

Annex EF9 of Dr E J Fordham

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EN010106 – Sunnica Energy Farm

**Speech of Dame Maria Miller MP (Basingstoke), House of Commons, 7
September 2022**

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[https://hansard.parliament.uk/commons/2022-09-07/debates/FB0D6FE6-CF3E-4D2B-AA92-FCAE0A5B0B17/Lithium-IonBatteryStorage\(FireSafetyAndEnvironmentalPermits\)#275](https://hansard.parliament.uk/commons/2022-09-07/debates/FB0D6FE6-CF3E-4D2B-AA92-FCAE0A5B0B17/Lithium-IonBatteryStorage(FireSafetyAndEnvironmentalPermits)#275)

Lithium-Ion Battery Storage (Fire Safety and Environmental Permits)

Hansard, House of Commons Chamber

Volume 719: debated on Wednesday 7 September 2022

Motion for leave to bring in a Bill (Standing Order No. 23)

14:38:00

Dame Maria Miller (Basingstoke) (Con)

I beg to move,

That leave be given to bring in a Bill to make local fire services statutory consultees for industrial lithium-ion battery storage planning permission applications; to make provision about the granting of environmental permits for industrial lithium-ion battery storage; and for connected purposes.

The Bill would ensure that industrial lithium-ion battery storage facilities are correctly categorised as hazardous, so that the Environment Agency, the Health and Safety Executive and the fire and rescue services would be statutory consultees when planning applications are considered.

Technological innovation is on an exponential curve, and nowhere is that more evident than in renewable energy generation. Under this Government, in 2019—for the first time ever—zero-carbon electricity production overtook fossil fuels. This transition to renewables is essential to protect our environment, but is also crucial geopolitically. We know only too well that hostile powers are willing to use energy supplies as a weapon. Home-grown renewable energy can help to shield us from attacks. With renewable energy, capture and storage become crucial. A library of Government plans and reports since 2017 cite the removal of barriers to electricity storage as crucial in our transition to greener energy.

The high water mark of energy storage is industrial lithium batteries, which make up more than 90% of the UK's storage capacity. By releasing energy into the power grids when it is required, these batteries shift peaks of supply to match demand, providing us with renewable electricity even when the air is still and the skies are grey. A handful of storage facilities are already operational in the UK, but a large number are due to come on stream in coming years; 366 projects are under construction or awaiting planning permission.

So what is the problem? Lithium-ion batteries are innocuous when they function normally, but if they fail, a process called thermal runaway—what we would call a battery fire—occurs, and there is a complex chemical reaction. It can occur for many reasons: the battery may be overcharged, there may be outside interference or the battery may have a design fault. The only way to stop a battery fire is to cool it down with a constant stream of water and wait for the fire to go out, which might take days, creating huge quantities of water containing highly corrosive hydrofluoric acid and copper oxide—by-products of battery fires. These toxic chemicals cannot be allowed to seep into watercourses, because they would cause immense environmental damage.

Current regulations do not require battery storage planning applications to be referred to the Environment Agency, the Health and Safety Executive or, indeed, the fire service. Planning permission is being granted near nurseries, hospitals, houses, rivers and even industrial chemical manufacturing plants. In my constituency, a battery facility has been granted planning permission on Basing fen, metres away from the headwaters of the River Loddon, close to a hospital and near the town centre. The application was only spotted by assiduous local residents and local councillors Kate

Tuck—who is with us today—and Onnalee Cubitt when a further application was submitted for a larger site. Should a fire break out at the storage facility on Basing fen, the water used to cool the plant would flow straight into the River Loddon. There is no requirement for a storage tank for firewater. Toxic water would continue to wash downriver towards the Thames.

A battery fire can produce a cloud of dangerous gas—hydrogen fluoride, methane and carbon monoxide. If the vapour cloud from a battery fire meets an ignition point, it can explode, as happened in Arizona in 2019; fire officers tackling that battery fire suffered life-changing injuries when the unit exploded. That fire was far from unique. Thermal runaway events occur in almost every country in which battery storage is used. Even South Korea, a pioneer in the development of battery storage, experienced 23 major battery fires between 2017 and 2019. Nearer to home, in September 2020 a battery storage facility fire in a residential area in the constituency of the hon. Member for Liverpool, West Derby (Ian Byrne), a stone's throw from a nursery, caused a violent explosion that blew debris up to 20 metres. It took 59 hours for the fire to be put out, during which residents were asked to keep their windows and doors closed because of the billowing smoke.

We need lithium-ion battery storage facilities, but they must be seen correctly for what they are: highly complex, with the potential to create dangerous events and hazardous substances. The good news is that we do not need new regulations; we simply need to better use the regulations we have. We already have robust legislation, the Planning (Hazardous Substances) Regulations 2015 and the Control of Major Accident Hazards Regulations 2015. My Bill would correctly apply those regulations to battery storage sites.

We have to heed warnings from experts such as Dr Wade Allison, professor of physics at Oxford University, who said that

“although batteries are essential to our world, naively multiplying them while ignoring safety questions is dangerous and negligent. That is what is happening. Large-scale battery energy storage systems should be classed as hazardous establishments in order to be regulated appropriately”.

By correctly categorising industrial lithium-ion batteries as hazardous, my Bill would ensure that the Environment Agency and the HSE were consulted during planning applications.

Furthermore, Phil Clark, the emerging energy technologies lead at the National Fire Chiefs Council, has called for

“developers to engage at the earliest opportunity with the local Fire and Rescue Services.”

He explains that

“the National Fire Chiefs Council are still learning about the potential impact of the exponential introduction of lithium batteries. Without an understanding of the risks and appropriate control measures required, we risk as a society creating the next legacy fire safety issue”—

his words, not mine. My Bill would make fire and rescue services statutory consultees for all battery storage facilities.

The evidence shows that the current regulations for lithium-ion battery storage facilities do not reflect the true risk. I urge the Government to support my Bill today and to announce an immediate review of those facilities that have already been constructed or that have planning consent, to ensure that they do not pose a threat to residents or the local environment.

I am not sure whether there is a Minister in place at the moment—maybe there is a Whip.

Sir David Evennett (Bexleyheath and Crayford) (Con) – indicated assent.

Dame Maria Miller

I hope that somebody will agree to meet me to discuss action in more detail. We cannot allow lithium-ion battery storage facilities to continue as they are and become another legacy fire issue, with all the risks that that entails to the lives of the people we represent and the environment we want to protect. I commend the Bill to the House.

Question put and agreed to.

Ordered,

That Dame Maria Miller, Ian Byrne, Mr Richard Bacon, Matt Hancock, Allan Dorans, Mrs Flick Drummond, James Gray, Alicia Kearns, Stephen Metcalfe, Mr John Baron, Valerie Vaz and Dame Diana Johnson present the Bill.

Dame Maria Miller accordingly presented the Bill.

Bill read the First time; to be read a Second time on Friday 24 March 2023, and to be printed (Bill 152).