

An update on U.S. investor-owned utility activity on transportation electrification for the first half of 2020 By Nicole Lepre and Conner Smith

OCTOBER 2020



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# **EXECUTIVE SUMMARY**

Since 2012, utility commissions across the country have approved almost \$1.5 billion in transportation electrification investments [1]. Between January and June 2020, \$60 million in utility investment was approved. These approvals could support an additional 485 Level 2 and 70 DC fast charging (DCFC) stations. This does not include the \$701 million approval issued by the New York Department of Public Service on July 16 for a make-ready infrastructure program split across six of the state's utilities. It also does not include the \$436 million Charge Ready 2 program from Southern California Edison approved in late August 2020. Approved utility investment between January and June 2020 is down almost 50 percent from the amount approved in the first two quarters of 2019 (see Figure 1), but the significant investments approved shortly after the time period covered by this report reveal that utility investment is can occur in large increments. This stems partially from the lengthy nature of the regulatory approval process, which has generally been exacerbated by the COVID-19 pandemic.

That irregularity and the start-stop nature of individual applications approved via a lengthy and litigated process could also underscore the need for decision-makers to consider policies that would provide a more durable foundation of utility support upon which independent investments can rely. For example, California Assembly Bill 841, signed into law on September 30<sup>th</sup>, requires "make-ready" infrastructure on the utility side of the meter to be provided at no-cost to customers at typical sites, which will offer more consistent, predictable market support [2].

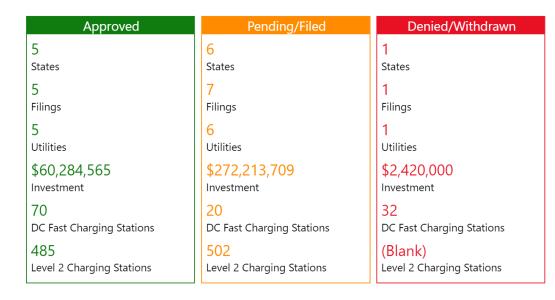


FIGURE 1: ELECTRIC UTILITY FILINGS BY STATUS IN THE UNITED STATES (JANUARY-JUNE 2020)

This chart highlights approved, pending, and denied filings between January and June 2020. There is a significant amount of newly filed investment with the potential to support more than 500 new charging stations.

Acknowledgement: This work was supported by the Natural Resources Defense Council.

Almost all of the approved investment in the first and second quarters came from a \$39 million program from Consolidated Edison in New York and a \$20 million program from Dominion Energy in Virginia. New proposals far exceed approved investment in the first half of 2020 and could bring an additional \$272 million in investment. Xcel Energy accounts for almost all of these proposals with two large filings, one in Colorado and another in Minnesota. The Minnesota program proposes \$157 million in EV rebates and other transportation electrification investment in an effort to provide stimulus and relief from the economic effects of COVID-19. In Colorado, Xcel is aiming to invest \$102 million as part of a broader transportation electrification plan filed in compliance with legislation passed in the state in May 2019 [2].

Investment in underserved communities emerged as a core focus area for utilities in 2019 and continues to be prioritized in programs approved or proposed in 2020. The Xcel Energy transportation electrification plan in Colorado offers the greatest potential investment in underserved communities with these groups prioritized for proposed investment worth \$75 million. At least \$200 million of the \$701 million make-ready program approved in New York early in the third quarter, is also set to go directly to underserved communities. While many utility EV programs, and especially many of the largest programs, include substantial commitments to underserved communities, not all utility programs or state commissions are prioritizing these communities. None of the investment approved in the first two quarters of 2020 was designated for these groups and a potential investment of \$600,000 for DCFC serving underserved communities from Central Maine Power Company was denied. The commission did not provide a primary reason for denial of DCFC programs and instead indicated a desire to further evaluate the impact of programs and assess potential benefits before approving other program elements.

