CONSULTING - SPECIFYING
engineer®

# MEP GIANTS 2021



CFE Media and Technology™

# EATON CONGRATULATES THE 2021 MEP GIANTS WINNERS

**Doug Dillie**
Industry Manager -
Electrical Consultants

**We're proud to sponsor the *Consulting-Specifying Engineer's* 2021 MEP GIANTS program. This marks our 13th year of helping to recognize the elite in our industry.**

At Eaton we're continuing to move ahead in spite of the challenges that we've all been facing these past few years. We're focused on keeping our factories open—safely—to meet the needs of the industry. Our application engineers are ready as ever to support you via email, phone and video calls. It's all about adapting. Just as our industry is adapting to meet the world's energy transition.

Currently, we're witnessing the biggest changes to energy infrastructure in over a century. It's more than a transition. It's a transformation encompassing electrification, decarbonization and decentralization. The move from centralized generation to local and distributed energy resources is a structural change that's creating an environment where energy consumers can become energy producers.

Where utility power once only flowed away from centralized sources, it now flows back and forth between a growing number of decentralized renewable generators, microgrid energy systems and electrical loads to provide cleaner, more reliable power throughout the world.

At Eaton, we call our approach to leading and managing that change Everything as a Grid. We're applying this approach to increase and optimize the world's energy. Continuing to invest in industry education to help professionals keep up with the constantly changing codes and best practices of a new power paradigm where far more energy is generated and stored locally.

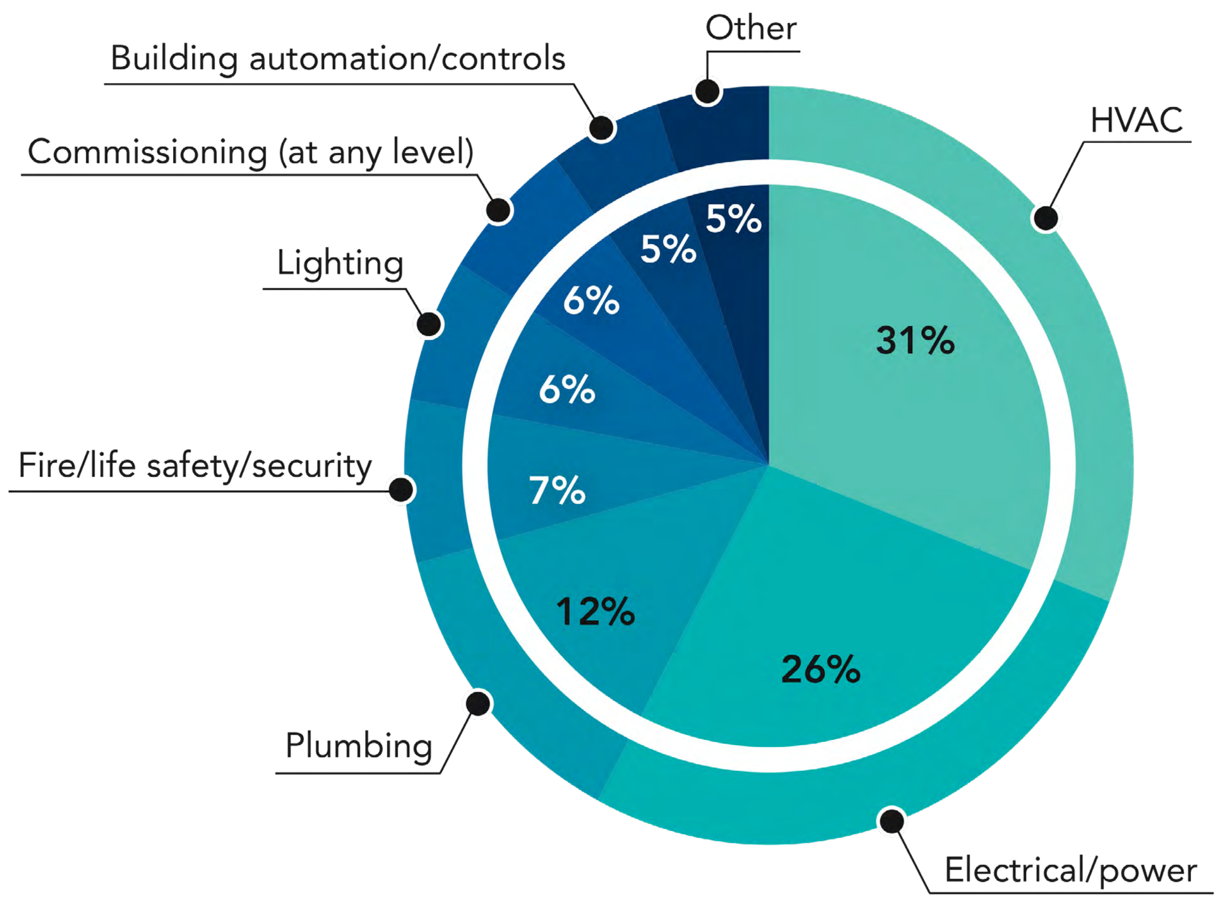
Thanks to *Consulting-Specifying Engineer* for recognizing the 2021 MEP Giants. And on behalf of my Eaton colleagues, congratulations to each and every one. Together, we're powering what matters.

**Douglas A. Dillie**
**Industry Manager, Electrical Consultants**
**Eaton**

MEP GIANTS 2021

# BY THE NUMBERS

## PERCENTAGE OF MEP DESIGN BILLINGS




**$62,237,932,549**
Grand total gross revenue

**$9,328,815,897**
Grand total MEP design revenue

**65,754**
Total engineers employed

**10,004**
LEED APs on staff

**90%**
Of MEP design revenue came from projects within the U.S.

**59%**
Cite COVID-19 concerns and issues as their biggest corporate challenge

**29%**
Of expenditures are allocated to new tools, such as software or hardware, on average

**32%**
Provided engineering services to the Middle East in 2020

**16%**
Of 2020 MEP design revenue was earned from hospital or health care facility projects

**17%**
Of engineering staff are female

# 2021 MEP GIANTS INDEX

MEP GIANTS 2021

| RANK | FIRM NAME |
|---|---|
| 94 | Advanced Engineering Consultants |
| 2 | AECOM |
| 10 | Affiliated Engineers |
| 26 | AKF Group |
| 5 | Alfa Tech Consulting Engineers Inc. |
| 44 | AMA Group |
| 54 | Arora Engineers Inc. |
| 11 | Arup |
| 49 | Bala Consulting Engineers |
| 57 | Bernhard |
| 17 | BR+A Consulting Engineers |
| 80 | Bridgers & Paxton Consulting Engineers Inc. |
| 53 | BRPH Architects Engineers Inc. |
| 91 | BSA LifeStructures |
| 4 | Burns & McDonnell |
| 33 | Burns Engineering Inc. |
| 37 | CannonDesign |
| 67 | CDM Smith |
| 73 | CJL Engineering Inc. |
| 82 | Clark Nexsen |
| 20 | CMTA Inc. |
| 87 | Concord Engineering Group Inc. |
| 79 | Core States Group |
| 24 | CRB |
| 66 | Cushing Terrell (formerly CTA Architects Engineers) |
| 43 | Dewberry |
| 38 | DLR Group |
| 63 | Dunham Associates |
| 90 | EEA Consulting Engineers |
| 21 | ESD |
| 40 | EwingCole |
| 9 | EXP |
| 38 | Gannett Fleming |

| RANK | FIRM NAME |
|---|---|
| 58 | Ghafari Associates LLC |
| 85 | GHT Limited |
| 70 | GPI/Greenman-Pedersen Inc. |
| 71 | H.F. Lenz Co. |
| 52 | H2M architects + engineers |
| 7 | HDR |
| 47 | HEAPY |
| 69 | HED |
| 13 | Henderson Engineers |
| 62 | HGA |
| 6 | High Performance Buildings Group |
| 83 | Highland Associates Ltd. |
| 42 | I. C. Thomasson Associates Inc. |
| 14 | IMEG Corp. |
| 25 | Integral Group |
| 12 | IPS-Integrated Project Services LLC |
| 1 | Jacobs |
| 27 | Jaros, Baum & Bolles |
| 60 | Johnson, Mirmiran & Thompson Inc. |
| 51 | Jordan & Skala Engineers |
| 100 | Karpinski Engineering |
| 99 | Kohrs Lonnemann Heil Engineers Inc. |
| 68 | LaBella Associates |
| 98 | LEO A DALY |
| 74 | Lilker Associates Consulting Engineers P.C. |
| 93 | LiRo Engineers Inc. |
| 61 | M/E Engineering P.C. |
| 95 | Matrix Technologies Inc. |
| 48 | Mazzetti |
| 34 | McKinstry |
| 31 | ME Engineers |
| 84 | Michaud Cooley Erickson |
| 56 | Morrison Hershfield |
| 50 | Newcomb & Boyd |

