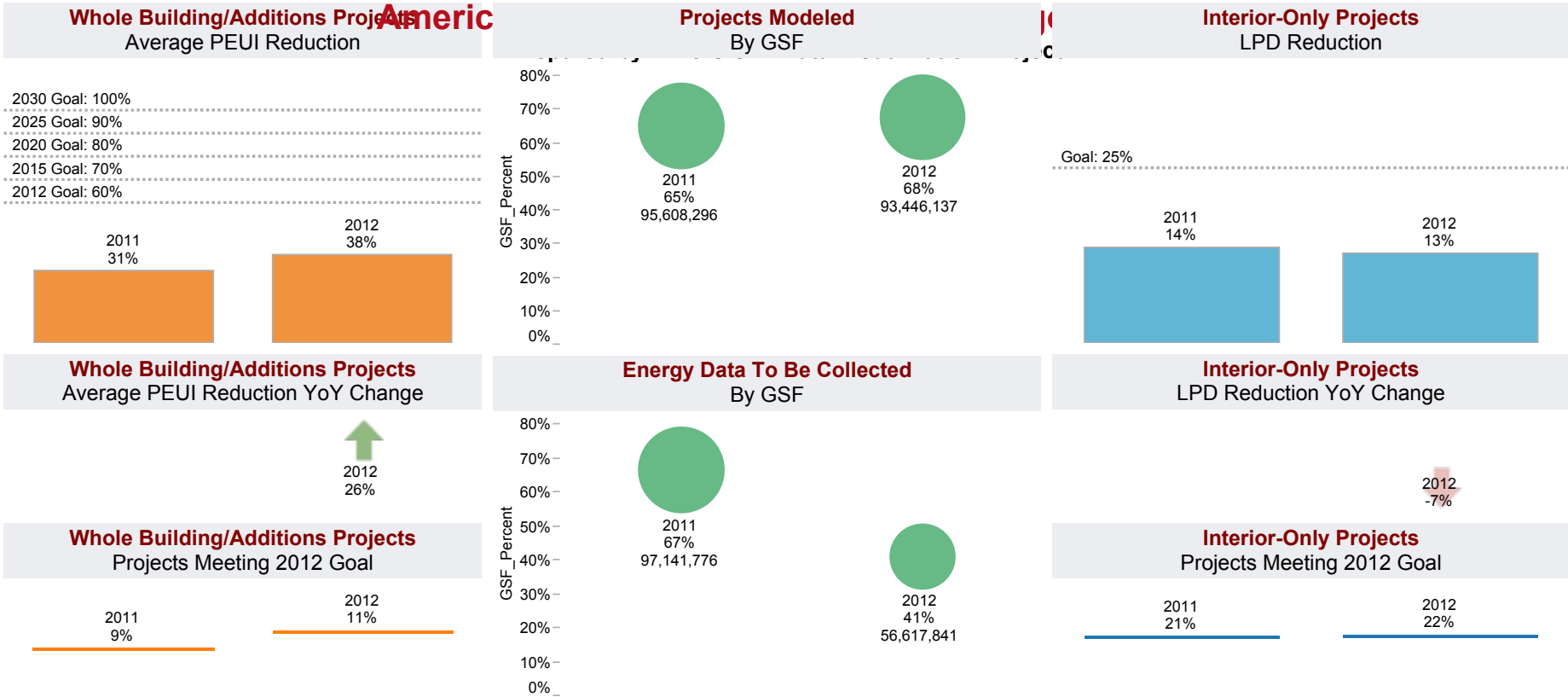


American Institute of Architects - Chicago Branch

Prepared by Arne Oien - Data Visualization Project



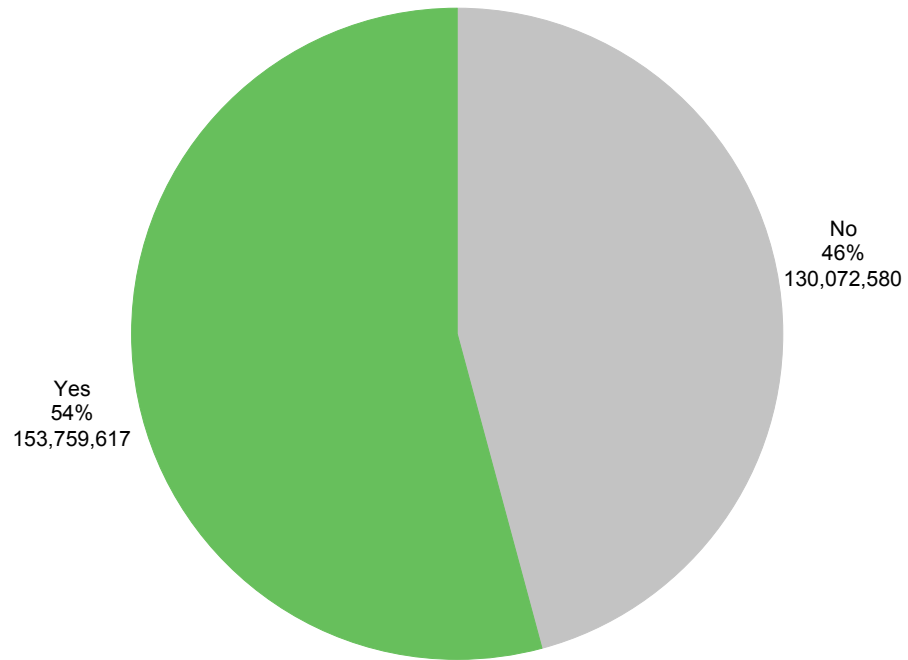
Gross Square Footage (GSF) Analysis (click year to view)				
	Projects	Modeled	EUI Data Collect	GSF
2011	140	82	54	146,046,391
2012	271	160	87	137,785,806

