

Highlights

Investment Levels Falling

Overall, U.S. investment levels in energy efficiency have fallen by roughly 18% from 2016 to 2018, likely due to a static policy environment.

Project Financing

Most energy projects can be financed through loan or debt financing through commercial banks. However, some specific financing mechanisms are particularly useful for energy efficiency, such as Property Assessed Clean Energy Programs (PACE) and Energy Savings Performance Contracts (ESPCs), On-Bill Financing, and Efficiency-as-a-Service.

Investments

Many of these investments, especially ESPCs, are implemented by energy service companies, or ESCOs. The ESCO market is seeing a leveling of revenues at approximately \$5 billion in 2011 and 2014. This is just a fragment of the ESCO market potential, estimated at \$92–\$201 billion (\$2016).

PACE Financing

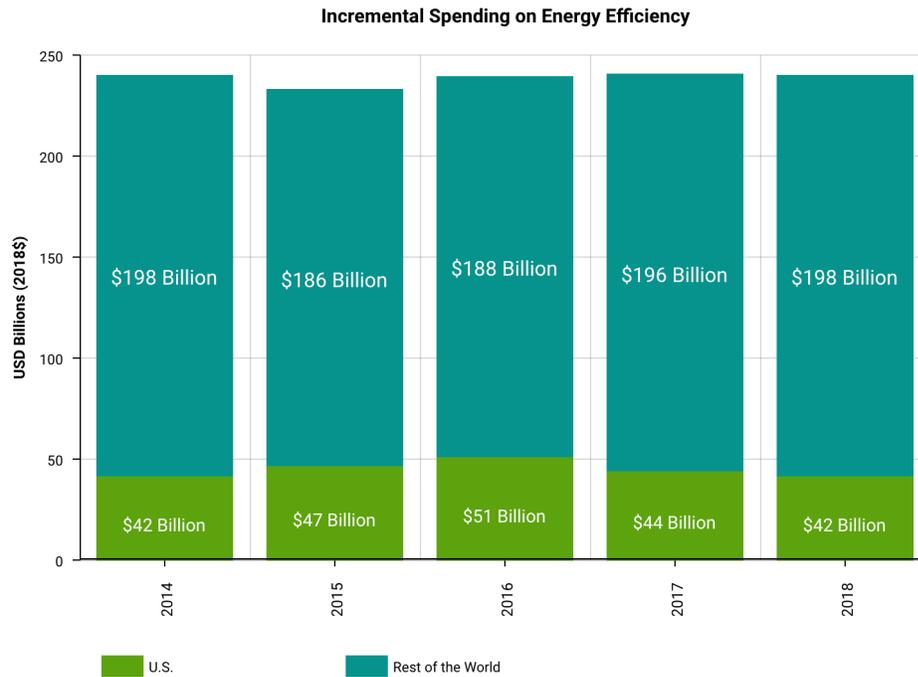
PACE financing has grown quickly since 2012, reaching 3.5 billion in investments in 2017, but investments are decelerating.

Green Bank Investments

Green Bank investments have also experienced slower growth in recent years, driven mainly by investments by the Connecticut and New York Green Banks.

20 Energy Efficiency Investments

U.S. energy efficiency investment levels are estimated to have fallen by 18% from 2016 to 2018



Source: IEA (2019), [World Energy Investment 2019](#); IEA (2018), [Energy Efficiency 2018](#)

Industry estimates of annual energy efficiency investments vary due to differences in how efficiency investments are defined, how the data is collected, and what data are available. According to the IEA, incremental investments in energy efficiency across buildings, transportation, and industry sectors have fallen in the U.S., from a peak of \$51 billion in 2016 to \$42 billion in 2018 (in 2018\$), while overall energy efficiency investment has largely stalled globally.¹ However, AEE reports revenue growth in certain energy efficiency subsectors, such as building efficiency (\$83 billion in 2018, up 10% from 2017), and the sales of hybrid electric vehicles and plug-in electric vehicles (\$70 billion, up 8% from 2017).²

21 Energy Service Company (ESCO) Investments

After rising steadily through 2011, ESCO revenues have been leveling out, reaching \$5 billion in 2014

1 IEA (2019), [World Energy Investment 2019](#)

2 AEE (2019), [2019 Market Report](#)

ESCO industry revenue (nominal \$) by market segment			
	2008 (n=29)	2011 (n=35)	2014 (n=43)
Market	(\$ million)	(\$ million)	(\$ million)
Federal Govt.	\$583	\$ 1,102	\$ 1,073
State/Local Govt.	\$872	\$ 1,233	\$ 1,314
K-12 Schools	\$847	\$ 995	\$ 1,219
Univ./College	\$614	\$ 702	\$ 504
Healthcare	\$238	\$ 302	\$ 304
Housing/Other	\$356	\$ 385	\$ 342
Commercial/Industrial	\$277	\$ 419	\$ 409
TOTAL	\$3,786	\$ 5,138	\$ 5,165

