



***Net-Metering &
Interconnection Report
2018 - 2020***

Bureau of Technical Utility Services

Policy & Planning Section

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I. Background and Observations

The Alternative Energy Portfolio Standards (AEPS) Act of 2004 (Act) requires electric distribution companies (EDCs) and electric generation suppliers (EGSs) to supply 18 percent of electricity using alternative energy resources by 2021.¹ The percentage of Tier I, Tier II and solar alternative energy credits that must be included in sales to retail customers gradually increases over this period. To facilitate achievement of this standard, the AEPS required the PUC to develop technical and net metering interconnection rules for customer-generators.² The regulations subsequently established by the PUC require EDCs and EGSs to submit annual reports to the Commission.³

This report contains summary data for customer-generator interconnection requests, per EDC service territory processed by the EDCs within the past year. It also summarizes and provides access to the data submitted by each EDC for the two prior years to provide a three-year trending analysis. All reported data is by energy year, which runs from June 1 through May 31. Please also note that while most of the data in this report is reflective of net metering customers and associated generating capacity it also includes data for customer accounts that exceed the thresholds for net metering.

Section II of this report discusses the various levels of interconnection to the EDCs distribution system. In Section III, we provide summary data for the numbers of customers interconnected by year, by AEPS tier and by EDC service territory. Section IV provides the generation capacity associated with the data reported in Section III.. In Section V we provide the number of annual interconnection requests received by year, by level of interconnection, by EDC. Section VI shows the average time required by each EDC to approve interconnection requests, by level of interconnection.

For the 2020 reporting year, 8,167 interconnection requests were received in the EDC service territories. This represents an increase in the number of interconnection requests, 2,348 more than in 2019. From 2019 to 2020 interconnection requests respectively increased by 42%, 35% and 171% for Level I, Level II and Level III. Only one Level IV interconnection requests was submitted in 2020, the same as in 2019. Associated generating capacity increased to a cumulative 491,617 kW, a 22% increase from 2019.

II. Interconnection Levels

EDCs are required to review interconnection requests using one or more of the following four review procedures.⁴

¹ See generally 73 P.S. § 1648.1 *et seq.* and also [52 Pa Code §75](#)

² See [52 Pa Code §75.1](#)

³ See [52 Pa Code §75.13\(g\)](#)

⁴ See [52 Pa. Code § 75.34](#)

Level 1 is used for inverter-based small generator facilities with a nameplate capacity of 10 kilowatts (kW) or less and the customer's interconnection equipment is certified.⁵

Level 2 is used for small generation facilities with a nameplate capacity of 5 megawatts (MW) or less when the following conditions exist:

- The small generator facility uses an inverter for interconnection and the interconnection equipment is certified.
- The proposed interconnection is to a radial distribution circuit, or a spot network limited to serving one customer.
- The small generator facility was reviewed under Level 1 review procedures but was not approved for interconnection at that level.

Level 3 is used for evaluating interconnection requests to connect small generation facilities with an electric nameplate capacity of 5 MW or less which do not qualify under Level 1 or Level 2 or that were reviewed under Level 1 or Level 2 but were not approved for interconnection at those levels.

Level 4 is used for interconnection customers that do not qualify for Level 1 or Level 2 and do not export power beyond the point of common coupling. Customers may request to be evaluated under Level 4 review procedures, which provide for a potentially expedited review.

⁵ See [52 Pa Code §75.22](#)

III. Summary of Customers Interconnected: 2018 - 2020

TABLE 1: SUMMARY OF CUSTOMERS INTERCONNECTED 2018 - 2020

	Data as of May 31, 2018				Data as of May 31, 2019				Data as of May 31, 2020			
	Tier I		Tier II	Total	Tier I		Tier II	Total	Tier I		Tier II	Total
	Total	Solar PV			Total	Solar PV			Total	Solar PV		
Number of Customer Generators	21,430	21,133	13	21,443	26,015	25,715	16	26,031	31,582	31,247	21	31,603
Estimated Generation Nameplate Capacity in kW	343,463	302,190	3,494	346,957	381,436	339,351	21,005	402,441	469,424	424,711	23,193	491,617

*Solar PV is a Tier I resource. The Solar PV column separately identifies the Solar PV component of Tier I.

Number of Customer-Generators by EDC Service Territory: 2018 - 2020

TABLE 2A: NUMBER OF CUSTOMER-GENERATORS BY EDC SERVICE TERRITORY 2020

Resource	Citizens	DQE	Met-Ed	PECO	Penelec	Penn Power	Pike	PPL	UGI	Wellsboro	West Penn	Total
Tier I	36	3,016	5,141	10,744	1,143	279	7	9,733	99	12	1,372	31,582
Solar PV	0	2,999	5,109	10,732	1,118	268	7	9,583	93	7	1,331	31,247
Tier II	0	5	2	6	6	0	0	2	0	0	0	21
Total	36	3,021	5,143	10,750	1,149	279	7	9,735	99	12	1,372	31,603

*Solar PV is a Tier I resource. The Solar PV column separately identifies the Solar PV component of Tier I.

TABLE 2B: NUMBER OF CUSTOMER-GENERATORS BY EDC SERVICE TERRITORY 2019

Resource	Citizens	DQE	Met-Ed	PECO	Penelec	Penn Power	Pike	PPL	UGI	Wellsboro	West Penn	Total
Tier I	34	2,689	4,052	9,128	756	172	6	8,034	90	9	1,045	26,015
Solar PV	34	2,670	4,021	9,115	729	162	6	7,885	84	4	1,005	25,715
Tier II	0	2	2	6	6	0	0	0	0	0	0	16
Total	34	2,691	4,054	9,134	762	172	6	8,034	90	9	1,045	26,031

*Solar PV is a Tier I resource. The Solar PV column separately identifies the Solar PV component of Tier I.

