



# Net-Metering & Interconnection Report 2019 – 2021

Bureau of Technical Utility Services  
Policy & Planning Section

## Table of Contents

<b>I.</b>	<b>Background and Observations.....</b>	<b>3</b>
<b>II.</b>	<b>Interconnection Levels.....</b>	<b>3</b>
<b>III.</b>	<b>Summary of Customer Interconnections: 2019 – 2021.....</b>	<b>5</b>
	Table I: Summary of Customers Interconnected 2019 – 2021.....	5
	Table 2A: Number of Customer-Generators by EDC Service Territory 2021.....	6
	Table 2B: Number of Customer-Generators by EDC Service Territory 2020.....	6
	Table 2C: Number of Customer-Generators by EDC Service Territory 2019.....	6
	Figure 1A: Number of Tier I Customer-Generators by EDC Service Territory.....	6
	Figure 1B: Number of Solar Customer-Generators by EDC Service Territory.....	7
	Figure 1C: Number of Tier II Customer-Generators by EDC Service Territory.....	7
	Figure 1D: Trends - Incremental Annual Growth of Customer-Generators 2012 – 2021.....	8
	Figure 1E: Trends - Cumulative Growth of Customer-Generators 2012 – 2021.....	8
<b>IV.</b>	<b>Interconnected Generation Capacity by EDC Service Territory (kW): 2019 –2021.....</b>	<b>9</b>
	Table 3A: Interconnected Generation Nameplate Capacity (kW) by EDC Service Territory 2021.....	9
	Table 3B: Interconnected Generation Nameplate Capacity (kW) by EDC Service Territory 2020.....	9
	Table 3C: Interconnected Generation Nameplate Capacity (kW) by EDC Service Territory 2021.....	9
	Figure 2A: Tier I Net-metered Generation Capacity (kW) by EDC Service Territory 2019-2021.....	10
	Figure 2B: Solar Generation Capacity (kW) by EDC Service Territory 2019-2021.....	10
	Figure 2C: Tier II Generation Capacity (kW) by EDC Service Territory 2019-2021.....	11
	Figure 2D: Trends - Cumulative Net Metered Capacity (kW) by Tier .....	11
<b>V.</b>	<b>Interconnection Requests by EDC Service Territory: 2019 – 2021.....</b>	<b>12</b>
	Table 4A: Number of Interconnection Requests by EDC Service Territory 2021.....	12
	Table 4B: Number of Interconnection Requests by EDC Service Territory 2020.....	12
	Table 4C: Number of Interconnection Requests by EDC Service Territory 2019.....	13
	Figure 3A: Level 1 Interconnection Requests by EDC Service Territory.....	13
	Figure 3B: Level 2 Interconnection Requests by EDC Service Territory.....	13
	Figure 3C: Level 3 Interconnection Requests by EDC Service Territory.....	14
	Figure 3D: Level 4 Interconnection Requests by EDC Service Territory.....	14
	Figure 3E: Trends - Number of Annual Interconnection Requests by Level: 2012-2021.....	15
	Figure 3F: Trends - Number of Interconnection Requests by EDC Service Territory 2012 – 2021.....	16
	Figure 3G: Trends - Comparison of Annual Net Metered Interconnection Requests to AEPS Certifications: 2012 – 2021.....	16
<b>VI.</b>	<b>Mean Number of Days to Complete Interconnection Request Approvals: 2019 – 2021.....</b>	<b>17</b>
	Table 5A: Mean Number of Days to Complete Interconnection Request Approvals by EDC Service Territory 2021.....	19
	Table 5B: Mean Number of Days to Complete Interconnection Request Approvals by EDC Service Territory 2020.....	19
	Table 5C: Mean Number of Days to Complete Interconnection Request Approvals by EDC Service Territory 2019.....	19

Figure 4A: Mean Number of Days to Approve Level 1 Interconnection Requests.....	20
Figure 4B: Mean Number of Days to Approve Level 2 Interconnection Requests.....	20
Figure 4C: Mean Number of Days to Approve Level 3 Interconnection Requests.....	21
Figure 4D: Mean Number of Days to Approve Level 4 Interconnection Requests.....	21

