

The Theatres Trust

22 Charing Cross Road, London WC2H 0QL

T 020 7836 8591 F 020 7836 3302

info@theatrestrust.org.uk www.theatrestrust.org.uk

The Theatres Trust

The National Advisory Public Body for Theatres

Ecovvenue



Protecting theatres for everyone

Director Mhora Samuel **Chairman** Rob Dickins CBE

Trustees Jason Barnes, Phil Clark, Marilyn Cutts, Venu Dhupa, Tim Foster, Penelope Keith CBE DL,

Dr Pauleen Lane CBE, Baroness McIntosh of Hudnall, Chris Shepley CBE, Sam Shrouder,

Dr Phyllis Starkey MP, Pat Thomas OBE, Ben Twist

The National Advisory Public Body for Theatres

The Theatres Trust Charitable Fund co-operates with The Theatres Trust, has the same Trustees and is registered as a charity under number 274697



European Regional
Development Fund
Investing in your future

The Theatres Trust

The
Theatres
Trust

Advisory non-departmental government body

Trustees appointed by the Secretary of State for
Culture, Media and Sport

Cover England and Wales, Scotland and
Northern Ireland

Mission

Protecting theatres from destruction, damage or deterioration

Promoting the importance of theatres and our protection of them

Providing advice on the planning, building, restoration, development and use of theatres for the benefit of the nation

Advice

- Planning – Statutory consultee on planning applications
- Theatre use – Infrastructure analysis and facilitation support
- Heritage – Listed building consents and historic significance
- Regeneration & Development – Spatial policy and S106 contributions
- Architecture & Design – Design development
- Environment – Building Sustainable Theatres & Ecovenue

Conference 08
Building Sustainable Theatres
10 June 2008

‘No action is too small’

Theatres Sustainability Principles

- Reduce energy consumption
- Harness renewables
- Design sustainable capital projects
- Become a leader

Theatres Sustainability Principles

Reduce energy consumption

- Produce short, mid and long term plans
- Evaluate operational demand
- Understand your BMS
- Become a good housekeeper
- Tackle the easy things first – energy efficient products, use controls
- Create the culture – recycling, reducing waste, reusing materials
- Share information with other theatres
- Develop procurement alliances
- Retrofit – boilers, air handling, HVAC, heat loss

Theatres Sustainability Principles

Harness renewables

- Plan to make use of renewables
- Assess the benefit and business case
- Think about water use
- Research eligibility for grants
- Look at wider benefits – education, PR and audience participation

Theatres Sustainability Principles

Design sustainable capital projects

- Embed sustainability goals early
- Consider occupancy – ‘quietly, sensibly, efficiently’
- Hold on to ‘smart, responsive, simplicity rather than rigid complexity’
- Consider existing historic features that could be adapted
- Remember older buildings need air circulation and ventilation
- Be aware of changing Building Regulations
(by 2010 all new buildings will need to be zero carbon)
- Keep up to date with energy efficient technologies
- Look at whole life costs

Theatres Sustainability Principles

Become a leader

- Don't wait for the law to act ~ Climate Change Act 2008 commitment to an 80% reduction in GHG emissions by 2020 (against 1990 levels)
- Benchmark experience and help shape legislation ~ EPCs DEC's
- Make your theatre a beacon for sustainability for audiences (Building, operations, productions, education, marketing, travel)
- Promote Corporate Social Responsibility policy
- Communicate your Environmental and Energy Management policies
- Make the invisible visible and raise awareness
- Support local, national and international initiatives

After the Conference...

Mayor of London's Green Theatre Plan

Launch of the Plan at Plasa 08 – Exhibition and Seminar Programme

Developing advice on Display Energy Certificates

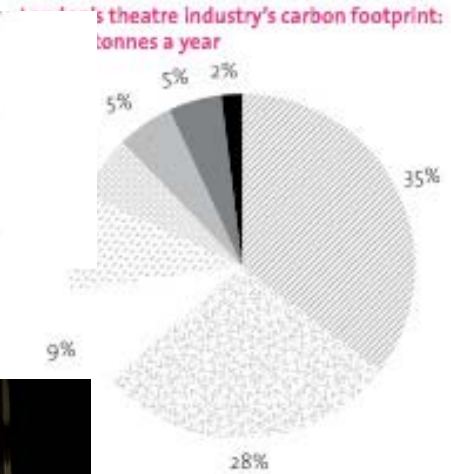
Benchmarking DECs

Sharing experiences of implementation among theatres – DEC Pool

Successfully applying to ERDF in London – Ecovenue

Ecovenue funding announced at Plasa 09

Plasa 08 Green Theatre Plan Launch



- Daytime/Evening theatre front of house (daytime and evening)
- Daytime/Evening auditorium aircon/cooling
- Rehearsal space (heating/cooling)
- Daytime/Evening theatre offices and back of house
- Stage electricals (lighting, sound, automation)
- Daytime/Evening theatre (front and back of house)
- Production management
- Production materials (sets, props)
- Daytime/Evening interior lighting of theatres



