

The Industrial and Commercial Energy Market Needs

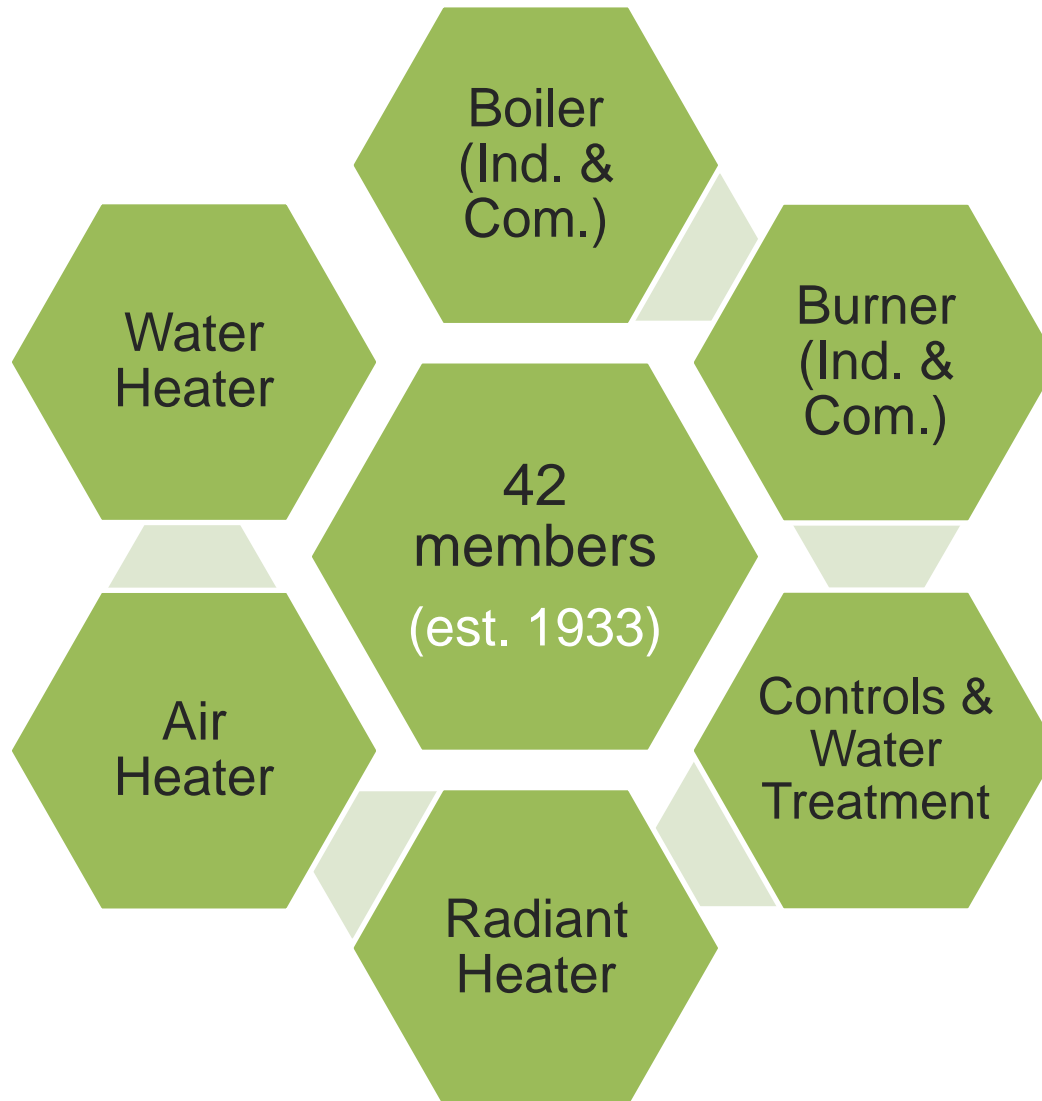
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Director

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What is ICOM?

Manufacturer's Trade Association



What does ICOM do?

Give the industry a single voice and strength in numbers



The Energy Market for Heating



Gas

**The
current
fuel of
choice**



Oil

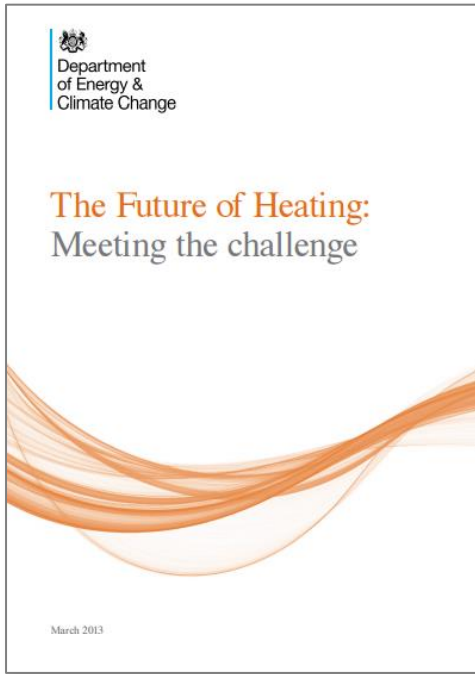
**What
role will
oil play
after
2020?**



Electricity

**Green
electricity
2050?**

What are the proposals?



- No gas from 2030
- Heat Pumps – only option for 2050



- Developing 'Heating & Cooling Strategy'
 - Rural areas – Heat Pumps
 - Urban areas – Heat network

Heat Pumps?

