

Business Opportunities
in the Oil and Gas Industry
In-Country Value
Sultanate of Oman



الفرص الاستثمارية في
قطاع النفط والغاز
القيمة المحلية المضافة
سلطنة عمان



Development of HVAC Industry

Location: Oil & Gas Exhibition Centre near to PDO Gate 2

Room: Fahud Theater Hall.

Date: 05 September 2016

Presented by:



PDO





Safety briefing



Emergency contacts

Tel: 2467 5555

Emergency alarm / fire drills

Guests should go to the nearest assembly point once you hear the fire alarm. Assembly point is located near Parking Area.

Prayer rooms

At the Mosque – Al-Kawther.

Toilets

Behind the Theater.

Coffee / tea

At the Coffee Area.

Arrangements for smokers

Outside the building.



Meeting agenda



1. Purpose of this workshop.
2. Context and background.
3. Types of AC units.
4. Classification of AC units.
5. Scope of the opportunity.
6. Market characteristics
7. Industry data.
8. ICV creation through the opportunity.
9. Specifications.



Purpose of this workshop



Purpose of the workshop

1. To share the scope of one of the priority opportunities with the business community.
2. To register interest of the business community.
3. To set an initial dialogue between the oil and gas industry and business community.
4. To exchange ICV development best practices.
5. This workshop is NOT an contractual commitment with any business entity.

Next steps

1. Business community to register interest by reaching the presenter or through Daleeli at the following link: <https://apps.pdo.co.om/vcu/external/>

More information on the ICV blueprint or on other opportunities could be found in the brochure and catalogue distributed today or by visiting www.incountryvalueoman.net



Context and background



It has been observed that lack of local Contractors for Heating Ventilation Air Conditioning (HVAC) System have affected operators in Oman in following ways:

1. CAPEX costs are higher (than other operators in the region).
2. Lead-times for delivery of the equipments are longer.
3. Lead-times for delivery of the few of the critical spare services are longer.



Various types of AC equipment



Window Air Conditioner



Split Air Conditioner



Various types of AC equipment



Packaged Rooftop Units



Air Handling Unit



Various types of AC equipment



Air Cooled Condensing Unit



Variable Refrigerant Flow (VRF)