| RANK | FIRM NAME |
|---|---|
| 18 | NV5 Global Inc. |
| 88 | Optimation Technology Inc. |
| 86 | Osborn Engineering |
| 41 | P2S Inc. |
| 22 | PAE Consulting Engineers Inc. |
| 30 | Page |
| 92 | Peter Basso Associates Inc. |
| 89 | Pond |
| 97 | Power Design |
| 75 | Professional Engineering Consultants P.A. |
| 29 | RMF Engineering Inc. |
| 76 | Ross & Baruzzini Inc. |
| 65 | RTM Engineering Consultants LLC |
| 78 | Rushing |
| 15 | Salas O'Brien |
| 96 | Sazan Group |
| 72 | SETTY |
| 32 | Smith Seckman Reid Inc |
| 35 | SmithGroup |
| 23 | Southland Industries |
| 46 | SSOE Group |
| 36 | Stanley Consultants |
| 8 | Stantec Inc. |
| 64 | STV |
| 16 | Syska Hennessy Group |
| 59 | ThermalTech Engineering Inc. |
| 45 | tk1sc |
| 28 | TLC Engineering Solutions Inc. |
| 19 | Vanderweil Engineers |
| 81 | VBFA |
| 55 | WB Engineers+Consultants |
| 77 | Wiley\|Wilson |
| 3 | WSP |

# 2021 MEP GIANTS

| RANK | FIRM NAME | LOCATION | TOTAL GROSS REVENUE FOR FISCAL YEAR ($ US) | TOTAL MEP DESIGN REVENUE ($ US) | PERCENT MEP REVENUE | MEP REVENUE, U.S. PROJECTS |
|---|---|---|---|---|---|---|
| 1 | Jacobs | Dallas, TX, U.S. | $13,566,975,000 | $1,587,900,000 | 12% | 8% |
| 2 | AECOM | Los Angeles, CA, U.S. | $13,200,000,000 | $1,200,000,000 | 9% | 24% |
| 3 | WSP | New York, NY, U.S. | $5,276,538,000 | $691,938,345 | 13% | 33% |
| 4 | Burns & McDonnell | Kansas City, MO, U.S. | $3,904,353,873 | $606,349,112 | 16% | 98% |
| 5 | Alfa Tech Consulting Engineers Inc. | San Jose, CA, U.S. | $1,200,000,000 | $400,000,000 | 33% | 15% |
| 6 | High Performance Buildings Group | Pasadena, CA, U.S. | $3,000,000,000 | $275,271,866 | 9% | 50% |
| 7 | HDR | Omaha, NE, U.S. | $2,725,846,000 | $267,876,638 | 10% | 65% |
| 8 | Stantec Inc. | Edmonton, AB, Canada | $3,526,767,074 | $256,851,120 | 7% | 34% |
| 9 | EXP | Brampton, ON, Canada | $706,530,000 | $159,334,249 | 23% | 65% |
| 10 | Affiliated Engineers | Madison, WI, U.S. | $158,545,000 | $147,880,872 | 93% | 93% |
| 11 | Arup | New York, NY, U.S. | $420,000,000 | $147,410,217 | 35% | 40% |
| 12 | IPS-Integrated Project Services LLC | Blue Bell, PA, U.S. | $618,490,377 | $142,368,366 | 23% | 76.60% |
| 13 | Henderson Engineers | Lenexa, KS, U.S. | $178,000,000 | $119,800,000 | 67% | 99.50% |
| 14 | IMEG Corp. | Rock Island, IL, U.S. | $224,013,000 | $114,982,000 | 51% | 99% |
| 15 | Salas O'Brien | Santa Ana, CA, U.S. | $160,241,684 | $114,165,744 | 71% | 99% |
| 16 | Syska Hennessy Group | New York, NY, U.S. | $119,163,759 | $108,968,002 | 91% | 97% |
| 17 | BR+A Consulting Engineers | Boston, MA, U.S. | $99,626,568 | $99,626,568 | 100% | 99% |
| 18 | NV5 Global Inc. | Hollywood, FL, U.S. | $707,700,000 | $84,407,361 | 12% | 88% |
| 19 | Vanderweil Engineers | Boston, MA, U.S. | $100,069,000 | $80,276,500 | 80% | 99% |
| 20 | CMTA Inc. | Prospect, KY, U.S. | $133,709,625 | $77,498,318 | 58% | 100% |
| 21 | ESD | Chicago, IL, U.S. | $86,863,511 | $71,523,577 | 82% | 99% |
| 22 | PAE Consulting Engineers Inc. | Portland, OR, U.S. | $70,020,000 | $70,020,000 | 100% | 100% |
| 23 | Southland Industries | Garden Grove, CA, U.S. | $940,170,966 | $68,196,229 | 7% | 100% |
| 24 | CRB | Kansas City, MO, U.S. | $187,490,000 | $65,497,584 | 35% | 93% |
| 25 | Integral Group | Oakland, CA, U.S. | $93,876,200 | $63,800,000 | 68% | 68% |
| 26 | AKF Group | New York, NY, U.S. | $64,000,000 | $62,000,000 | 97% | 98% |
| 27 | Jaros, Baum & Bolles | New York, NY, U.S. | $64,561,581 | $59,791,621 | 93% | 96% |
| 28 | TLC Engineering Solutions Inc. | Orlando, FL, U.S. | $69,643,721 | $59,627,583 | 86% | 99% |
| 29 | RMF Engineering Inc. | Baltimore, MD, U.S. | $58,000,000 | $58,000,000 | 100% | 100% |
| 30 | Page | Washington, D.C., U.S. | $206,243,000 | $57,748,000 | 28% | 90% |
| 31 | ME Engineers | Golden, CO, U.S. | $57,550,000 | $57,550,000 | 100% | 83% |
| 32 | Smith Seckman Reid Inc | Nashville, TN, U.S. | $84,844,851 | $57,527,667 | 68% | 99.60% |
| 33 | Burns Engineering Inc. | Philadelphia, PA, U.S. | $71,545,000 | $57,236,000 | 80% | 100% |