Lighting Power Density (LPD) Reduction Analysis (click year to view)				
	Building Types	Projects	Countries	Avg. LPD Redu..
2011	8	104	2	14%
2012	9	180	3	13%

Projected Energy Use Intensity (PEUI) Reduction Analysis (click year to view)				
	Building Types	Projects	Countries	Avg. PEUI Reduc..
2011	14	140	9	31%
2012	16	271	14	38%

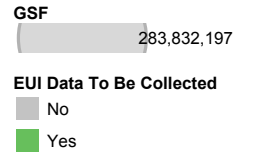
Energy Use Intensity (EUI) - AIA vs. New York City (click year to view)				
	Avg. EUI	Projects	NYC Avg. EUI	NYC Buildings
2011	69	79	82	10,958
2012	70	159	82	10,958

Energy Data To Be Collected By GSF



EUI Data To Be Collected, GSF_Percent and sum of GSF. Color shows details about EUI Data To Be Collected. Size shows sum of GSF. The marks are labeled by EUI Data To Be Collected, GSF_Percent and sum of GSF. The data is filtered on YEAR Year, Scope and Action (Return). The YEAR Year filter keeps 2011 and 2012. The Scope filter keeps Whole Building/Addition and whole building/addition. The Action (Return) filter keeps 1 member.

Energy Data To Be Collected By GSF



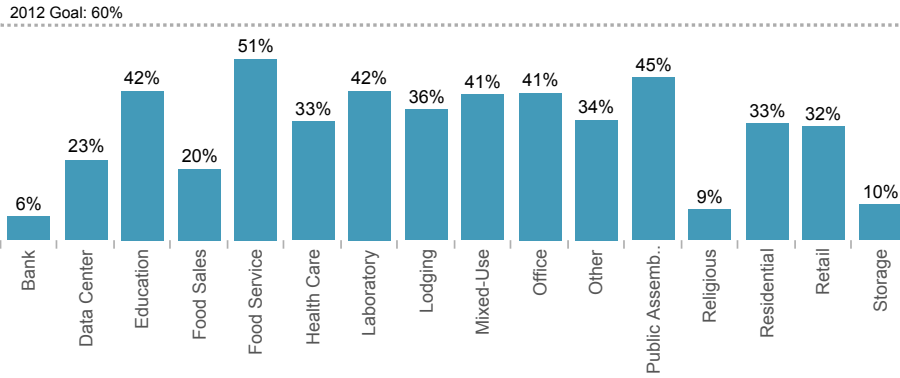
EUI Data To Be Collected, GSF_Percent and sum of GSF. Color shows details about EUI Data To Be Collected. Size shows sum of GSF. The marks are labeled by EUI Data To Be Collected, GSF_Percent and sum of GSF. The data is filtered on YEAR Year, Scope and Action (Return). The YEAR Year filter keeps 2011 and 2012. The Scope filter keeps Whole Building/Addition and whole building/addition. The Action (Return) filter keeps 1 member.

2012

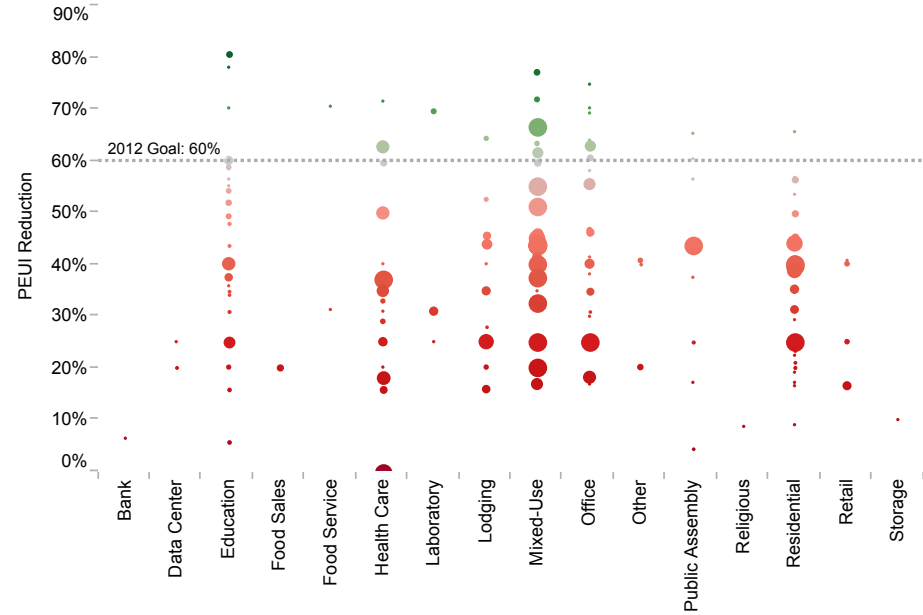
American Institute of Architects - Chicago Branch Reduction in Projected Energy Use Intensity (PEUI)



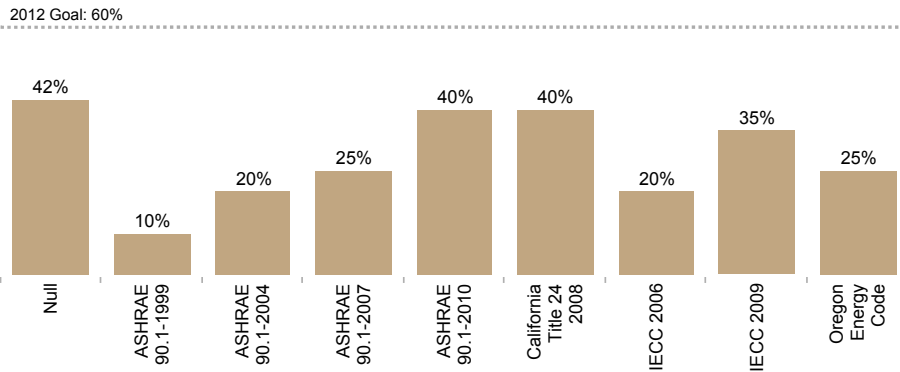
Average PEUI Reduction by Building Use Type



