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Recognition Of Prior Learning Scheme for Refrigeration and Air-Conditioning Servicing Technicians in Mongolia

Mongolia is a low volume consuming country of Hydrochlorofluorocarbons (HCFCs) and Hydrofluorocarbons (HFCs) which are controlled substances under the Montreal Protocol, and the consumption is only in the Refrigeration and Air-Conditioning (RAC) servicing sector. Therefore, the RAC servicing sector plays a major role in the implementation of Montreal Protocol in Mongolia, and the workforce must be skilled and well-trained.

Credit: National Ozone Authority of Mongolia

TVET for RAC Servicing Technicians

In Mongolia, trade needs for servicing technicians started in 1946 and the training of technicians began in 1959 with the first enrolment course on catering technology at the Commercial Technical College.

Mongolia has a Technical Vocational Education and Training (TVET) system, and its profession for the Refrigeration Equipment Technician (Industrial) was first introduced in 1983 in the Institute of Technology (formerly known as the Vocational Institute of Food Technology) with courses in RAC. The comprehensive components of Good Servicing Practices (GSP) were integrated in the courses in 2001 aiming to reduce the consumption and emissions of Ozone Depleting Substances (ODS) in refrigerants. By 2011, Mongolia had successfully established a recognized qualification system in the RAC servicing sector.

Good Servicing Practices Training

In 2012, the “Master Skills” Training Center was established by the Mongolian Refrigeration Association (MRA), supported by the National Ozone Authority (NOA) with assistance from the UNEP OzonAction Compliance Assistance Programme (CAP).

As part of the implementation of the HCFC Phase-out Management Plan (HPMP) in Mongolia, the Center provides short-term vocational training for existing RAC technicians in the market, assisting them to upgrade their skills on GSP. The remaining area of implementation is to fully integrate the GSP with the formal TVET training programme in order to ensure that currently certified servicing technicians receive adequate GSP skills and knowledge in a sustainable manner.

Mandating the Use of Certified Servicing Technicians Creates the Need for Certification

In 2018, the “*Regulation for licensing the import, sale and use of ODSs and other substitutes and equipment containing them*” was revised through Government Resolution #277 and entered into force from 1 January 2019. As per the revised Regulation, entities providing RAC servicing using ODS and alternatives are mandatorily required to employ only certified servicing technicians upon issuing the license.

Previously in the absence of a recognized qualification system in the RAC servicing sector, a large number of existing technicians faced disadvantages in getting decent jobs and accessing further career development, despite having the required knowledge and skills. Therefore, it is essential to develop the mechanism of Recognition of Prior Learning (RPL) for those RAC technicians.

Credit: National Ozone Authority of Mongolia

Recognition of Prior Learning (RPL)

The RPL process can help those in the industry acquire a formal qualification that matches their knowledge and skills, and thereby contributes to improving their employability, mobility, and lifelong learning. RPL can make a significant contribution to providing the relevant learning framework necessary for the present and ongoing maintenance of a quality workforce, especially in the RAC servicing sector. In Mongolia, the RPL process has been rolled out in over 30 TVET trades in the construction, mining, and other sectors, including apparel and culinary etc. Mongolia initiated the RPL scheme for RAC servicing technicians as part of their implementation of the HPMP in cooperation with various national stakeholders.

RPL Legal Basis

In 2017, a Directorial Order of the TVET Assessment, Information and Methodology Centre (AIMC) issued a regulation on assessment and validation of the vocational education and training school graduates and qualification level of individuals/vocational employees. This regulation is the legal basis for RPL implementation in Mongolia. Based on this regulation, to conduct assessment validation, national assessors need to be trained and certified, and the evaluation conducted as per the National Occupational Standard (NOS) and Training Standard (competency standard) of the occupation.

RPL Assessor

Between 2018-2020, Vocational Education and Training Assessment Center (VETAC) organized training and certification for 13 engineers, technicians, and trainers from the Room Air-Conditioning (Room AC) and Refrigeration servicing sector that became certified to conduct assessment verification.

A qualification assessment team was established to develop an assessment plan on RPL for servicing technicians based on Mongolia's recognized training curricula. This team includes TVET, AIMC, MRA, and the 13 certified assessors.

RPL Technical Basis

In Mongolia, the qualification assessment team developed a list of skills required in the workplace, based on the standard of ''MNS EN 13313:2017 Refrigerating systems and Heat pumps - Competence of Personnel'', which was adopted as the first national standard in the RAC servicing sector, as part of HPMP activities. This is a temporary solution until the NOS and Training Standard for RAC servicing technicians are approved and it serves as the foundation for their development..

RPL Pilot Scheme

The pilot RPL scheme first targets the Room AC servicing technicians. An assessment plan for levels II, III, and IV was developed based on the ''MNS EN 13313:2017 Refrigerating systems and Heat pumps - Competence of Personnel'' standard for piloting purposes. Once the pilot proves successful, the NOS assessment plan can be considered for official inclusion into the TVET and National Qualification System.

Under this pilot scheme, technicians with informal education/training could be certificated and qualified for NOA requirements under Government Resolution #277. The RPL certificate training course for RAC lasts between 7-14 days and is provided by the Institute of Technology.

