

CASE STUDY

A-Gas and Partners Support Singapore to Reduce Hydrofluorocarbon Emissions in the Refrigeration and Air-Conditioning Sector



BACKGROUND

About the National Environment Agency

The National Environment Agency (NEA) is the leading public organisation responsible for ensuring a clean and sustainable environment for Singapore. Its key roles are to improve and sustain a clean environment, promote sustainability and resource efficiency, maintain high public health standards, provide timely and reliable meteorological information, and encourage a vibrant hawker culture. NEA works closely with its partners and the community to develop and spearhead environmental and public health initiatives and programmes. It is committed to motivating every individual to care for the environment as a way of life, in order to build a liveable and sustainable Singapore for present and future generations.

About Temasek Polytechnic- Integrative Built Environment Centre

Situated in TP School of Engineering, the Integrative Built Environment Centre (IBEC) was conceptualised to support the Singapore Green Plan and the BuildSG movement. It aims to advance Singapore's push for sustainable development and transform the built environment sector by providing training in the latest technologies. Recognised by the Singapore International Facility Management Association as a key training and research centre for the sector, the 140-square-metre centre enables students to explore smart and sustainable facility management and be future-ready.

About A-Gas

A-Gas is the world leader in the supply and lifecycle management of refrigerants and associated products and services. Through our first-class recovery, reclamation, and repurposing processes, we capture refrigerants and fire protection gases for future re-use or safe destruction, preventing their harmful release into the atmosphere.

For almost 30 years, A-Gas has supported our clients and partners on their environmental journey by supplying lower global warming gases and actively increasing the circularity of the industries we serve, building a more sustainable future.

GOALS

HFCs are commonly used as refrigerants in Refrigeration and Air Conditioning (RAC) equipment. If released into the atmosphere, these high global warming gases contribute to climate change. This project aims to improve the competency of those working in the RAC Sector in handling such refrigerants and to reduce their potential release into the atmosphere during the installation, maintenance, and decommissioning of RAC equipment.

AT A GLANCE

Challenges

- A targeted training course was required to help technicians meet the requirements of the recent Environmental Protection and Management (Amendment) Act.
- To create a focus on minimising refrigerant leakage thereby reducing greenhouse gas emissions.

Benefits

- Teaching consistent best practice to mitigate HFC emissions in Singapore through efficient refrigerant lifecycle management.

SOLUTION

To equip chiller technicians in Singapore with essential knowledge and skills to handle refrigerants correctly during chiller installation, maintenance and decommissioning works, the NEA for Singapore and Temasek Polytechnic, a training institution in Singapore, launched a certification course on chiller refrigerant handling with the support of A-Gas Singapore Pte Ltd (formerly known as VEMAC Services Pte Ltd).

The course supports the Environmental Protection and Management (Amendment) Act (EPMA) that was passed in Parliament on 13 September 2021 to mandate measures to reduce the impact of HFC refrigerants that are used in selected RAC applications. The certification course covers both theory and practical hands-on lessons on refrigerant handling during the installation, maintenance, and decommissioning of water-cooled chillers, with a focus on minimising refrigerant leakage to prevent unnecessary release and damage to the atmosphere.



As a joint trainer of the course, A-Gas contributed by sharing its technical expertise on refrigerant handling. The team provided the necessary refrigerant recovery equipment for the practical hands-on lessons, including the installation of a decommissioned chiller at the training centre for refrigerant recovery demonstration purposes. This contribution has resulted in the delivery of a successful course designed specifically with the environment in mind.



"Adding this opportunity to our training portfolio demonstrates our dedication to protecting our environment. It has been great to align with A-Gas and recognise ways in which we can reduce climate risk. Working with A-Gas to design and deliver this course has been a pleasure and we look forward to working with them in the future."

MR EFREN L. BALAJADIA

Head Integrative Built Environment Centre &
Course Chairman of Diploma in Clean Energy

RESULTS

The A-Gas Singapore team demonstrated their "Together We Can" attitude by consolidating contributions from operations, fabrications, and marketing teams to customise this first-ever external training collaboration.

The Chiller Refrigerant Handling course was successfully launched on 13th Sep 2021.

CONCLUSION

This course is an important effort to enhance the competency of chiller technicians in Singapore through instilling best practices in refrigerant handling, thereby preventing HFC refrigerants being leaked to the atmosphere.

Providing this training collaboration is just one of the advantages A-Gas brings to Singapore. Our market-leading recovery and reclamation services, combined with our portfolio of lower GWP refrigerants enables A-Gas to support its customers, partners and the wider economy on its environmental journey.

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This partnership has helped Singapore reduce emissions from refrigerants.