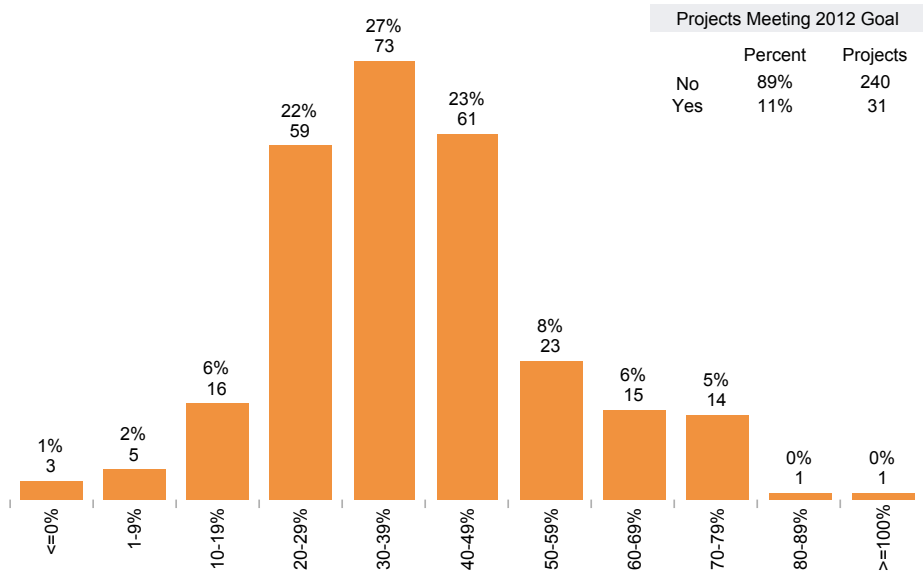
PEUI Reduction Distribution



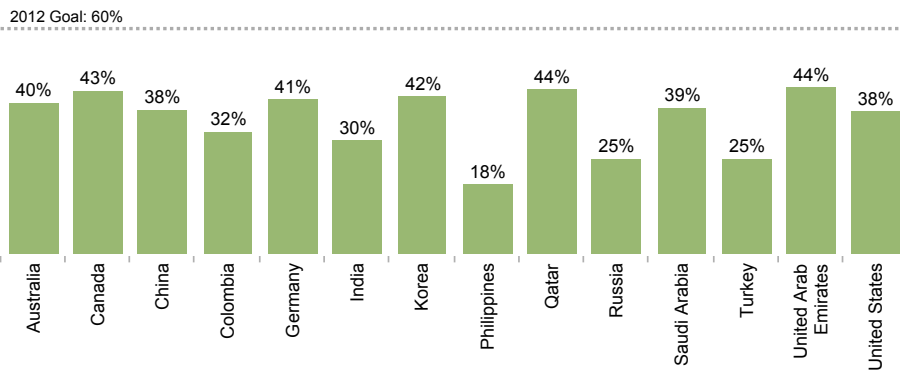
PEUI Reduction by Building Design Code



Projects By PEUI Reduction Bin



PEUI Reduction by Country

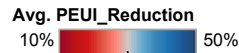
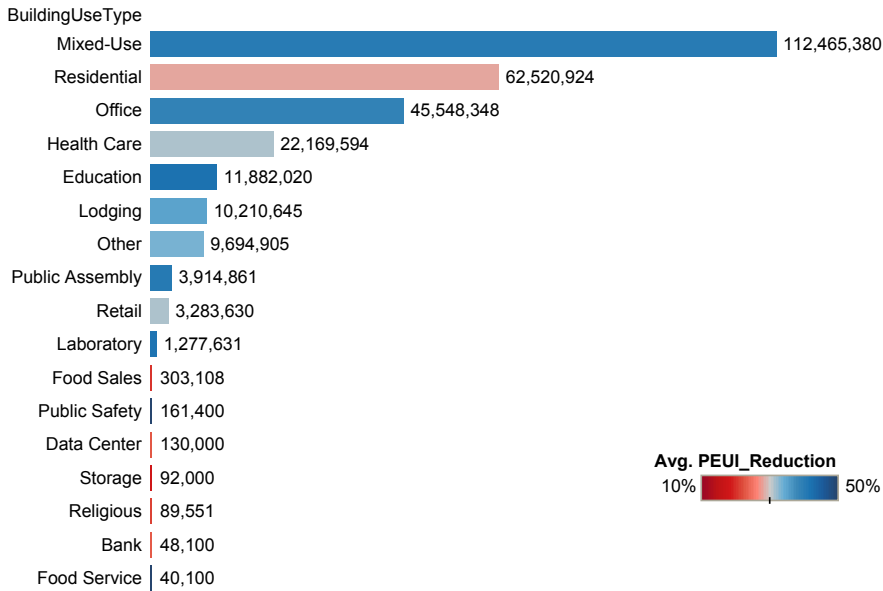