Medium- and heavy-duty electrification was also a key focus of programs approved in the first half of the year with both Dominion Energy and Consolidated Edison targeting smart charging for electric buses and trucks as components of their approvals. San Diego Gas and Electric was also approved to offer interim commercial vehicle charging rates that is available to all eligible customers and that will also support their \$109 million investment in an EV charging program including support for electric trucks and buses approved in 2019. Stakeholders expect the commission to make a permanent solution soon [4].

Utilities have an approval rate of 79 percent so far in 2020 with 60 percent of approved programs having been modified from their original proposal. This is slightly up from the 70 percent approval rates seen in the first half of 2019.

This report elaborates on the trends in transportation electrification programs from investor-owned utilities (IOU) described above. Using data from the Atlas EV Hub (<u>www.atlasevhub.com</u>), the report summarizes utility EV investment activity in 2020 and places that investment in a broader context.<sup>1</sup>

# TRANSPORTATION ELECTRIFICATION STATE OF PLAY

U.S. passenger EV sales were down 44 percent in the second quarter compared to the second quarter of 2019 and are down almost 30 percent for the first half of the year compared to the first half of 2019. The auto industry overall has been hit hard by the COVID-19 pandemic and the market as a whole saw sales

<sup>&</sup>lt;sup>1</sup> All data from this report is from the Electric Utility Filings dashboard on the Atlas EV Hub (<u>www.atlasevhub.com</u>) unless otherwise noted.

fall by 24 percent for the first half of the year following major manufacturing shutdowns and production delays [3]. The Tesla Model 3 continues to dominate the U.S. EV market, claiming 49 percent of all sales through June 2020. However, Tesla's sales overall for the first half of 2020 are down 15 percent compared to 2019. Even the Model 3 has faced a challenging year so far and saw sales drop by 26 percent compared to the first half of 2020. Part of this has to do with the introduction of the Model Y in March, which appears to have diverted some of the demand away from the Model 3. In total, there are now 52 EVs offered on the market, up from the 38 models offered in the second quarter of 2019.

Charging infrastructure deployment continues to grow steadily despite fluctuations in EV sales. Charging service providers have added more than 9,800 ports to the nation's charging network in the first half of 2020, more than 2,000 ports higher than the number of ports added in the first half of 2019. As of June 30, 2020, there were more than 90,000 charging ports across the country 17,500 of which were DCFC ports. California accounts for roughly a third of the nation's charging infrastructure and Tesla provides half of the DCFC ports nationwide.

State policy implementation and funding programs continue to provide vital support for the medium- and heavy-duty EV sector with California passing the landmark Advanced Clean Trucks Rule in June 2020 [4]. The public sector passed the \$2 billion funding mark for transportation electrification when \$133 million in awards were made for electric transit buses through the Federal Low- or No Emission (Low-No) Bus Program in June. Funding awards for EVs and EV charging announced in the first half of 2020 are valued at \$288 million and are 25 percent higher than the awards recorded in the same period of 2019. Roughly \$92 million of the first and second quarter awards for transportation electrification came from the Volkswagen Settlement.

# UTILITY FILINGS FROM JANUARY THROUGH JUNE 2020

New York and Virginia accounted for almost all of the approved utility investment in the first half of 2020 with a combined \$59 million. Filing activity is down in general compared to the first half of 2019 which saw almost twice as much investment approved. However, New York utilities were approved to invest \$701 million in make-ready infrastructure for EV charging in July, and Southern California Edison was approved to invest \$436 million in their Charge Ready 2 program in August, significantly increasing the yearly total of approvals. New filings from Xcel Energy in Colorado and Minnesota could bring in an additional \$260 million of utility investment if approved. Utilities continue to target both light-duty electrification as well as provide support for electric buses and trucks. Programs offering publicly accessible DCFC have dominated the approvals so far in 2020 with a few innovative program elements targeting customer groups like ride-hail drivers and commercial fleet operators. This section provides high level statistics on utility filings from 2012 through June 2020 as well as detailed summaries of filing activity recorded between January and June of 2020 for each region as defined by the U.S. Energy Information Administration (EIA).

