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THE EUROPEAN COMMITTEE OF HVAC&R MANUFACTURERS



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SOĞUTMA
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DERNEĞİ

AIR CONDITIONING
& REFRIGERATION
MANUFACTURERS'
ASSOCIATION

Energy Efficiency in Central Asia: Turkey as a bridge between the EU and Central Asia

Business case reflecting experiences made by the European
Heating, Ventilation, Air Conditioning and Refrigeration
(HVAC&R) industry

Roadmap

- **Eurovent and ISKID**
- Market fundamentals and geopolitics
- Energy efficiency and workforce education
- EU initiatives and practical recommendations





- **‘Umbrella association’ representing European HVAC&R manufacturers**
 - 16 major national HVAC&R associations and
 - 8 Corresponding Members in countries without association
- **Members from 18 European countries**
 - From Italy in the South to Norway in the North
 - From Spain in the West to Russia and Turkey in the East

Our Members



Together, we represent

- **More than 1.000 companies throughout Europe**
 - From small and medium-sized to multinational global players
- **Which employ over 125.000 people**
 - Highly skilled labour that drives innovation, energy efficiency and reduces CO2 footprints across the globe
- **And, in 2013, generated a comb. turnover of around EUR 25bn**
 - Significant contributor to national public accounts

Truly European





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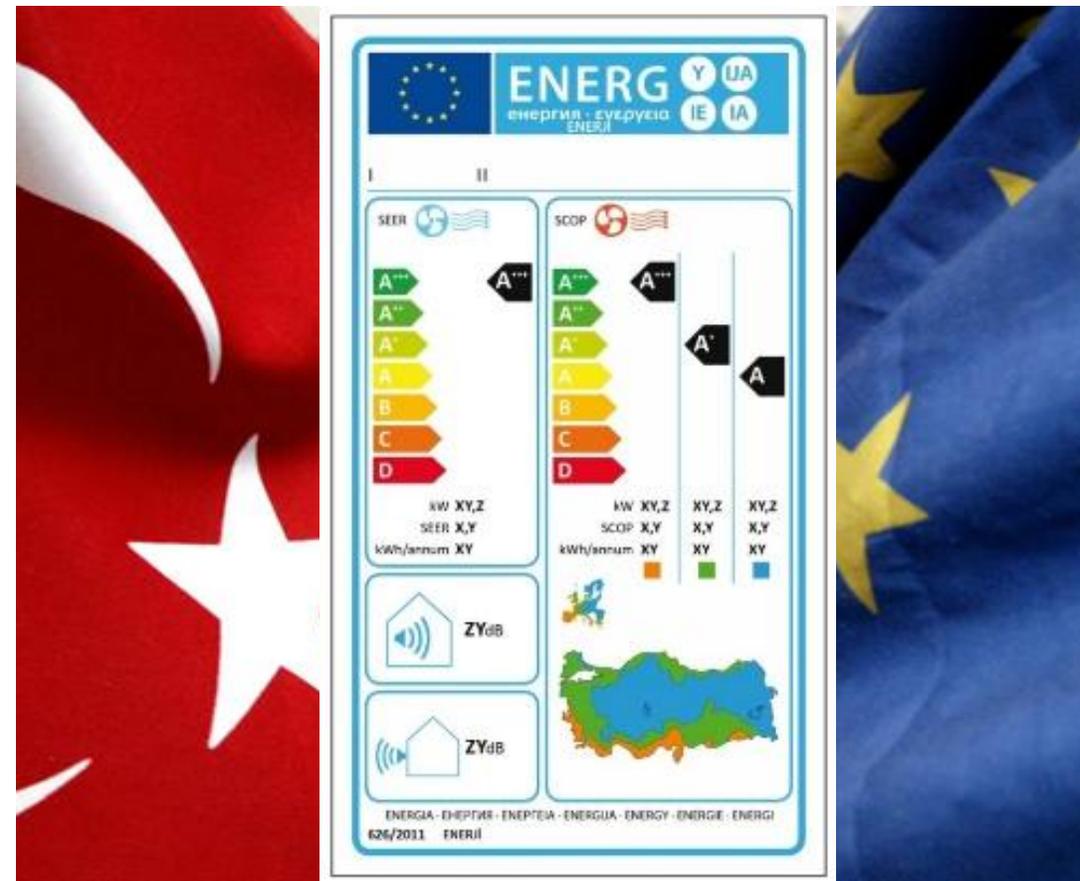
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- **Turkish representative of Air Conditioning and Refrigeration Manufacturers**
 - 97 members that represent around 90% of the Turkish market,
 - Members constitute manufacturers and/or importers of air conditioning and refrigeration equipment in Turkey.
- **ISK-SODEX (HVAC&R) exhibition in Istanbul**
- **Member of Eurovent since 2000**