TABLE 2C: NUMBER OF CUSTOMER-GENERATORS BY EDC SERVICE TERRITORY 2018

Resource	Citizens	DQE	Met-Ed	PECO	Penelec	Penn Power	Pike	PPL	UGI	Wellsboro	West Penn	Total
Tier I	32	2,228	3,136	7,763	622	116	5	6,622	89	9	807	21,429
Solar PV	32	2,209	3,106	7,751	597	106	5	6,473	83	4	767	21,133
Tier II	0	0	2	7	5	0	0	0	0	0	0	14
Total	32	2,228	3,138	7,770	627	116	5	6,622	89	9	807	21,443

*Solar PV is a Tier I resource. The Solar PV column separately identifies the Solar PV component of Tier I.

Figure 1A: Number of Tier I Customer-Generators by EDC Service Territory

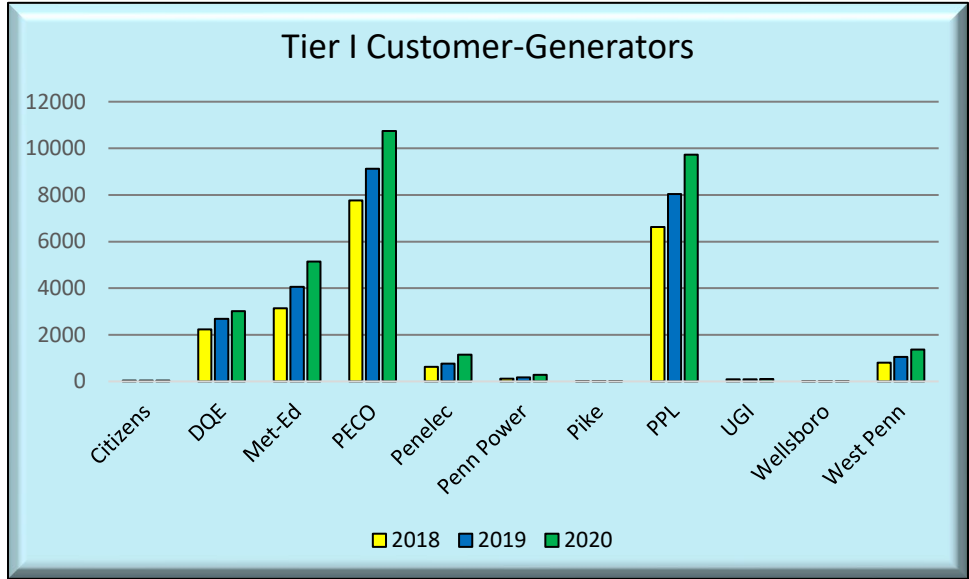


Figure 1B: Number of Solar Customer-Generators by EDC Service Territory

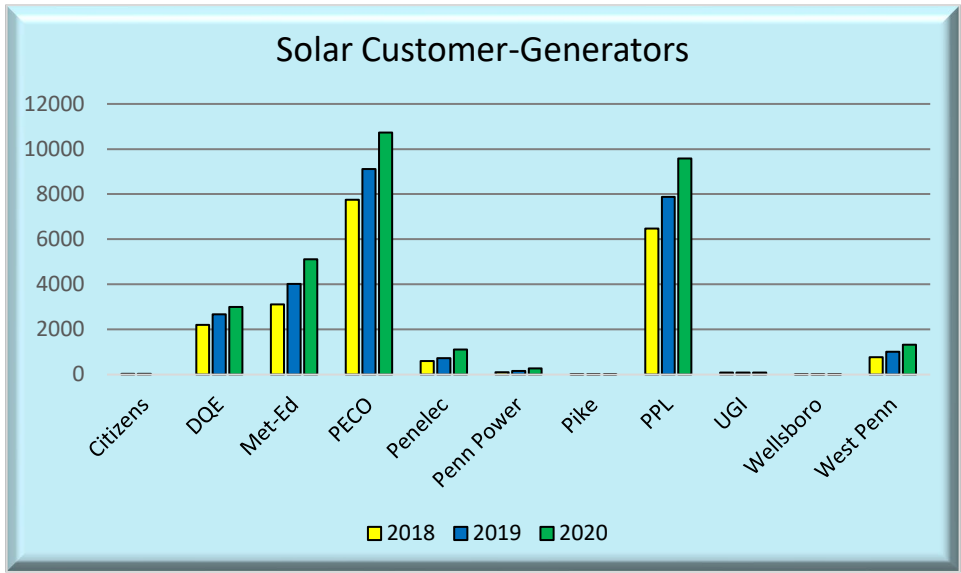


Figure 1C: Number of Tier II Customer-Generators by EDC Service Territory

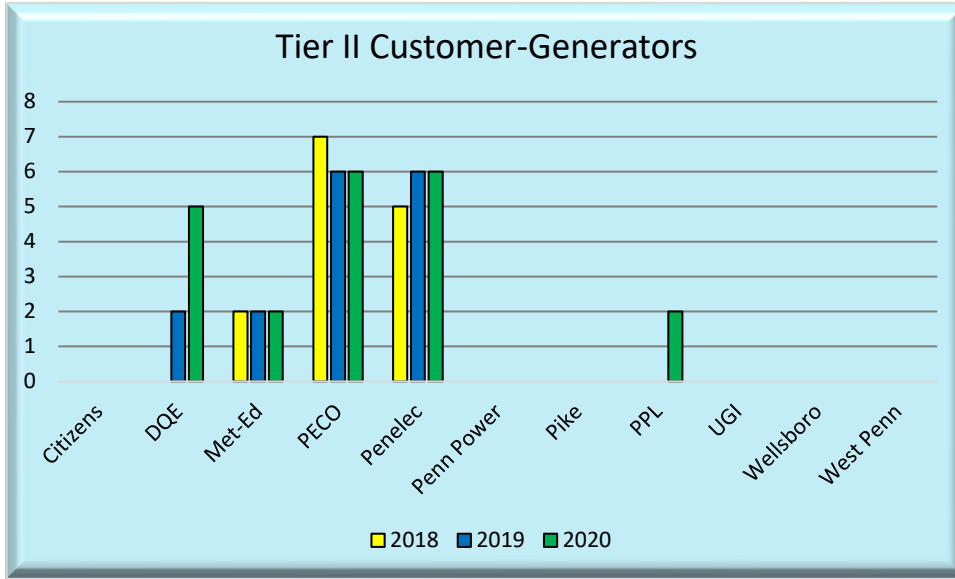
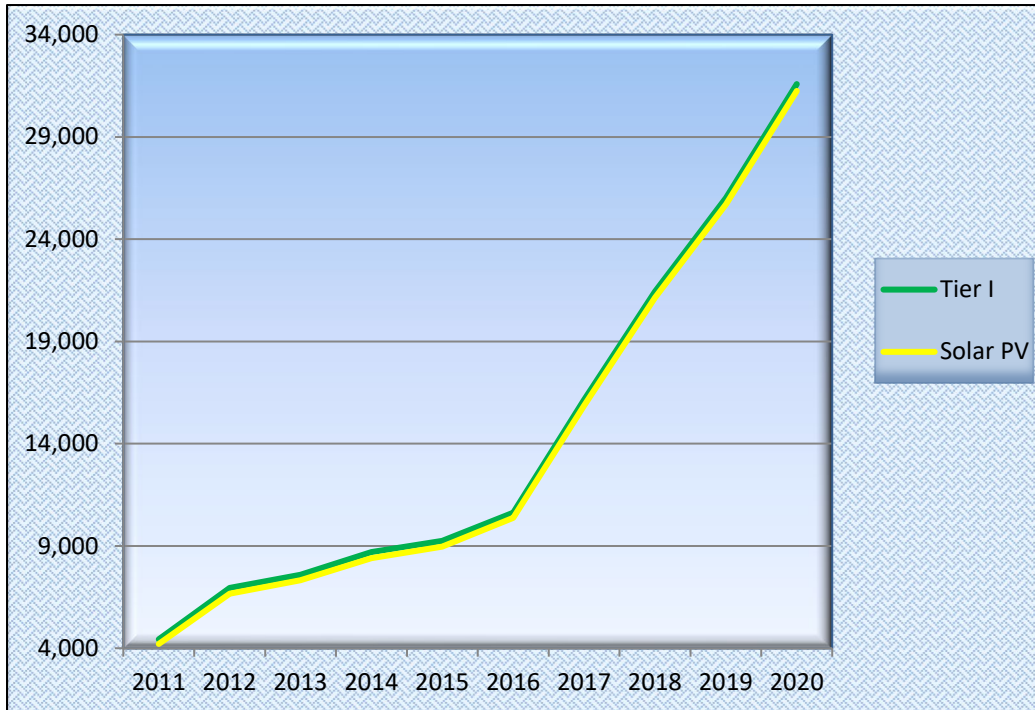


Figure 1D: Trends - Number of Net Metered Solar & Tier I Customers 2011 - 2020



IV. Interconnected Generation Capacity (kW) by EDC Service Territory: 2018 - 2020

TABLE 3A: GENERATION NAMEPLATE CAPACITY (kW) BY EDC SERVICE TERRITORY: 2020

Resource	Citizens	DQE	Met-Ed	PECO	Penelec	Penn Power	Pike	PPL	UGI	Wellsboro	West Penn	Total
Tier I	922	26,015	87,845	118,989	12,091	4,635	59	188,749	1,100	122	27,897	469,424
Solar PV	0	25,923	80,880	118,131	11,383	3,295	59	156,190	1,081	103	27,666	424,711