# 2021 MEP GIANTS

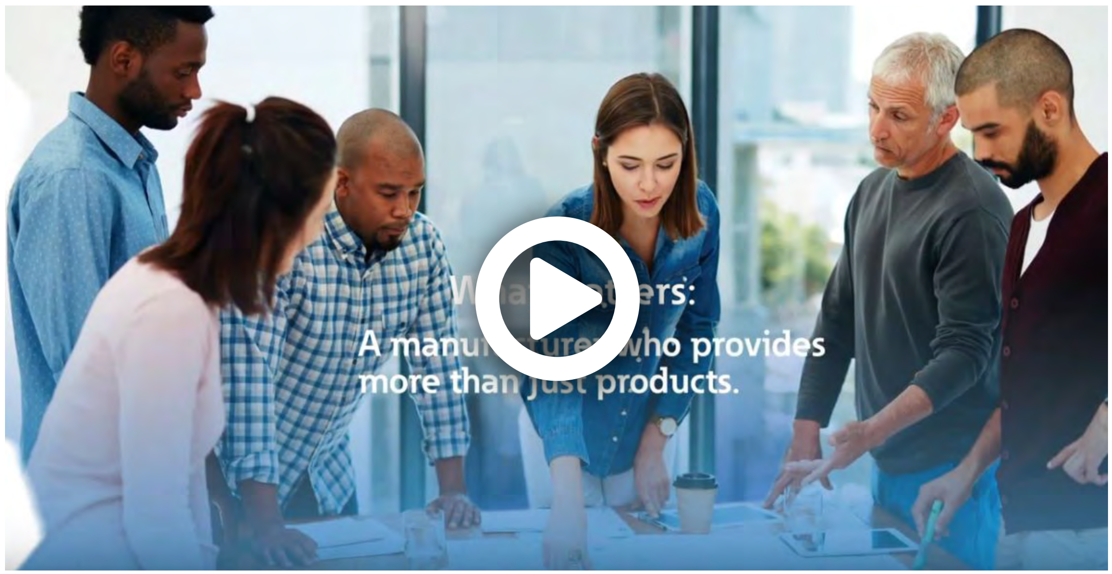
| RANK | FIRM NAME | LOCATION | TOTAL GROSS REVENUE FOR FISCAL YEAR ($ US) | TOTAL MEP DESIGN REVENUE ($ US) | PERCENT MEP REVENUE | MEP REVENUE, U.S. PROJECTS |
|---|---|---|---|---|---|---|
| 34 | McKinstry | Seattle, WA, U.S. | $697,000,000 | $57,000,000 | 8% | 100% |
| 35 | SmithGroup | Detroit, MI, U.S. | $267,168,526 | $56,210,000 | 21% | 98% |
| 36 | Stanley Consultants | Muscatine, IA, U.S. | $192,803,000 | $55,540,000 | 29% | 82% |
| 37 | CannonDesign | New York, NY, U.S. | $268,359,267 | $52,000,000 | 19% | 100% |
| 38 | DLR Group | Phoenix, AZ, U.S. | $280,000,000 | $50,000,000 | 18% | 99% |
| 38 | Gannett Fleming | Camp Hill, PA, U.S. | $651,270,000 | $50,000,000 | 8% | 100% |
| 40 | EwingCole | Philadelphia, PA, U.S. | $107,000,000 | $48,150,000 | 45% | 100% |
| 41 | P2S Inc. | Long Beach, CA, U.S. | $53,681,514 | $47,033,328 | 88% | 100% |
| 42 | I. C. Thomasson Associates Inc. | Nashville, TN, U.S. | $47,000,000 | $45,814,885 | 97% | 100% |
| 43 | Dewberry | Fairfax, VA, U.S. | $463,140,000 | $45,190,454 | 10% | 97% |
| 44 | AMA Group | New York, NY, U.S. | $73,000,000 | $45,000,000 | 62% | 100% |
| 45 | tk1sc | Irvine, CA, U.S. | $45,094,000 | $43,446,661 | 96% | 100% |
| 46 | SSOE Group | Toledo, OH, U.S. | $188,500,000 | $42,046,998 | 22% | 45% |
| 47 | HEAPY | Dayton, OH, U.S. | $38,881,623 | $38,881,623 | 100% | 100% |
| 48 | Mazzetti | San Francisco, CA, U.S. | $38,158,927 | $38,158,927 | 100% | 98% |
| 49 | Bala Consulting Engineers | King of Prussia, PA, U.S. | $36,900,000 | $36,900,000 | 100% | 100% |
| 50 | Newcomb & Boyd | Atlanta, GA, U.S. | $36,255,950 | $34,188,039 | 94% | 97% |
| 51 | Jordan & Skala Engineers | Norcross, GA, U.S. | $37,869,000 | $33,532,000 | 89% | 100% |
| 52 | H2M architects + engineers | Melville, NY, U.S. | $87,353,010 | $33,095,575 | 38% | 100% |
| 53 | BRPH Architects Engineers Inc. | Melbourne, FL, U.S. | $88,480,670 | $32,613,975 | 37% | 99% |
| 54 | Arora Engineers Inc. | Chadds Ford, PA, U.S. | $35,246,255 | $31,894,160 | 90% | 100% |
| 55 | WB Engineers+Consultants | New York, NY, U.S. | $41,261,000 | $31,625,000 | 77% | 100% |
| 56 | Morrison Hershfield | Markham, ON, Canada | $141,431,208 | $30,640,220 | 22% | 26.34% |
| 57 | Bernhard | Metairie, LA, U.S. | $729,000,000 | $30,517,000 | 4% | 100% |
| 58 | Ghafari Associates LLC | Dearborn, MI, U.S. | $110,600,000 | $30,000,000 | 27% | 85% |
| 59 | ThermalTech Engineering Inc. | Cincinnati, OH, U.S. | $56,400,000 | $27,200,000 | 48% | 100% |
| 60 | Johnson, Mirmiran & Thompson Inc. | Hunt Valley, MD, U.S. | $324,650,000 | $26,442,236 | 8% | 100% |
| 61 | M/E Engineering P.C. | Rochester, NY, U.S. | $28,465,000 | $25,842,800 | 91% | 100% |
| 62 | HGA | Minneapolis, MN, U.S. | $194,444,563 | $25,692,804 | 13% | 97.50% |
| 63 | Dunham Associates | Minneapolis, MN, U.S. | $24,700,000 | $24,700,000 | 100% | 98% |
| 64 | STV | New York, NY, U.S. | $566,488,000 | $24,593,528 | 4% | 100% |
| 65 | RTM Engineering Consultants LLC | Schaumburg, IL, U.S. | $25,897,756 | $24,446,549 | 94% | 100% |
| 66 | Cushing Terrell (formerly CTA Architects Engineers) | Billings, MT, U.S. | $64,064,016 | $23,039,036 | 36% | 99% |

# 2021 MEP GIANTS

| RANK | FIRM NAME | LOCATION | TOTAL GROSS REVENUE FOR FISCAL YEAR ($ US) | TOTAL MEP DESIGN REVENUE ($ US) | PERCENT MEP REVENUE | MEP REVENUE, U.S. PROJECTS |
|---|---|---|---|---|---|---|
| 67 | CDM Smith | Boston, MA, U.S. | $1,289,786,421 | $22,935,442 | 2% | 1.78% |
| 68 | LaBella Associates | Rochester, NY, U.S. | $159,409,386 | $22,251,207 | 14% | 100% |
| 69 | HED | Southfield, MI, U.S. | $90,912,000 | $22,001,000 | 24% | 100% |
| 70 | GPI/Greenman-Pedersen Inc. | Babylon, NY, U.S. | $348,000,000 | $22,000,000 | 6% | 100% |
| 71 | H.F. Lenz Co. | Johnstown, PA, U.S. | $24,111,500 | $21,067,000 | 87% | 100% |
| 72 | SETTY | Washington, D.C., U.S. | $21,827,558 | $20,989,124 | 96% | 100% |
| 73 | CJL Engineering Inc. | Moon Township, PA, U.S. | $20,800,000 | $20,800,000 | 100% | 100% |
| 74 | Lilker Associates Consulting Engineers P.C. | New York, NY, U.S. | $23,500,000 | $20,200,000 | 86% | 100% |
| 75 | Professional Engineering Consultants P.A. | Wichita, KS, U.S. | $47,868,000 | $19,858,000 | 41% | 100% |
| 76 | Ross & Baruzzini Inc. | Saint Louis, MO, U.S. | $61,907,000 | $19,852,000 | 32% | 100% |
| 77 | Wiley\|Wilson | Lynchburg, VA, U.S. | $44,900,000 | $19,800,000 | 44% | 100% |
| 78 | Rushing | Seattle, WA, U.S. | $19,400,000 | $19,400,000 | 100% | 100% |
| 79 | Core States Group | Duluth, GA, U.S. | $81,138,684 | $19,187,328 | 24% | 99% |
| 80 | Bridgers & Paxton Consulting Engineers Inc. | Albuquerque, NM, U.S. | $19,148,968 | $19,148,968 | 100% | 100% |
| 81 | VBFA | Murray, UT, U.S. | $19,358,000 | $18,986,000 | 98% | 98% |
| 82 | Clark Nexsen | Virginia Beach, VA, U.S. | $85,996,888 | $18,919,315 | 22% | 95% |
| 83 | Highland Associates Ltd. | New York, NY, U.S. | $29,200,000 | $18,400,000 | 63% | 100% |
| 84 | Michaud Cooley Erickson | Minneapolis, MN, U.S. | $18,462,794 | $17,667,140 | 96% | 98% |
| 85 | GHT Limited | Arlington, VA, U.S. | $17,502,177 | $17,502,177 | 100% | 100% |
| 86 | Osborn Engineering | Cleveland, OH, U.S. | $32,744,000 | $16,056,693 | 49% | 98% |
| 87 | Concord Engineering Group Inc. | Voorhees, NJ, U.S. | $21,200,000 | $16,000,000 | 75% | 100% |
| 88 | Optimation Technology Inc. | Rush, NY, U.S. | $27,063,000 | $15,600,000 | 58% | 100% |
| 89 | Pond | Peachtree Corners, GA, U.S. | $208,200,000 | $15,563,217 | 7% | 98% |
| 90 | EEA Consulting Engineers | Austin, TX, U.S. | $18,884,569 | $15,296,837 | 81% | 100% |
| 91 | BSA LifeStructures | Indianapolis, IN, U.S. | $43,144,365 | $15,037,264 | 35% | 100% |
| 92 | Peter Basso Associates Inc. | Troy, MI, U.S. | $16,000,000 | $14,900,000 | 93% | 100% |
| 93 | LiRo Engineers Inc. | Syosset, NY, U.S. | $396,535,000 | $14,609,000 | 4% | 100% |
| 94 | Advanced Engineering Consultants | Columbus, OH, U.S. | $13,925,055 | $13,925,055 | 100% | 100% |
| 95 | Matrix Technologies Inc. | Maumee, OH, U.S. | $41,610,122 | $13,411,523 | 32% | 100% |
| 96 | Sazan Group | Seattle, WA, U.S. | $13,344,874 | $13,092,461 | 98% | 100% |
| 97 | Power Design | St. Petersburg, FL, U.S. | $740,000,000 | $13,000,000 | 2% | 100% |
| 98 | LEO A DALY | Omaha, NE, U.S. | $93,870,859 | $12,990,408 | 14% | 95% |
| 99 | Kohrs Lonnemann Heil Engineers Inc. | Fort Thomas, KY, U.S. | $13,031,162 | $12,915,464 | 99% | 100% |
| 100 | Karpinski Engineering | Cleveland, OH, U.S. | $13,209,091 | $12,593,937 | 95% | 100% |