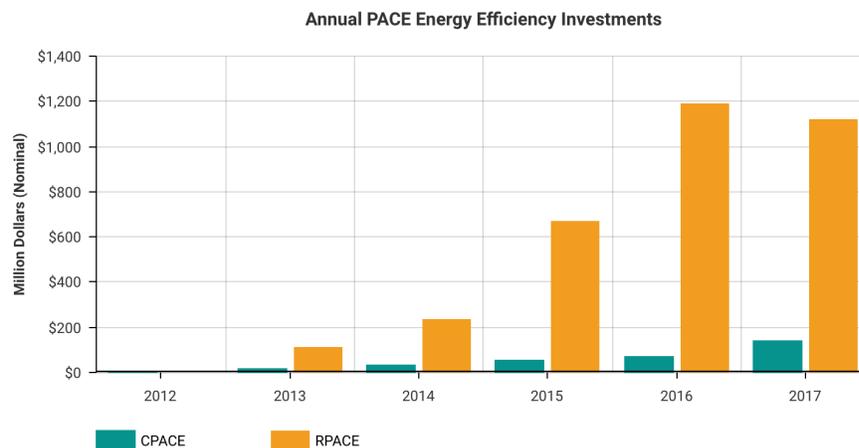
Source: LBNL (2016), U.S. Energy Service Company (ESCO) Industry: [Recent Market Trends](#)

Studies show that the [ESCO](#) market had been growing steadily since the 1990s but is reaching a plateau in recent years, with industry revenue rising from approximately \$3.8 billion in 2004 to \$5.1 billion in 2011, and then remaining largely flat at \$5.2 billion in 2014 (nominal dollars).

In contrast, LBNL has estimated that the market potential for the U.S. ESCO industry – including through [Energy Savings Performance Contracts \(ESPCs\)](#) – could reach \$92–\$201 billion (\$2016).³

22 PACE Investments

PACE financing for energy efficiency has grown rapidly to more than \$3.5 billion in 2017, but this trend is slowing

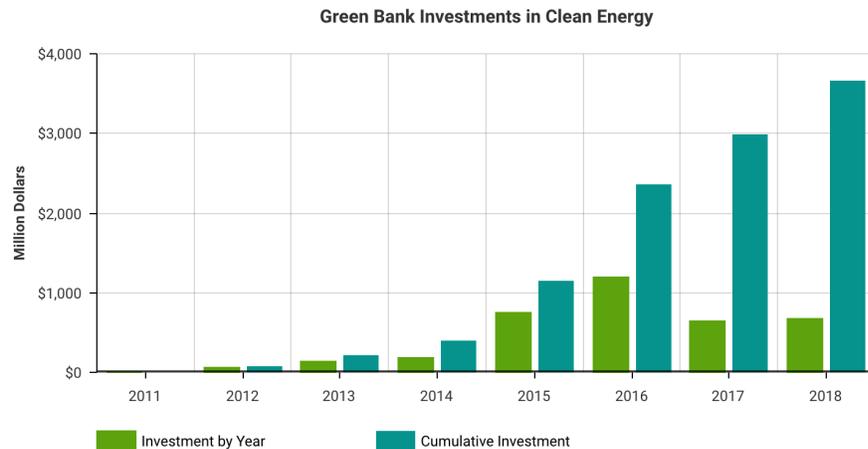


ACEEE energy efficiency estimates based on PACENation 2017 [Economic, Energy, and Environmental Impact Report](#)

[Property Assessed Clean Energy Programs \(PACE\) investments](#), including commercial (C-PACE) and residential (R-PACE) investments, experienced significant growth from 2012 to 2016. However, while C-PACE investments nearly doubled from \$72 million in 2016 to \$142 million in 2017, R-PACE investments fell by 6% over the same time period, to \$1.1 billion.⁴ In 2017, cumulative PACE investment reached \$3.5 billion.

23 Green Banks

Green Bank investments catalyzed more than \$3.5 billion into clean energy through 2018, but are decelerating



Source: Coalition for Green Capital

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Led by the Connecticut Green Bank and New York Green Bank, the most mature in the country, U.S. Green Banks have stimulated cumulative investment of more than \$3.6 billion in clean energy, including energy efficiency.^{5,6}

While overall energy efficiency-specific breakdowns are not available, the Connecticut Green Bank reports closing 1,329 energy efficiency projects in 2018, while the New York Green Bank has invested \$52.4 million in energy efficiency projects to date and has \$83.0 million in active pipeline projects.⁷ However, incremental Green Bank investments fell in 2017 and 2018 relative to 2015–2016.

- 4 The drop in R-PACE investments has been largely attributed to California legislation passed in 2017 establishing new underwriting guidelines, including income verification and ability-to-pay standards.
- 5 Other U.S. Green Banks include: Michigan Saves, NYCEEC, Rhode Island Infrastructure Bank, the Climate Access Fund, Montgomery County GreenBank, DC Green Bank, the Solar and Energy Loan Fund, Nevada Clean Energy Fund, Colorado Clean Energy Fund, California Lending for Energy and Environmental Needs Center, and GEMS.
- 6 Coalition for Green Capital (2019), [Building a Green Bank Finance Business in Your Geography to Drive Clean Energy Investment](#)
- 7 CT Green Bank (2019), [FY 2019 Comprehensive Annual Financial Report](#); NY Green Bank (2019), [Annual Review 2018–19 and Annual Business Plan 2019–2020](#)