Tier II	0	424	3	45	20,957	0	0	1,764	0	0	0	23,193
Total	922	26,439	87,848	119,034	33,048	4,635	59	190,513	1,100	122	27,897	491,617

*Solar PV is a Tier I resource. The Solar PV column separately identifies the Solar PV component of Tier I.

TABLE 3B: GENERATION NAMEPLATE CAPACITY (kW) BY EDC SERVICE TERRITORY: 2019

Resource	Citizens	DQE	Met-Ed	PECO	Penelec	Penn Power	Pike	PPL	UGI	Wellsboro	West Penn	Total
Tier I	886	24	72,499	105,103	8,981	3,660	53	169,617	1,025	42	19,546	381,436
Solar PV	886	23	65,631	104,239	8,273	2,322	53	137,557	1,006	23	19,338	339,351
Tier II	0	0	3	45	20,957	0	0	0	0	0	0	21,005
Total	886	24	72,502	105,148	29,938	3,660	53	169,617	1,025	42	19,546	402,441

*Solar PV is a Tier I resource. The Solar PV column separately identifies the Solar PV component of Tier I.

TABLE 3C: GENERATION NAMEPLATE CAPACITY (kW) BY EDC SERVICE TERRITORY: 2018

Resource	Citizens	DQE	Met-Ed	PECO	Penelec	Penn Power	Pike	PPL	UGI	Wellsboro	West Penn	Total
Tier I	870	19,469	60,933	93,693	7,785	3,166	50	146,368	1,012	42	9,908	343,296
Solar PV	870	19,183	55,315	92,833	7,083	1,828	50	114,308	997	23	9,700	302,190
Tier II	0	0	3	501	3,157	0	0	0	0	0	0	3,61
Total	870	19,469	60,936	94,194	10,942	3,166	50	146,368	1,012	42	9,908	346,957

*Solar PV is a Tier I resource. The Solar PV column separately identifies the Solar PV component of Tier I.