2012

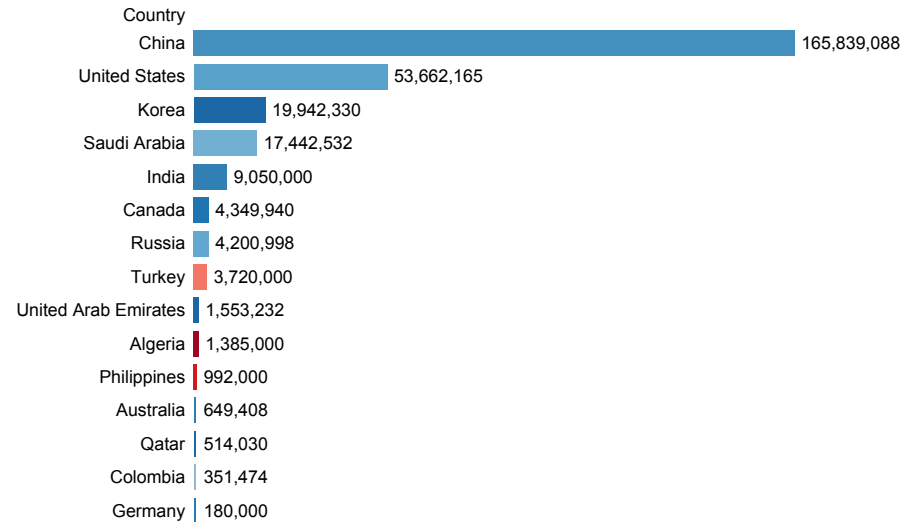
American Institute of Architects - Chicago Branch Gross Square Footage (GSF) Analysis



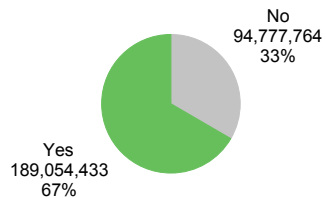
GSF by Building Use Type



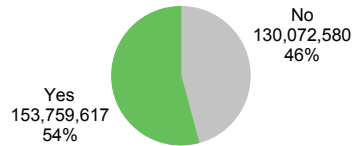
GSF by Country



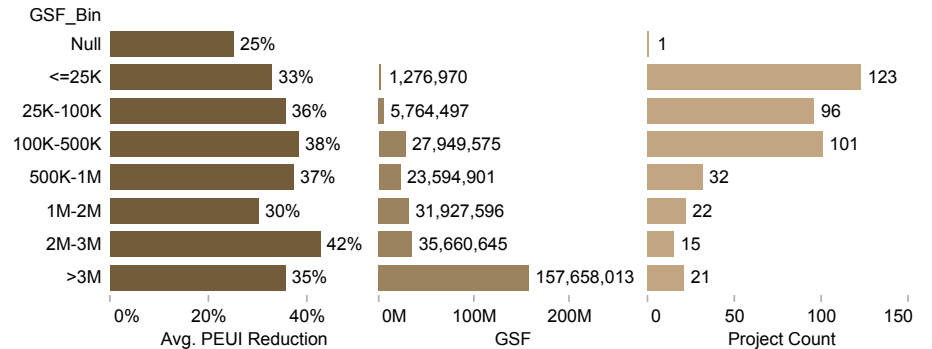
GSF Modeled



EUI Data To Be Collected



PEUI Reduction by Project GSF Bin

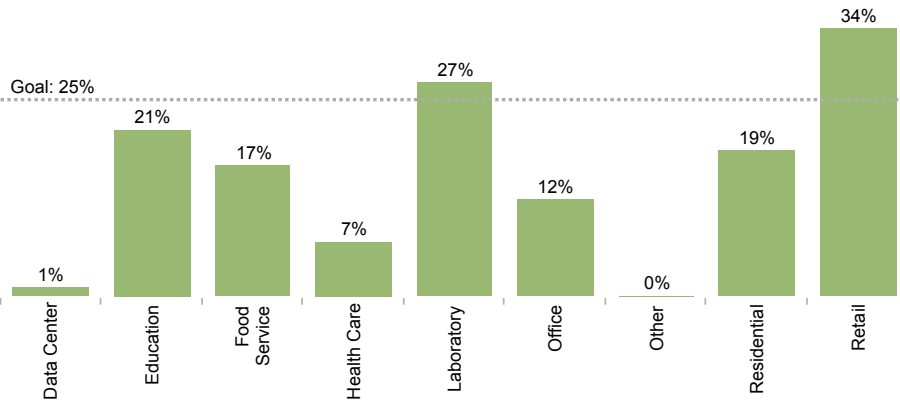


2012

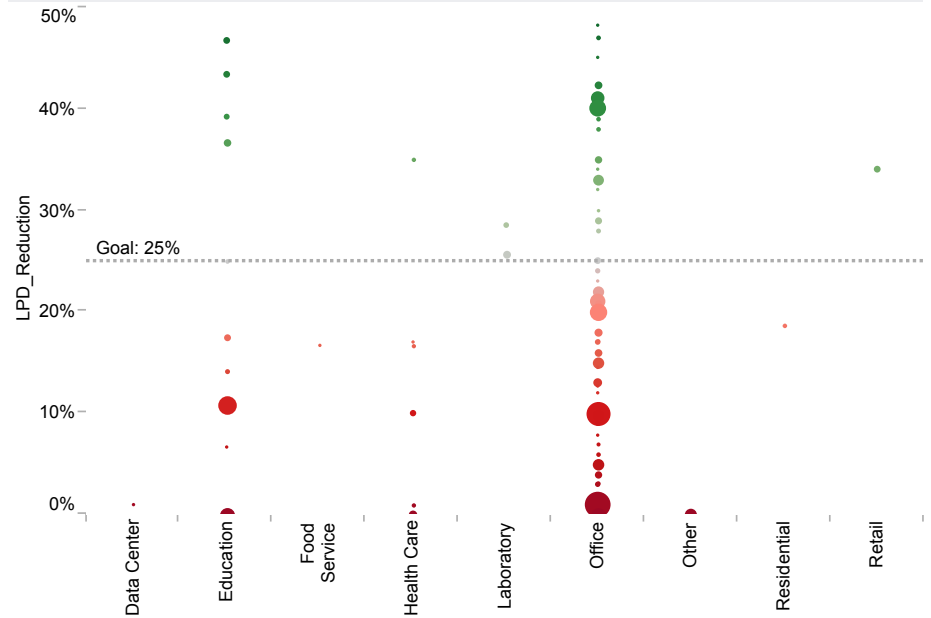
American Institute of Architects - Chicago Branch Reduction in Lighting Power Density (LPD)