# WHAT MATTERS: A MANUFACTURER WHO PROVIDES MORE

EATON
*Powering Business Worldwide*



## What matters: A manufacturer who provides more than just products

Learn about various ways consulting and specifying engineers benefit from working with Eaton on key projects.

By Amara Rozgus, Editor-in-Chief, and Amanda Pelliccione, Director of Research, *Consulting-Specifying Engineer,* Downers Grove, Ill.

# MEP Giants design revenue is up

*The 2021 MEP Giants reported a 6% increase in MEP design revenue, though gross revenue has decreased*

The 2021 MEP Giants generated $9.3 billion in mechanical, electrical, plumbing and fire protection engineering design revenue, an increase over last year's MEP Giants' revenue of $8.8 billion. This year, the 2021 MEP Giants earned approximately $62.2 billion in gross annual revenue during the previous fiscal year, a decrease of about $5.5 billion. While gross revenue was down, MEP design revenue rose 6% over last year's numbers. Figure 1 shows the various building specialties in which MEP Giants earned revenue.

One major player moved to the top 10 list: Alfa Tech Consulting Engineers Inc. was purchased in part by the German foundation RSBG in 2018. After a three-year trial period, the company has grown through mergers and acquisitions and is now reporting its full revenue numbers.

While no other shake-ups occurred within the top 10 firms on the MEP Giants list, there were some newcomers to the total of 100 companies. Several companies either joined the list for the first time or returned after time away from reporting data (in order of ranking on the list): Integral Group, AKF Group, I.C. Thomasson Associates Inc., Mazzetti, WB Engineers+Consultants, Concord Engineering Group, LiRo Engineers Inc., Advanced Engineering Consultants, Sazan Group and Power Design.

**Table 1: Top 10 firms by MEP design revenue**

| Rank | Firm | MEP design revenue |
|---|---|---|
| 1 | Jacobs | $1,587,900,000 |
| 2 | AECOM | $1,200,000,000 |
| 3 | WSP | $691,938,345 |
| 4 | Burns & McDonnell | $606,349,112 |
| 5 | Alfa Tech Consulting Engineers Inc. | $400,000,000 |
| 6 | High Performance Buildings Group | $275,271,866 |
| 7 | HDR | $267,876,638 |
| 8 | Stantec Inc. | $256,851,120 |
| 9 | EXP | $159,334,249 |
| 10 | Affiliated Engineers | $147,880,872 |

Table 1: Top 10 firms are listed by MEP design revenue. Jacobs topped the list yet again — as it has since 2013 — with $1.5 billion in MEP design revenue, a 17% decrease from last year. Courtesy: *Consulting-Specifying Engineer*

**Table 2: Top 10 firms by gross annual revenue**

| Rank | Firm | Gross annual revenue |
|---|---|---|
| 1 | Jacobs | $13,566,975,000 |
| 2 | AECOM | $13,200,000,000 |
| 3 | WSP | $5,276,538,000 |
| 4 | Burns & McDonnell | $3,904,353,873 |
| 8 | Stantec Inc. | $3,526,767,074 |
| 6 | High Performance Buildings Group | $3,000,000,000 |
| 7 | HDR | $2,725,846,000 |
| 67 | CDM Smith | $1,289,786,421 |
| 5 | Alfa Tech Consulting Engineers Inc. | $1,200,000,000 |
| 23 | Southland Industries | $940,170,966 |

Table 2: This shows the top MEP Giants firms by gross annual revenue. Courtesy: *Consulting-Specifying Engineer*

Other companies also moved up more than 10 slots, frequently due to mergers and acquisitions (in order of appearance on the list): Alfa Tech Consulting Engineers Inc., McKinstry, SETTY and VBFA.

The list this year comprises 62% private companies (down from 63% in 2019), 24% employee-owned companies, 8% limited-liability companies and 6% public companies. The 2021 MEP Giants are made up of consulting engineering firms (59%, same as last year) and architectural engineering firms (31%).

Several mergers and acquisitions occurred in the past year; 21% of the firms reporting acquired another company (see page xx for the article "MEP Giants' M&A activity bucks overall consolidation trend").

Table 1 shows the top firms based on MEP design revenue, which is how the MEP Giants are ranked.

## Human resources

The 2021 MEP Giants firms employ 30,304 MEP/FP engineers, with an average of 303 engineers at each firm. Last year, 24,981 MEP/FP engineers were employed by the MEP Giants. On average, each 2021 MEP Giants firm has 145 mechanical engineers (up from 115 in 2020), 127 electrical engineers (up from 107), 20 plumbing engineers (up from 18), 12 fire protection engineers (up from 10) and 33 environmental engineers (up from 32).

This year's MEP Giants employ 193,630 people, including all types of administrative staff and job titles (a decrease from last year's staffing total of 196,467 people). For the 2021 MEP Giants, firms averaged 1,936 staff members, both engineering and nonengineering staff (down from 1,965 in the previous reporting period).

The engineering staffs of this year's firms are made up of 17% females, equal to last year. When asked "What percentage of your firm's engineering staff are female?" 72% of respondents said 20% or less.

On average, firms had 100 LEED Accredited Professionals (at any level) on their team and 8 commissioning agents or professionals (CxAs or CxPs) on the team.

In 2021, the MEP Giants earned 90% of their MEP design revenue for U.S.-based projects, a small decrease from last year (91%). Several opportunities are open to MEP Giants outside the United States. Engineering services are provided in North America (Mexico, Canada) 50% of the time. Other areas of international revenue include Asia (33%, a decrease), the European Union (32%, steady), the

**Percentage of MEP design billings**

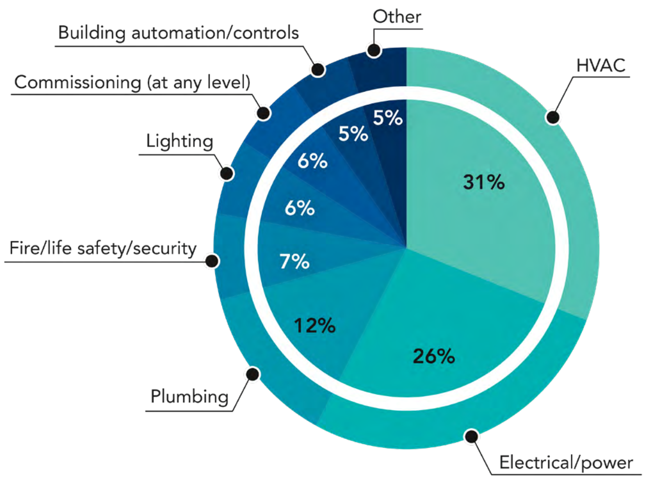



Figure 1: The top two areas in which 2021 MEP Giants earned revenue — HVAC and electrical/power projects — varies very little year over year. Courtesy: *Consulting-Specifying Engineer*

Middle East (32%, an increase) and the Caribbean (32%, an increase).