Display Energy Certificates

Display Energy Certificates promote the improvement of the energy performance of buildings

DECs raise public awareness of energy use and provide the public with energy information about a building they are visiting

A DEC is based on a buildings actual annual energy consumption and the CO2 emissions that result from that energy use

Display Energy Certificates

DEC rating is from A to G, where A has the lowest CO2 emissions (best) and G has the highest CO2 emissions (worst)

The rating is also shown as a number

A typical building of its type would have a rating of 100

A building with twice the typical CO2 emissions would have a rating of 200 (or G).

Display Energy Certificates

Currently only required for buildings with a total useful floor area over 1,000m² – but can be smaller

Occupied by a public authority or institution providing a public service to a large number of persons and visited by those persons

Valid for one year

Accompanying Advisory Report is valid for seven years

Requirement for Display Energy Certificates came into effect on 1 October 2008

Ecovvenue – an opportunity to get ahead

DEC Benchmark – only one theatre!

CIBSE Guide F - Energy efficiency in buildings.pdf - Adobe Reader

File Edit View Document Tools Window Help

222 / 245 97.8% Find

Table 20.1 Fossil and electric building benchmarks⁰⁻²⁰ (figures in shaded columns may be regarded as upper limits for new design)

Building type	Energy consumption benchmarks for existing buildings (/ kWh·m ⁻²) per year (unless stated otherwise)				Basis of benchmark
	Good practice		Typical practice		
	Fossil fuels	Electricity	Fossil fuels	Electricity	
Catering:⁽²⁾					
— fast food restaurants	480	820	670	890	Gross floor area (kW·h/m ² per £1000 turnover)
— public houses	1.5	0.8	3.5	1.8	
— restaurants (with bar)	1100	650	1250	730	Gross floor area (kW·h/cover ^(b))
— restaurants (in public houses)	2700	1300	3500	1500	
Entertainment:					
— theatres	420	180	630	270	Gross floor area ^(b)
— cinemas	515	135	620	160	Gross floor area ^(b)
— social clubs	140	60	250	110	Gross floor area ^(b)
— bingo clubs	440	190	540	230	Gross floor area ^(b)
Education (further and higher)^{(7)(d)}					
— catering, bar/restaurant	182	137	257	149	Gross floor area
— catering, fast food	438	200	618	218	Gross floor area
— lecture room, arts	100	67	120	76	Gross floor area
— lecture room, science	110	113	132	129	Gross floor area
— library, air conditioned	173	292	245	404	Gross floor area
— library, naturally ventilated	115	46	161	64	Gross floor area
— residential, halls of residence	240	85	290	100	Gross floor area
— residential, self catering/flats	200	45	240	54	Gross floor area
— science laboratory	110	155	132	175	Gross floor area
Education (schools)⁽²⁰⁾:					
— primary	113	22	164	32	Gross floor area
— secondary	108	25	144	33	Gross floor area
— secondary (with swimming pool)	142	29	187	36	Gross floor area
Hospitals:⁽¹⁹⁾					
— teaching and specialist	339	86	411	122	Heated floor area ^(d)
— acute and maternity	422	74	510	108	Heated floor area ^(d)
— cottage	443	55	492	78	Heated floor area ^(d)
— long stay	401	48	518	72	Heated floor area ^(d)

Theatres Trust DEC Pool Royal Court – Unicorn – Plymouth TR

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Display Energy Certificate

How efficiently is this building being used?

Royal Court Theatre
Royal Court Theatre
Sloane Square
LONDON
SW1W 8AS

This certificate indicates how much energy is being used to operate this building. The operational rating energy actually used in the building. It is compared to a benchmark that represents performance indicative of more advice on how to interpret this information on the Government's website www.communities.gov.uk

Energy Performance Operational Rating

This tells you how efficiently energy has been used in the building. The numbers do not represent actual units of energy consumed; they represent comparative energy efficiency. 100 would be typical for this kind of building.

More energy efficient

- A 0-25
- B 26-50
- C 51-75
- D 76-100
- E 101-125
- F 126-150
- G Over 150

Less energy efficient

Technical information

This tells you technical information about how energy is used in this building. Consumption data based on actual meter readings.