Average LPD Reduction by Building Use Type



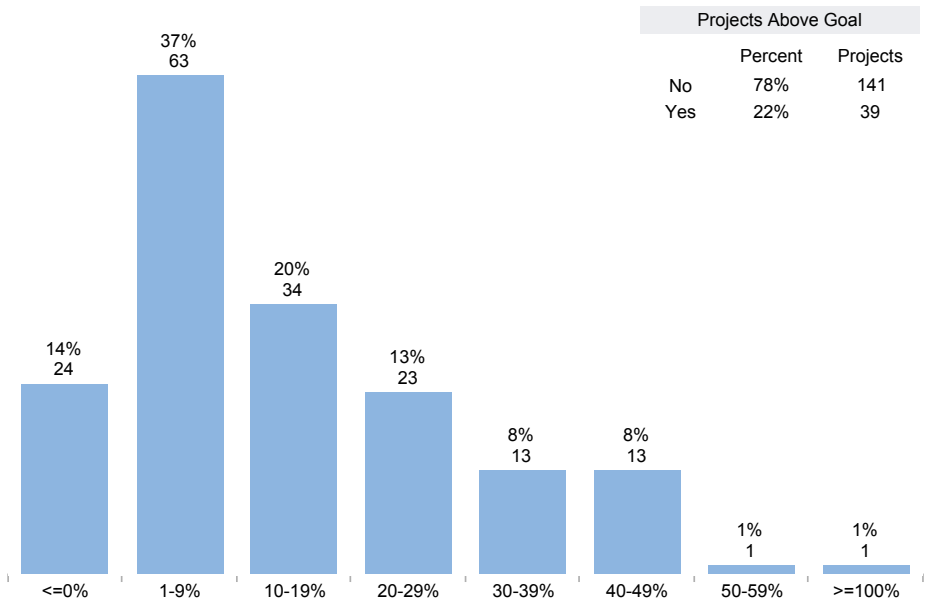
LPD Reduction Distribution



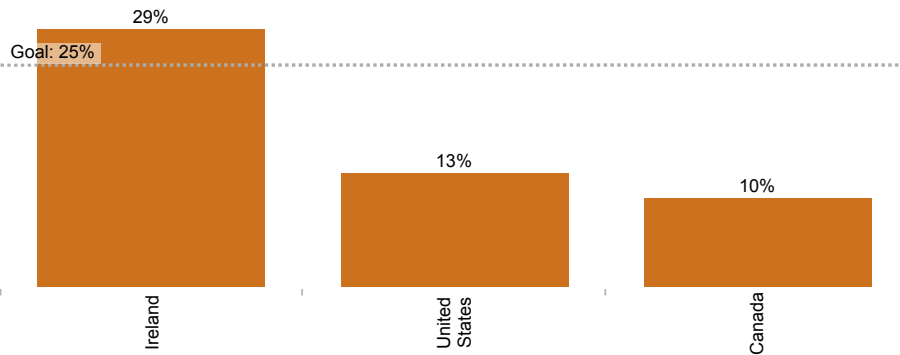
Average LPD Reduction by Building Use Type

BuildingUseTy..	ASHRAE LPD Allowance	Avg. LPD	Avg. LPD Reduction
Data Center	1.0	1.0	1%
Education	1.2	0.9	21%
Food Service	1.5	1.0	17%
Health Care	1.1	1.0	7%
Laboratory	1.4	1.0	27%
Office	1.0	0.9	12%
Other	1.0	1.0	0%
Residential	0.7	0.6	19%
Retail	1.5	1.0	34%