When it comes to sustainable engineering, the number of U.S. Green Building Council LEED projects increased for this reporting period; 1,668 projects were submitted for LEED certification in the past fiscal year, whereas 1,111 projects were submitted for the previous reporting period. The number of projects submitted in the past fiscal year to the U.S. Environmental Protection Agency's Energy Star Buildings Label increased to 634 projects, with an average of six projects completed by each of the 2021 MEP Giants, an increase from four projects in the previous year.

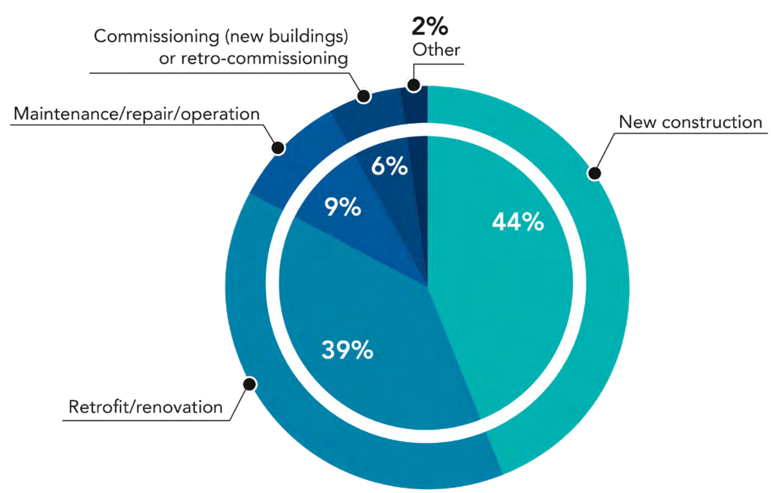
Figure 2: Very small shifts occur between new construction and retrofit/renovation each year; the 2021 MEP Giants data remains consistent, even during COVID-19. Courtesy: *Consulting-Specifying Engineer*

## Project types

The 100 firms listed here don't handle all aspects of engineering. Many subcontract specialty services including acoustics (70%, up from 68% the previous year), computational fluid dynamics modeling (30%, up from 29%), construction management (23%, up from 15%) and fire/smoke systems design and commissioning, each at 15%.

As shown in Figure 2, MEP Giants indicated that they split their time between new construction (44%, up from 42% last year) and retrofit/renovation (39%, no change). These numbers have deviated only slightly year over year, with a percent or two of change each year based on economic conditions. Rounding out the projects are maintenance,

**MEP design revenue by project type**



repair and operations (9%); commissioning or retro-commissioning (6%); and "other" (2%). For a more in-depth report on commissioning, read the October 2021 article on the Commissioning Giants.

The 2021 MEP Giants firms continue to work on several projects in hospitals and health care facilities, office buildings and government or military facilities. Figure 3 breaks down the various building types in which MEP Giants firms work; the health care and office building markets were at the top for this reporting period, as they were the past five years.

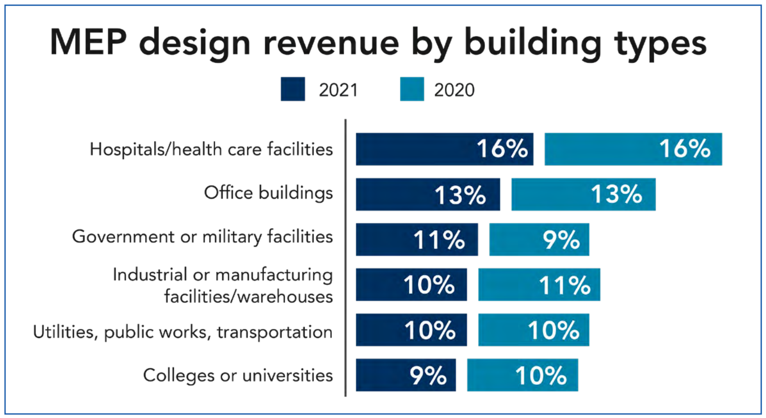



Figure 3: For the 2021 MEP Giants, the top six buildings in which the firms earned revenue did not change, but the order did slightly. For this reporting period, other building types included engineered multidwelling buildings (7%), K-12 schools (6%), research laboratories (5%) and data centers (4%). Courtesy: *Consulting-Specifying Engineer*

Read about several project profiles at www.csemag.com/giants.

## COVID-19

The biggest corporate challenge during this reporting period was COVID-19 concerns and issues, with 59% of MEP Giants firms indicating it was the largest. The major ways in which firms were affected were:

- Backlog of work: 53%.
- Provided more/less retrofit/renovation services: 33%.
- Additional new hires: 30%.
- Stopped work in some markets (building types or geographic locations): 29%.
- Temporary layoffs: 29%.

## Survey methodology

At the beginning of 2021, the *Consulting-Specifying Engineer* staff collected and analyzed data from several consulting and engineering firms. Some of the top mechanical, electrical, plumbing and fire protection engineering firms submitted their firms' profiles to *Consulting-Specifying Engineer*; however, not all consulting firms were willing or able to participate in this year's MEP Giants survey. The smallest amount of MEP design revenue reported this year was more than $12.5 million. Some firms were unable to report final data due to the COVID-19 pandemic.

In 2021, more than 100 engineering firms provided their information for the MEP Giants program, with some newcomers or firms reentering the program. Data and percentages are based on the top 100 companies that responded to the request for information; the results do not fully represent the construction and engineering market as a whole. However, with nearly identical questions asked in previous years and more than 100 engineering firms participating this year, we present a qualified portrait of where the top engineering firms stand in 2021.

# 10 design tips for the energy transition

*Simplifying solar, microgrid and electric vehicle charging infrastructure*

The biggest changes to energy infrastructure in more than a century are underway. How do you design power systems that unlock new functionality?

Today, power systems still look and function much like they did at the turn of the last century, bringing power from centralized power plants to energy consumers. By 2050, however, energy infrastructure is expected to monumentally change. In the U.S., the share of renewables is expected to double during that time, and the installed base of energy storage systems worldwide will grow 27 times by the end of this decade. (Source: U.S. Energy Information Administration and Wood Mackenzie 2021, respectively)

The energy transition is an industry term that describes this transformation and covers three key trends: electrification, decarbonization and decentralization. Electrification is largely driven by changes in transport and buildings. Decarbonization is creating a massive shift from coal and natural gas to renewables. As we move from centralized generation to local and distributed energy resources, there is a structural change (decentralization) in electricity that creates an environment where traditional energy consumers can become energy producers.

From brownfield to greenfield projects, power system design is fundamentally changing:

1. Far more solar photovoltaic (PV) systems are being added

## EVERYTHING AS A GRID

### *Unlock a low-carbon future*

*Everything as a Grid is Eaton's perspective on, and approach to, leading and managing the change in how energy is distributed and managed. Utility power once flowed in a single direction away from centralized sources. Today's modern power flows bi-directionally, back and forth through the grid, between an increasing number of decentralized renewable generators, microgrid energy systems and electrical loads, to offer cleaner, more reliable power across the world.*

*Through its Everything as a Grid approach, Eaton is creating flexible energy systems to power the future—accelerating decarbonization, boosting resilience, reducing energy costs and creating new revenue streams.*

2. Microgrids and multiple distributed energy resources (DER) are increasingly integrated and interconnected to building systems and the utility grid

3. Electric vehicle charging infrastructure requires a fundamental change in where we fuel our vehicles and how energy demand is planned and managed

Let's take a look at the key energy codes, standards and application considerations for power system designs in these areas.

## Connecting solar at the building level

In 2020, solar accounted for 43% of all new electricity-generating capacity added in the U.S., and analysts expect solar capacity additions in the next decade to be more than three times greater than what has already been installed through 2020. (Source: SEIA March 2021 data) In other words, the vast majority of onsite generation installs will be solar. So how is solar safely integrated at the building level?

While much of energy infrastructure is changing, some things are not. Codes and standards still govern these applications, so let's start there.

