Creating a Clean, Affordable and Resilient Energy Future for the Commonwealth

Codes for the Future

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Photo credit: Fontaine Brothers, used with permission
- efficiency first
- maintenance friendly
- readily available

wall R19+21ci
roof R45ci
wwr 20%
window U=0.21

External shading
Condensing heating
Displacement ventilation
Energy recovery

Photo credit: Lamoureux Pagano, used with permission
345 kW

Fontaine Brothers, used with permission
### Site Energy (MBtu/yr) | Site to Source Factor | Source Energy (Mbtu/yr)
---|---|---
Gas | 1,318,800 | 1.09 | 1,437,492
Electric | 1,360,695 | 3.15 | 4,286,190
**Total** | 5,723,682 |  |  

**PV**

<table>
<thead>
<tr>
<th>Site Energy (MBtu/yr)</th>
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<tr>
<td>1,817,042</td>
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**434 kW** → **80% ZERO ENERGY**
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![Graph showing energy consumption]

- Zero energy
- School that was built
- Improved envelope, hvac, etc
- School required by code

- MassSave
- Rooftop PV
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Buildings are already closer to zero energy than they are to the energy consumption of the “last code”

Focus on envelope and rooftop PV

Avoid envelope tradeoff

Learning from passivehouse

EUI requirement?

EUI requirement for regulated loads