

Welsh Air Quality Forum Seminar

Caerphilly Council Chamber



Reducing Environmental Impact

Bruce Allen CEO of HETAS and Chair of Woodsure

Amanda Marshall – Woodsure Ready to Burn Scheme

The Big Issues

Wood burning -

1. Particulate emissions most discussed are PM 2.5 – PM10
2. But also there are concerns about smaller particles

Mineral Fuels –

1. Banning of house coal and similar smoky fuels
2. Controlling sulphur emissions

AQ in Wales

Local air quality management in Wales

Policy guidance

June 2017

Ways of working

The principle is made up of five ways of working public bodies should follow when carrying out sustainable development. These are:

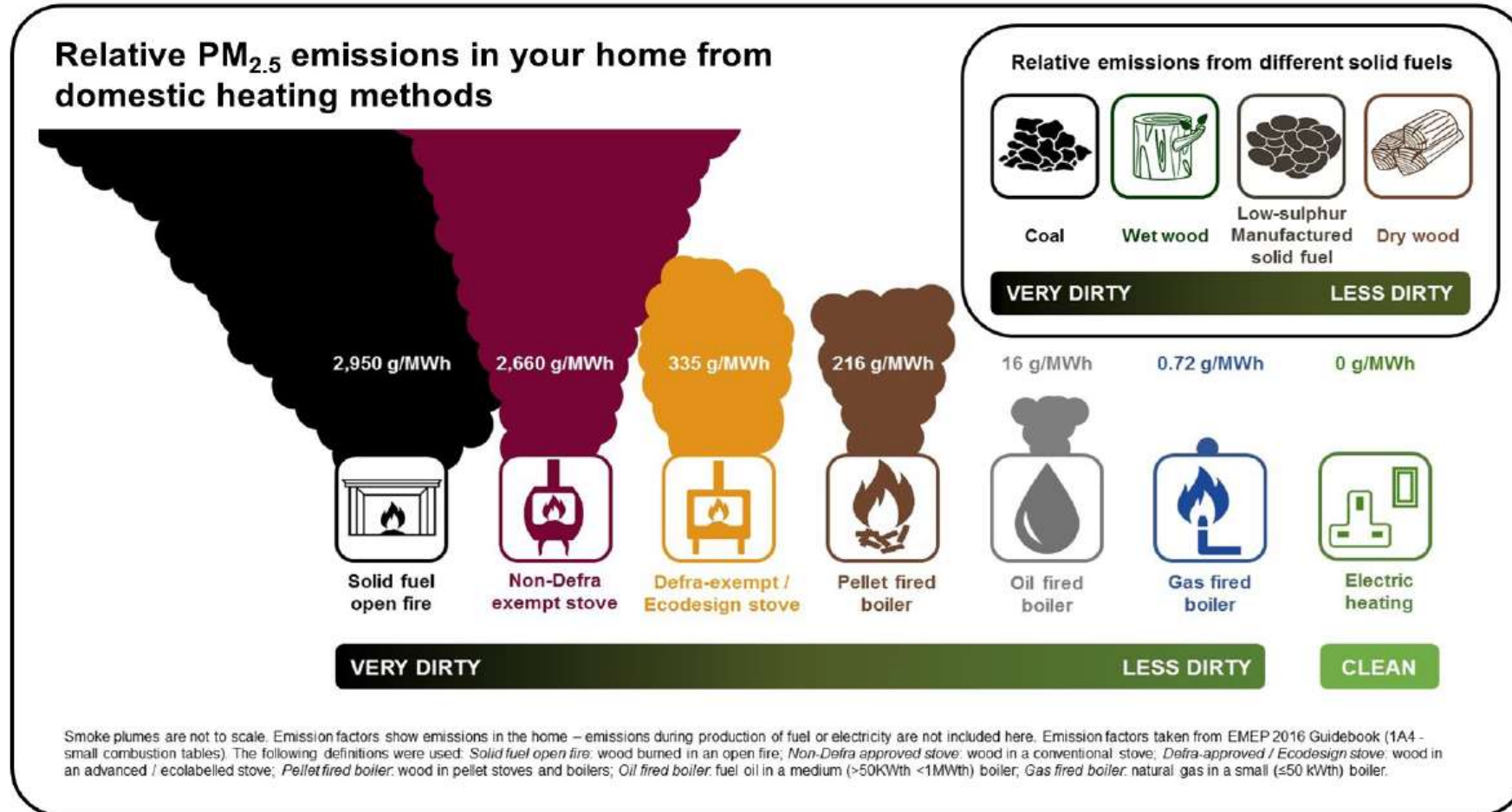
1. looking to the long term so we do not compromise the ability of future generations to meet their own needs;
2. taking an integrated approach;
3. involving a diversity of the population in the decisions affecting them;
4. working with others in a collaborative way to find shared sustainable solutions; and
5. acting to prevent problems from occurring or getting worse

