

COAL IS THE MOST EFFICIENT SUPPLIER OF ENERGY (excluding Nuclear)

- ❖ Better than Oil and Natural Gas.
- ❖ Coal is plentiful. *(For example the United States coal reserves, based on current usage, are 350 years.)*
- ❖ China and India also have vast reserves of coal.

Unfortunately, coal is the dirtiest of all fossil fuels and we are moving to the point where the world has started saying:

“that coal should remain in the ground.”



STATEMENTS FROM GOVERNMENT SOURCES WHY COAL SHOULD REMAIN IN THE GROUND.

The Paris Conference on Global Warming attended by 195 countries in December 2015 concluded that it was essential that Worldwide the enormous reserves of coal must be left in the ground to help deal with the effects of global warming that should not rise beyond **2C** from pre-industrial levels.

This year some of the conference committees added a later target of achieving **1.5C** by 2030. The danger figure to be avoided at all costs is **5C**.

General Meeting & Management Forum - March 2016

David Madden

The Future of Coal

Wolverhampton



**The problems with fossil fuel use in China.
Similar problems are occurring in India.**





The end of two of the fourteen older coal-fired power stations in the UK.



UK USE OF COAL (2014)

It is worth noting that these power generators (in the UK) use up to 3,500 tonnes of coal an hour (currently totalling 42,000 tonnes of coal an hour producing electricity). Only about 13% of coal is used for other purposes such as coking plants for steel making. They may also need to find new choices of energy reducing coal use to almost nil!

To put this in perspective steam locomotives in the UK use something like 1.3 tonnes an hour!

THE UK COAL SITUATION TODAY

In the UK the last deep mine colliery closed in December 2015 and we will rely largely on imported coal for our remaining 3 coal fired power plants. These will also close by 2023 unless converted to using Biomass or other 'safe' fuels.

The UK still produces coal with nine drift mines and eight opencast sites. The largest company owning opencast sites (Hargreaves) issued a profit warning late last year with an announcement that production is to be reduced by 50%.

However their statement included that they saw a long term future for coal production in Scotland.

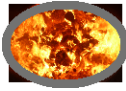
A REMINDER OF THE WORLD WIDE SITUATION OF COAL

**World Coal supply should to be reduced by :
82.3%
From 8,222m/tonnes with 6007.5m/tonnes left in the ground.**

Presumably;

Leaving 2223.5 m/tonnes as 'safe' coal available.

Note: This is not an official document but one produced on the internet



AN INTERESTING STEAM LOCOMOTIVE AND STATION IN JAPAN



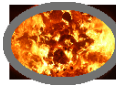
Mooka, Japan, Unusual Main
Line Station



THE POSSIBLE EFFECT ON HERITAGE & TOURIST RAILWAYS

- (a) Heritage and Tourist railways may find themselves needing to comply with carbon reduction targets in their use of coal.**
- (b) They may even be forced by law to convert locomotives to other fuels - likely to be very expensive.**

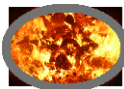
Our policy should be to seek exemptions for all industrial historic transport which uses coal.



OTHER FOSSIL FUEL LOCOMOTIVES

We should also be aware that hundreds of diesel locomotives have been preserved and many are part of our railway history. It is possible that new engines or modifications for using cleaner diesel fuel may be required. Such measures could be costly.

The United States has announced that diesel locomotives must use safer fuels which involves new engines being fitted. However we understand this will not apply to preserved locomotives.

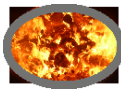


WHAT WE WOULD LIKE TO SEE HAPPEN

Exemptions for historic transport in future legislation (worldwide, if possible) -

We need good guidance: clearly, the best solution is to seek exemptions from our respective governments for all historic transport systems currently using coal.

It is the small amount we use in avoiding the need to convert coal burning historic transport with modern systems or other fuels which might destroy their historic status. Bearing in mind the small amount of coal used by historic transport, as shown overleaf-

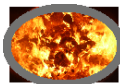
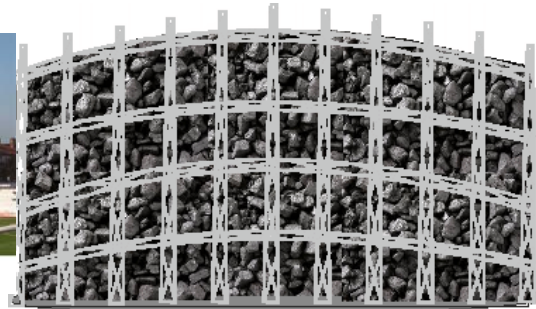


A SIMPLE IMAGE SHOWING COAL USAGE IN POWER STATIONS AND ON HERITAGE & TOURIST RAILWAYS

Left is a picture of a disused gasometer that were used extensively in the UK and many other countries for the storage of coal gas. On the right the amount of coal shown would serve a coal powered station for about 4 hours!