Main heating fuel: Natural Gas
Building Environment: Heating and Mechanical Ventilation
Total useful floor area (m²): 2997
Asset Rating: Not available

	Heating	Electrical
Annual Energy Use (kWh/m ² /year)	172	219
Typical Energy Use (kWh/m ² /year)	345	129
Energy from renewables	0%	0%

Administrative information

This is a Display Energy Certificate as defined in the Energy Act 2008 (SI 2008/1462) as amended.

Assessment Software: ORCALC V2.00
Property Reference: 8551702004
Assessor Name: Hazel Ranyard
Assessor Number: LCEA053878
Accreditation Scheme: CIBSE Certif
Employer/Trading Name: Chapman Bar
Employer/Trading Address: 6 Princes Street
Issue Date: 05-08-2009
Valid Until: 27-05-2010
Related Party Disclosure: not applicable
Recommendations for improving the energy contained in the accompanying Advisory Report

Display Energy Certificate

How efficiently is this building being used?

Unicorn Theatre
Unicorn Theatre
147 Tooty Street
LONDON
SE1 2HZ

This certificate indicates how much energy is being used to operate this building. The operational rating energy actually used in the building. It is compared to a benchmark that represents performance indicative of more advice on how to interpret this information on the Government's website www.communities.gov.uk

Energy Performance Operational Rating

This tells you how efficiently energy has been used in the building. The numbers do not represent actual units of energy consumed; they represent comparative energy efficiency. 100 would be typical for this kind of building.

More energy efficient

- A 0-25
- B 26-50
- C 51-75
- D 76-100
- E 101-125
- F 126-150
- G Over 150

Less energy efficient

Technical information

This tells you technical information about how energy is used in this building. Consumption data based on actual meter readings.

Main heating fuel: Natural Gas
Building Environment: Air Conditioning
Total useful floor area (m²): 3419.1
Asset Rating: Not available

	Heating	Electrical
Annual Energy Use (kWh/m ² /year)	130	153
Typical Energy Use (kWh/m ² /year)	318	142
Energy from renewables	0%	0%

Administrative information

This is a Display Energy Certificate as defined in the Energy Act 2008 (SI 2008/1462) as amended.

Assessment Software: ORCALC V2.00
Property Reference: 779558
Assessor Name: Andrew LCEA05
Assessor Number: LCEA053878
Accreditation Scheme: CIBSE Certif
Employer/Trading Name: Fortiss
Employer/Trading Address: Fortiss
Issue Date: 16-12-2008
Valid Until: 15-12-2010
Related Party Disclosure: not applicable
Recommendations for improving the energy contained in the accompanying Advisory Report

Display Energy Certificate

How efficiently is this building being used?

Theatre Royal & Drum Theatre
Theatre Royal
Royal Parade
PLYMOUTH
PL1 2TR

Certificate Reference Number: 0910-0118-4950-9102-6092

This certificate indicates how much energy is being used to operate this building. The operational rating is based on meter readings of all the energy actually used in the building. It is compared to a benchmark that represents performance indicative of all buildings of this type. There is more advice on how to interpret this information on the Government's website www.communities.gov.uk/depbc.

Energy Performance Operational Rating

This tells you how efficiently energy has been used in the building. The numbers do not represent actual units of energy consumed; they represent comparative energy efficiency. 100 would be typical for this kind of building.

More energy efficient

- A 0-25
- B 26-50
- C 51-75
- D 76-100
- E 101-125
- F 126-150
- G Over 150

Less energy efficient

Technical information

This tells you technical information about how energy is used in this building. Consumption data based on actual meter readings.

Main heating fuel: Natural Gas
Building Environment: Heating and Mechanical Ventilation
Total useful floor area (m²): 9072
Asset Rating: Not available

	Heating	Electrical
Annual Energy Use (kWh/m ² /year)	117	122
Typical Energy Use (kWh/m ² /year)	387	150
Energy from renewables	0%	0%

Administrative information

This is a Display Energy Certificate as defined in SI 2007/991 as amended.

Assessment Software: ORCALC V1-05-02
Property Reference: 19094114000
Assessor Name: John Fluke
Assessor Number: STRO020451
Accreditation Scheme: STroma Accreditation Ltd
Employer/Trading Name: Balfay Partnership
Employer/Trading Address: Lytton Court
Issue Date: 06-12-2008
Valid Until: 01-12-2009
Related Party Disclosure: Energy Management Services
Recommendations for improving the energy efficiency of the building are contained in the accompanying Advisory Report

Total CO₂ Emissions

This tells you how much carbon dioxide the building emits. It shows tonnes per year of CO₂.

