

Q&A Session – Crematoria Decarbonisation webinar (25.11.2025)

How do burial and other end-of-life options compare with cremation, and is it appropriate to discuss these alternatives?

Cremation remains the predominant choice for end-of-life arrangements in the UK, with approximately 80% of people opting for this method, largely due to cultural preferences and cost considerations. Burial, while generally associated with lower carbon emissions, faces significant practical challenges, particularly the availability of land and associated cost, where the long-term maintenance of burial sites is imposing a significant cost-burden on Local Authorities.

It is more feasible to decarbonise cremation technology than to try to drive a shift in societal attitudes toward burial, especially when there are low-carbon cremation technologies available.

Discussing alternative end-of-life options is appropriate in the context of environmental policy and service planning, as it enables informed decision-making and supports efforts to meet carbon reduction targets, however, wider discussion is outside the scope of this study, which is focussed on cremation technologies.

Do electric cremators have longer cycle times than gas cremators?

Yes. The average cycle time for electric cremators is often quoted as a conservative c.110minutes/cremation Vs c.90min/cremation for a gas cremator, more importantly, electric cremators have higher **variation** around this average than gas, where fuel can easily be used to control the process time. At Huntingdon, electric cremators typically take 80 minutes to 100 minutes, with some cases taking longer. The cadaver size, condition and coffin material all influence cremation time. Concerns about longer cremation times are common in the bereavement sector, but practical experience at Lambeth reportedly showed that electric cremations were broadly comparable to gas ones from an operational perspective.

What are the relative costs of installing fully electric cremators from the start compared with converting existing gas units?

Conversion may well be more expensive than starting out with a purpose built site. Costs vary widely by manufacturer and by the specific circumstances of each crematorium. While new electric cremators may range from £700k to £900k each, major additional costs can arise from DNO grid-connection upgrades for example, £750k in Preston due to distance from the substation.

Total project costs must consider installation, building modifications, project management and contingency costs as well as any temporary cremation arrangements required during the installation period. Overall, total installation cost is highly site-specific and represents a long-term strategic shift rather than a quick financial payback.

For a retrofit, what would the expected payback period be?

Very dependent on the total capital costs (Cremator + costs of installation and alternative cremation provisions if required during installation) and the site turnover. Crematoriums can have very high margins (30%-40%+, hence their attractiveness to the Private Sector). Unless

Why do the cremation times tend to be longer with electric units?

Gas cremators can maintain a 90-minute cycle because operators can observe the process and increase fuel as needed - for example, when body size or medical conditions require additional combustion energy and turbulence. This “go-faster” flexibility helps with scheduling and throughput.

Electric cremators, by contrast, rely on a steady, gentle heat with no ability to accelerate the process. They take days to warm up (But this will only occur from cold 1-2 times per year), and once at temperature the cremation simply takes as long as it needs to. This can mean some longer cycles, but studies show averages of around 110 minutes.

Is it correct that the annual energy demand is around 152 GW?

DFW Europe reported over 82,000 electric cremations across 35 units, with an average operating load of under 15 kW/hr (131,400 kWh/Yr 132 MW/yr or 0.13GW/yr) - roughly equivalent to five domestic 3kW sockets once the cremator is at operating temperature. The main electrical demand comes from warming up the chamber, which explains the significance of DNO connection costs and leads to an annual energy demand in that range of c.152MW/yr. (Watch the units)

Actual energy demand will depend on cremator usage: The higher the usage, the lower the electricity demand, since the charge is providing energy through combustion.

Is the cremator operated continuously without any weekly shutdowns?

The cremation process is continuous, with the equipment operated without shutdowns (Other than annual maintenance inspection) and temperatures maintained to ensure consistent performance.

Considering the strong case for electric, do you see / foresee a shift towards electric cremators within the public sector?

Yes, however we are in a transition phase, as with EVs, we have a market with existing electric cremator suppliers, new entrants and incumbent providers experimenting with electrification technology. Local authorities require support to cover the upfront capital costs of replacing existing gas cremators with electric units and funding may prove

challenging in some cases. The wide range of crematorium locations may make alternatives alternative technologies uniquely more applicable for them (E.g. biofuels)

Would the case rely on grant funding, or might loans provide a workable solution?

Loans reduce the up-front cash requirements, allowing the cost to be spread over a longer period. In cases where significant DNO connection costs are involved, grant funding for the once-off DNO connection cost will support a strong business case.

Why is the duration of an electric cremation cycle considered unpredictable?

The unpredictable nature of electric cremation cycle times is largely due to the unknown factors contained within each individual coffin (Common with all cremation technologies) and the inability of an electric cremator to 'accelerate' the combustion process: The temperature is fixed and there is no turbulence in the cremation primary chamber, unlike in a gas cremator, where additional fuel can be used, if required, to maintain cycle time. One supplier, Addfield, is experimenting with 'electric boost' technology, results will be out in mid-2026.