Industrial & Commercial heating requires:

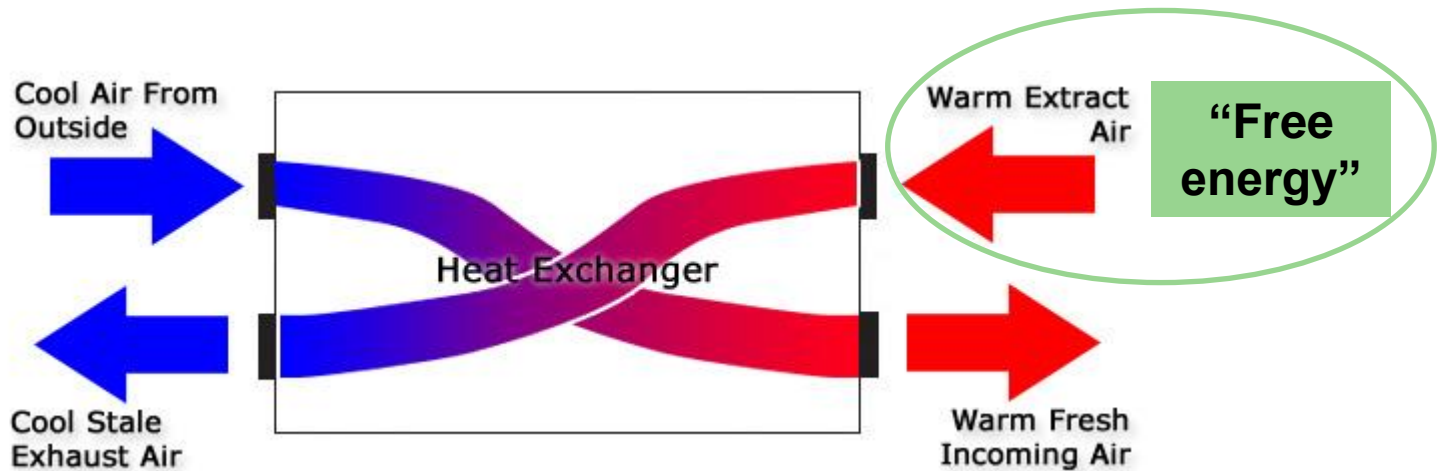
- larger volume of heat for buildings
- higher temperature heat for process applications
 - Steam
 - Direct firing (gas or oil burner)

“Is it realistic to achieve these with Heat Pumps only?”

Heat Recovery?

Higher temperatures = more hot flue gas wasted

Heat Recovery - reclaim 'waste' heat to be used again.



Department of Energy and Climate Change (DECC) do not accept this as Renewable Energy, therefore **no incentives**

Renewable Energy?

- Biomass
- Heat Pumps
- Geothermal
- Biogas
- Solar
- Wind



All play a part in supplying energy.

How can we de-carbonise?

A number of projects are producing **biomethane** and other **green gases**.

Green gasses reduce:

- landfill
- effluent disposal

There are a growing number of “green gas” plants, but how much “green gas” can be supplied?

Hydrogen?

Northern Gas Networks - feasibility project in Leeds to determine use of Hydrogen through sections of the grid.

Production:

- Hydrolysis of water

Hydrolysis during over-supply from wind/solar. Electrical energy stored as hydrogen

- Steam Methane

Steam Methane Reforming produces carbon which can be captured and stored

Both could provide decarbonised gas supply to the grid.

Hydrogen issues?

Some of the issues:

- Cost of developing new appliances.
- Hydrogen flame is invisible. Gas Cookers would need extra safety
- Gas Fires would have to be different design and may not even be suitable as a product.

Conversion issues:

- Difficult to convert existing appliances.
- Large replacement program (British Gas were a monopoly during 1960s NG conversion)
- Cost of conversion.

How can we save energy?

Existing products have almost reached maximum efficiency due to limitations of Physics

Now **buildings** need to be more efficient

Energy Performance in Buildings Directive (EPBD) has a requirement for Nearly Zero Energy to be achieved by **2019 / 2021**

Building Regulations will implement this in the UK.
Review not due till 2018

How do we make the changes?

There are three options:

1. Regulations
2. Incentives
3. Good will/market acceptance.

Current Government are against options 1 & 2.

Option 3 is almost impossible as costs come into the decision.

Renewables and building changes cost money.

How can manufacturers help?

- Invest in **novel appliances**
- Invest in the production of cheaper **renewable products**
- Invest in the preparation for **hydrogen**

“Why invest?”

Where are we heading towards?

Manufacturers need clear policies for the future in order to be comfortable with making investments.

a. Are we going to have a Green **Gas** Grid?

b. Are we going to have a Green **Electricity** Grid?

A or B, or both?

The future?

- Many scenarios
- No clear policies to overcome the issues
- Volatile Governments over the next 35 years

Can we trust any new policies that come into force?

What does the industry need?

To invest in novel design and state of the art production facilities, the industry needs:

- Reliable and stable policies
- Financial support

Otherwise, industry growth and innovation will be restricted

Summary

- Clear policies from Government.
- Funding for developing new “Green” products.
- A decision as to whether the gas and electricity grids will be de-carbonised and how that will be funded.

Overall Industry needs certainty and continuity in order to feel able to invest.

Thank you.

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