Figure 2A: Tier I Net-metered Generation Capacity (kW) by EDC Service Territory 2018 - 2020

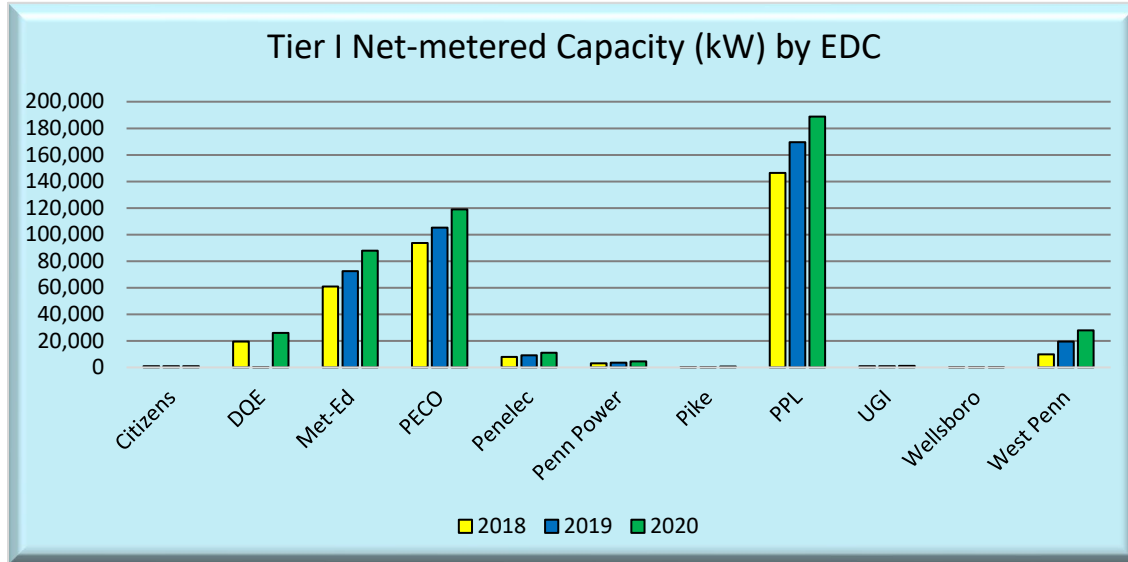


Figure 2B: Solar Generation Capacity (kW) by EDC Service Territory 2018 - 2020

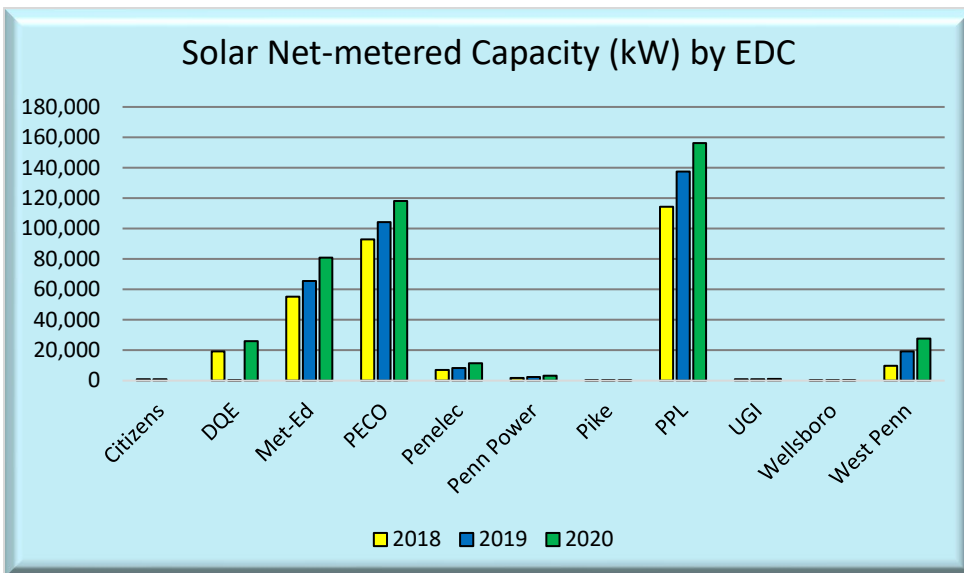


Figure 2C: Tier II Generation Capacity (kW) by EDC Service Territory 2018 - 2020

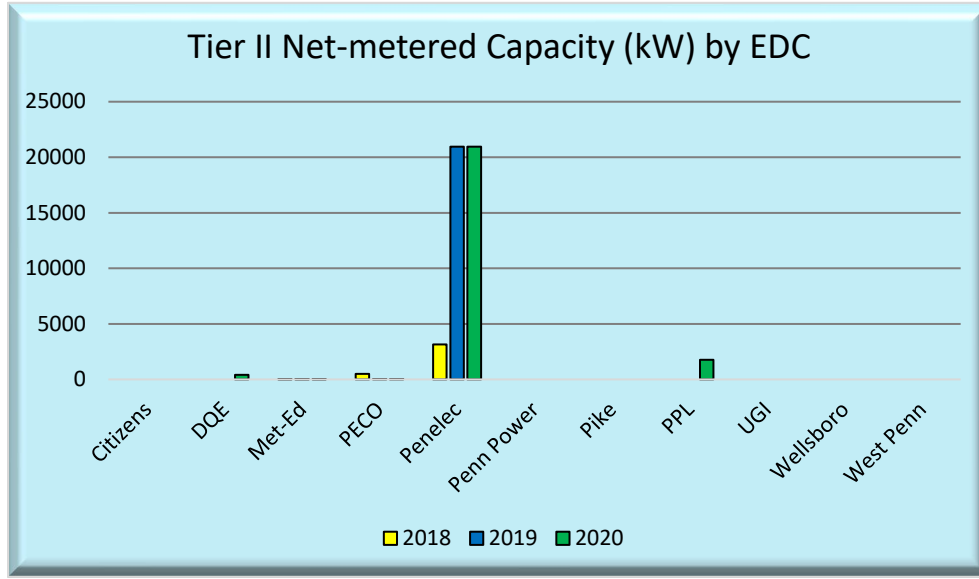
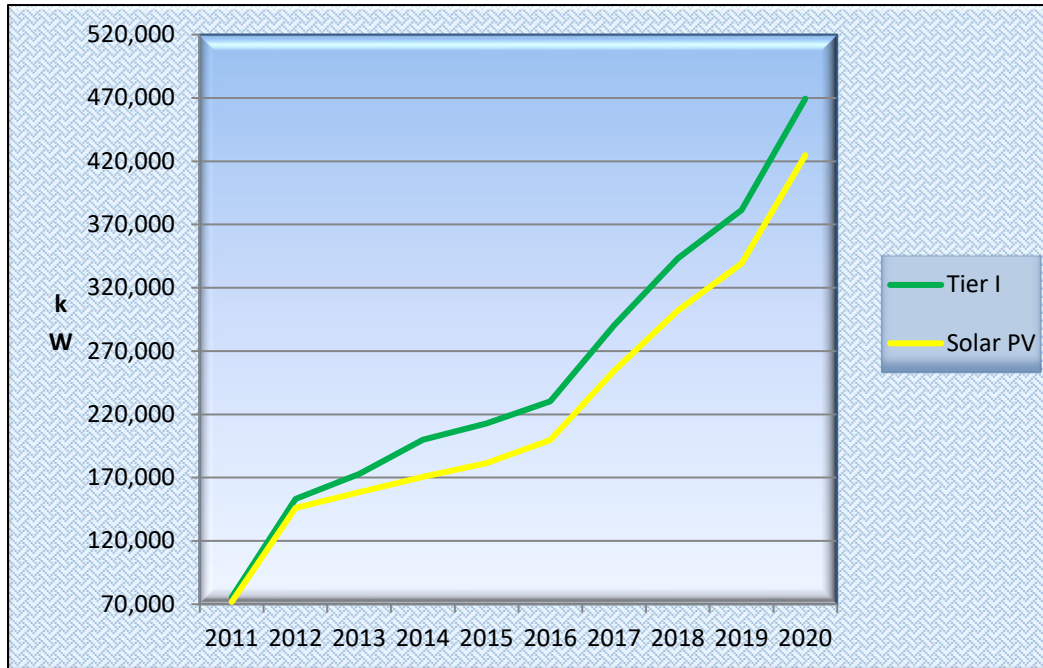


Figure 2D: Trends—Net Metered Capacity (kW) Solar & Tier I 2011 - 2020



V. Interconnection Requests by EDC Service Territory: 2018 - 2020

TABLE 4A: NUMBER OF INTERCONNECTION REQUESTS BY EDC SERVICE TERRITORY 2020

Resource	Citizens	DQE	Met-Ed	PECO	Penelec	Penn Power	Pike	PPL	UGI	Wellsboro	West Penn	Total
Level 1	3	380	1,021	2,270	370	92	1	1,688	9	2	314	6,150
Level 2	2	70	415	457	97	24	0	808	6	1	117	1,997
Level 3	0	2	1	6	0	0	0	6	0	1	3	19