ISKID supports Turkey's path to the EU

- ISKID accompanies the implementation of EU legislation and CEN standards in Turkey while actively participating in their developments
- Examples include:
 - Ecodesign requirements for air conditioners below 12 kW was published on 19 July 2013 in Turkey (same requirements as EU, into force as of 2014),
 - Energy Label of Air Conditioners Regulation was published on 24 December 2014
 - Energy Performance of Buildings directive published in 2008,
 - Support of the F-Gas Regulation.



Strong network in Central Asia



- Through national trade and investment partnerships supported by Eurovent member associations
- Strong regional presence of certain European manufacturers (e.g. CIAT, Baltimore Aircoil)
- Regional proximity of Eurovent members ISKID and APIC (Russia's representative of the HVAC&R industry)
- Presence at regional exhibitions and events, promoting sustainable and energy efficient solutions

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The HVAC&R sector

- Heating, ventilation, air-conditioning and refrigeration products are **omnipresent**
- Products provide for thermal comfort and indoor air quality
- Important in the design of medium to large industrial and office buildings, and housing
- European legislation (especially Ecodesign) changes market landscape and 'forces' the HVAC&R sector to adapt
- **Constitute a significant driver for energy efficiency and air quality improvements**



Central Asia: Market characteristics



- Culture:
 - Turkic languages (e.g. Kazakh, Kyrgyz),
 - Often Russian as lingua franca.
- Important regional differences concerning, for example
 - Economic power,
 - Level of development,
 - Political systems,
 - Climate conditions,
 - Regulatory frameworks,
 - Energy prices.

Central Asia: Market characteristics (cont.)

- Strong economic impact of Russia and Turkey in the region due to proximity and established trade patterns
- EU manufacturers often use these countries as regional hubs
- Turkish constructors became the second largest after China undergoing building projects in the region
- **EU energy efficiency measures and programmes have to take into account Turkey and Russia**
 - Which can transfer knowledge to Central Asia.



