

Energising Culture

A Guide to Future Energy for Cultural Buildings

JULIE'S BICYCLE * ** **
SUSTAINING CREATIVITY

Ecovenue

The
Theatres
Trust



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Forewords

Despite the entrenched nature of our current energy infrastructure, still vastly reliant on fossil fuels, systemic change to sourcing, supply and distribution of energy is inevitable. While energy is still cheap and easily accessible to the arts and cultural sector the energy system is poised on the edge of profound change. Already energy costs are volatile, carbon pricing is a reality, and the building of environmental externalities into the costs of materials and services is underway.

Over the coming years we can confidently predict that our current economic framework will be remodelled to account for a broader spectrum of value for any given resource – including environmental impacts. The consequent profound changes will impact on all aspects of arts and culture: and it is these business realities that are already stimulating change much more effectively than campaigns, science or personal ethics. The aim of this guide is to support these changes.

In the UK the current coalition government, under the guise of austerity, has decelerated low carbon incentives that would have stimulated bigger shifts (such as feed-in tariffs, mandatory reporting and CRC returns) even though investment in the ‘green economy’ is at record levels.

Such investment is transforming what is possible in sectors including digital, transport, communications, utilities, and materials and design, all directly relevant to the arts and culture. These transformational technologies combined with new business concepts and partnerships that strike through

existing silos will, in large part, determine the future of arts and culture.

In the short term efficiencies and low cost retrofits will be the quickest wins and Arts Council England has already sent out helpful signals by including environmental sustainability as criteria in capital applications; encouraging the development of environmental policies; and measuring, tracking and benchmarking performance across the portfolio.

This guide, the first of a two-part publication, aims to set out the issues around energy demand, energy supply and the related implications for business models; and to make informed decisions about a long-term energy strategy for arts buildings.

The second part will take a more comprehensive long-term vision of environmental sustainability and how the cultural sector intersects, ranging across activities, business models, new technologies and emerging cultural values.

Protecting energy and resource supply, understanding demand, and the capital interventions that will buffer the arts and culture from price and supply volatility is of critical and immediate importance.

We hope this guide will provide cultural organisations with the information and guidance to help them plan for a resilient energy outlook over the coming years.

Alison Tickell
Chief Executive, Julie’s Bicycle

2012 is the UN International Year of Sustainable Energy for All, designed to promote action and address global energy issues. As the advisory body for theatres in the UK I’m delighted that we’ve been able to play our part and come together with Julie’s Bicycle to publish this valuable guide designed to help theatres and other cultural organisations improve their energy efficiency, adapt to climate change and rethink their approach to energy. The 48 venues in our Ecovenue project assisted by the European Regional Development Fund, which has part funded this guide, have contributed to developing our understanding of how theatres and small venues can manage their energy better and have been front runners in achieving Display Energy Certificates. This guide draws on the lessons we’ve learnt and covers many of the areas we’ve engaged with. I hope that Energising Culture will inspire you to understand the challenges ahead, take action, and see where we can work together to achieve a lower carbon future for our theatres and cultural buildings.

Mhora Samuel – Director, The Theatres Trust

Executive summary

Key points:

- Pressure to reduce energy consumption and related emissions and impacts is increasing. Fossil fuel prices are rising inexorably but unpredictably. Our global future energy needs, sources, supplies, distribution, and infrastructural interventions are subject to larger forces at play, such as economic constraints and political priorities.
 - Drivers for change in the arts and cultural sector are no different from other sectors – ethics, cost and efficiencies, compliancy and regulations and future-proofing. However, the arts and culture are particularly vulnerable to reputational risk and it is critical therefore to address the concerns of your stakeholders, from patrons and artists, to audiences and local communities, so you are in a position to be proactive and share your energy story and successes.
 - In the short-term the evolving policy and regulatory environment, increasing energy prices, uncertainty over future energy supply and climate change adaptation, present many challenges. In the long-term they can provide opportunities to rethink how your organisation uses energy in ways which can save you money and reduce environmental impacts; improve the fabric of your building and guarantee a secure supply of clean energy.
 - Regardless of the size of your building, its function and whether you own, lease or share it, it's important to plan your energy future and to understand the relationship between your energy requirements and your carbon emissions.
 - Increase energy efficiency through
 - awareness-raising and behavioural change
 - energy monitoring and evaluation
 - energy efficient appliances
 - smarter controls
 - Rethink systems and services by
 - managing heat, ventilation and cooling
 - seasonal performance planning
 - making buildings more multi-functional
 - Rethink our energy supply by
 - generating energy onsite
 - community energy generation
 - Medium to longer-term planning and investment in energy efficiency and low or zero carbon energy sources and technology will present challenges for many cultural buildings, in particular given:
 - budget cuts and uncertainty over future funding;
 - a lack of incentive if energy-related costs savings result only in reduced budgets and the organisation implementing the measures doesn't benefit;
 - the need to ensure that energy-related measures do not compromise the organisation's ability to meet the needs and expectations of their artists and audiences and;
 - lower levels of control or influence over how buildings are used by audiences and artists.
 - Shifting to a culture in which energy, carbon and climate change become core considerations for building upgrade, capital investment and renewal programmes and opening up to new and collaborative investment models will strengthen the cultural sector's ability to provide stewardship of its physical infrastructure. Creative collaboration within the sector, among owners and occupiers and between owners, occupiers and local communities will make it easier to develop innovative and smart solutions and overcome barriers to investment.
- In short, an informed and longer-term approach to energy strategy and management has the potential to save money, drive innovation, and catalyse the business relationships and ideas that are necessary conditions for sustainable and resilient businesses.
- This guide is intended to help address the challenges outlined above, by raising key questions, outlining options for future energy strategy and management of buildings, and stimulate debate, with case studies and further resources to inform your decisions.

Summary of Chapters:

- Chapter 1. **Drivers for change**

outlines how energy and climate policy and regulation and the changing energy system are likely to impact on cultural buildings in the long term, voluntary schemes and standards which can help drive improvements, and what you should be thinking about in terms of reputational risk.

- Chapter 2. **Getting your house in order** focuses on understanding energy use, costs and emissions, operational efficiency and energy procurement – an essential precursor to any longer term planning or investment.

- Chapter 3. **Future proofing** outlines medium to longer-term options for reducing energy use, costs and emissions and sourcing low and zero carbon energy, looking at buildings, offsite productions and digital services.

- Chapter 4. **Funding opportunities and investment models**

provides information on financial incentives, funding programmes and investment models you may be able to use to support your initiatives.

- Chapter 5. **A framework approach to your energy future**

provides a framework for developing your energy strategy and implementing an on-going process to improving energy performance and moving towards a lower or even zero carbon future.

- **Appendix A)**

provides more detailed technical guidance on the options outlined in Chapters 3 and 4.

- **Appendix B)**

highlights tools and databases, guidance and support, certifications and standards available to the arts and cultural sector.