Projects By LPD Reduction Bin

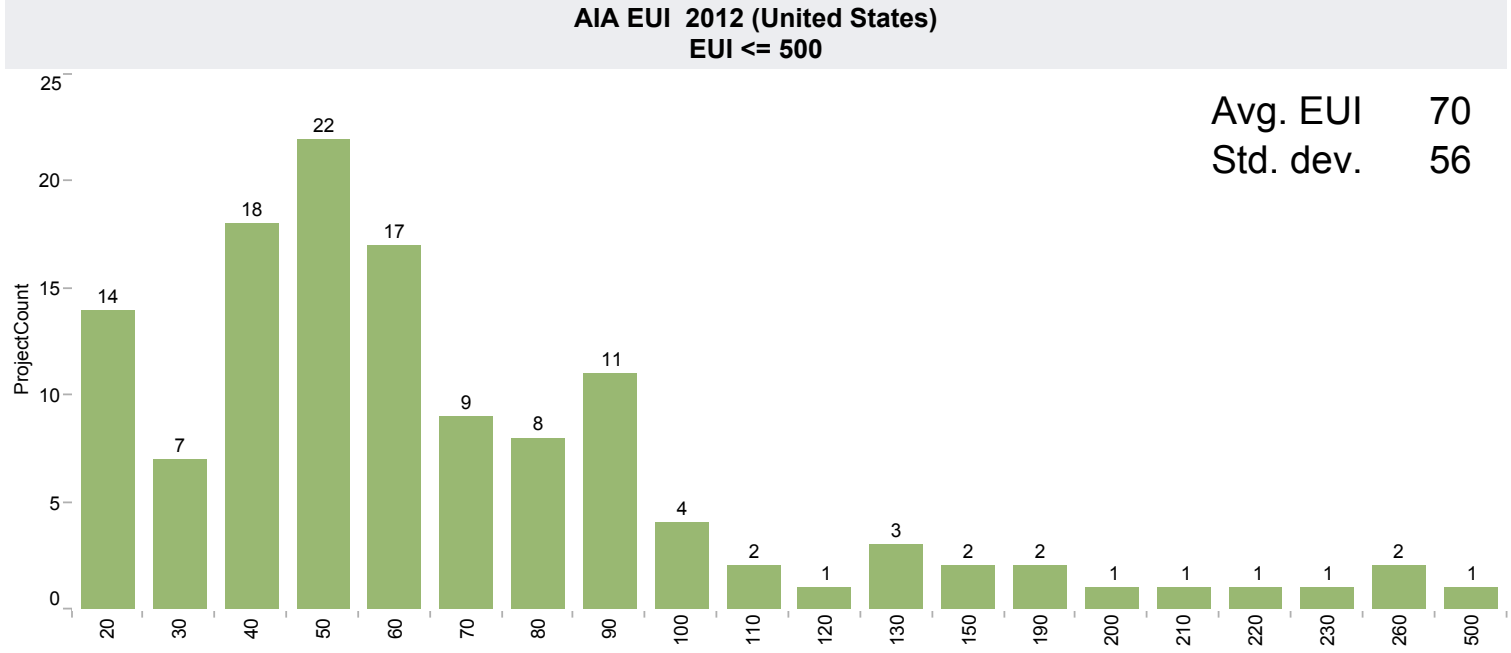


Average LPD Reduction by Country



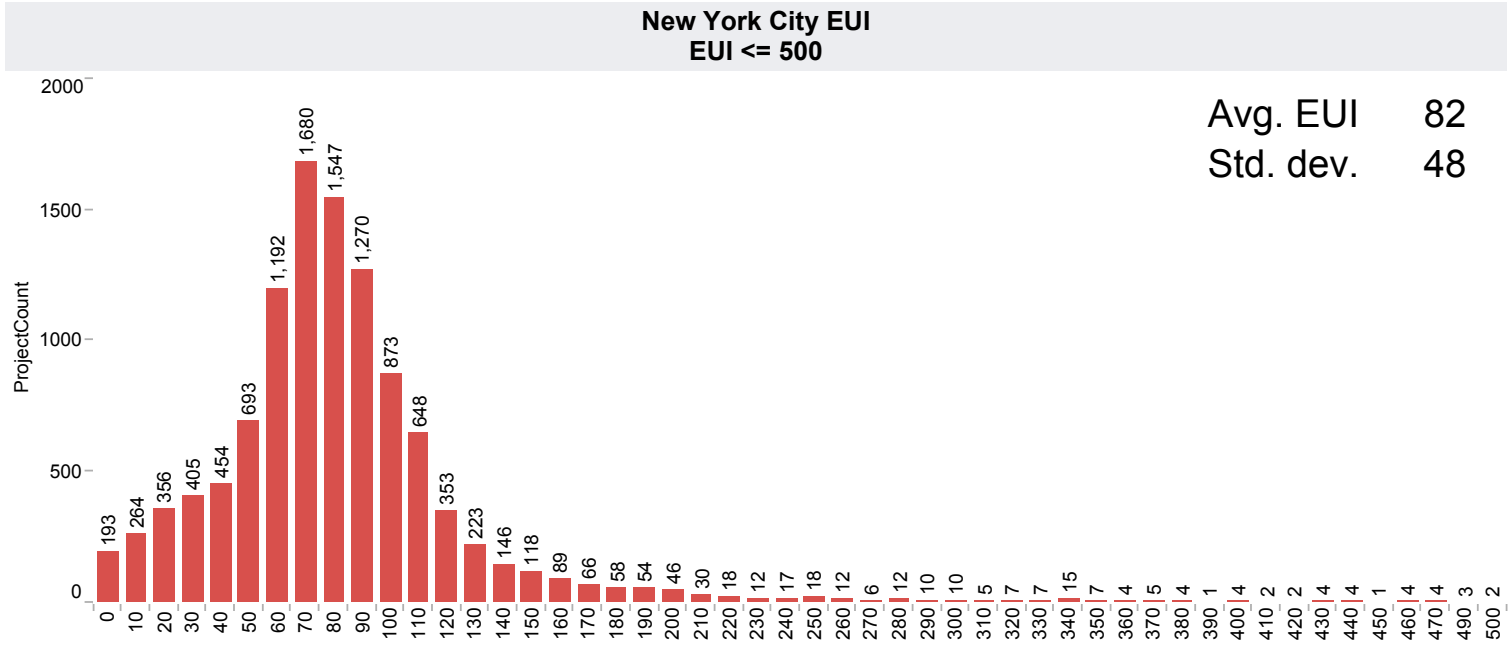
American Institute of Architects - Chicago Branch

EUI Comparision: AIA vs. NYC



- #### AIA Building Type
- Bank
 - Data Center
 - Education
 - Food Sales
 - Food Service
 - Health Care
 - Laboratory
 - Lodging
 - Mixed-Use
 - Office

- #### NYC Building Type
- Null
 - Bank
 - Data Center
 - Education
 - Food Sales
 - Food Service
 - Health Care
 - Library
 - Lodging
 - Office



- #### AIA GSF Bin
- Null
 - 1M-2M
 - 2M-3M
 - 25K-100K
 - 100K-500K
 - 500K-1M
 - <=25K
 - >3M
 - Condition
 - MAX([EUI_Bin]) <= 500

- #### NYC GSF Bin
- Null
 - 1M-2M
 - 2M-3M
 - 25K-100K
 - 100K-500K
 - 500K-1M
 - <=25K
 - >3M

