

Energy Positive: S M L XL

Approaches to Scaling-Up Energy Positive Buildings
Renewable Energy, Building Technology and Funding Sources

S

M

L

XL

15,000 sf



confidential

EUI(kBtu/sf*yr)

30

Building Type

Art + Media Studio

Renewable Energy

Roof: 110%

S

15,000 sf



30

Art + Media Studio

Roof: 110%

M

50,000 sf



45

Teaching Lab

Roof + Site: 124%

L

XL

EUI(kBtu/sf*yr)

Building Type

Renewable Energy

S

15,000 sf



30

Art + Media Studio

Roof: 110%

M

50,000 sf



45

Teaching Lab

Roof + Site: 124%

L

250,000 sf



60

Inpatient Tower

Roof + Site: 50%

XL

EUI(kBtu/sf*yr)

Building Type

Renewable Energy

S

15,000 sf



confidential

30

Art + Media Studio

Roof: 110%

M

50,000 sf



Bristol
Community
College

45

Teaching Lab

Roof + Site: 124%

L

250,000 sf



confidential

60

Inpatient Tower

Roof + Site: 50%

XL

550,000 sf



confidential

155

Research Lab

Roof: 5% + Green Power: 95%

EUI(kBtu/sf*yr)

Building Type

Renewable Energy

0-2%

Cost Premium

0-6yr

Simple Payback

EUI(kBtu/sf*yr)

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Inpatient Tower

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Roof + Site: 124%

Roof + Site: 50%

Roof: 5% + Green Power: 95%

Technology

Daikin / Mitsubishi
Air-Source VRF

Multistack + Systecon
Ground-Source Scroll Chillers

Daikin / Mitsubishi
Ground-Source VRF

Carrier / Trane / York
Ground-Source Screw Chillers

Renewaire / Lossnay
ERVs

Haakon
DOAS with Enthalpy Wheel

Innovent
Ground-Source Heat Pump AHUs

Konvekta
Heat Recovery

Big Ass / Aeratron
Ceiling Fans

Erlab
Filtered FumeHoods

Lumos
Solar PV (select areas)

Rygan HPGX
Ground-Source

Eemax
Point of Use DHW

Aircuity
Air Quality Monitoring

Colmac
Ground-Source DHW

Acoustiflo
o AHU
Fans

Schuco

Clearline

Passive House

Schuco

0-2%

Cost Premium

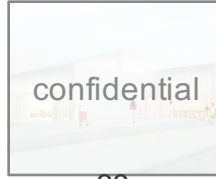
0-6yr

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Colmac
Ground-Source DHW

Acoustifl
o AHU
Fans

Schuco
Triple-Glazed Windows

Clearline
Window Actuators

Passive House
Triple-Glazed Windows

Schuco
Triple-Glazed Windows

Funding

Fed Solar Tax Credit



MA DOER Grants



MassCEC GSHP Grant



Utility Incentives



SRECI / SMART



APS: AEC for GSHP