Level 4	0	1	0	0	0	0	0	0	0	0	0	1
Total	5	453	1,437	2,733	467	116	1	2,502	15	4	434	8,167

TABLE 4B: NUMBER OF INTERCONNECTION REQUESTS BY EDC SERVICE TERRITORY 2019

Resource	Citizens	DQE	Met-Ed	PECO	Penelec	Penn Power	Pike	PPL	UGI	Wellsboro	West Penn	Total
Level 1	3	299	757	1,920	186	50	0	970	2	0	150	4,337
Level 2	0	110	343	422	47	25	0	440	0	0	87	1,474
Level 3	0	0	2	3	0	0	0	2	0	0	0	7
Level 4	0	0	0	0	0	0	0	0	0	0	1	1
Total	3	409	1,102	2,345	233	75	0	1,412	2	0	238	5,819

TABLE 4C: NUMBER OF INTERCONNECTION REQUESTS BY EDC SERVICE TERRITORY 2018

Resource	Citizens	DQE	Met-Ed	PECO	Penelec	Penn Power	Pike	PPL	UGI	Wellsboro	West Penn	Total
Level 1	3	929	462	1,736	57	19	0	838	0	1	81	4,126
Level 2	0	217	305	403	21	11	0	495	0	0	36	1,488
Level 3	0	0	2	3	1	0	0	3	0	0	0	9
Level 4	0	0	0	3	1	0	0	0	0	0	0	4
Total	3	1,146	769	2,145	80	30	0	1,336	0	1	117	5,627