How compatible are electric and gas cremators? Could a crematorium operate both simultaneously to allow a gradual transition given the upfront costs?

Running both electric and gas cremators simultaneously is conceptually possible, but it represents the highest-cost option due to the additional engineering work and installation expenses. Maintenance costs are also likely to be higher, particularly if different models are involved. The overall economics would need to be carefully assessed on a site-by-site basis to determine feasibility.

What is the typical industry cost for a single electric cremator?

The cost of a single electric cremator can be up to £900,000, though it may vary slightly depending on the manufacturer.

Can you recommend any consultants or companies for feasibility studies to support business case development? Can they provide support with technical specifications?

As we provide impartial advice, we cannot recommend individual consultants. However, you can contact your regional hubs and associations such as the Association for Public Service Excellence (APSE), the Institute of Cemetery and Crematorium Management (ICCM), and the Cemetery, Burial and Cremation Executive (CBCE) for guidance. All manufacturers are also able to support feasibility studies if needed and there are a range of independent consultants, such as, but not limited to, CDS, Ricardo plc, Drees & Sommer and others. (Note: CDS have an arms-length corporate relationship with cremator supplier Addfield).

Does the filter need to be replaced every 1,800 or 18,000 cremations?

1800. This is indicative and will depend on the manufacturer's guidance.

While crematorium waste heat is frequently proposed for heat networks, is it practical for electric crematoria?

Electric cremators generate significantly less waste heat compared with gas-fired units, and much of the heat they do produce is used internally, leaving less surplus for external use. The heat output is intermittent, corresponding to the cremation schedule, so there is no consistent excess heat available. Additionally, practical considerations such as the distance to a heat network and the infrastructure required for pipework further limit the feasibility of integrating electric cremators into a heat network.

Is there a risk of any negative reaction to connecting a crematorium to an air source heat pump or a heat network?

Since the air source heat pump would be installed on-site, it is unlikely to raise any significant concerns. In contrast, connecting a crematorium to a wider heat network could be more sensitive, so careful management of public perception would be important to ensure community acceptance. Negative publicity examples such as this classic: "[Dead bodies burned to heat pools in UK](#)" and "[Swimmers could be kept warm by cremated bodies](#)" exist.

Do any case studies provide confirmed payback periods, measured in years, from energy cost reductions?

We have not yet been able to see hard evidence, however with illustrative potential savings of c.£30/cremation in fuel costs, a capital cost differential of 300k over 10 years (Assuming 1000 cremations/year) is a directional indication of the ability for a business case to handle a higher up-front capital cost. DNO costs can be high, and spin-off benefits such as potentially lower maintenance costs, CO₂ emission reduction, and the ability to use on-site solar will affect site-specific payback periods. As with EVs, once the home charger has been installed, longer term, lower operating costs can be enjoyed, but the capital costs are higher.

Are there any reported problems with accommodating oversized coffins due to the weight restrictions of electric cremators?

Cremators designed to handle oversize coffins are 'Bariatric' cremators, with larger entrance door apertures. Main weight restrictions will be with the loading sled/trolley rather than the cremator itself. Cremation process will be longer, with air supply throttled to slow the process and prevent excess heat release during combustion. Maximum size requirements can all be specified during the design phase and tailored to the needs of the local community.

Why are DNO connection costs so high when the electrical demand is only slightly higher than that of a gas crematorium?

The DNO connection cost is a one-off expense for connecting the site to the distribution network, suitable for handling both the sites existing electrical requirements and the additional potential maximum load of all new cremators being installed (And any additional requirements, such as EV chargers etc.). This is separate from the ongoing charges from the electricity supplier for actual energy consumption.

Do gas and electric cremators differ significantly in size, and should plant room space be considered when switching fuel types?

Size varies by manufacturer. Broadly, electric cremators can be a little larger and importantly, heavier than gas cremators. The concrete slab on which current gas cremators are installed will need to be assessed to ensure it can sustain the additional weight. Installation can be assessed by suppliers as part of the quotation/assessment process and yes, plant room space will be a factor.

Do electric cremators require abatement equipment, and does it occupy as much space as that used for gas cremators?

Electric cremators do require abatement equipment, they produce a little less NO_x due to not having the high-temperature 'blue-flame' of a gas burner, which is NO_x producing (Yes, this applies to your kitchen gas cooking rings as well) but the rest of the abatement equipment will be the same. Size varies by manufacturer/configuration (e.g. abatement per cremator, or shared across cremators) and will need to be assessed by the equipment supplier as part of the quotation process.