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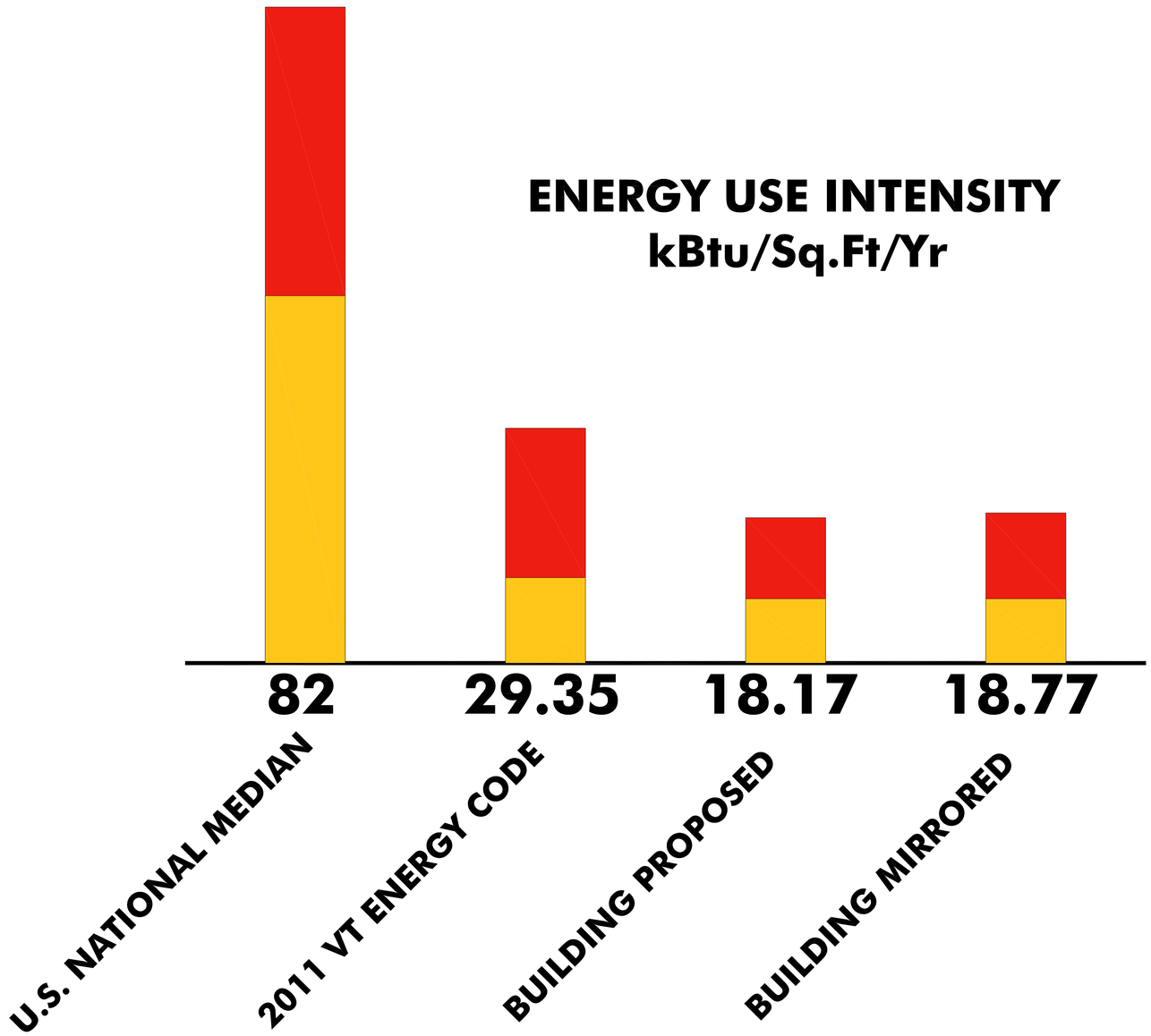