<b>VII. Status of Interconnection Requests.....</b>	<b>21</b>
Table 6A. Status of Interconnection Requests by EDC Service Territory 2021.....	22
Table 6B. Status of Interconnection Requests by EDC Service Territory 2020.....	22
Table 6C. Interconnection Requests Moved to Another Level 2021.....	23
Table 6D. Interconnection Requests Moved to Another Level 2020.....	23

## ***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% of electricity using alternative energy resources by 2021 and for all years thereafter.<sup>1</sup> To facilitate achievement of this standard, the AEPS required the Public Utility Commission (PUC or Commission) to develop technical and net metering interconnection rules for customer-generators.<sup>2</sup> The regulations subsequently established by the PUC require EDCs and EGSs to submit annual reports to the Commission.<sup>3</sup>

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. The data in this report supersedes data in the two previous annual reports, as it reflects some revisions and corrections made by the EDCs during those periods. All reported data is by energy year, which runs from June 1 through May 31.

Section II of this report discusses the various levels of interconnection to the EDCs' distribution systems. 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. Section VII shows the status of interconnection requests by EDC Service Territory.

For the 2021 reporting year (June 1, 2020-May 31, 2021) 9,167 interconnection requests were received in the EDC service territories. This represents an increase in the number of interconnection requests, 1,000 more than in 2020. From 2020 to 2021 interconnection requests respectively increased by 6% and 31% for Level I and Level II. There was a 5% decline in the rate of Level III requests and no change in the rate of Level IV interconnection requests. Associated generating capacity increased to a cumulative 559,947 kW, an 18% increase from 2020.

## ***II. Interconnection Levels***

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

**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.<sup>5</sup>

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

---

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

<sup>2</sup> See [52 Pa Code §75.1](#)

<sup>3</sup> See [52 Pa Code §75.13\(h\)](#)

<sup>4</sup> See [52 Pa. Code § 75.34](#)

<sup>5</sup> See [52 Pa Code §75.22](#)

- 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.

### III. Summary of Customers Interconnected: 2019 - 2021

The number of customer-generators has risen to 38,445. There were no new Tier II customer-generators in energy year 2021 and the rate of growth for Tier I and Solar customer-generators grew at a rate of roughly 22%, similar but slightly higher than annual growth in energy year 2020.

While Tables 2A through 2C and Figures 1A through 1C show the numbers of customers, by Tier for the past three years, Figures 1D and 1E provide a 10-year perspective of the incremental annual growth and cumulative growth of customer-generators by Tier.

TABLE 1: SUMMARY OF CUSTOMERS INTERCONNECTED 2019 - 2021

	Data as of May 31, 2019				Data as of May 31, 2020				Data as of May 31, 2021			
	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	26,005	25,704	14	26,019	31,555	31,215	19	31,574	38,428	38,122	19	38,447
Estimated Nameplate Capacity (kW)	404,994	362,557	4,553	409,547	468,424	425,332	6,741	475,165	551,638	499,610	8,309	559,947

\*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: 2019 - 2021

TABLE 2A: NUMBER OF CUSTOMER-GENERATORS BY EDC SERVICE TERRITORY 2021

Resource	Citizens	DLC	Met-Ed	PECO	Penelec	Penn Power	Pike	PPL	UGI	Wellsboro	West Penn	Total
Tier I	42	3,714	6,428	12,357	1,645	399	8	11,876	110	15	1,834	38,428
Solar PV	42	3,695	6,396	12,345	1,616	387	8	11,726	104	10	1,793	38,122
Tier II	0	5	2	6	4	0	0	2	0	0	0	19
<b>Total</b>	<b>42</b>	<b>3,719</b>	<b>6,430</b>	<b>12,363</b>	<b>1,649</b>	<b>399</b>	<b>8</b>	<b>11,878</b>	<b>110</b>	<b>15</b>	<b>1,834</b>	<b>38,447</b>

\*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 2020

Resource	Citizens	DLC	Met-Ed	PECO	Penelec	Penn Power	Pike	PPL	UGI	Wellsboro	West Penn	Total
Tier I	36	2,993	5,141	10,744	1,139	279	7	9,733	99	12	1,372	31,555
Solar PV	36	2,974	5,109	10,732	1,111	268	7	9,583	93	7	1,331	31,251
Tier II	0	5	2	6	4	0	0	2	0	0	0	19
<b>Total</b>	<b>36</b>	<b>2,998</b>	<b>5,143</b>	<b>10,750</b>	<b>1,143</b>	<b>279</b>	<b>7</b>	<b>9,735</b>	<b>99</b>	<b>12</b>	<b>1,372</b>	<b>31,574</b>

