, particularly the CO2 emissions calculated from the electricity consumption of sold products, often referred to as downstream Scope 3, there's a broad discussion within the international industry about whether manufacturers can genuinely claim to be neutral or zero by 2050. This leads to the question of whether the GHG Protocol itself might be revised or whether we need to innovate in how these emissions are disclosed. This understanding is shared not only by us but also by other global manufacturers.

Therefore, while we are naturally working on reducing our numbers, the rules for how these emissions are calculated and disclosed are still evolving. There's talk of significant revisions to the GHG Protocol starting this year, and we are keenly interested in these developments and plan to actively engage in them.

**Asano [Q]:** One more point, not directly related to today's main topic, but concerning CO2 emissions and the use of refrigerants by your company, the launch of TNFD is significant for biodiversity and ecosystem conservation. Global warming, gases, and chemicals have a substantial impact, especially when considered in a life cycle assessment.

I believe you will be addressing TNFD-related issues, but I am curious about your company's primary concerns regarding biodiversity impacts. Are you focusing more on the impacts of CO2, or are other aspects like gases or plastics more critical? Currently, I am curious about the direction in which you are heading. It might not be appropriate to ask for a ranking of priorities, but if there is any information you can share in advance, I would appreciate it.

**Fujimoto [A]:** We are certainly very concerned about TNFD and believe that CO2 reduction is crucial for biodiversity. Our approach involves aligning our actions with this belief. When it comes to TNFD, it necessitates an analysis of the relationship between our business and biodiversity. However, unlike food manufacturers, our business is not significantly impacted in this area. Therefore, our biodiversity policy includes global forest conservation and creating green spaces and biotopes at our various locations.

We haven't finalized our specific approach towards TNFD for external disclosure yet. We intend to continue our deliberations on this matter.

**Asano [M]:** Thank you very much.

**Monri [M]:** Thank you. This concludes our Q&A session.

A final note from the secretariat: we will be sending a survey via email shortly. We appreciate your cooperation.

With this, we conclude today's sustainability briefing. Thank you all for your participation and valuable time.

[END]

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