

Keyword index

A

accelerator 1325
acceptance 123
action 617
activity patterns 93
activity-based workplace 1499
actors 939
adaptive thermal comfort (ATC) ... 1451
agent-based modelling 3
air conditioning 1451, 1563, 1631,
1697, 1705
algorithmic control 1377
alternative energy systems (AES) ... 987
alternative measures 561
app 179
appliances 1563, 1713
assessments 551, 599
auctioning revenue use 321
automatic control 1489

B

barriers 675, 1459
batteries 313, 949
battery storage 817
behaviour 649, 1105, 1653
behavioural change 179, 395, 717,
1451
behavioural savings programmes ... 717
bi-national cooperation 371
big data 649, 1289, 1387
blockchain 899
bottom-up analysis 1563, 1641
broader social context 439
building 1345
building codes 293
building commissioning 1469
building communities 855
building design 199, 805, 1355
building energy certification ... 293, 685,
1217, 1303, 1433
building energy policies 607
building energy quotas 189
building envelope 217, 1295
building policy 439
building refurbishment 199, 1269,
1531

building retrofitting 1177, 1253, 1269
building sector 1631
building stock 1289, 1303, 1427
building technology 1225, 1489
building trade 1269
buildings 513, 987
built environment 71, 1167
business models 963
business strategy 303

C

car sharing 1079
car transportation 1079, 1087, 1117
carbon tax 1365
carbon-neutral housing 209
change of behaviour 1243
circular economy 1553, 1603
cities 199, 513, 591, 607, 973, 987
citizen visions 159
citizens 83
climate change 1407
climate change mitigation 133, 617,
1047
climate policy 267, 659, 785, 1167
climate vulnerability 287
cloud computing 1581
cloud control 649
cluster analysis 745
clusters 1105
co-benefits 395
CO₂ emissions 607, 1069, 1117
coefficient of performance 1547
cognitive agent models 1019
cold appliances 1593
collaboration 1325
collective conventions 29
commercial buildings 1325
communication 149
community energy systems 835, 955
comparing evaluation 767
comparison of simulation tools 1515
competitions 561, 1397
competitiveness 395
compliance 1237, 1573
conjoint analysis 1177
connected thermostat 649

conservation 71
construction industry 1225
construction systems 1407
consumer behaviour 71, 617, 1019
consumer's contract switching
behavior 917
consumption 1243
control 1489
cooling 1631, 1667, 1713
cost benefit 425, 675, 1469, 1563
cost curves 1531
cost effectiveness 675
cost efficiency 209
counselling 1355
craftsmen 1177
cycling 1097

D

data centres 1581
data collection 777, 1667
data monitoring 717
database 1573, 1723
decarbonisation 255, 997, 1269
decision-making process 1019, 1177,
1225
decomposition 503
deep renovations 599, 1167, 1253,
1259, 1315, 1345
delegation of responsibility 47
demand patterns 745
demand response 93, 113, 389, 541,
745, 929, 955, 1489
demand side management
(DSM) 389, 899, 1443, 1489
design 805
design process 71
developers 845
diffusion 1459
digital 929
digital signage display 1687
digitisation 277
direct solar electricity 1615
Directive on Eco-design
(EuP/ErP) 1553
Directive on Electricity Production from
Renewable Energy Sources (RES) ... 891