Various types of AC equipment



Air Cooled Chiller

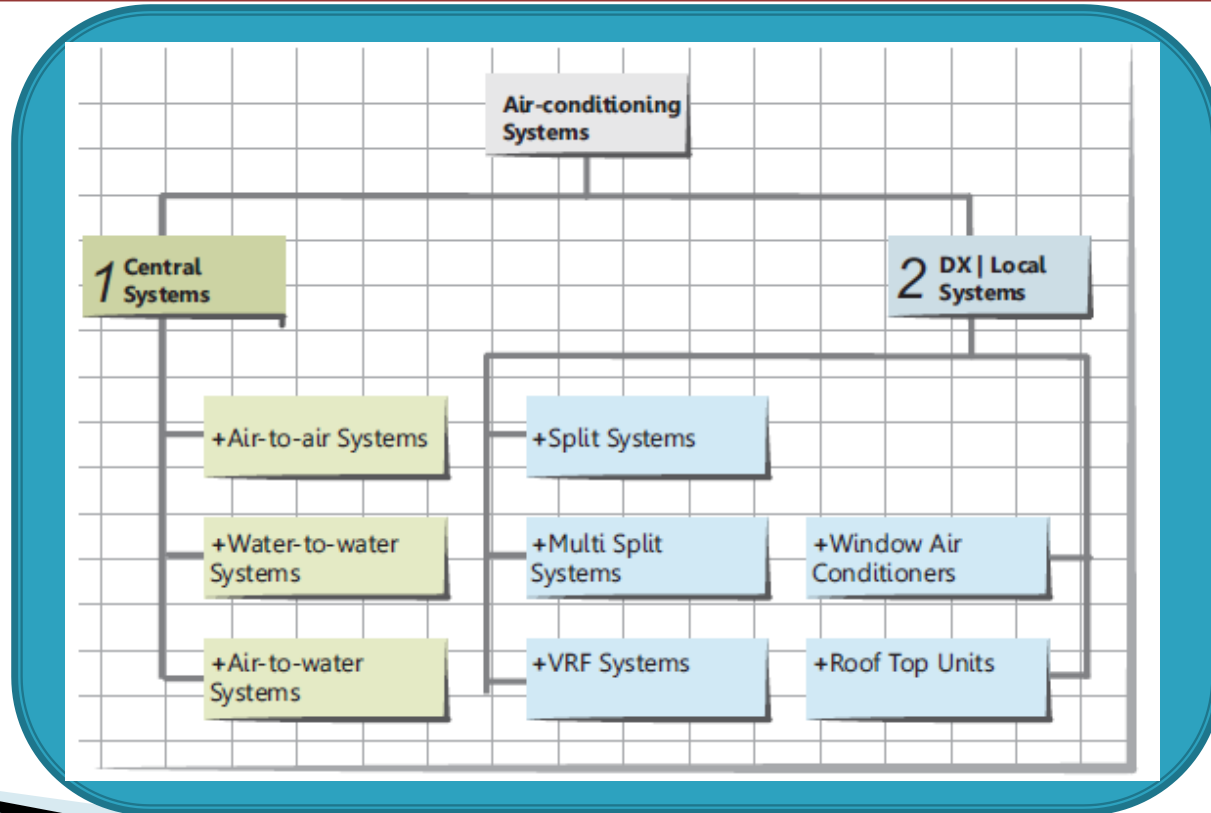


Water Cooled Chiller





Classification of HVAC system





Classification of HVAC system



HVAC systems used in our application are as below, which are in ascending order in comparison to the capacity of the units:

Sl. No.	Types of HVAC System	Used for	Capacity (TR)
1	Window Air Conditioners	Temporary Installation, Guard House	0.75 - 2.5
2	Split Air Conditioners		
a.	Non-Ductable units	Residential, Small offices, Temporary Installation, Guard House	1.0 - 3.0
b.	Ductable Units	-do-	1.5 - 8.0
3	Package Air Conditioners	-do- but with less requirement of fresh air	5.0 - 30.0
4	Variable Refrigerant Volume (VRV)	Offices, Residential	5.0 - 50.0
5	Closed Control Units(CCU)	Server rooms	5.0 - 30.0
6	Air Handling Units	Comparatively large offices, Substations, Control building, Auxillary rooms, Medical facilities, Recreation clubs	5.0 - 200.00
7	Condensers	To suit Air handling units of DX type	5.0 - 150.00
8	Chillers	For large Installation	50.0 - 500(air cooled); upto 30000 in case of water cooled



Scope of the opportunity



- ▶ Set up manufacturing unit for HVAC equipment.
- ▶ Set up manufacturing unit for ancillary items related to HVAC like Grilles, Diffusers, Dampers, Filters, etc.
- ▶ Set up regional specialized service hubs.
- ▶ Developing, training and employing Omani nationals.
- ▶ Set up R&D unit / testing facilities.



Market characteristics



Based on the evaluation of current HVAC market, following market trends are observed:

- All the HVAC equipment is been imported to Oman.
- The market share of window air conditioners is shrinking and this trend is expected to continue.
- Ductless split systems dominate the small commercial and residential market segment and their market forecast to grow over the next few years.
- The demand of these units are very much high for Residential & Commercial Establishments compared to oil & gas industry.



Market characteristics



- Sale of VRF/VRV systems have grown by over 30% in value and total cooling capacity sold. The growth rates in market volume is higher.
- AHUs (Air Handling Units) are being increasingly used in HVAC systems.
- Presently maintenance company are limited to few numbers, having expert knowledge on the HVAC equipments and products.
- Above company's are focused on MEP maintenance rather concentrating and establishing with technical experts in HVAC industry.



Industry data



EXTERNALIZED
SPEND

114-127 M

POTENTIAL ICV

28-32M

IMPACT ON HR

316-350

FEASIBILITY

Medium



ICV creation through the opportunity



▶ Expected to increase ICV by:

Potential job creation related to the opportunity

Direct and Indirect

316 – 350

Potential ICV related to the opportunity*

Local services

75%

Feasibility of implementation

Medium

Impact

- Application across Residential & Commercial Establishment.
- Development of Specialized Service providers.
- The development of above sector can push business of spare parts such as mechanical seals and filters.
- Maintenance hubs will require semi-skilled and technical professionals.

Feasibility

- High demand across different sectors of economy is sufficient to attract international suppliers.
- Exportability to the region can be explored.
- Technology is diffused and can be developed, other option is to attract global brands to set hub for region.



Specifications



- Operator Specifications
- Original Equipment Manufacturer (OEM) Specifications
- International Standards & Codes
- American Society of Heating, Refrigeration and Air-conditioning Engineers (ASHRAE)
- Chartered Institution of Building Services Engineers (CIBSE)
- British Standards (BS)
- Sheet Metal and Air Conditioning Contractors National Association (SMACNA)
- Duct Work (DW)
- Air Conditioning, Heating and Refrigeration Institute (AHRI)
- American Society of the International Association for Testing and Materials (ASTM)



Materials and follow-up

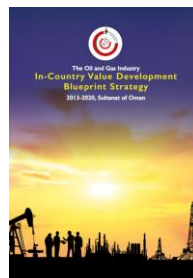


For more information:



Website

For follow-up:



Brochure



Catalogue of opportunities

Register interest at: <https://apps.pdo.co.om/vcu/external/>

For technical clarification:

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