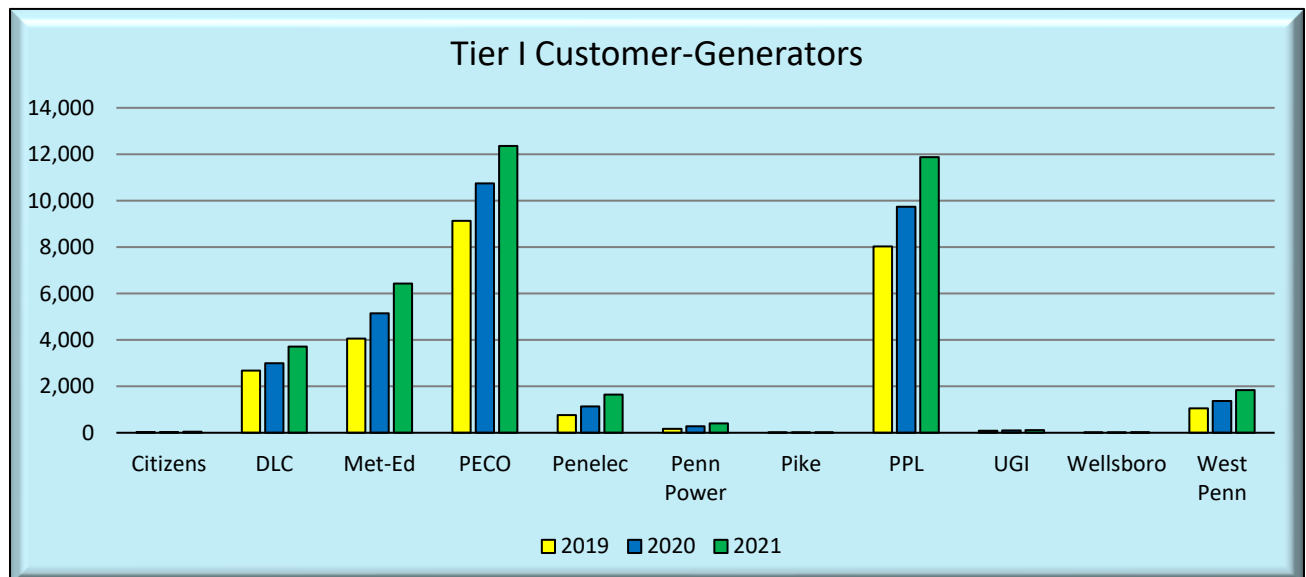
\*Solar PV is a Tier I resource. The Solar PV column separately identifies the Solar PV component of Tier I.