Figure 3A: Level 1 Interconnection Requests by EDC Service Territory

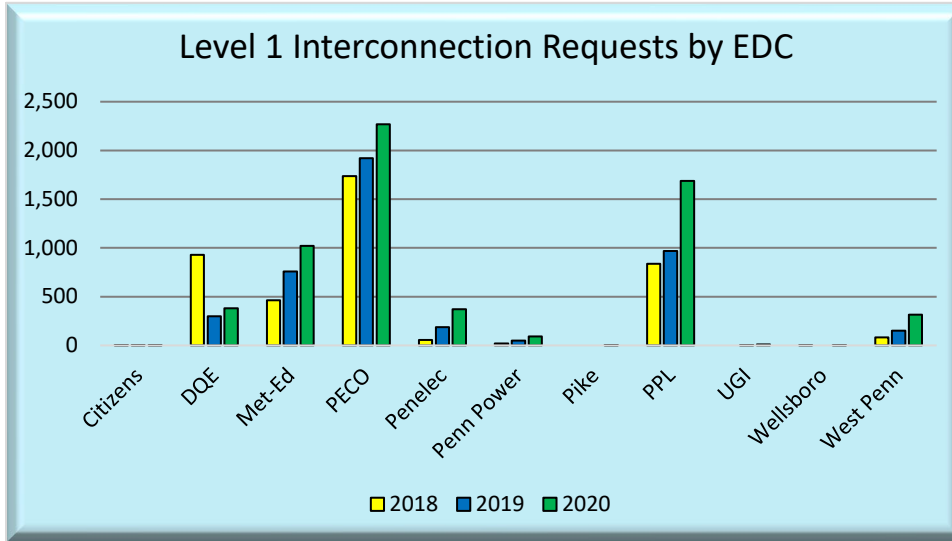


Figure 3B: Level 2 Interconnection Requests by EDC Service Territory

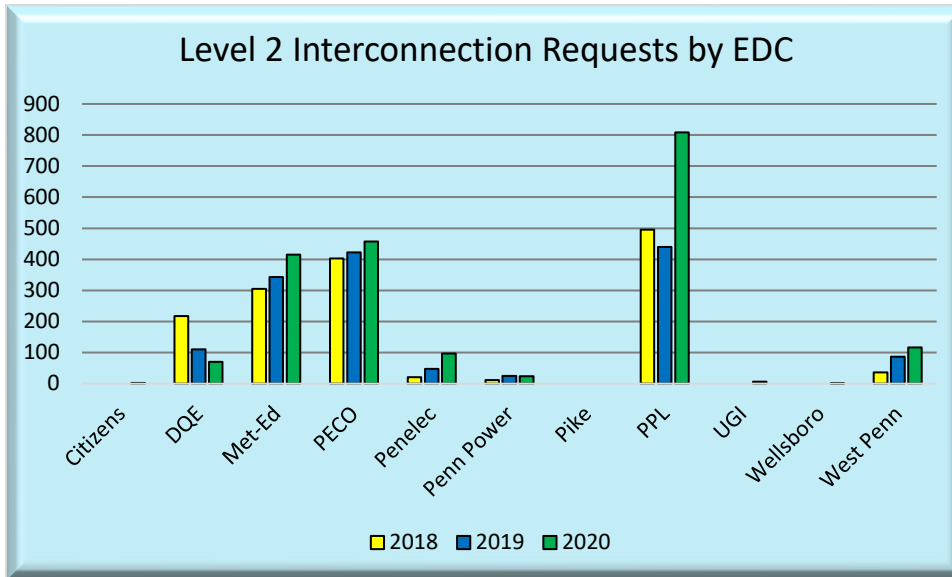


Figure 3C: Level 3 Interconnection Requests by EDC Service Territory

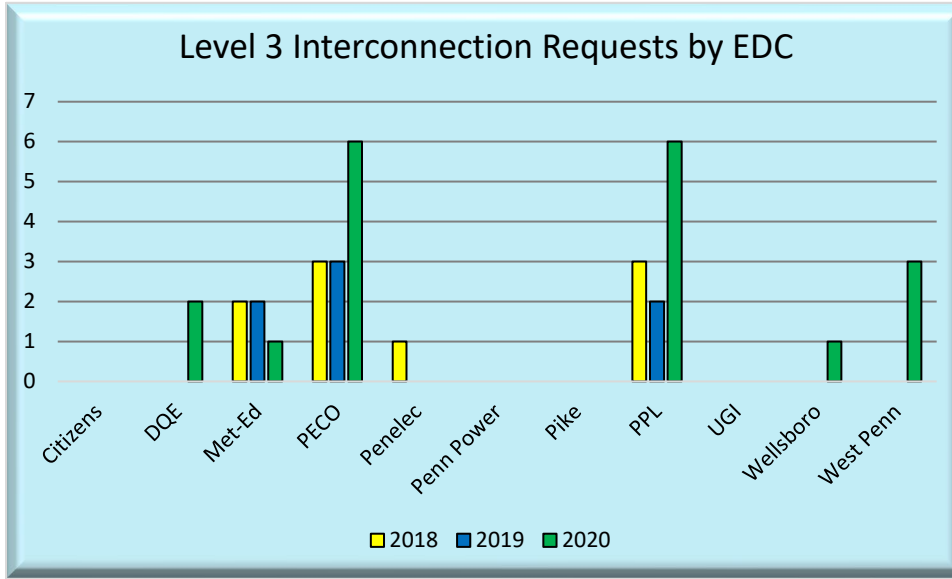


Figure 3D: Level 4 Interconnection Requests by EDC Service Territory

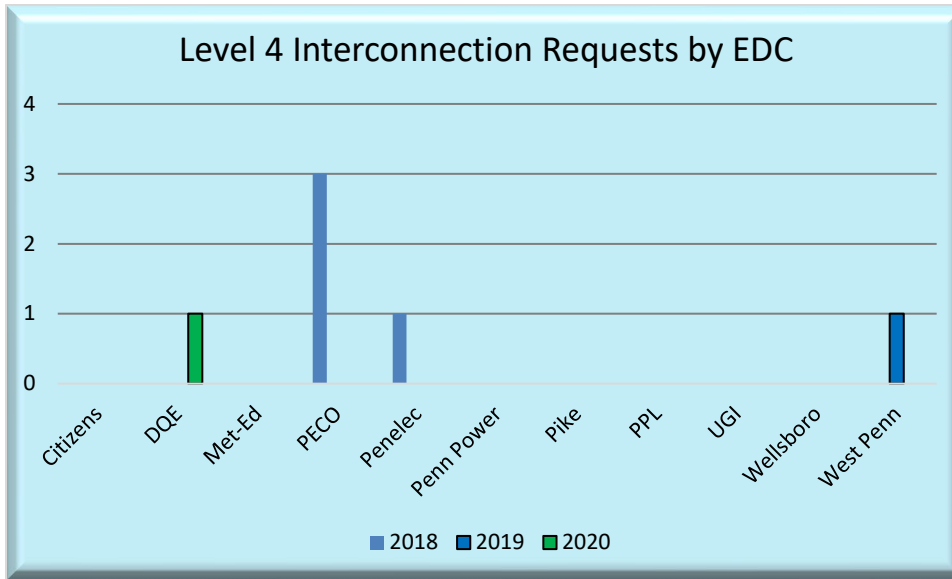
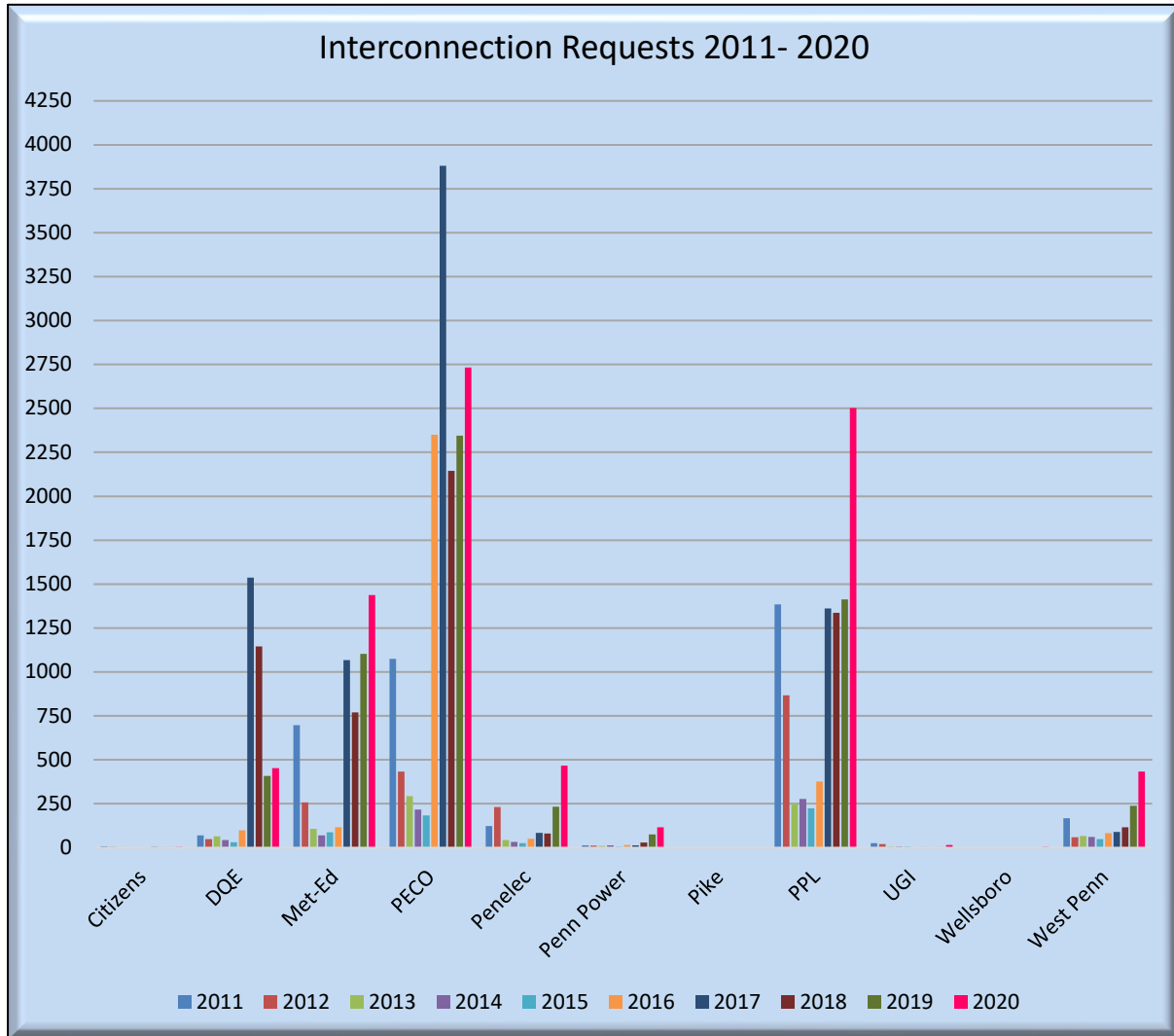


Figure 3E: Trends-- Number of Interconnection Requests by EDC Service Territory 2011 – 2020



**VI. Mean Number of Days to Complete Interconnection Request Approvals:
2018 - 2020**

TABLE 5A: MEAN NUMBER OF DAYS TO COMPLETE INTERCONNECTION REQUEST APPROVALS
BY EDC SERVICE TERRITORY 2020

Resource	Citizens	DQE	Met-Ed	PECO	Penelec	Penn Power	Pike	PPL	UGI	Wellsboro	West Penn	Mean