## SUMMARY STATISTICS OF UTILITY FILINGS (2012 – JUNE 2020)

Between October 2012 and June 2020, electric utilities have been approved to invest almost \$1.5 billion in transportation electrification across the United States. Pending filings as of June 30, 2020 could add an additional \$884 million to the total. Approved investment could support more than 49,000 Level 2

charging stations and 2,600 DCFC stations in 26 states throughout the country. Figure 2 shows all the filings tracked on the EV Hub organized by filing status.

Approved	Pending/Filed	Denied/Withdrawn
26	23	17
States	States	States
81	34	28
Filings	Filings	Filings
45	24	23
Utilities	Utilities	Utilities
\$1,469,375,464	\$884,121,821	\$401,253,126
Investment	Investment	Investment
2,603	1,010	436
DC Fast Charging Stations	DC Fast Charging Stations	DC Fast Charging Stations
49,074	61,169	82,003
Level 2 Charging Stations	Level 2 Charging Stations	Level 2 Charging Stations

## FIGURE 2: ELECTRIC UTILITY FILINGS BY STATUS BETWEEN 2012 AND JUNE 2020

This chart summarizes approved, pending, and denied filings through June 2020.

Approved utility investment shot up to \$2.1 billion in July with the approval of the \$701 million Make-Ready Program in New York. Shortly afterwards in August, Southern California Edison was approved to invest \$436 million for their Charge Ready 2 program. This approval reduces the pending investment recorded at the end of the second quarter by almost half.

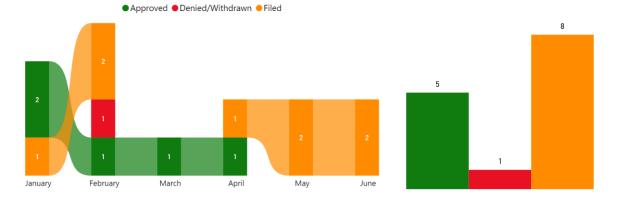
## FILING ACTIVITY DURING FIRST HALF OF 2020

Approved utility investment in the first half of 2020 is less than half of what it was during the same period from 2019. COVID-19 restrictions and limitations could be one of the driving factors explaining this drop in activity at utility regulatory commissions. Activity during the first half of the year was concentrated in New York and Virginia. Dominion Energy, which is planning to support electrification of all school buses in its Virginia service territory<sup>2</sup>, secured the state's first utility investment in the first quarter of 2020 with \$20 million approved for a variety of programs. Consolidated Edison received approval to invest \$39 million in DCFC make-ready infrastructure for both fleet and public charging stations. In total, the approvals issued in the first and second quarters of 2020 could support 485 Level 2 and 70 DCFC stations. Figure 3 summarizes the filing activity seen through the first half of the year.

<sup>&</sup>lt;sup>2</sup> <u>https://www.dominionenergy.com/our-stories/electric-school-buses</u>

Approved	Pending/Filed	Denied/Withdrawn
5	6	1
States	States	States
5	7	1
Filings	Filings	Filings
5	6	1
Utilities	Utilities	Utilities
\$60,284,565	\$272,213,709	\$2,420,000
Investment	Investment	Investment
70	20	32
DC Fast Charging Stations	DC Fast Charging Stations	DC Fast Charging Stations
485	502	0
Level 2 Charging Stations	Level 2 Charging Stations	Level 2 Charging Stations

FIGURE 3: FILING CHANGES BETWEEN JANUARY AND JUNE 2020



This chart highlights approved, pending, and denied filings between January and June 2020. No Approvals were recorded in May or June.

Overall, filings by five electric utilities in five states were approved during the first half of 2020. Six utilities in six states either filed new programs or received some sort of modification to previously proposed programs. During this time, commissions throughout the country denied one filing in Maine worth \$2.4 million.

In addition to the larger programs approved for Consolidated Edison in New York and Dominion Energy in Virginia, Central Maine Power Company, Hawaiian Electric, and San Diego Gas and Electric also received approvals for smaller programs and EV rates. A portion of Central Main Power Company's filing was the only denial recorded during this period. Figure 4 shows the location of filing activity throughout the country in the first half of 2020.