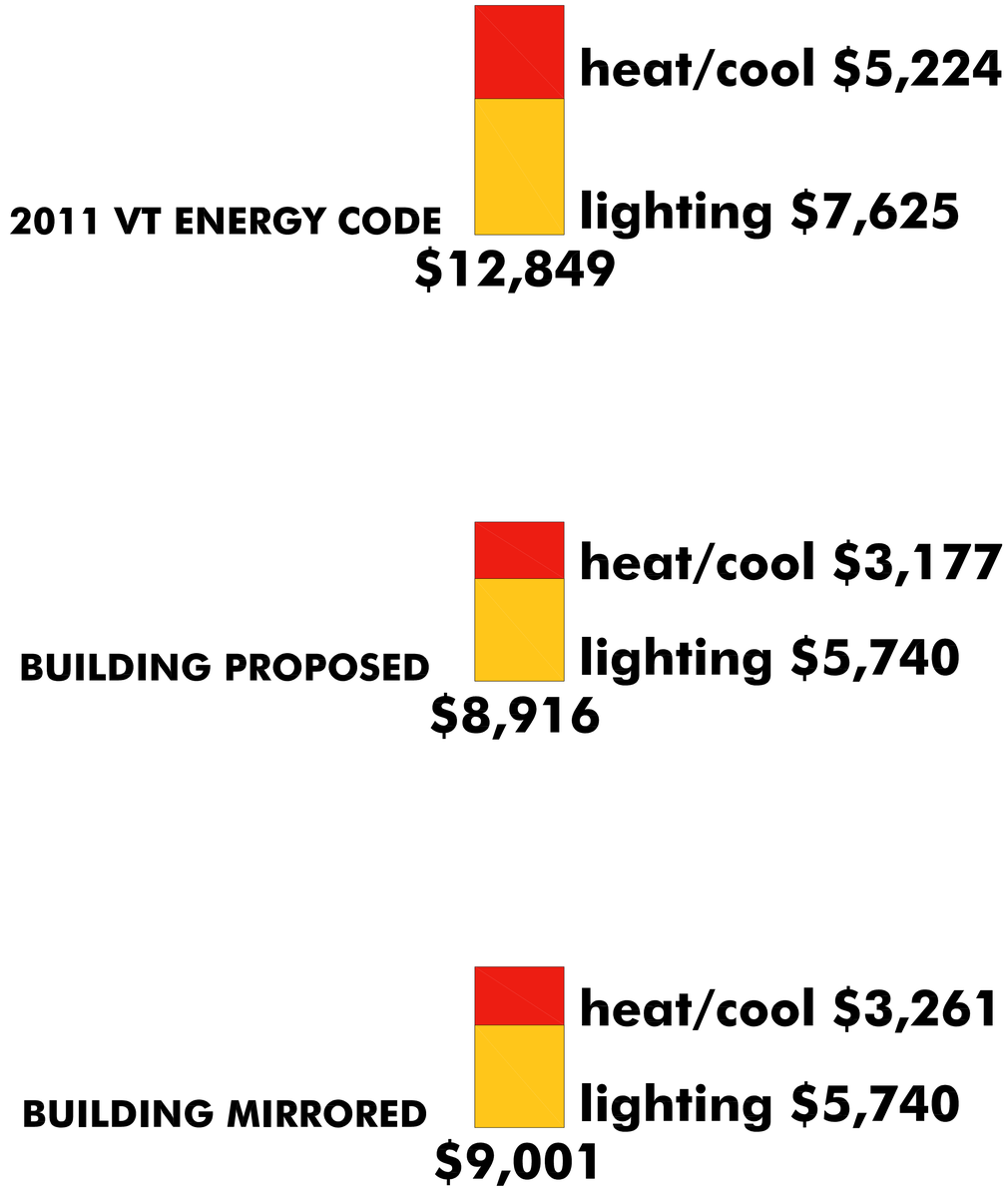
Ownership of Instruments of Service