Example of approaches – EU Eco Design legislation 2020/22 Looks at key issues

Looks at 5 main areas:-

- **Seasonal Efficiency**
- **NOx**
- **OGC**
- **Particulate emissions (generally carbon)**
- **CO**

Looking at the problems



Emissions from wet wood combustion

Evidence from testing with wet wood on an open fire

Test No	Test Duration h	Radiation Output kW	Smoke Emission g h ⁻¹
1	1.23	0.92	21.0
2	1.40	0.91	18.1
3	1.38	0.86	23.5
4	1.25	1.05	16.7
5	1.00	0.83	26.1
Mean	1.25	0.91	21.1

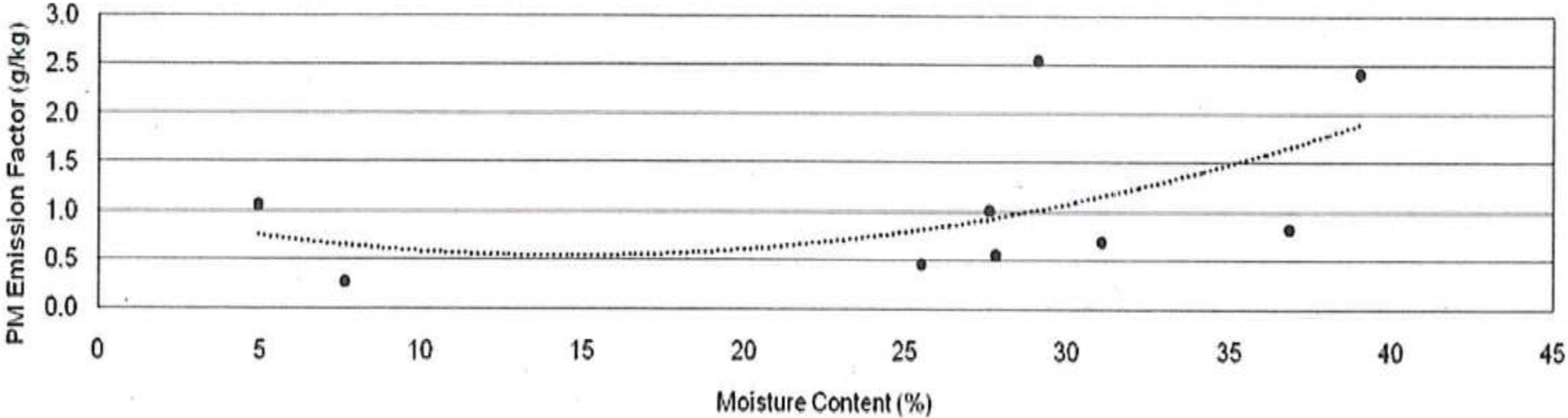
Evidence from testing with dry wood on an open fire

Smoke Emission		
Gravimetric		
Total g	Mean gh ⁻¹	PD6434 permitted gh ⁻¹
3.4	4.1	5.6
3.0	2.9	5.6
4.4	4.3	5.7
5.7	7.6	5.5
4.0	4.0	5.5
4.1	4.6	5.6

Wet vs Dry wood combustion

- The tests were at a notified test lab on similar appliances
- Wet wood combustion was 5 x more emissive than dry in those tests
- This was in simple open fires and modern clean-burn appliances do much better