All

BuildingUseTy..	BuildingUseSubType	Country	Projects	Avg. PEUI Re..	GSF
Bank	Financial Institution	United States	6	23%	48,100
		Total	6	23%	48,100
	Total		6	23%	48,100
Data Center	Data Center	United States	3	23%	137,700
		Total	3	23%	137,700
	Total		3	23%	137,700
Education	College/University	Canada	1	56%	3,497,915
		Turkey	2	25%	1,070,000
		United States	30	43%	4,325,111
		Total	33	42%	8,893,026
	General	China	1	51%	2,474,800
		United States	6	58%	182,870
		Total	7	57%	2,657,670
	K-12 School	United States	27	36%	1,207,011
		Total	27	36%	1,207,011
		Total	67	42%	12,757,707
Food Sales	Supermarket/Grocery	United States	4	20%	303,108
		Total	4	20%	303,108
	Total		4	20%	303,108
Food Service	Fast Food	United States	2		1,088
		Total	2		1,088
	Restaurant/Cafeteria	United States	5	51%	53,629
		Total	5	51%	53,629
		Total	7	51%	54,717
Health Care	Clinic	United States	6	31%	36,082
		Total	6	31%	36,082
	Hospital Inpatient	Saudi Arabia	1	37%	2,867,172
		Turkey	2	25%	750,000
		United States	25	26%	8,944,189
		Total	28	27%	12,561,361
	Medical Office	United States	7	60%	1,510,243

Projects, Avg. PEUI Reduction and GSF broken down by BuildingUseType, BuildingUseSubType and Country. The data is filtered on Action (BuildingUseType) and DesignEnergyCode (group). The Action (BuildingUseType) filter keeps 17 members. The DesignEnergyCode (group) filter keeps multiple members.

All

BuildingUseTy..	BuildingUseSubType	Country	Projects	Avg. PEUI Re..	GSF
Health Care	Medical Office	Total	7	60%	1,510,243
		United States	4	30%	567,165
		Total	4	30%	567,165
	Outpatient - General	China	1	-1%	6,456,000
		United States	4	46%	1,487,328
		Total	5	34%	7,943,328
	Total		50	31%	22,618,179
Laboratory	Laboratory	United States	7	42%	1,359,095
		Total	7	42%	1,359,095
	Total		7	42%	1,359,095
Lodging	General	United States	1	40%	37,000
		Total	1	40%	37,000
	Hotel/Motel	China	3	21%	5,364,579
		Saudi Arabia	1	44%	657,890
		United States	14	34%	2,860,264
		Total	18	33%	8,882,733
	Residence Hall/Dormitory	United States	10	39%	1,490,912
Total		10	39%	1,490,912	
Total		29	35%	10,410,645	
Mixed-Use	Mixed-Use	Australia	1	40%	649,408
		Canada	1	46%	777,725
		China	24	41%	81,520,546
		Colombia	1	32%	351,474
		India	2	40%	3,350,000
		Korea	1	44%	2,465,258
		Qatar	1	44%	514,030
		Russia	2	39%	433,628
		Saudi Arabia	5	29%	13,594,553
		United States	33	42%	8,808,758
		Total	71	41%	112,465,380
Total		71	41%	112,465,380	

Projects, Avg. PEUI Reduction and GSF broken down by BuildingUseType, BuildingUseSubType and Country. The data is filtered on Action (BuildingUseType) and DesignEnergyCode (group). The Action (BuildingUseType) filter keeps 17 members. The DesignEnergyCode (group) filter keeps multiple members.

All

BuildingUseTy..	BuildingUseSubType	Country	Projects	Avg. PEUI Re..	GSF
Office	10,000 sf	China	1		7,120
		United States	113	41%	895,186
		Total	114	41%	902,306
	10,001 to 100,000 sf	Canada	1		98,000
		China	1		41,000
		Ireland	1		17,190
		United States	146	38%	4,859,773
		Total	149	38%	5,015,963
	100,001 sf or greater	China	5	32%	17,820,024
		India	2	46%	3,500,000
		Korea	1	25%	12,526,792
		Philippines	2	18%	992,000
		Russia	1	25%	3,767,370
		United States	24	41%	10,248,454
		Total	35	37%	48,854,640
Total		298	39%	54,772,909	
Other	Other	China	3	34%	8,930,800
		Germany	1	41%	180,000
		United States	8	31%	773,583
		Total	12	33%	9,884,383
	Total		12	33%	9,884,383
Public Assembly	Entertainment/Culture	Saudi Arabia	1	44%	322,917
		United States	8	38%	491,400
		Total	9	38%	814,317
	General	China	1	44%	2,658,685
		United States	1	60%	65,000
		Total	2	52%	2,723,685
	Library	China	1	53%	269,000
		United States	1	65%	34,459
		Total	2	59%	303,459
	Recreation	United States	2	23%	73,400

Projects, Avg. PEUI Reduction and GSF broken down by BuildingUseType, BuildingUseSubType and Country. The data is filtered on Action (BuildingUseType) and DesignEnergyCode (group). The Action (BuildingUseType) filter keeps 17 members. The DesignEnergyCode (group) filter keeps multiple members.

All

BuildingUseTy..	BuildingUseSubType	Country	Projects	Avg. PEUI Re..	GSF	
Public Assembly	Recreation	Total	2	23%	73,400	
	Total		15	41%	3,914,861	
Public Safety	General	China	1	61%	161,400	
		Total	1	61%	161,400	
	Total		1	61%	161,400	
Religious	Worship	United States	2	21%	89,551	
		Total	2	21%	89,551	
	Total		2	21%	89,551	
Residential	Mid-Rise/High-Rise	China	2	34%	37,931,254	
		Korea	2	53%	4,950,280	
		United Arab Emirates	1	44%	1,553,232	
		United States	25	39%	10,702,306	
		Total	30	40%	55,137,072	
	Multi-Family, 2 to 4 units	China	1	20%	100,000	
		United States	3	14%	7,600	
		Total	4	16%	107,600	
	Multi-Family, 5 or more units	Algeria	1	-6%	1,385,000	
		India	1	25%	2,200,000	
		Turkey	1	25%	1,900,000	
		United States	45	25%	1,837,216	
	Total	48	25%	7,322,216		
	Single-Family Attached	United States	2	23%	21,400	
		Total	2	23%	21,400	
	Single-Family Detached	United States	15	18%	68,099	
		Total	15	18%	68,099	
		Total	99	28%	62,656,387	
	Retail	Mall	United States	4	36%	193,666
			Total	4	36%	193,666
		Non-mall, Vehicle Dealerships, misc.	United States	11	32%	1,646,164
			Total	11	32%	1,646,164
Store		Canada	2	33%	74,300	