ENERGY USE INTENSITY
kBtu/Sq.Ft/Yr





Cost Per Year

(1st year @ todays energy rates)

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Solar Photovoltaic (PV)

Special Category (government, non-profit, schools, hospitals, low-income multi-family) PV: $2.25/W DC up to 10 kW, $1.50/W DC for next 50 kW (up to 60 kW). Efficiency adder: $0.10/W (cap: $450). Maximum incentive $97,500 or up to 50% of project costs (whichever is lower).

48kW PV array initial cost = +/- $178,820

Cost after state incentive = +/- $99,320

Annual Energy Production +/- 54,000 kWh

Cost of Electricity per year at 14 cents/kWh = $7,560

6 cent per kWh solar PV utility premium = $3,240

Value per year of installing 48 kW PV array = $10,800

Payback of 48 kW PV array (without factoring energy inflation) = 9.19 years

BUILDING MIRRORED
w/ 48kW PV Array

$-1,800

Cost Per Year

(1st year @ todays energy rates)

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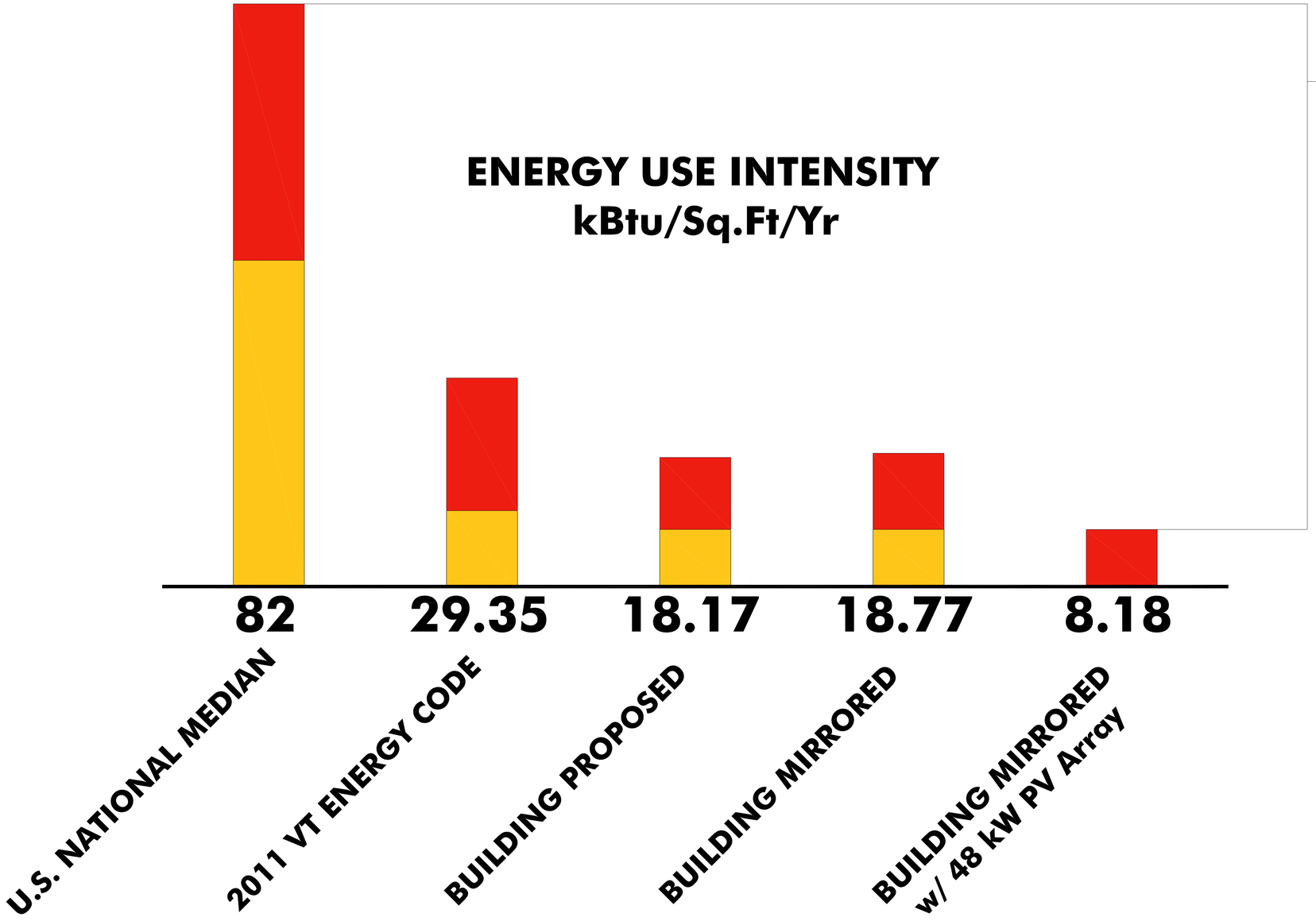