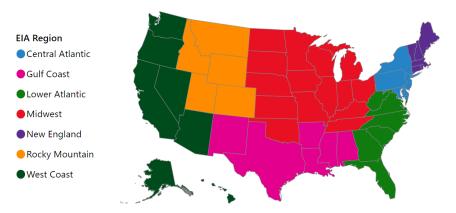


## FIGURE 4: FILING ACTIVITY BETWEEN JANUARY AND JUNE 2020

This map shows the status of different filing actions through June 2020 by state. Filing activity, based on number of programs, was spread out throughout the country.

## UTILITY TRANSPORTATION ELECTRIFICATION PROGRAMS BY EIA REGION

This section provides an overview of filing activity in each region as defined by the U.S. EIA. Figure 5 displays states divided by their respective EIA regions.





This figure shows states categorized by U.S. EIA region.

Approved investment for the first quarter fell almost entirely in the Central and Lower Atlantic regions while the Rocky Mountain and Midwest regions claimed almost all of the proposed investment. Figure 6 shows the states where utility programs were approved, filed, rejected, or withdrawn during the first half of 2020.

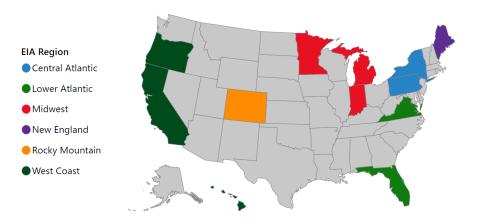


FIGURE 6: 2019 UTILITY FILING ACTIONS BY EIA REGION

This map displays 2020 filing actions by EIA region across the country for the entire year. The first half of 2020 saw filing actions in every region besides the Gulf Coast.

## WEST COAST

Filing activity on the West Coast was slower in the first half of 2020 compared to the surge seen in the second half of 2019 where California utilities were approved to invest \$189 million. In total, two programs were approved in the West Coast in the first half of 2020. One was for a \$265,000 investment in DCFC ownership by Hawaiian Electric and the other was an interim commercial vehicle charging rate by San Diego Gas and Electric. The only new program proposed was for a pilot program exploring utility pole EV charging stations by Portland General Electric in Oregon. The program does not include any additional investment.

Utility	State	Filing Identifier	Date	Status	Potential Investment
San Diego Gas & Electric	CA	19-06-007	4/16/2020	Approved	No costs allocated <sup>3</sup>
Hawaiian Electric Company	HI	2018-0422	1/10/2020	Approved	\$265,000
Portland General Electric	OR	ADV 1081	1/14/2020	Filed	No costs allocated

#### TABLE 1: WEST COAST FILINGS BY STATUS THROUGH JUNE 2020

<sup>&</sup>lt;sup>3</sup> Programs listed as "no costs allocated" are programs such as EV rates where the utility has not allocated costs to that program.

This table shows all filing activity in the West Coast region in the first half of 2020.

Despite a slower start in 2020 compared to 2019, the West Coast continues to lead investment in transportation electrification. The region accounts for almost 74 percent of all approved utility investment in the sector since the first filing activity in 2012. Utilities on the West Coast continue to show leadership in designing programs that include is a focus on underserved communities, with 18 of the 33 recorded filings including such a focus. The West Coast also leads in terms of medium- and heavy-duty electrification with more than 98 percent of the total approved investment.

The West Coast's lead was extended in late August when Southern California Edison was approved to invest \$436 million in their Charge Ready 2 program. This approval represents the region's first large investment for the year and the largest single utility EV program approved in the U.S.

## CENTRAL ATLANTIC

The Central Atlantic region had the highest approved investment in the first half of 2020 with \$39 million approved in a program filed by Consolidated Edison in New York. There was also an EV rate filing by Duquesne Light Company in Pennsylvania, although no investment was proposed as a part of the proposal.