- Directive on Energy Performance
in Buildings (EPBD) 1237, 1279
displays 13
disruption 1117
distributed energy resources
(DER) 405
distributional effects 1243
district heating ... 83, 835, 875, 881, 891
domestic appliances 1653
domestic energy 1387
domestic energy efficiency ... 179, 1199,
1573
domestic policies and measures ... 1269
DR service providers 235
dynamic efficiency 1469, 1489
dynamic solar shading 1489
dynamic windows 55
- E**
e-bikes 1097
eco-visualization 61
Ecodesign Directive (EuP/ErP) ... 1603,
1677
econometric evaluation 1069
economic analysis 503
economic assessment 835
economic model 405
economic viability 707
effectiveness 487
efficiency first 55, 495
efficiency standards 55
efficiency trends 579
electric mobility 1129
electric power system 255
electric storage 1025, 1489
electric vehicles ... 313, 1025, 1035, 1105
electricity 93
electricity consumption 1155
electricity market design 495
electrification 247, 997
elevators 1335
emission reduction policy
analysis 1069
emissions scenarios 267
employment 835
end-use efficiency 631, 929
end-use metering 631
energy audit 225
energy communities 797
energy conservation 855
energy consumption ... 39, 47, 503, 1217,
1593
energy data 607, 1289
energy demand ... 247, 413, 1335, 1387
energy demand side 93
energy efficiency action plans 169,
1433
Energy Efficiency Directive
(EED) 487, 551, 561, 579, 891
energy efficiency financing 1315
energy efficiency index 727
energy efficiency indicator 685, 727
energy efficiency investments ... 303, 395
energy efficiency measures 907
energy efficiency obligation ... 457, 467,
579
energy efficiency policy ... 19, 341, 361,
395, 477, 503, 513, 591, 643, 669, 685,
767, 1087, 1189, 1199, 1225, 1335, 1603,
1723
energy efficiency programme ... 321, 425
energy efficient products 1687
energy efficient technologies 1427,
1459
energy equality 143
energy intensity 395
energy justice 143, 361
energy label 1547, 1631
energy labelling ... 293, 1631, 1653, 1697
Energy Labelling Directive 1573,
1677, 1687
energy localization 955
energy management 1397, 1419
energy measurement 1433
energy model 949, 973, 1641
energy monitoring 631, 1653
energy performance 1469, 1477
energy performance certificates ... 1209,
1217, 1237
energy performance gap 1477
energy performance of buildings
directive (EPBD) 1217
energy policy ... 143, 447, 531, 767, 777,
1019, 1243, 1553, 1641, 1661
energy poverty 521, 569, 1199
energy saving methodology 757
energy saving potential 313, 685,
1335, 1451
energy savings calculation 757
energy savings certificates 467
energy savings potential 123
energy services 617, 675, 697, 963
energy sufficiency ... 123, 143, 159, 179,
189, 331, 351, 361, 1143, 1505
energy supply and demand 341
energy transition 247, 371, 939
energy union 1199
energy use 13, 71
energy-related products 1631
engineering estimates 1563
environmental impact 267, 1603
EPBD 1303
equity 973
ESCO market development 697
- ESCO market query 697
ESCOs 1315
EU 2020 target 503, 579
EU Emission Trading Scheme
(EU ETS) 321
EU policy 361, 1253
evaluation 467, 477, 659, 669, 697,
735, 767, 1189
evaluation methods 697, 717, 767
everyday life 39, 113
excess heat 875
existing housing stock 1269
existing residential buildings. 1177, 1217
experience sharing 477
experimentation 47
- F**
feedback 855
financial incentives 55
fleet consumption regulation 1059
flexibility 103, 1105
flexible demand 865
floor space 1355
fuel cell 1009
fuel consumption 1087
fuel economy 1087
fuel poverty 1365
- G**
games 179
gap 395
Germany 659
global platform 1325
governance 805, 987
gradient boosting 757
greenhouse gas emission
reduction 1009
greenhouse gas mitigation 447
ground source 1677
group behavior 3
- H**
harmonisation 643, 1705
health 1047, 1259
heat controls 1377, 1397
heat feed-in 891
heat pump 1377, 1547, 1677
heat storage 817, 1489
heating 71, 617, 1355, 1377, 1531
heating systems 217
heavy-duty vehicles 1009
home energy audits 71
homeowners 1355
household appliances 405
household consumption 29, 93, 631
household electricity 29, 745
households 113, 875, 1035, 1155

housing 881, 1355, 1477
 HVAC 649
 hybrid and electric cars 1059

I

ICT-based behaviour change 855
 impact 599, 777
 impact evaluation 717, 767, 777
 incandescent light bulbs 735
 incentive mechanisms 19, 457
 inclusion 973
 India 1289
 indicators 569
 individual houses 1209
 individual mobility 1079
 indoor air quality 1237, 1525
 indoor climate 1237
 industrial energy saving ... 169, 395, 643
 industrial SME 225
 information 487
 information and communication
 technologies (ICT) 1581, 1661
 infrastructure 805, 939
 innovation adoption 1019
 innovative business models 277
 innovative technologies 1427
 intentional community 845
 intermediaries 1177
 internet 1641, 1661
 internet of things (IoT) 1641, 1661
 IPMVP 757

K

key performance indicators (KPI) ... 907

L

labelling 1723
 LED 19, 735
 legislation 891
 legitimacy 531
 liberalized electricity market 917
 life cycle 1407
 life cycle analysis 1603
 lifts 1335
 living space 1243
 load management 929, 949
 local and regional energy
 planning 133, 591, 785
 local authorities 133, 825, 963
 local energy policies 785
 local energy system 805
 local or regional energy efficiency
 measures 551
 long-term EU GHG emissions
 reduction 1295
 long-term renovation strategies ... 1237
 low-energy building 1407

low-energy summer comfort 1505
 low-income households 1259

M

mandatory requirements 1189
 market barriers 1035
 market facilitation 235
 market transformation 735, 1581
 material arrangements 1155
 measures 425
 media discourse 169
 Middle East 287, 845
 middle-out approach 199
 middle-out perspective 199
 minimum energy efficiency
 standards 1259, 1697
 minimum energy performance
 standards (MEPS) 1705, 1723
 mitigation potential 447, 659
 mobility 617, 987, 1079
 modelling 447
 monitoring 659, 697, 777
 multiple benefits ... 303, 777, 1259, 1563
 multiple benefits of energy efficiency
 projects 149
 multiple impacts 377
 municipal utilities 963
 municipalities 881, 1129