90.03% FOSSIL FUEL SAVINGS OVER NATIONAL MEDIAN

2030 CHALLENGE Targets: U.S. National Medians

U.S. Medians for Site Energy Use and 2030 Challenge Energy Reduction Targets by Space/Building Type[3]

From the Environmental Protection Agency (EPA): Use this chart to find the site fossil-fuel energy targets

Building Use Description[2]	Available in Target Finder[3]	Median Source EUI[4] (kBtu/Sq.Ft./Yr)	Average Percent Electric	Median Site EUI[4] (kBtu/Sq.Ft./Yr)	2030 Challenge Site EUI Targets (kBtu/Sq.Ft./Yr)				
					50% Target	65% Target	70% Target	80% Target	90% Target
Education		144	63%	58	29.0	23.2	17.4	11.6	5.8
K-12 School	X								
College / University (campus-level)		244	63%	104	52.0	41.6	31.2	20.8	10.4
Food Sales		570	86%	193	96.5	77.2	57.9	38.6	19.3
Grocery Store / Food Market	X								
Convenience Store (with or without gas station)		657	90%	228	114.0	91.2	68.4	45.6	22.8
Food Service		575	59%	267	133.5	106.8	80.1	53.4	26.7
Restaurant / Cafeteria		434	53%	207	103.5	82.8	62.1	41.4	20.7
Fast Food		1170	64%	418	209.0	167.2	125.4	83.6	41.8
Inpatient Health Care (Hospital)	X								
Lodging		163	61%	72	36.0	28.8	21.6	14.4	7.2
Dormitory / Fraternity / Sorority	X								
Hotel, Motel or Inn	X								
Mall (Strip Mall and Enclosed)		247	71%	94	47.0	37.6	28.2	18.8	9.4
Nursing/Assisted Living	X								
Office	X								
Outpatient and Health Care		163	72%	62	31.0	24.8	18.6	12.4	6.2
Clinic / Other Outpatient Health		194	78%	67	33.5	26.8	20.1	13.4	6.7
Medical Office	X								
Public Assembly		89	57%	42	21.0	16.8	12.6	8.4	4.2
Entertainment / Culture		94	63%	46	23.0	18.4	13.8	9.2	4.6
Library		246	59%	92	46.0	36.8	27.6	18.4	9.2
Recreation		100	55%	39	19.5	15.6	11.7	7.8	3.9
Social / Meeting		71	57%	43	21.5	17.2	12.9	8.6	4.3
Public Order and Safety		161	57%	82	41.0	32.8	24.6	16.4	8.2
Fire/Police Station		146	56%	82	41.0	32.8	24.6	16.4	8.2
Service (Vehicle Repair / Service, Postal service)		96	63%	45	22.5	18.0	13.5	9.0	4.5
Storage / Shipping / Nonrefrigerated Warehouse		28	56%	10	5.0	4.0	3.0	2.0	1.0
Non-refrigerated Warehouse/Distribution Center	X			1	0.5	0.4	0.3	0.2	0.1
Refrigerated Warehouse	X								
Religious Worship	X								
Retail Store (Non-mall Stores, Vehicle Dealerships)		139	67%	53	26.5	21.2	15.9	10.6	5.3
Other[3]		127	56%	70	35.0	28.0	21.0	14.0	7.0

Source: ©2012 2030 Inc. / Architecture 2030
Data Source: U.S. Environmental Protection Agency; U.S. Energy Information Administration

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