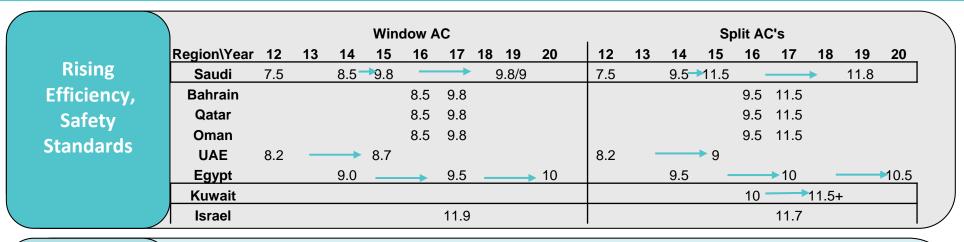


# MEPS Regulations And Refrigerant Update

## MEA Residential AC Market Dynamics/ Key Trends



Saudi Arabia - R22 to continue in Window AC till Dec 2017 - No R22 for Split AC's. OEM's selling R410A since Jan 2015. - Requesting details on R32 Product line Bahrain/Qatar/Oman - No official stand on R22 slowdown - OEM's selling R22 & R410A systems Changing United Arab Emirates - No Mention Of R22 Phase Down/Ban.. OEMs selling systems With R22 & R410A Refrigerant - Alternate Refrigerant (PRAHA): OEMs Tested Prototypes With L20/R32/DR3. Planning Phase 2 Landscape Egypt - UNEP alternate refrigerant project underway with EMR samples. Kuwait - R22 to continue till 2020 - R410A Israel

Engaging with Regulators & OEMs To Plan For Future Transitions. "GSO" Offers The Promise of Unified GCC Effy. Standards

# SASO 2663 MEPS: Update

SASO 2663 Today			Nov 6 <sup>th</sup> Meeting Proposal			Nov 22 <sup>nd</sup> Meeting Proposal			15 <sup>th</sup> Dec Meeting Proposal					
AC Type	Sys Cap KBtu	MEPS(EER)		Sys Cap	MEPS		Stage I: 1 <sup>st</sup> July 2017		Stage II : Date TBD		Stage I: 1 <sup>st</sup> July 2017??		Stage II : XX/XX/20XX	
		T1	T3	KBtu	T1	T3	T1	T3	<b>T1</b>	Т3	T1	T3	T1	Т3
	≤ 18K	9.8	7.06	-244	0.0	7.00	0.70	6.00	0.00	C 00*	0.70	6.00	2.22	C 00*
Window	> 18K & ≤ 24K	9.7	6.98	<u>&lt;</u> 24K	9.8	7.06	9.70	6.90	9.80	6.90*	9.70	6.90	9.80	6.90*
	> 24K & <70K	8.5	6.12	> 24K & <u>&lt;</u> 65K	8.5	6.12	8.50	6.10	9.80	6.90*	8.50	6.10	9.0	6.20*
Splits	<70K	11.5	8.28	<65K	12.1	8.70	11.50	8.30	12.10	8.30*	11.50	8.30	11.80	8.30*

### 15<sup>th</sup> Dec meeting discussion/outcome:

- Manufacturers raised a point on G Mark validity which is three years (starting July 2016). In case of any change in the information of a product, this will lead to a re-issuance of the Gmark, which will take at least 8 months.
- Manufacturers proposed that EER values will be 9.8 EER ( For Window AC type Category A), 9.0EER ( For Window AC type Category B) and 11.8 EER (for single splits) and to start the enforcement in 2020
- Discussion on SEER: Some manufactures proposed to introduce SEER. Conclusion is that SEER is premature and adapted methodology to KSA shall be used.

#### **Other Points:**

- R22 phase out for Window AC: No Discussion
- Next team meeting will be scheduled in 2017 : No date of meeting
- SEEP team will come up with an updated final draft

# Kuwait MEW Standards (MEW/R-6/2016)

### **New energy standards**

Table 7.1 Maximum Allowable Power Rating for Different Types of A/C Systems (kW/RT)

System Type	Capacity (RT)	PRCHIL	(PR <sub>T</sub> )
DX units <sup>(1)</sup>	All	270	1.50
Variable refrigerant flow (VRF), DX with inverter compressor (1)	All	•	1.40 @ 48 °C 1.10 @ 35 °C
Air-cooled chilled water system	All	1.60	2.00(2)
Water-cooled chilled water system, water cooled	<250	0.90	1.45(2)
DX system	250 - 500	0.75	1.30(2)
•	>500	0.70	1.25(2)

New power rating to be 1.5 Kw/ton as compared to 1.6Kw/ton today for DX units

### **Implementation Dates**

System Type	Capacity (RT)	$PR_{T}$ , $(kW/RT)$				
10.000000000000000000000000000000000000		1-10-2016	1-1-2019			
DX units	All	1.50	1.10			
Variable refrigerant flow (VRF), DX with inverter compressor	All	1.40 1.1 @ 35 °C	1.01 0.80 @ 35 °C			
Air-cooled chilled water system	All	2.00	1.44			
Water-cooled chilled	<250	1.45	1.05			
water system, water	250 - 500	1.30	0.94			
cooled DX system	>500	1.25	0.90			

ZPKU - MEA Project

<sup>\*</sup> Based on discussions with RISCO and other AC manufacturers first phase might get implemented beginning 2017.