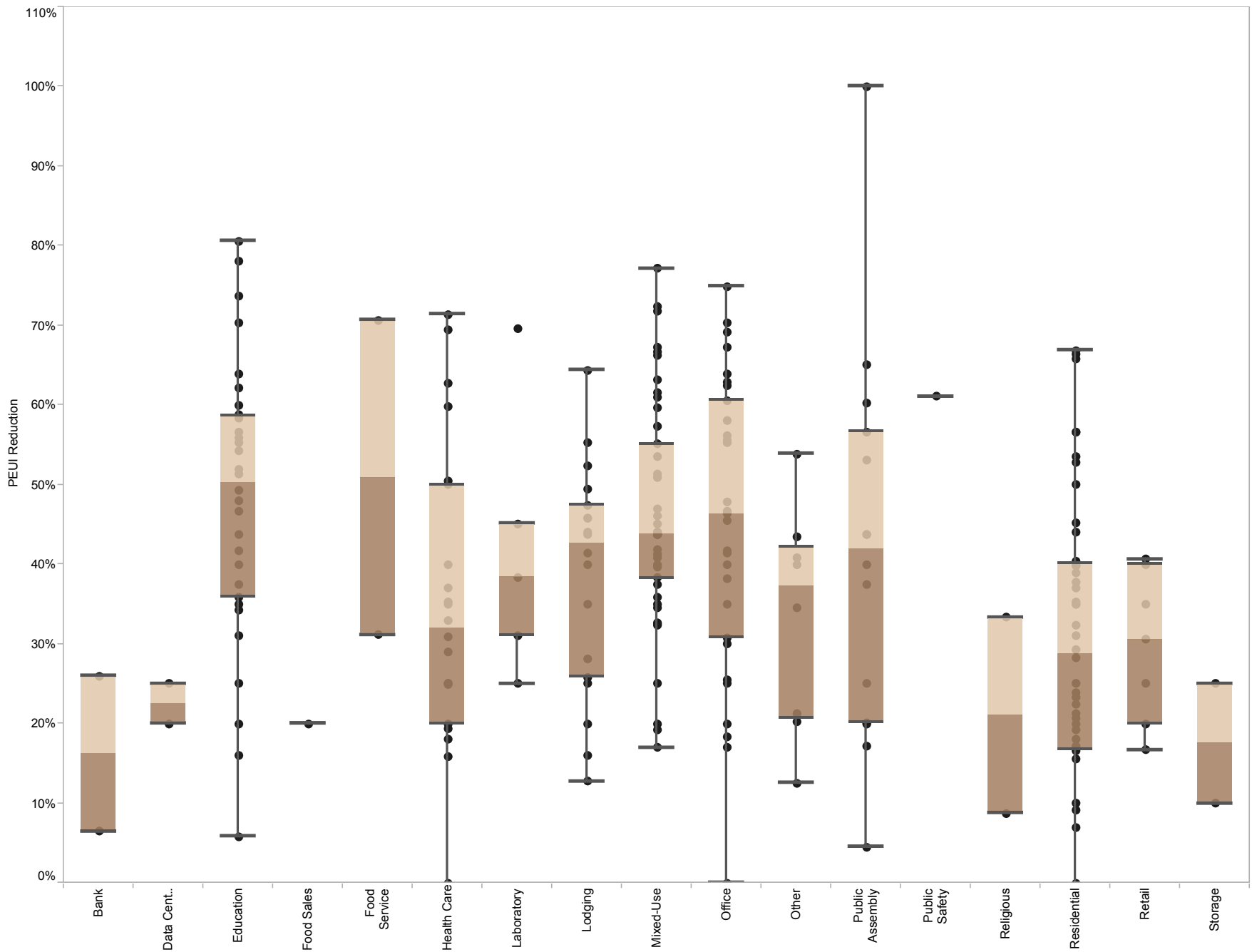
Projects, Avg. PEUI Reduction and GSF broken down by BuildingUseType, BuildingUseSubType and Country. The data is filtered on Action (BuildingUseType) and DesignEnergyCode (group). The Action (BuildingUseType) filter keeps 17 members. The DesignEnergyCode (group) filter keeps multiple members.

All

BuildingUseTy..	BuildingUseSubType	Country	Projects	Avg. PEUI Re..	GSF
Retail	Store	China	1	31%	2,152,000
		United States	4	18%	549,500
		Total	7	26%	2,775,800
	Total	22	31%	4,615,630	
Storage	Distribution/Shipping Center	United States	1	10%	40,000
		Total	1	10%	40,000
	Non-refrigerated warehouse	United States	1	25%	52,000
		Total	1	25%	52,000
Total	2	18%	92,000		
Grand Total			695	35%	296,341,752

Projects, Avg. PEUI Reduction and GSF broken down by BuildingUseType, BuildingUseSubType and Country. The data is filtered on Action (BuildingUseType) and DesignEnergyCode (group). The Action (BuildingUseType) filter keeps 17 members. The DesignEnergyCode (group) filter keeps multiple members.

PEUI Reduction (Min, Max, Avg)



PEUI_Reduction for each BuildingUseType. Details are shown for BuildingUseType. The data is filtered on Scope, YEAR Year, Country, DesignEnergyCode, GSF_Bin and DesignEnergyCode (group). The Scope filter keeps Whole Building/Addition and whole building/addition. The YEAR Year filter keeps 2011 and 2012. The Country filter keeps 16 of 16 members. The DesignEnergyCode filter keeps 9 of 9 members. The GSF_Bin filter keeps 8 of 8 members. The DesignEnergyCode (group) filter keeps multiple members.