Previous Operational Ratings

This tells you how efficiently energy has been used in this building over the last three accounting periods.

Plasa 09

Ecovenue funding announced

Thanks to DEC Pool Members:

Jane Lemon, Ambassador Theatre Group

Ed Nickols, Northern Stage

Carolyn Forsyth, Unicorn

Paul Handley, Royal Court

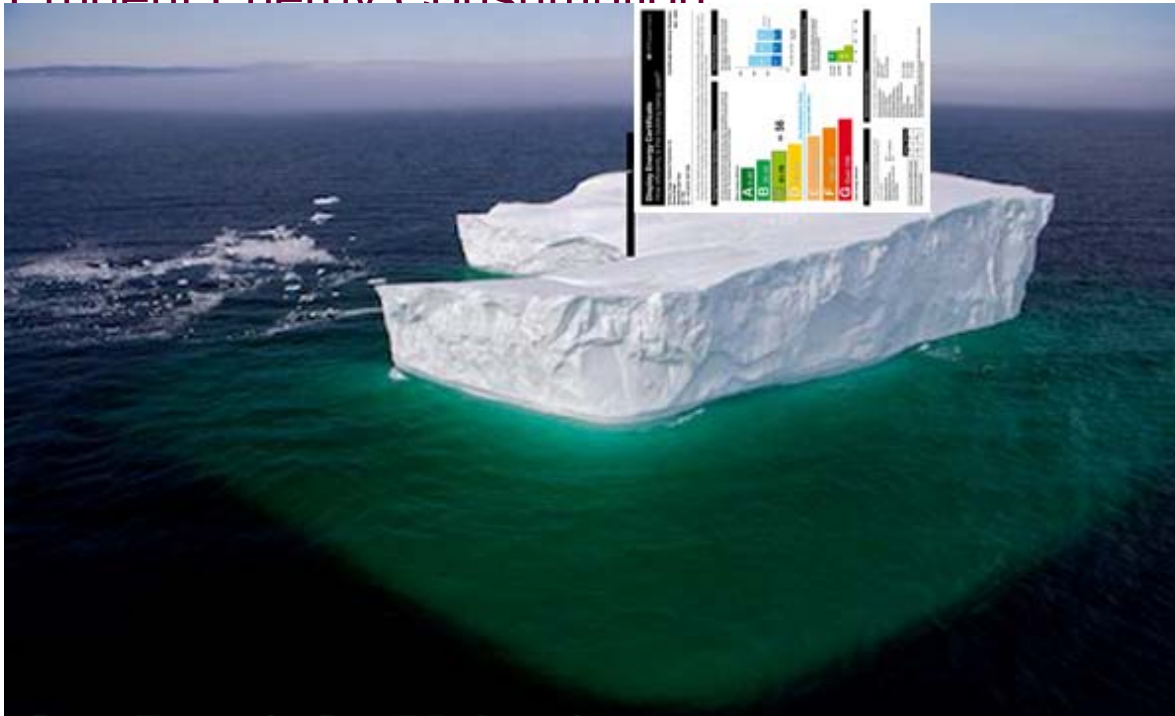
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Using the DEC as a tool

Ed Nickols “DEC: The Flag on the Iceberg of Prudent Energy Consumption”



Ecovenue

“ECOVENUE is a theatre-specific, environmental business support project for 48 theatre and performing arts venues across London. It aims to achieve quantifiable improvements in the environmental performance of London’s theatres, renowned worldwide. Theatres will be provided with advice to develop Environmental Policies and achieve Display Energy Certificates (DECs). Savings made will help to deliver the Mayor of London’s Green Theatre Plan, which aims to help theatres achieve reductions in carbon emissions by 60% from 1990 levels by 2025. ECOVENUE will be delivered by The Theatres Trust, the National Advisory Public Body for Theatres and will run until 2012.”

Ecovenue

Three year project

48 small scale London Theatres recruited in January 2010

Successful theatres with the project for two years

Theatre Building Services Adviser appointed by end 2009

Apply Theatres Sustainability Principles

Develop theatre-specific environmental policies

Ecovenue

Free Environmental Audit and Advisory Report

Free Display Energy Certificate – Two years

Advice on use of natural resources and waste management
~ Recycling, reuse of renewables, and waste reduction

Links to Mayor of London's Green Theatre Plan and Procurement Code

Benchmark DEC's – help to determine theatre attributes

Theatres become members of UK wide DEC Pool

The Theatres Trust

mhora.samuel@theatrust.org.uk

www.theatrust.org.uk

info@theatrust.org.uk

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