N

narratives 351
 National Climate Initiative 659
 national energy efficiency action
 plans (NEEAPs) 487
 national energy efficiency plans 591
 natural gas 1167
 net zero energy 513
 networks 225, 1427, 1641
 new paradigm 189
 non-energy benefits (NEBs) ... 225, 303,
 425, 835
 nudgeathon 71

O

occupancy 1477
 occupancy detection 1443
 odor 1525
 off-grid electricity 1667
 offices 1499
 online tool 669
 operational tools 551
 optimal thermostat setting 1451
 optimisation 1489
 organisation behaviour 303
 output 599
 overcoming barriers 551, 675
 overheating 1407

P

Paris agreement 1295
 parking 1079
 participation 61
 participatory design 71
 partnering project 1325
 passenger vehicles 1069
 passive houses 1433
 passivhaus 1477
 peak load 745, 949
 peak savings 103
 persistence 717
 photovoltaics 39, 55, 313, 707, 817,
 949
 plug-in hybrid electric vehicle 1035
 policies and measures 1189
 policy 413
 policy and regulation 541
 policy implementation ... 487, 503, 579,
 591
 policy instruments 599
 policy interaction 521
 policy measures 1581
 policy mix 767
 policy programme 225
 policy-making 331, 569
 practice-based interventions 1155
 practices 39, 103, 1155
 primary energy 1505
 primary energy use 1407
 product policy 1631
 progressive tariff 1505
 prosumers 39, 899
 PtX 217
 public buildings 579
 public information display 1687
 public support 531

Q

qualitative study 83
 quantitative survey 1129, 1177
 quotas 293

R

rapid evidence assessment 1621
 rebound effects 293, 1087
 RED II 891
 refrigerators 1667
 refurbishment 1345
 refurbishment strategies 1531
 regulation 1047
 renewable energy 255, 267, 513,
 1025
 renewable heating law 891, 1189
 renovation 1295, 1365
 renovation policies 1345
 research 331, 1387, 1451

- residential buildings 467, 599, 1143,
1289, 1459
- residential lighting..... 19
- resource efficiency..... 1621
- resources..... 1553, 1603
- retrofit approaches..... 1345
- retrofits 55
- S**
- scaling..... 133
- scenario study 217
- scenarios..... 123, 413
- seasonal space heating energy
efficiency 1547
- sector coupling..... 217
- self-consumption..... 707
- sequences 103
- serious game..... 149
- sharing economy 797
- smart cities..... 825
- smart grid..... 939, 955, 1489
- smart home technology 865
- smart metering..... 825
- smart meters..... 1387
- smart readiness indicator..... 1237
- social..... 1397
- social learning 113
- social practices..... 47
- societal changes..... 413
- socio-technical..... 1155
- solar energy 39
- Solar Plus 817
- solar thermal 817
- solar utilization efficiency 1615
- space heating and cooling 1407
- spatial data 1097
- standardisation 1687
- standards and labeling program 1713
- standby power 1641
- State EE Index for India 727
- statistics..... 631
- step-by-step retrofit..... 1303
- stock model 1335
- subsidies 1315
- sufficiency..... 29, 103, 133, 447
- survey 649
- sustainability 71, 987, 1499
- sustainable communities 845, 881,
907
- sustainable energy initiatives..... 159
- sustainable housing..... 439
- Sweden 13
- system simulation 949
- T**
- taxes..... 1069
- techno-optimism..... 351
- technology adoption..... 939
- technology diffusion 1225
- television..... 1653, 1687
- tender 561
- territorial carbon budgets..... 133
- testing 1451, 1547, 1667, 1687, 1697,
1713
- time 1253
- time use..... 103, 745, 1105
- tool..... 313
- total primary energy 1505
- tradable white certificates..... 457
- training..... 149, 487
- transaction costs 675
- transformation pathways 617
- transition 531
- transport electrification 1117
- trends 413
- trigger points 1279
- U**
- U-value 1217
- uncertainty propagation..... 1209
- universities 1419
- urban building energy modeling.... 1515
- urban model..... 785
- urban planning 805, 973, 1505
- US policy 1047
- user behaviour 631, 1397
- user engagement 855
- V**
- value 1489
- vehicle charging..... 1025
- ventilation..... 1459, 1631
- visualisation 13
- voluntary agreements 777
- W**
- walking 1097
- waste heat..... 891
- wastewater 875
- water management 881
- web portal..... 1387
- white certificates 457, 467
- willingness to pay 1035
- windows 1295
- work environment..... 1499
- work time 103
- world leading cities 607
- Z**
- zero-carbon houses..... 1325
- zero-carbon technologies..... 1325
- zero-emission houses 845