SERVICING INDUSTRY IN AFRICA AND IN OTHER DEVELOPING COUNTRIES

Tuesday, 5 November 2019 | 18:00 - 20:00 | Iran room
19 pieces of cooling equipment added per second for next 30 years.

Energy consumption grows to 9,500 TWh by 2050.

Exceeds IEA’s implied “energy budget” for cooling in its 2°C Scenario by more than 50%.

Projected that 80% of the RAC market will be located in developing countries by 2030.
THE GAMBIA: ‘SUPER TECHNICIANS’ TRAINING AND INSTALLATION OF 200 ENERGY-EFFICIENT R290 ACs

Ms Franziska Menten
Project Coordinator
UNIDO
Promote the demonstration, deployment, and transfer of innovative low-carbon technologies to increase energy efficiency of AC/refrigeration systems, while minimizing the discharge of chemicals damaging to the ozone layer.

Combination of technical assistance on policy and regulation, technology transfer, capacity building and awareness-raising.

200 new technology units (R290 Split AC systems) and upgrade of 2 industrial refrigeration facilities.

20 public and private local organizations benefitting from this, ensure a good basis for the intended behavioural change.
<table>
<thead>
<tr>
<th>Region</th>
<th>West Africa</th>
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<tr>
<td>Country</td>
<td>The Gambia</td>
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<tr>
<td>Technology Types</td>
<td>R290 split room air conditioners &amp; Energy optimization in existing industrial refrigeration system</td>
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<td>Sector Type</td>
<td>RAC &amp; industrial refrigeration</td>
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<tr>
<td>Results</td>
<td>EE improvements of 15-20% and installation of 200 units in hospitals, schools and private sector completed</td>
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<tr>
<td>Project Amount</td>
<td>$495,000</td>
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<td>Donor</td>
<td>GEF</td>
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The most important for the success of the project...
6 steps to efficient cooling:

1. Choice of refrigerant (can typically influence efficiency by 5-10%)
2. Equipment design and selection of components
3. Proper installation (e.g. practices, location)
4. Proper and regular maintenance operations (charge, cleaning of coil and filters)
5. Reducing cooling load
6. Efficient building/construction models
Some best practice examples:

- Train-the-Trainers schemes to establish a cascading system of highest qualified senior technicians to train medium and junior level staff
- Smartphone applications for technicians for on-site handling of flammable, toxic refrigerants
- Technology exhibitions and pilot conversions: use policy and technology capacity for a faster adoption of alternative refrigerant technology in real-life applications
- Study tours to neighbouring countries, case study sites, training institutes and exhibitions in other countries
- E-learning courses in national language, such as “REAL Alternatives” scheme in 13 working languages (EU-funded project with open access)
- “Refrigerants Driver’s License”: globally recognized minimum qualification scheme for sound refrigerant management
- Technology exhibitions and pilot conversions: use policy and technology capacity for a faster adoption of alternative refrigerant technology in real-life applications
- Universal RAC training kit with pre- and post-assessment of training and checklists, minimum teacher qualification and equipment, venue requirements for theoretical and practical training, text books, manuals, etc.
- “Refrigerant Literacy Course”: for non-technical people, such as NOUs, energy efficiency or climate change-related personnel to interact with technical staff
- Use of labels with pictograms on RAC equipment and cylinders to involve illiterate technicians
Thank you!

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