Central Asia: The emerging role of Turkey

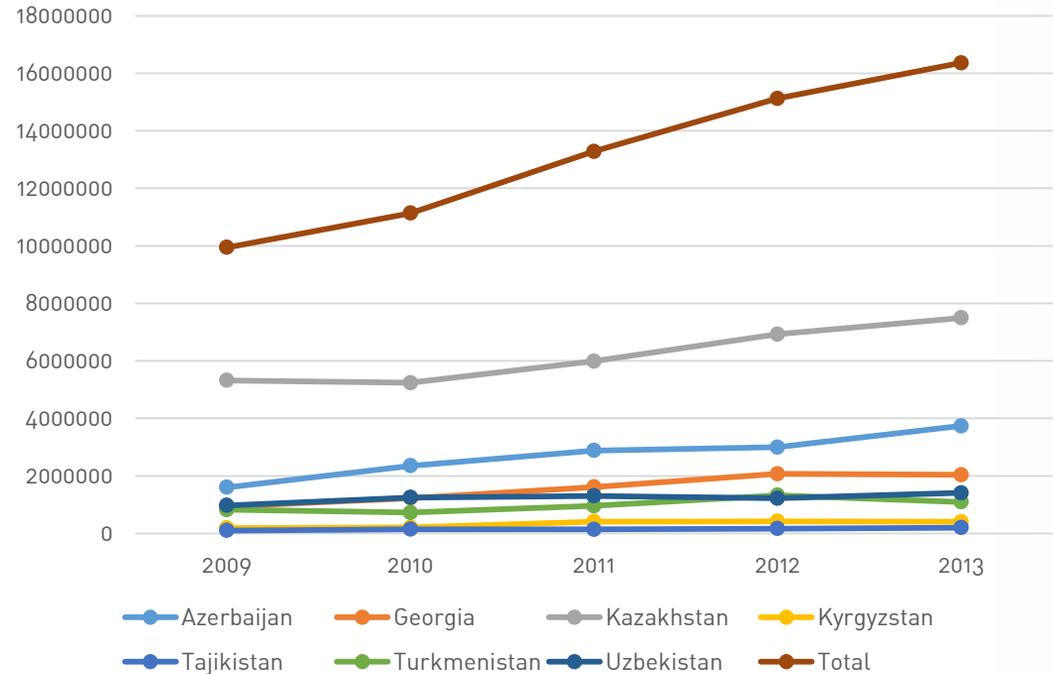
- Many Central Asian countries share a cultural, linguistic, historical and religious heritage with Turkey
- Turkish labour force often more adapted to work in Central Asia than EU workers
- Large investments in Central Asia such as power plants, hospital complexes, hotels or airports that require complex HVAC&R systems are being managed from Turkey
- **Turkey acts as an important bridge between the EU and Central Asia**
 - From a European industrial perspective, it increasingly takes over Russia's previous role,
 - Serves as main hub for flight connections to the region.

Statistics: EU and Turkey exports to Central Asia

From 2009-2013

- Eurostat data indicates steady increase of exports from both the EU and Turkey to Central Asia (Azerbaijan, Georgia, Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, Uzbekistan)
- Based on Eurovent Market Intelligence projections, similar situation applied to HVAC&R industry

EU28 exports to Central Asia



Statistics: EU and Turkey exports to Central Asia (cont.)

2014 projection

- Based on Eurovent Market Intelligence calculations, Turkish exports to the region are projected to increase while EU28 exports decrease
- EU industry reports significant decrease in sales to CIS countries
- Economic impact of Ukraine crisis and respective sanctions observable

Shift of emphasis



Geopolitics and its economic impact



- **Sanctions due to Ukraine crisis**
 - EU industry sceptical about sanctions,
 - Significant impact on EU industry although HVAC&R products are not subject to sanctions.
- Russia started to encourage non-EU imports (e.g. from China and Turkey, which do not apply sanctions) while increasing support for domestic producers (largely OEMs)
- China's 'New Silk Road' strategy
- **Economic impact of Turkey and other non-EU players on the region is on the rise**

HVAC&R applications in Central Asia: Two-cell water cooling tower in Uzbekistan

- 40000000 kcal/h capacity, under construction in 2014



HVAC&R applications in Central Asia: Refrigeration system in Kazakhstan

- Installation of cold rooms with modes from 0 to -25 degrees



HVAC&R applications in Central Asia: Chicken slaughterhouse in Azerbaijan



6 November 2014

Turkey as a bridge between the EU and Central Asia

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- **Energy efficiency and workforce education**
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Energy efficiency: Characteristics in Central Asia

Status Quo

- **'Energy efficiency' does not constitute an important criteria for many investors**
 - Especially in Central Asian countries with low energy prices.
- Market commonly values **cost-effectiveness and reliability of products** more than efficiency
 - Climate conditions,
 - Maintenance aspects,
 - Income level.
- Hardly any legislative requirements for minimum efficiency requirements of HVAC&R products
 - E.g. 'green economy model' in Kazakhstan.

Possible measures

- Raise awareness on advantages of 'energy efficient' solutions
 - Investment costs vs. long-term savings,
 - Impact on health and the environment,
 - Energy security.
- Support countries in developing their own legislative frameworks
- Demand minimum efficiency requirements as a requirement for EU funded/supported projects
 - Not neglecting reliability aspects and specific local requirements,
 - 'One size does not fit all'.

