

Executive Summary Battery Storage, Smart Grid, and Efficiency Funding and M&A 2018 First Half Report

Funding and merger & acquisition activity for the battery storage, smart grid, and efficiency sectors

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BATTERY STORAGE KEY FINDINGS

- In 1H 2018, VC funding for Battery Storage companies totaled \$539 million in 29 deals.
- VC Funding in 1H 2018 was spread across 14 categories: Energy Storage Systems, Lithium-based Batteries, Solid State Battery, Flow Batteries, Thermal Energy Storage, Energy Storage Downstream, Fuel Cells, Nickel-based Batteries, Energy Storage Management Software, Pumped Storage, Supercapacitor, Flywheel, Power Electronics, and Zinc-air Battery.
- The Top 5 VC funding deals in 1H 2018 were: Stem raised \$80 million, sonnen raised \$71 million, Ionic Materials secured \$65 million, Durapower secured \$40 million, and Ice Energy raised \$40 million.
- There were 17 VC investors that participated in Battery Storage deals in Q2 2018 and Q1 2018.
- Announced debt and public market financing for Battery Storage technologies in 1H 2018 totaled \$142 million in five deals compared to nine deals bringing in \$129 million in 1H 2017.
- In the first half of 2018, there were eight M&A transactions (one disclosed) compared to two transactions in 1H 2017 (one disclosed).

Battery Storage Top 5 VC Funded Deals in 1H 2018

Battery Storage Fop & Vol and a Boats in Tit 2016					
Company	Country	Funding Type	Amount (\$M)	Investors	
stem	USA	Series D	80	Activate Capital, Ontario Teachers' Pension Plan, Temasek	
sonnen	Germany	Undisclosed	71	Shell Ventures	
ionic MATERIALS	USA	Series C	65	Dyson, Samsung, A123, Hitachi, Renualt, Nissan, Mitsubishi	
durapower	Singapore	Undisclosed	40	Banpu Infinergy Company, K-IX Ace	
	USA	Undisclosed	40	Argo Infrastructure Partners	
Source: Mercom Capital Group					



SMART GRID KEY FINDINGS

- VC funding in 1H 2018 totaled \$135 million in 11 deals compared to \$304 million raised in 22 deals in 1H 2017.
- VC Funding in 1H 2018 was spread across eight Smart Grid technologies: Grid
 Optimization, Smart Grid Communication, Microgrid, Business and Customer Care,
 Demand Response, Smart Charging of Plug-in Hybrid Vehicles (PHEV) and Vehicle to
 Grid (V2G), Software, and Advanced Meter Infrastructure.
- The Top 5 VC funding deals in 1H 2018 were: Smart Wires raised \$55 million, Bidgely raised \$27 million, Husk Power received \$20 million, Mnubo raised \$17 million, and Simple Energy raised \$6 million.
- In 1H 2018, \$1.3 billion was raised in two debt financing deals compared to \$9 million in one deal in 1H 2017.
- In the first half of 2018, there were five M&A transactions (all undisclosed) compared to 13 transactions (three disclosed) in 1H 2017.

Smart Grid Top 5 VC Funded Deals in 1H 2018

Company	Country	Funding Type	Amount (\$M)	Investors	
SMART WIRES REIMAGINE THE GRID	USA	Undisclosed	55	Undisclosed	
bidgely	USA	Series C	27	Georgian Partners, Khosla Ventures, E.ON, Innogy, Constellation Technology Ventures	
HUSK Powering Possibilities	India	Undisclosed	20	Shell Technology Ventures, Swedfund International, ENGIE Rassembleurs d'Energies	
mnubo	Canada	Series B	17	HSB Group	
SIMPLE energy	USA	Undisclosed	6	Undisclosed	
Source: Mercom Capital Group					



ENERGY EFFICIENCY KEY FINDINGS

- \$165 million was raised in 10 deals in 1H 2018 compared to \$242 million raised in 20 deals in 1H 2017.
- VC Funding in 1H 2018 was spread across five sub-technologies: Temperature Control, Efficiency Finance, Efficient Home/Building, Efficiency Software, and Efficiency Components.
- The Top 5 VC funding deals in 1H 2018 were: ecobee raised \$61 million and \$36 million in two separate deals, Carbon Lighthouse secured \$27 million, Redaptive secured \$20 million, and Petros PACE Finance received \$10 million.
- There were 20 VC investors that participated in Energy Efficiency deals in Q2 2018 compared to 15 investors in Q1 2018.
- Announced debt and public market financing for Energy Efficiency technologies in 1H 2018 totaled \$212 million in two deals compared to \$1.7 billion raised in nine deals in 1H 2017.
- PACE financing in 1H 2018 totaled \$694 million in three deals compared to \$668 million raised in three deals in 1H 2017.
- In the first half of 2018, there were three undisclosed M&A transactions compared to five transactions in 1H 2017 (two disclosed).

Efficiency Top 5 VC Funded Deals in 1H 2018

Company	Country	Funding Type	Amount (\$M)	Investors
s ecobee	Canada	Series C	61	Energy Impact Partners, Thomvest, Relay Ventures, Amazon Alexa Fund
€ ecobee	Canada	Series C	36	Caisse de depot et placement du Quebec, AGL Energy, Business Development Bank of Canada
CARBON	USA	Undisclosed	27	GRC SinoGreen, JCI Ventures, Ulupono Initiative, SV Tech Ventures, Ekistic Ventures, Radicle Impact Partners, Steve Girsky, JB Straubel
RED^PTIVE°	USA	Undisclosed	20	CBRE, ENGIE New Venture, GXP Investments, Linse Capital
PETROS PACE FINANCE	USA	Undisclosed	10	Alex Rodriguez, A-ROD

Source: Mercom Capital Group



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There were 92 companies and investors covered in Mercom's Battery Storage, Smart Grid, and Efficiency Funding and M&A Q2 2018 Report. The report is 96 pages in length and contains 90 charts, graphs, and tables.

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