The Consolidated Edison program was first filed in October 2019 and is separate from the make-ready program approved in July 2020 spanning all of the state's utilities. The utility will invest \$30 million in make-ready infrastructure to support the deployment of 25 publicly available DCFC stations and \$9 million in make-ready infrastructure to support the deployment of seven DCFC stations for use by owners of private and public fleets. The program will also provide new EV rates for commercial electric trucks and residential customers through the Smart Charge NY Program. Table 2 shows the breakdown of these filing changes.

Utility	State	Filing Identifier	Date	Status	Potential Investment
Consolidated Edison Company	NY	19-E-0065	01/16/2020	Approved	\$39,000,000
Duquesne Light Company	PA	P-2020- 3019522	4/20/2020	Filed	No costs allocated

#### TABLE 2: CENTRAL ATLANTIC FILINGS BY STATUS IN THE FIRST HALF OF 2020

This table shows all filing activity in the Central Atlantic region in the first half of 2020. The Consolidated Edison program was the only recorded activity in this period.

New York increased the amount of approved utility investment by a factor of 10 across the state with the approval of the \$701 million Make-Ready Program across six utilities in July. The approval from the Department of Public Service requires each utility to file programs up to the maximum budget allowed in the order. The order estimates an additional 1,500 DCFC and 53,00 Level 2 charging stations to the state.

## MIDWEST

No new investment was approved in the Midwest in the first half of 2020. However, the region leads the year in terms of newly proposed investment with two new programs worth a combined \$169 million. The Xcel program in Minnesota is the larger of the two with \$157 million in proposed investment. Consumers Energy is seeking approval to invest \$12 million in Michigan.

The Xcel program was filed as a direct response to COVID-19 and is described as an effort to provide investment to support the state's economic recovery. In addition to highlighting investment amounts, the utility estimated significant job creation numbers associated with the program. The program is different from many other utility filings in that it proposes to use \$150 million of the budget to provide rebates directly to customers for both passenger EVs and electric transit buses. These rebates are tied to participation in a managed charging program. It also includes a small investment in a public charging program and proposals to expand the existing fleet EV service program at no additional cost to the ratepayers as well as plans to accelerate the electrification of Xcel's own fleet.

In Michigan, Consumers Energy is looking to target fleet customers with the PowerMIFleet program filed in February. The pilot program was filed as part of a wider electric rate case and will draw on the learnings of the Company's existing PowerMIDrive program. The new pilot seeks to understand how fleet vehicle charging will impact the grid and proposes to invest \$12.2 million over a three-year period in make-ready infrastructure as well as rebates for both Level 2 and DCFC stations for fleet vehicles as well as for the public and for workplaces. The program also includes components to test demand response capabilities at workplaces and vehicle-to-grid (V2G) capabilities with participating customers as well as education and outreach components to provide training and assistance to participating customers. Xcel energy offers a similar fleet program in Minnesota. Table 3 provides additional information on the two programs.

Utility	State	Filing Identifier	Date	Status	Potential Investment
Xcel Energy	MN	M-20-492	6/17/2020	Filed	\$156,500,000
Consumers Energy	MI	U-20697	2/27/2020	Filed	\$12,200,000

## TABLE 3: MIDWEST FILINGS BY STATUS IN THE FIRST HALF OF 2020

*This table shows all filing activity in the Midwest region in the first half of 2020. Minnesota and Michigan continue to lead the region in terms of utility support for transportation electrification.* 

## LOWER ATLANTIC

Virginia accounts for all of the approved investment in the Lower Atlantic in the first half of 2020 with a \$20 million approval for Dominion Energy's first EV program. A Florida Power and Light program proposing new EV rates was the only new program proposed in the region.

The Smart Charging Infrastructure Pilot Program was filed in September 2019 and Dominion will invest \$20 million for transit bus charging stations as well as DCFC and Level 2 stations for public locations, multiunit dwellings, and workplaces. Within the approval are provisions to invest \$700,000 in utility-owned DCFC stations targeted for ride-hail driver use. The entire program includes a strong focus on vehicle-grid integration measures.