As with any electrical application, NEC Chapters 1 through 4 apply. In addition, the following NEC Articles are an important starting point for a safe solar PV system installation:

- **NEC Article 690** applies to PV electrical systems, array circuits and inverters for PV systems, which may be interactive with other electrical power sources (the electric utility) or stand-alone with or without energy storage.
- **NEC Article 691** covers the installation of large-scale PV electric supply stations with an inverter generating capacity greater than 5000 kilowatts (kW) that are not under exclusive utility control.

These NEC articles are not intended to serve as a comprehensive design guide. Solar applications present unusual service conditions in terms of topography, environment and equipment. So even if you design a system that meets minimum code requirements, it may not be optimized for its unique environment—creating uptime and production challenges.

### DESIGN TIP 1: Plan for peak site conditions

Overcurrent protection devices provide vital functionality enabling cost-effective and reliable performance of PV systems. However, peak solar project site operating conditions are often not considered when sizing AC collection system components. This can lead to equipment overheating, nuisance tripping, system failure and reduced power generation during hot summer days when reliable power production is needed the most.

Peak site conditions act individually or in concert to increase the internal operating temperatures in PV system enclosures and can stress components well beyond their UL design ratings. Common peak conditions include ambient operating temperatures approaching or exceeding 40°C, internal heat gain due to direct solar radiance on the enclosure or reflected from the terrain, and geographical elevation above 3,300 feet.

You can address these issues by estimating the expected internal heating of the enclosure from solar radiance. To start, study local weather data, including recorded daily and average monthly temperatures. Often, PV system designers use 2% high or 0.4% high temperature data as the basis for system design, and size the PV system ampacities to minimum NEC requirements without application of additional thermal rating factors. This approach presents problems during the hottest summer days, when peak daily temperatures can be at record levels. The IEEE C37.24 Guide for Evaluating Effect of Solar Radiation on Metal-Enclosed Switchgear is an excellent reference on this topic.

For PV collection systems enclosures subject to full sun, the reflected and the direct solar gain can add up to 15°C to the internal enclosure temperatures. This means that the internal enclosure operating temperatures can exceed 50°C for an extended period (four to six hours) during peak time, even in moderate climates. Effective thermal management is a must to address this challenge.

## DESIGN TIP 2: Select proper overcurrent protection devices (OCPDs)

Due to peak site conditions, UL equipment design ratings can be far exceeded. UL891 switchboards, which apply molded case circuit breakers and fused switches as OCPDs in enclosures, are UL Listed based on 40°C ambient with 65°C rise at maximum rated loading. At internal enclosure temperatures above 40°C, you should apply techniques to reduce the heat rise in the enclosure.

- When designing switchboards for solar applications, keep the following in mind: manufacturers typically publish thermal rating factors for OCPDs for service temperatures above 40°C. If you don't see the information in published documents, ask for it.

- Sizing OCPDs for minimum 50°C ambient service is a good idea in solar applications, although some applications may require an even higher temperature consideration.

- OCPDs acting as string inverter ac collection devices are often densely packed and highly loaded during the peak temperatures of the solar day; typically generating the highest amount of heat at the hottest part of the day.

- Switchboard buses must be properly sized for system loading. Consider sizing to the next higher ampacity to reduce heat rise, based on thermal conditions.

- Equipment and OCPD terminal connections are UL rated for 75°C conductors, even if 90°C rated conductors are applied.

## DESIGN TIP 3: Size conductors for thermal conditions

Conductors are an important thermal management system that draws heat out of the OCPD during operation. Apply the conductors at 75°C ratings to match the OCPD terminal UL Listing.

The conductors should be sized per NEC Article 310 and applicable NEC conductor thermal rating factors applied. For example, NEC 2020 Table 310.16 provides the allowable 75°C ampacities of insulated conductors based on 30°C ambient temperatures and Table 310.15(B)(1) provides thermal correction factors for ambient temperatures above 30°C. Sizing conductors for 50°C service in solar applications is an effective approach to reduce the temperature rise in the enclosure.

## DESIGN TIP 4: Go beyond the code to enhance safety

The NEC provides an exception [2020 NEC 690.9(D)] that eliminates the requirement for a main overcurrent protective device on the inverter side of the solar power transformer. The exception states that a power transformer with a current rating connected towards the interactive inverter output, not less than the rated continuous output of the inverter, shall be permitted without overcurrent protection from the inverter.

The elimination of the main OCPD on the secondary of the solar power transformer may provide economic benefits to the project cost, however, this approach can increase arc energy hazards for operation and maintenance teams right where the available arc fault energy is at the highest level.

System designers may want to consider using arc flash reduction measures at the low-voltage side of the solar step-up transformer. To achieve this, you can incorporate an Arc Reduction VFI (AR-VFI) transformer design or add the main OCPD back into the design. For reference, energy reduction methods are addressed in NEC Sections 240.67 and 240.87. These NEC Sections address applications where the fuse or circuit breaker is rated or can be adjusted to 1200A and higher, but the technologies included can be applied to lower rated overcurrent protective devices.

It's important to understand that NEC installation requirements serve as a bare minimum. For solar PV applications, going above code requirements can be essential to enhance personnel safety, protect equipment and advance system uptime.

For additional information about solar PV for commercial and industrial buildings, visit the latest For Safety's Sake blog.

## Integrating multiple DER into a microgrid


The increasing frequency and impact of climate emergencies underscore the need for more sustainable and resilient power. Over the past 20 years, power outages have surged by upwards of 67%. (Source: Climate Central, 2020) Microgrids enable customers to balance where, when and how electricity is consumed to support resilience, sustainability and efficiency. In other words, they can help maintain business continuity by preventing downtime, reduce energy costs, and accelerate decarbonization.

Energy storage is a critical component to microgrid systems. At Eaton, we've led the way in deploying microgrid energy systems for more than a decade, and 99% of the projects we've worked on have incorporated energy storage.

When it comes to the codes and standards for microgrid and energy storage systems, NEC Chapters 1 to 4 need to be kept in mind. In addition:

- **NEC Article 706** is relatively new (since 2017) and addresses additional requirements for energy storage systems, which used to be buried in Article 705.


*Incorporating solar generation and battery storage, Eaton is developing a microgrid at its Arecibo Plant in Puerto Rico to improve resilience for the manufacturing of circuit breakers used in homes, buildings and a range of industrial applications*

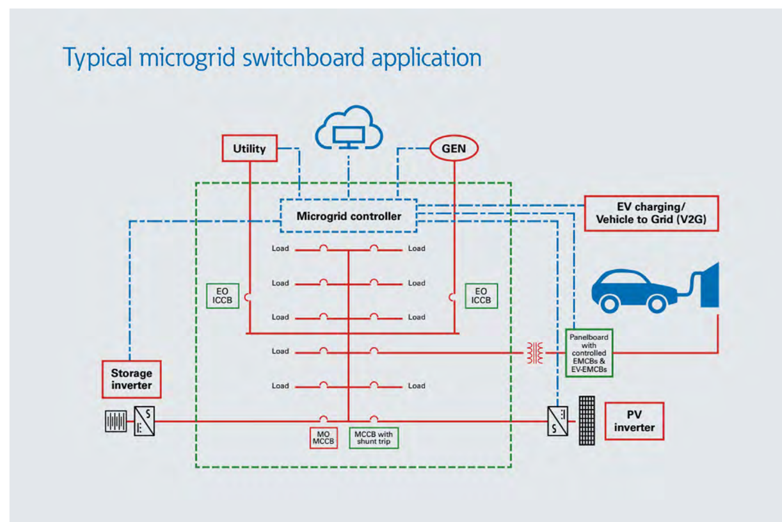
- **NEC Article 705** addresses how to connect additional power production sources to the existing premises' wiring system to operate in parallel with the primary source of electricity. Typically, the primary source is the electric utility, and the other local sources could include onsite energy storage, solar, wind, fuel cells or generators. **NEC Article 705 Part II** addresses microgrid systems.

Beyond the NEC, NFPA 855 and UL 9540A are also relevant. The former addresses the installation of energy storage systems, while UL provides the test method for fire safety hazards associated with propagating thermal runaway within battery systems. There are layers of protection that are required to support safe the safe integration of energy storage systems, and it's essential to know the code requirements beyond the physical battery system to help keep people and property safe.