Disused gasometer overlooking the famous Oval cricket ground in London



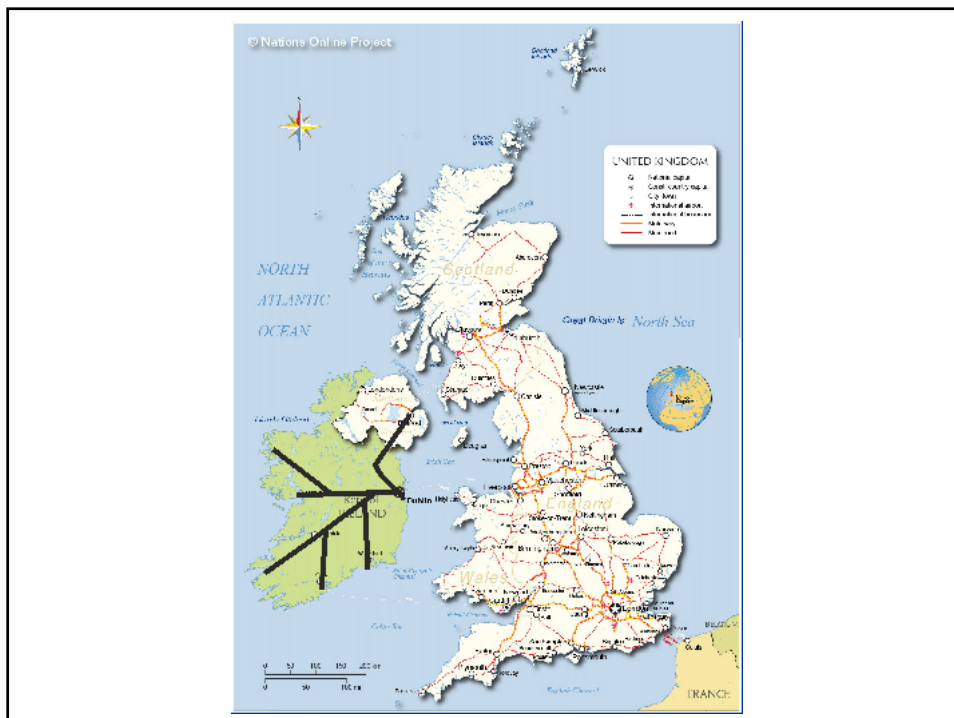
A SMALL SECTION OF THE GASOMETER COMPARED WITH A COMPARABLE SIZE STEAM LOCOMOTIVE



THE COAL PROBLEM IN IRELAND.

You may be aware that the Irish Government have made a policy statement to rid the country of coal completely by 2018!

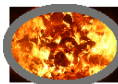
Our Chairman Brian Simpson together with David Morgan and myself arranged a meeting with representatives of both the north and south of Ireland. However, a new government may not be confirmed until Easter so we are not yet sure if their policy on coal will continue.



WORLD COAL ASSOCIATION

Later this month Ian Leigh has organised a meeting with The World Coal Association, an international body based in London, to discuss the issues listed above. David Morgan and myself will also be attending.

The World Coal Association is the only organisation that works on a global basis on behalf of the coal industry. Membership is open to companies and not-for-profits with a stake in the future of coal from anywhere in the world, with member companies represented at Chief Executive or Chairman level.



THE PRESERVATION OF OUR INDUSTRIAL HISTORIC TRANSPORT-

(Railways, ships, traction engines, steam rollers etc.)

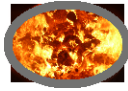
THE IMPORTANT QUESTIONS

If legislation results in a universal ban on burning coal, what are the other likely fuel sources?

Can these other sources be utilised without threatening the preservation and use of our locomotives and other historic transport?

Or, in A worst case scenario, will all coal burning locomotives, and other historic transport be confined to static museum status?

Will there be a profitable market for coal in the 2020s?



IN MAKING OUR CASE

We need accurate figures of coal usage worldwide. Clearly a role for Wattrain. These figures when compared with the amount of coal used for power generation may show we can make a case for exemptions for historical transport.

What we do not need is illustrated on the publicity slide shown next.



**PICTURES
LIKE THIS**

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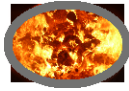
David Madden

The Future of Coal

Wolverhampton



There are probably millions of people who live alongside railway lines where occasional steam trains pass by. They are potential critics of heritage and tourist railways when they hang out their washing! Dirty smoke emissions are not a good advertisement for when and if we apply to continue with the use of coal when everyone else may be banned!



THE PRESERVATION OF OUR INDUSTRIAL HISTORIC TRANSPORT- Railways, ships, traction engines, steam rollers etc.

If legislation results in a universal ban on burning coal, what are the other likely fuel sources?

Can these other sources be utilised without destroying the preservation of our historic locomotives and other Historic transport?

Or, in the worst case scenario, will all coal burning locomotives, ships etc be confined to static museum status?

2023 is a short period within which to take action on the future of coal.

There is a suggestion that the worldwide coal situation should aim to reduce production as the following shows:

**World Coal supply to be reduced by :
82.3%
From 8,222m/tonnes with 6007.5m/
tonnes left in the ground.**

**Presumably, these figures suggest
Leaving 1204.4 m/tonnes as 'safe' coal.**

Note: This is not an official document but one produced on the internet

This is not going to happen! WHY?

Japan, China and India have announced that they are together to build about 1,300 new coal-fired power stations!

Japan needs new coal fired power stations following the dreadful accident at Fukushima.

China and India have announced they also will be building new coal fired power stations (one or two a week!)

Officials in India and China have stated that they have many areas in their countries where people have no electricity and they have a duty to provide electric power where none currently exists.



INDIA
455 new coal fired
power plants



CHINA
803 new coal fired
power plants



JAPAN
43 New
coal fired
plants

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Internationally

**THESE ARE SOME OF THE CHALLENGES ON THE
FUTURE SUPPLY OF COAL.**

**WE ARE WORKING INTERNATIONALLY TOWARDS
MAKING A GOOD CASE FOR THE CONTINUED USE
OF SUITABLE COAL FOR HISTORIC TRANSPORT.**

THANK YOU FOR LISTENING