Utility	State	Filing Identifier	Date	Status	Potential Investment
Florida Power and Light	FL	20200170-EI	6/19/2020	Filed	No costs allocated
Dominion Energy Virginia	VA	PUR-2019-00154	3/26/2020	Approved	\$20,779,565

### TABLE 4: LOWER ATLANTIC FILINGS BY STATUS IN THE FIRST HALF OF 2020

*This table shows all filing activity in the Lower Atlantic region for the first half of 2020. Dominion Energy's program was the only approved investment in the region.* 

## **GULF COAST**

There was no new filing activity recording during the first half of 2020 and the region continues to have the least recorded utility activity with only one program filed by CenterPoint Energy in Texas in 2019. Table 5 summarizes this filing.

#### TABLE 5: GULF COAST FILINGS BY STATUS IN 2019

Utility	State	Filing Identifier	Date	Status	Potential Investment
CenterPoint Energy	ТХ	49421	4/05/2019	Filed	No costs allocated

This table shows all filing activity in the Gulf Coast region through 2020. The EV Rate filed by CenterPoint Energy is the only activity in the region.

## **NEW ENGLAND**

The only recorded filing activity in New England in the first half of 2020 was a partial approval of a program proposed by Central Maine Power.

On February 25, 2020, the Maine Public Utilities Commission (PUC) approved portions of several proposed EV pilots by Central Maine Power (CMP). The commission denied any funding for DCFC make-ready and incentives, which was the bulk of the \$3.5 million initially proposed by CMP. In addition to \$240,000 for make-ready investment in 60 Level 2 charging stations, the commission also approved a new rate structure for DCFC stations that seeks to lower the operating costs for station hosts. The commission did not provide a primary reason for denial of the DCFC programs and indicated a desire to further evaluate the impact of programs and assess potential benefits before approving other program elements. Approvals also included investment from Efficiency Maine, which is not an investor-owned utility. Table 6 provides more information on the program.

Utility	State	Filing Identifier	Date	Status	Potential Investment
Central Maine Power	ME	2019-00217	2/25/2020	Rejected	\$2,420,000
Central Maine Power	ME	2019-00217	2/25/2020	Approved	\$240,000

#### TABLE 6: NEW ENGLAND FILINGS BY STATUS IN THE FIRST HALF OF 2020

This table summarizes the rejected and approved elements of Central Maine Power's proposal and represents the only recorded filing activity in New England in the first half of 2020.

## **ROCKY MOUNTAIN**

There was no approved utility investment in the Rocky Mountain region in the first half of 2020, however there were two transportation electrification plans filed in Colorado. Xcel proposes to invest \$102 million and Black Hills Energy requests approval for \$1.3 million. Both of these plans were filed as a part of requirements established in Colorado Senate Bill 19-077 which was enacted in May 2019 and required the state's utilities to file plans within the year from the bill's passing. These comprehensive plans increased the amount of proposed utility investment in the state by a factor of 25, showing that legislative action can be a useful tool in leveraging utility investment to advance transportation electrification across a variety of vehicle categories and use cases.

On May 8, 2020, Black Hills Energy filed their plan which includes investment of \$1.3 million through 2023 in a range of programs including rebates for EV charging, EV rates, and grid updates to accommodate an increase in the number of EVs in their service territory. The company will also explore fleet electrification pilots throughout the duration of the plan. Black Hills is dedicating 15 percent of the total investment through the plan to underserved communities.

Xcel, through their subsidiary Public Service Company of Colorado, filed their plan on May 15, 2020. The plan requests approval for their Schedule EVC which proposes new rates and company ownership of DCFC stations. The TEP plan proposes to invest more than \$102 million between 2021 and 2023 on a range of programs including \$2.2 million for school bus electrification in underserved communities. The plan also proposes fleet advisory services as well as incentives, make-ready investment, and ownership proposed for charging infrastructure across all customer types. Underserved communities will be prioritized in all of these programs according to the filing. Table 7 summarizes this activity.