## DESIGN TIP 5: Microgrid switchboard simplifies DER interconnection

When it comes to commercial and industrial buildings, the switchboard is probably the most ubiquitous electrical system technology. And, a microgrid switchboard can elegantly and conveniently connect all distributed energy resources into one central power distribution and intelligent control hub. This approach simplifies design and installation, while meeting UL 891 (switchboard) standards:

- Incorporating switching and protection components
- Integrating the microgrid controller (factory-wired and tested) within the switchboard structure
- Providing design flexibility with various circuit breaker options



## DESIGN TIP 6: Expand functionality of emergency assets

Energy infrastructure can be put to work in new ways. For example, essential Uninterruptible Power Systems (UPS) add resilience and enable continuous operation to any facility where mission critical power is needed, but typically sit unused much of the time. Now, new EnergyAware systems can also support sustainable energy solutions, optimize the cost of powering buildings and even create new revenue streams from power protection assets. The UPS will always maintain its primary role of ensuring business continuity in the event of an outage, and now it can fully utilize its power capacity to provide additional value when there is no emergency.

*A data center in Virginia uses EnergyAware UPS technology to support clean energy goals, lower demand and peak time charges.*

## DESIGN TIP 7: Intelligent microgrid control optimizes multiple DERs

Microgrid controllers provide modular, scalable and repeatable technology with powerful control technology that optimize DER systems according to customer goals (energy savings, resilience, maximizing renewables and more). The basic idea is to select hardware that provides plug-and-play functionality, while also working with an organization able to provide a technical and economic assessment of the software and services necessary to optimize the system. This can include peak shaving, time of use arbitrage, islanding from the grid and the ability to sell power back to the utility.

For additional information on microgrid & DER intelligent control solutions visit **Eaton.com/microgrid**.

## Electric vehicle charging infrastructure must avoid an ad hoc approach

Electricity demand is expected to increase by 27% by 2050 due to vehicle electrification (Source: McKinsey 2019). This will drive a fundamental shift in where we fuel up; we'll fuel our vehicles where we park. It's important to understand that electric vehicle charging infrastructure (EVCI) is more

*A massive deployment of electric vehicle charges is anticipated and will require significant upgrades to power systems.*

than another building or site load, with wide-ranging implications to power system design.

When it comes to the NEC requirements, there is a lot of activity happening:

- **NEC Chapters 1 to 4** apply and will provide guidance on the load calculations, impact to service size (or even a separate service), metering when fee for charging is applicable, and more.
- **NEC Section 625.5** requires listing of all electrical materials, devices, fittings and associated equipment.
- **NEC Section 625.42** introduces load management systems. The load management service is permitted to be integral to a piece of equipment or the listed system. The 2023 code cycle will likely permit load management systems.

In addition to the NEC, there are a host of relevant safety certifications specific to DC fast charging (including UL 2202), electric vehicle supply equipment (ANSI UL 25952), bidirectional charging (UL 9741), and more.

Both AC and DC charging options have their place, and each comes with business and installation considerations. It's expected that AC charging will represent the largest global public installs through 2025, and DC charging will provide critical network support on long travel routes like interstate highways.

DC-type charging is preferred in some applications and for specific needs, depending on vehicle routes and dwell time. This type of charging involves more power and delivers a charge in as little as 30 minutes.

AC charging is typically used to charge where you park for work, school, shopping, entertainment or hotel stays. Level 1 charging is used when you park overnight to charge your vehicle taking eight hours or more to fully charge an electric vehicle, whereas Level 2 charging typically takes around four hours to charge.

EV charging systems can be optimized with charge management software, battery energy storage and the integration of renewables like solar PV to meet cost, resilience and sustainability goals.

## DESIGN TIP 8: plan ahead for EVCI

When upgrading or designing building systems, you need to plan for future EVCI capacity needs in order to avoid significant changes and costs later. In other words, you need to future-proof and provide the electrical architecture for what's to come. How many chargers will be required? How much power do you need to accommodate for growth? Playing the long game enables right-sizing service and feeders.

## DESIGN TIP 9: Optimize charging with load management systems

Optimizing charging with load management enables more installed chargers and delivers as much power as chargers need. Further, when available capacity is reached, load management software limits energy consumption and reduces the power available. This integral approach to load management enables load shedding and avoids exceeding incoming service capacity.

### DESIGN TIP 10: plan for power distribution upgrades, including energy storage

EVCI may require updates and upgrades to existing energy infrastructure. This can include adding energy storage and intelligent microgrid control, switchboard updates, as well as software that can optimize EV charging.

## Flexible energy systems will power the future

Now and in the future, electrical infrastructure needs to do much more than just receive power from the grid for distribution to building loads and equipment. There is an enormous opportunity to manage power far more effectively, taking advantage of a new power paradigm that is decentralized, electrified and decarbonized. All that said, there is no doubt that power system design and NEC codes will also change, so that energy infrastructure can work in new ways to ensure the power is always on, optimized for efficiency and safety, and ready for what's next.

At Eaton, we're applying our Everything as a Grid approach to increase and optimize the energy the world relies on. We are continuing to invest in industry education to help professionals get the know-how needed to keep up with constantly changing codes and best practices that support a new power paradigm that involves far more local energy generation and storage.

Connect with your local Eaton application engineer to get the latest insights on codes, new technologies, training and education resources.

By Nick Belitz, Morrissey Goodale LLC, Denver

# MEP Giants' M&A activity bucks overall consolidation trend

*The number of transactions in the mechanical, electrical, plumbing and fire protection engineering firms fell sharply in 2020 as compared to prior years, but long-term trends favor escalating M&A activity*

Mechanical, electrical and plumbing firms are a class unto themselves in the engineering world, with *Consulting-Specifying Engineer's* MEP Giants being the rarest of them all. It's unusual for one type of engineering firm to run counter to the trends broadly at work in the industry at large.

But if there was ever a year for something unexpected, 2020 was certainly the time and that is exactly what happened with MEP firms in terms of mergers and acquisitions. Last year, with the world in the grips of a global pandemic, engineering firms and the industry as a whole not only survived, but in many cases thrived. This was good news for the engineering business in general and also good news for industry M&A, which continued at a robust pace.

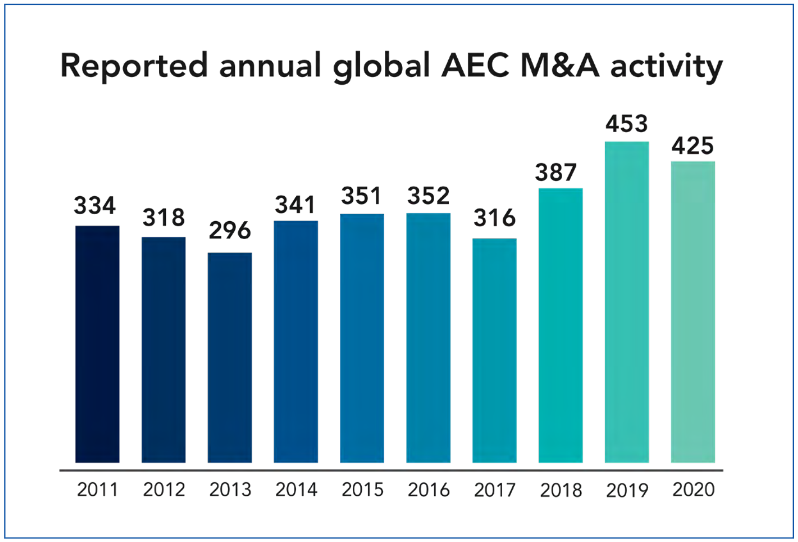
Such performance in 2020 would lead us to believe that the MEP Giants, consistent with the trends in the larger engineering industry, would continue their yearslong pattern of increasing the number of firms making acquisitions as well as the number of acquisitions made. But as it turned out, the MEP Giants bucked overall industry trends in three critical ways. Specifically:

## TREND NO. 1: Sustained consolidation activity despite the pandemic

In the overall engineering world, buyers and sellers still pursued, closed and announced transactions at a strong pace in 2020. After record-setting levels of merger and acquisition activity in recent years, the architecture and engineering industry closed 425 deals globally in 2020, which was somewhat less than the 453 transactions in 2019, but still more than the 387 deals in 2018.