Credit: National Ozone Authority of Mongolia

Who Can Apply for RAC RPL Assessment?

- The RAC RPL assessment is open to individuals or employers to apply.
- Individuals who have acquired skills through informal learning and wish to get certified or upgrade levels in their workplace.
- Vocational education training students who completed formal and informal training and wish to upgrade their qualifications and competency level.
- Individuals trained in common technical skills from another sector such as gas welding, equipment assembling, and installation can switch to be RAC servicing sector technicians.
- University graduates who acquired formal education are also working as RAC technicians.

RAC RPL Pilot Achievements

- In 2019, 31 RAC servicing technicians without any formal qualifications applied for an RPL assessment and received certificates for levels II, III, and IV levels.
- In 2020, an additional 32 RAC servicing technicians were certified.
- In total, between 2019-2020 RPL assessments were conducted four times and 63 RAC servicing technicians were certified with competency certificates in levels II, III and IV.

Further Development Plan of RAC RPL

Along with the implementation of HPMP Stage II, the RAC RPL programme will be further strengthened and/or expanded in the following areas:

- Establish a Professional Council jointly by NOA, MRA, TVET institutes, inspection agency/energy department of the Government to ensure the integration of GSP into RAC RPL schemes and assist VETAC in finalizing the curriculum for the RAC sector.
- Build the capacity of VETAC assessors for conducting RAC RPL certification assessment and teachers of TVET training institutes for delivering training courses on the GSP related components.
- Expand the RAC RPL certification scheme to include commercial and industrial refrigeration sectors in addition to the Room AC sector that is already covered under HPMP Stage I.
- Jointly conduct the RAC RPL certification in collaboration with MRA and TVET Assessment Center.

With Mongolia’s experience, the best way to strengthen the certification system for RAC servicing technicians at the national level is to integrate GSP into the applicable legal documents in line with the relevant national laws, regulations, standards, and training curriculums. Additionally, relevant national occupational standards, competency-based training curriculum and assessment plans should be reviewed/updated to integrate GSP components at the national level.

Challlenges and Recommendations

- Develop an occupational standard for RAC servicing technicians by the RAC Professional Councils and Professional Associations
- Approve the developed occupational standardfor RAC servicing technicians by the National Employment Council.
- Develop nationally recognized training standardsand curricula for the RAC servicing sector.
- Strengthen the capacity of the assessors and qualification decision makers.
- Establish a test question bank for TVET AIMC to ease the development of the assessment plan.
- Set up the facilities for conducting assessments inaccordance with nationally recognized training standardsand curricula.
- Promote the RAC RPL's objectives, process, benefits through outreach.

Quick Summary: RAC Recognition of Prior Learning (RPL) of Mongolia

Recognition of Prior Learning (RPL) is a process used by regulatory bodies that assesses knowledge and/or skills acquired informal learning to determine meeting the competencies required by specific standard or code.

LEGAL INSTRUMENTS THAT PROVIDE AUTHORITY FOR RAC RPL

A new revision of the "Regulation for Licensing the Import, Sale, and Use of ODSs and Other Substitutes and Equipment Containing Them" through Mongolia's National Resolution #277

Regulation of Assessment and Validation of TVET & Qualification of Vocational Employees issued by the Director Order of the TVET Assessment, Information and Methodology Centre

RPL SCHEME FOR RAC SERVICING TECHNICIANS

RPL Assessors	• 13 engineers, technicians, and trainers from the Room Air-Conditioning (AC) servicing sector became certified to conduct assessment verification. • A qualification assessment team was established to develop an assessment plan on RPL for servicing technicians. This team includes TVET, AIMC, MRA, and the 13 certified assessors.
RPL Pilot Scheme	• The pilot RPL scheme first targets the Room AC servicing technicians. • Once the pilot proves successful, the assessment plan can be considered for official inclusion into the TVET and National Qualification System. • Technicians with informal education/training could be certified and qualified.
Who can apply?	• The RPL assessment is open for individuals who acquired skills informally, vocational education training students/university graduates who wish to upgrade their qualifications, and/or competency level in RAC servicing sector, and employers.
Training	• The RPL certificate training course for RAC lasts between 7-14 days and is provided by the Institute of Technology.
Certification	• Successful applicants for an assessment will be given the qualification certificate for levels II, III, and IV levels.
RPL Pilot Achievement	• In total, between 2019-2020 RPL assessments were conducted four times and 63 RAC servicing technicians were certified with competency certificates in levels II, III and IV.

FUTURE DEVELOPMENT PLAN

Mongolia's RAC RPL scheme will be further strengthened and/or expanded in the following areas along with the implementation of HPMP Stage II by taking into account an integration of Good Servicing Practices (GSP) into national systems.

Establish a committee to ensure the integration of GSP and assist VETAC in finalizing the curriculum for the RAC sector.

Expand RPL certification scheme to include commercial and industrial refrigeration sectors.

Jointly conduct the RPL certification in collaboration with MRA and TVET Assessment Center.

Build the capacity of VETAC assessors for RPL certification assessment through courses on the GSP related components.

Develop and enhance the Occupational Standard for RAC Servicing Technicians to be approved by the appropriate Ministry.

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