Level 1	0	20	10	14	10	1	30	1	2	3	8	10
Level 2	20	23	12	15	10	1	0	10	2	1	7	10
Level 3	0	0	0	0	0	0	0	15	0	1	7	3
Level 4	0	0	0	0	0	0	0	0	0	0	0	1

TABLE 5B: MEAN NUMBER OF DAYS TO COMPLETE INTERCONNECTION REQUEST APPROVALS
BY EDC SERVICE TERRITORY 2019

Resource	Citizens	DQE	Met-Ed	PECO	Penelec	Penn Power	Pike	PPL	UGI	Wellsboro	West Penn	Mean
Level 1	11	20	9	10	10	2	0	7	1	0	18	8
Level 2	0	21	12	11	10	2	0	7	0	0	18	7
Level 3	0	0	17	0	0	0	0	7	0	0	0	2
Level 4	0	0	0	0	0	0	0	0	0	0	53	53

TABLE 5C: MEAN NUMBER OF DAYS TO COMPLETE INTERCONNECTION REQUEST APPROVALS
BY EDC SERVICE TERRITORY 2018

Resource	Citizens	DQE	Met-Ed	PECO	Penelec	Penn Power	Pike	PPL	UGI	Wellsboro	West Penn	Mean
Level 1	2	20	13	9	10	1	0	7	0	23	5	8
Level 2	0	21	17	10	10	2	0	7	0	0	5	7
Level 3	0	0	13	10	0	0	0	7	0	0	0	3
Level 4	0	0	0	9	0	0	0	0	0	0	0	9