Leeds University extract



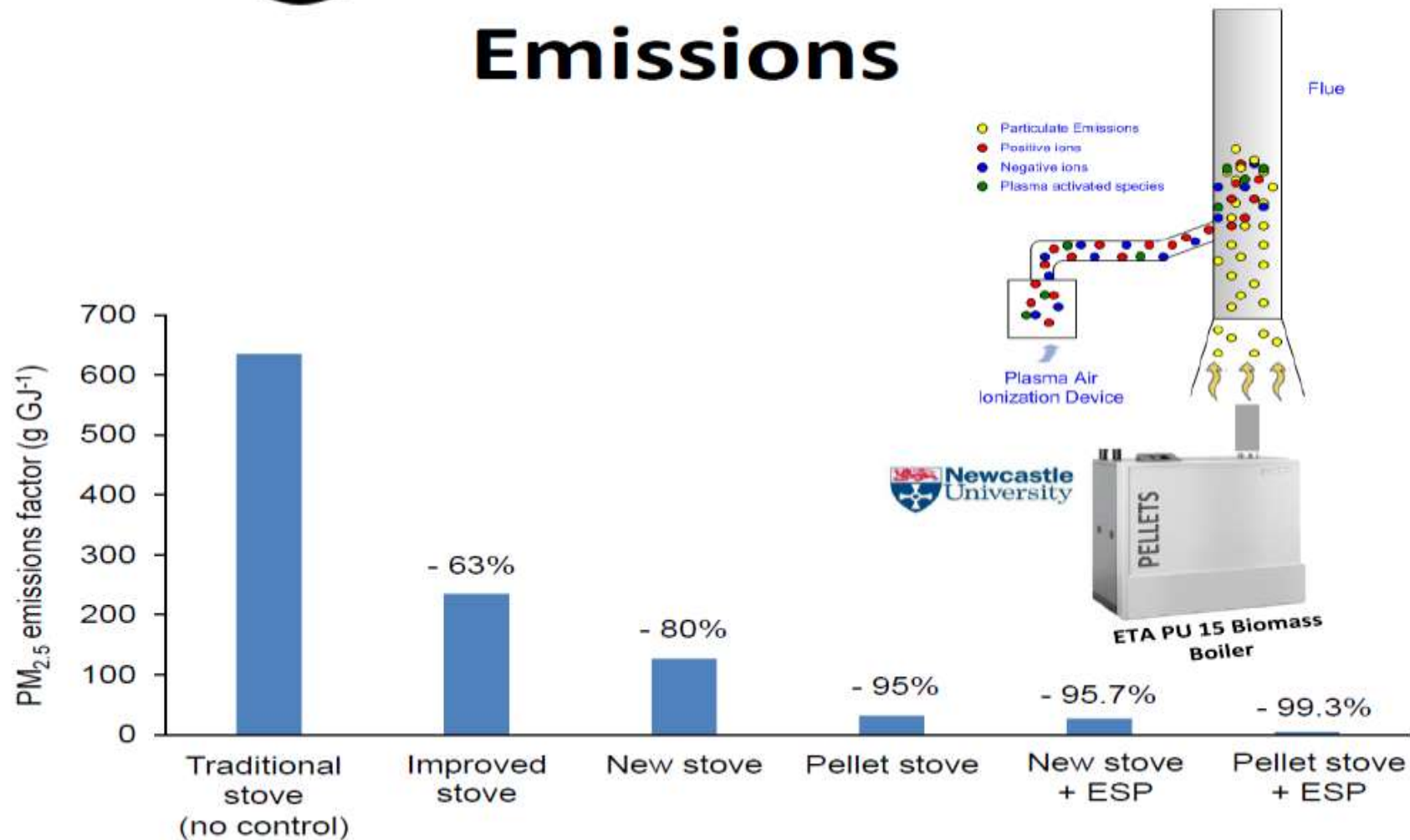


A 1kg freshly cut log can contain around a pint of water. Burning off all that water takes a lot of energy from the fire and creates a lot of smoke!

What other evidence is there?



Emissions



Making the best of the possible solutions

- Ensuring that only the cleanest appliances are available will help with every consumer who changes an existing appliance or installs a new one
- The greatest benefit – to be realised for every appliance, is using clean, dry wood fuel.
- The Ready to Burn scheme allows the sale of wood fuel up to 20% moisture (mostly domestic – logs and heat-logs/briquettes)
- Woodsure's main quality scheme covers chip, hog, logs, pellets etc
- The ENplus pellet scheme looks after pellets

Other factors

- Maintenance of appliances – keeping efficiencies up
- Sweeping of chimneys
- Advice to consumers and business on better burning – can be given by installers, sweeps etc but also by the local authority

Looking back at our 5 principle for Wales

- Thinking long term – knowing these facts helps longer term thinking
- Integrated Approach – recognising that retailers/producers must sell fuels that can burn more cleanly – and educating customers to buy the best fuel – recognising times of high pollution and asking customers to reduce emissions
- Involving the population – in this case the population is the retailers and buyers of fuel and those who burn solid fuels at home or in a business
- Working with others – schemes like Woodsure & HETAS, working with local agencies and authorities – with flexible legislation driving change
- Acting to stop things getting worse – utilising Ready to Burn, HETAS Installers, good sweeps, public education and as a last resort, enforcement.