Energy Efficiency: Educational considerations

Status quo

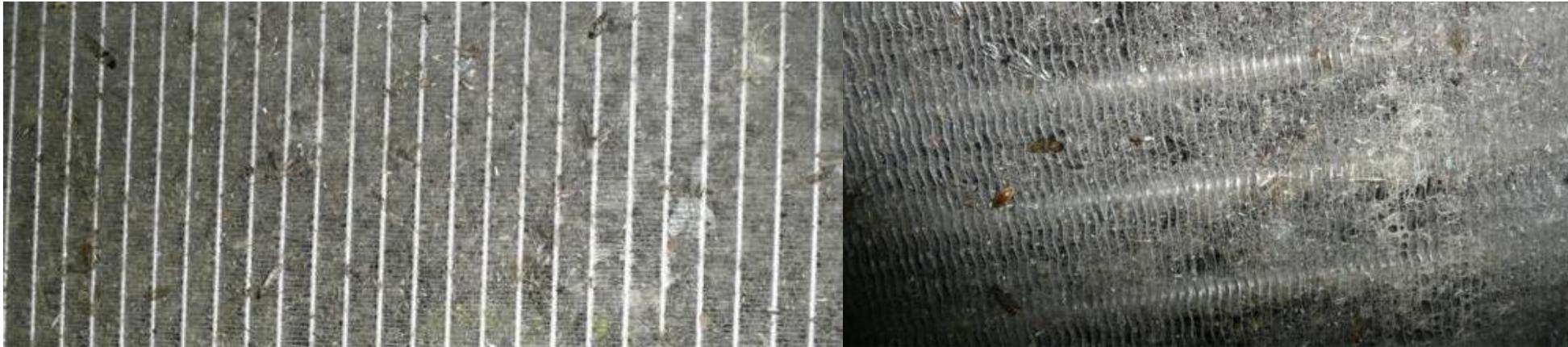
- Qualified and educated personnel available in comparatively small numbers
 - Skilled personnel largely educated during Soviet times reaching retirement age, **successors missing!**
- **Often insufficient knowledge on technical developments and possibilities**

Possible measures

- Raise awareness about technical professions
- Acknowledge the significant role of HVAC&R products when introducing energy efficiency programmes
- Encourage education partnerships and exchange programmes between the EU and Central Asian countries
- Support the development of e-learning programmes

Energy efficiency: Maintenance issues

- Maintenance is a key factor in order to ensure product reliability and sustainability
 - E.g. defrost, filter cleaning, dedusting.
- **Maintenance helps to realise energy efficiency potentials and a longer lifespan of HVAC&R products**



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EU initiatives: Room for improvement

Status quo

- EU (supported) measures include
 - Regional Energy Dialogue with Central Asia (since 1995),
 - Investment Facility for Central Asia (IFCA),
 - The Regional Environmental Centre for Central Asia (CAREC),
 - INOGATE,
 - Concept of Transition of the Republic of Tajikistan towards Sustainable Development for 2007-2030.
- **Many initiatives prove ineffective while often lacking sufficient support of Central Asian governments**

Possible measures

- Enhance existing initiatives within a wider regional strategy
- Coordinate public and private initiatives
 - Ease investment opportunities
- Increase simplicity of programmes and ensure effective monitoring

Recommendations:

Practical advice from the HVAC&R industry

- Energy efficiency and education go hand-in-hand
 - Measures will not work if people do not understand them
- Initiatives in Central Asia should involve Turkey and Russia as these countries constitute major 'bridges' to the region
- Support energy efficiency and sustainability initiatives of the industry
 - E.g. by offering or supporting seminars during major regional fairs
 - Eurovent/APIC 'Air Quality and Energy Efficiency Forum' (Road show)
- Enhance visa regime and travel opportunities
- Speed-up process for Turkey's EU membership
- Reconsider current sanction mechanisms



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