Figure 4A: Mean Number of Days to Approve Level 1 Interconnection Requests

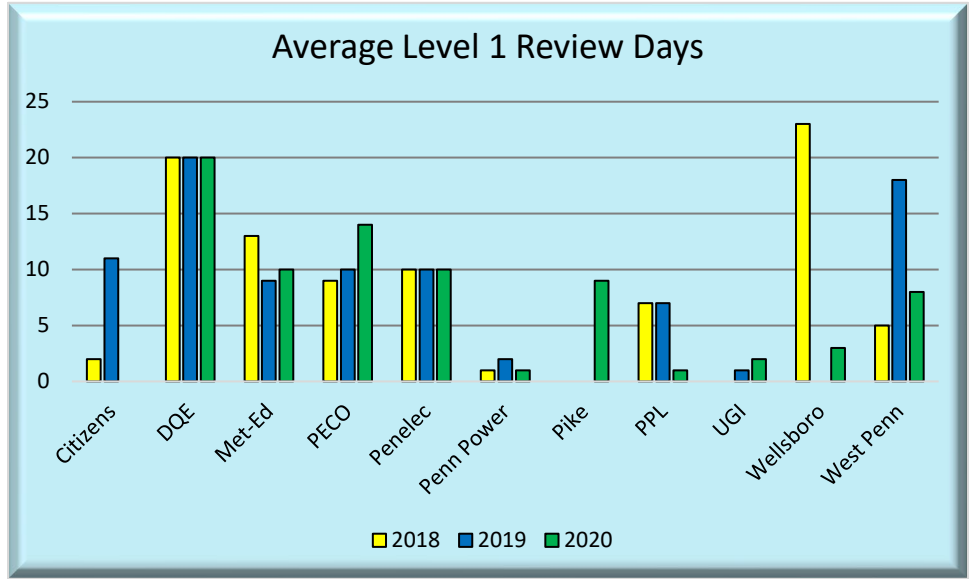


Figure 4B: Mean Number of Days to Approve Level 2 Interconnection Requests

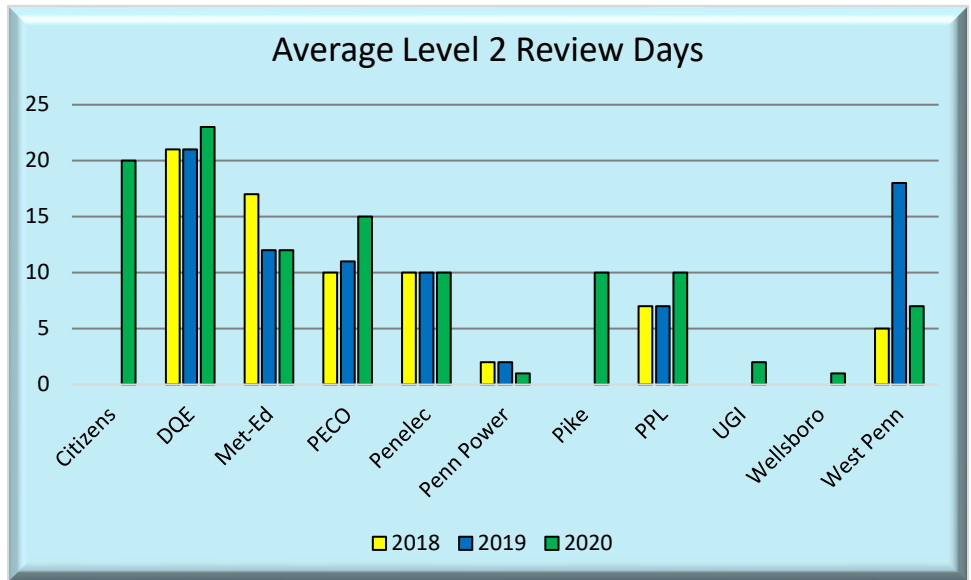


Figure 4C: Mean Number of Days to Approve Level 3 Interconnection Requests

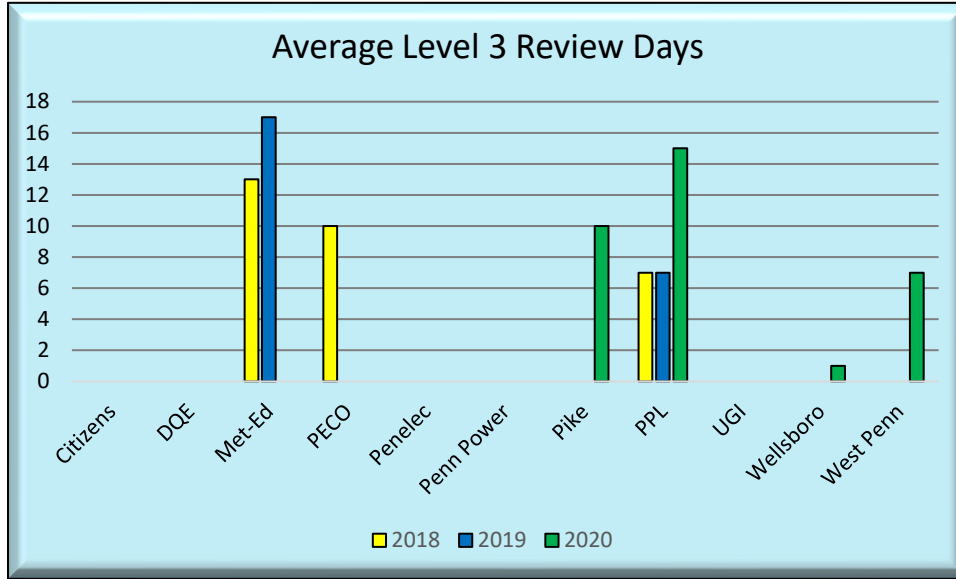


Figure 4D: Mean Number of Days to Approve Level 4 Interconnection Requests