Utility	State	Filing Identifier	Date	Status	Potential Investment
Black Hills Energy	СО	20A-0195E	5/08/2020	Filed	\$1,343,709
Xcel Energy	СО	20A-0204E	5/15/2020	Filed	\$102,170,000

#### TABLE 7: ROCKY MOUNTAIN FILINGS BY STATUS IN THE FIRST HALF OF 2020

This table summarizes filing activity in the Rocky Mountain region in the first half of 2020.

These filings signify a shift for the Rocky Mountain region, which saw less activity in 2019 compared to other regions. Colorado utilities appear committed to transportation electrification and will provide support for the growing EV markets in their service territories.

# KEY TAKEAWAYS FROM FILINGS IN THE FIRST HALF OF 2020

Overall, filing activity was down in the first half of 2020 compared to the same months in 2019. Importantly, this does not include major approvals issued in New York and California that occurred in July and August. These actions bring the approved total beyond the level seen in the first seven months of 2019, \$701 million approved in New York and a \$436 million approved in California.

Three of the six programs approved during the first half of 2020 were make-ready programs, and beyond June, make-ready programs have continued to receive commission approval with the large New York approval from July being focused on this approach and SCE's approved Charge Ready 2 program also having a significant make-ready component. Figure 7 shows filing types by status for the first half of 2020.



FIGURE 7: JANUARY THROUGH JUNE 2020 FILING ELEMENT TYPE BY STATUS

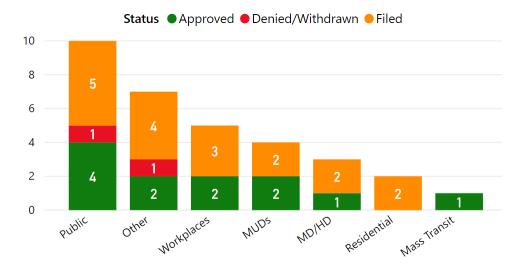
*This chart shows the number of approvals, pending filings, and denials by filing element type in 2020 through June. Make-ready programs received the most approvals in the first half of the year.* 

Of the five programs approved and seven programs filed during the first half of the year, only two programs included a focus on underserved communities. Both of these were from Colorado utilities where legislation was enacted in May 2019 that requires utilities to include a focus on underserved communities in their transportation electrification plans. However, the large New York and California approvals that occurred after June both include a significant focus on underserved communities.

Medium- and heavy-duty electrification pilots continue to be introduced in utility filings. Xcel's proposal to provide up to \$100 million in rebates for electric transit buses in Minnesota is one of the largest commitments to the medium- and heavy-duty sector proposed by a non-California utility to date. San

Diego Gas and Electric in California was also approved in April to offer a medium- and heavy-duty vehicle EV rate was the only approval issued for this use case in the first half of the year.

Programs with a focus on providing charging infrastructure to the general public continue to see the highest number of approvals. Figure 8 shows the number of filings, by status, for various use targets.



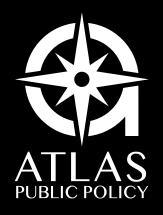
#### FIGURE 8: JANUARY THROUGH JUNE 2020 FILING USE TARGETS BY STATUS

This chart shows the use targets for different filings separated by use target in 2020 through June. Public charging continues to see the most approvals of any use target, as was the case in 2019 as well.

Looking ahead, because California and New York recently received large approvals and other large programs have already been proposed, there may be less new proposed utility investment next year since programs filed by utilities in other states have tended to be smaller than those in New York and California. Equity-related investments are set to more than double with approvals issues in the third quarter of 2020 and the New York and California lead over the rest of the country will continue to grow. Utility support for medium- and heavy-duty electric vehicles is also likely to increase with California passing the Advanced Clean Trucks Rule at the end of June and 15 states signing on to a ZEV Truck MOU pledging to work towards 100 percent ZEV truck sales by 2050.

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