The majority of the transactions last year occurred within the domestic U.S. — an eye-popping 309 deals — which illustrates the strong economic position of the nation as

Figure 1: Global merger and acquisition activity in the engineering and architecture industry remained strong in 2020 as measured by the number of announced transactions. Courtesy: Morrissey Goodale




well as the confidence of industry executives willing to invest in other firms across the country. But while the engineering industry showed a strong appetite for deals in the midst of the uncertainty created by the pandemic, the MEP Giants responded by reducing merger and acquisition activity in 2020.

In fact, the number of the largest mechanical, electrical, plumbing and fire protection engineering firms that reported a deal in the previous year fell to 21%, just over one-fifth of the MEP Giants group. That stands in contrast to 2019, during which 28% of the Giants reported a transaction and 2018, during which 25% of the group closed a deal.

While notable, this data doesn't tell the full story. As a group in 2020, the MEP Giants recorded 33 transactions, down 37% from the 52 deals made the year before. This also represents a decline from the 49 deals reported in 2018 and the 37 deals reported in 2017. We note, however that while the latest results show a departure from the multiyear trend of increasing acquisitions by the MEP Giants, 2020s activity is still on par with the number of deals made annually by the group just a few years ago.

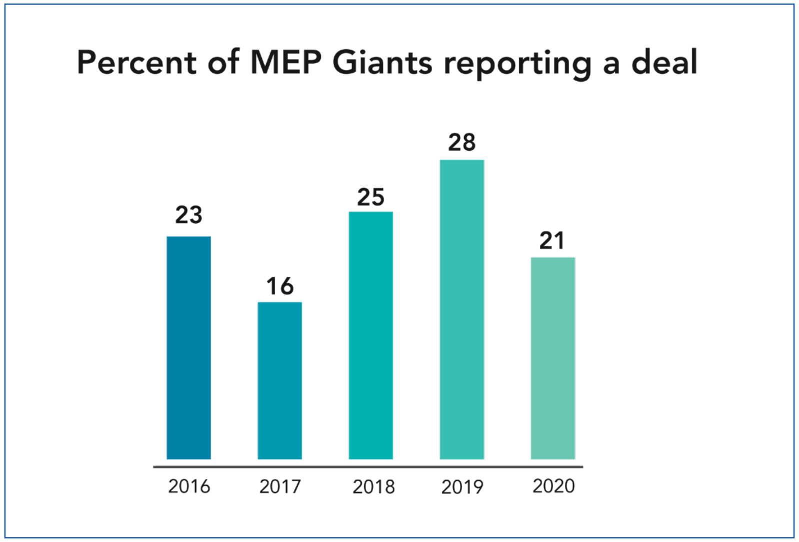
## TREND NO. 2: Private equity firms are driving deal-making

In the broader engineering industry, the trend before and during 2020 tended to an increasing number of deals being done by private-equity and private-equity-backed firms. Apart from the MEP Giants, this very much held true in the past year, with private equity accounting for more than a quarter of all deals consummated in the U.S. in 2020 and more than one-third of all deals in the U.S. as of this writing in mid-2021.

With private equity having become the preferred equity model for many firms, it is no surprise that owners of firms large and small, having successfully navigated the pandemic year and with near-term prospects for the business still strong, would look to capitalize on their current position to transition or fully exit ownership. An environment in which sellers look to do deals quickly favors skilled, well-capitalized acquirers.

Private equity firms and family offices fit the bill because they are prepared to move swiftly when strategic investments fitting their criteria become available. By contrast,

Figure 2: More than one-fifth of the MEP Giants reported a transaction in 2020, representing a reversal of the trend over the previous three years. Courtesy: Morrissey Goodale




some privately held, employee-owned firms (many of which may be managed by committee) can be slower to make decisions and, though they may be very good acquirers and integrators, simply may not be in a position to strike when the right opportunity presents itself.

Further, larger strategic engineering firms and their management teams may face capitalization challenges of their own stemming from stalled internal ownership transition plans, making investment capital from these buyers even more valuable and their leaders more risk-averse. We anticipate this situation will likely continue to create a favorable landscape for private equity to further grow in the engineering industry in the short and medium term.

However, this is another area in which the MEP Giants bucked the trend as only one private-equity-backed firm, Salas O'Brien (Santa Ana, California), registered a transaction. The other buyers of 2020 consist predominantly of the usual suspects of publicly traded firms Stantec (Edmonton, Alberta) and WSP (Montreal, Quebec) and stalwart employee stock ownership plan or employee-owned firms IMEG (Rock Island, Illinois) and LaBella Associates (Rochester, New York).

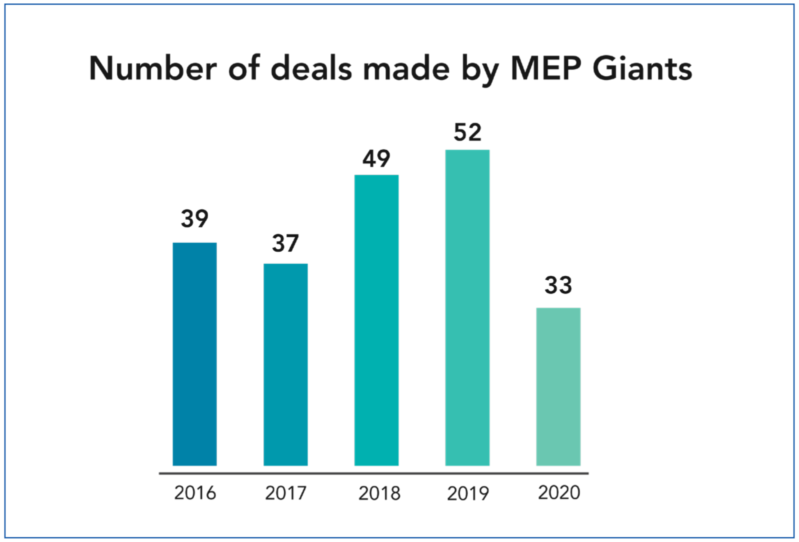
Nonetheless, given the high level of interest in the engineering sector from private equity firms, we expect to see more financial buyers involved in MEP deals going forward.

## TREND NO. 3: The number of buyers in the engineering space is increasing

Recent years have brought us a diverse group of buyers from all sectors and geographic corners of the market, inclusive of private equity buyers, publicly traded strategic buyers, ESOPs and midsize and smaller employee-owned engineering firms. We would expect the same for MEP firms but based on the data, it was only a few big, brave MEP Giants that shrugged off the pandemic and kept on acquiring.

If we use tallies of transactions as a measure of confidence, a handful of serial acquirers expressed supreme optimism throughout 2020. Specifically, industry leaders IMEG and Salas O'Brien recorded eight and five transactions, respectively, during the course of the year. These buyers by themselves represented nearly 40% of the 33 transactions closed by the MEP Giants in 2020.

Figure 3: The number of deals made by the MEP Giants firms in 2020 declined as the group recorded 33 transactions, down 36% from the 52 deals made by the firms in 2019. Courtesy: Morrissey Goodale




Well-known MEP industry names Stantec, WSP and Jacobs (Dallas) also notched multiple transactions, whereas NV5 (Hollywood, Florida) and Gannett Fleming (Camp Hill, Pennsylvania), both of which were quite active in 2019, scaled back deal-making in the pandemic year.

So what does this mean for the future of M&A activity of the MEP Giants? The critical point is that the long-term drivers of consolidation, which were present long before the pandemic, are still very much in play and, if anything, have intensified over the last year. For buyers, those factors include the need to address mounting competitive pressures, the goal to expand in high-growth geographies and the desire to capture increasing government spending on infrastructure.

Sellers, meanwhile, will continue to face challenges with their internal ownership and leadership transition while seeking to capitalize on strong valuations in the current marketplace. Therefore, in 2021 and beyond, acquisitions will remain a critical part of the growth strategies — and business opportunities — for the MEP Giants.

***Nick Belitz** is a principal with Morrissey Goodale LLC, a management consulting and research firm that exclusively serves the architecture, engineering and construction industry. Morrissey Goodale is a CFE Media content partner.*

CONSULTING - SPECIFYING
engineer®

# Thank you for downloading the 2021 MEP Giants eBook!

Direct questions about MEP Giants to:
Amara Rozgus, Editor in Chief
arozgus@cfemedia.com

MEP GIANTS 2021



CFE Media and Technology™