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

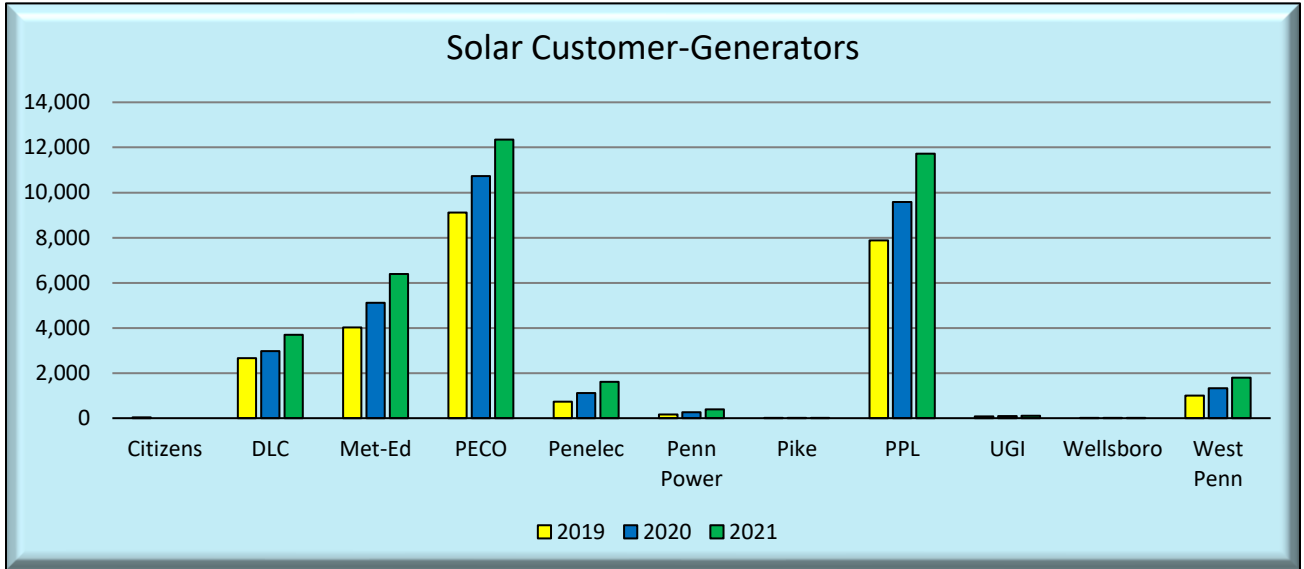
Resource	Citizens	DLC	Met-Ed	PECO	Penelec	Penn Power	Pike	PPL	UGI	Wellsboro	West Penn	Total
Tier I	34	2,679	4,052	9,128	756	172	6	8,034	90	9	1,045	26,005
Solar PV	34	2,660	4,021	9,115	729	162	6	7,885	84	4	1,005	25,704
Tier II	0	2	2	6	4	0	0	0	0	0	0	14
<b>Total</b>	<b>34</b>	<b>2,681</b>	<b>4,054</b>	<b>9,134</b>	<b>760</b>	<b>172</b>	<b>6</b>	<b>8,034</b>	<b>90</b>	<b>9</b>	<b>1,045</b>	<b>26,019</b>

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

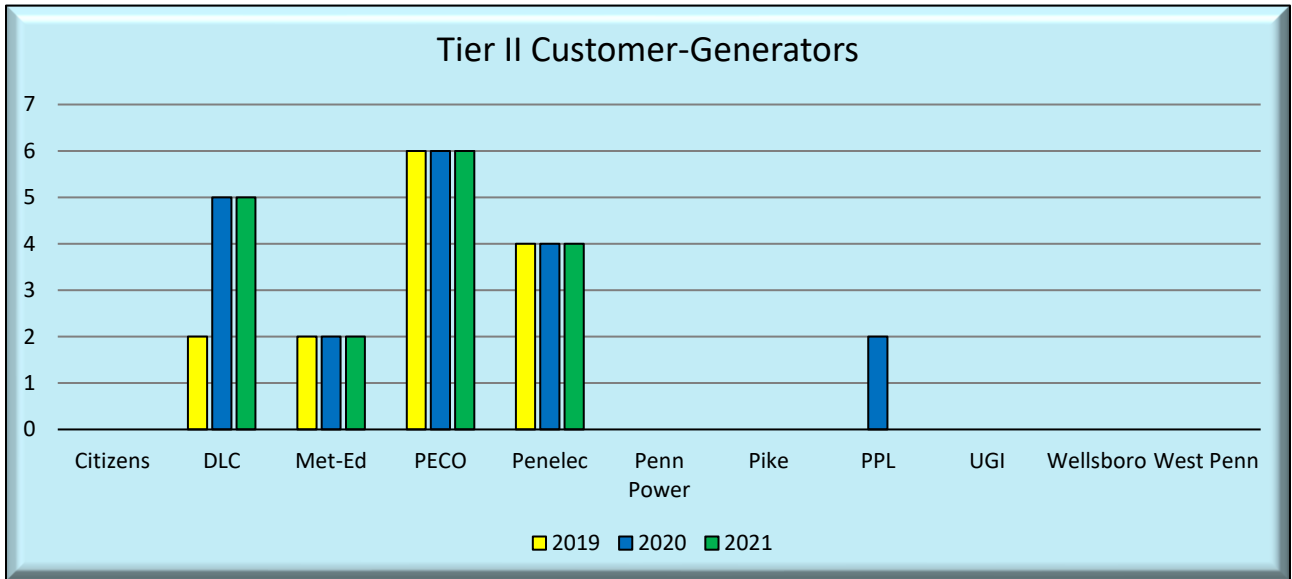
**Figure 1A: Number of Tier I Customer-Generators by EDC Service Territory**



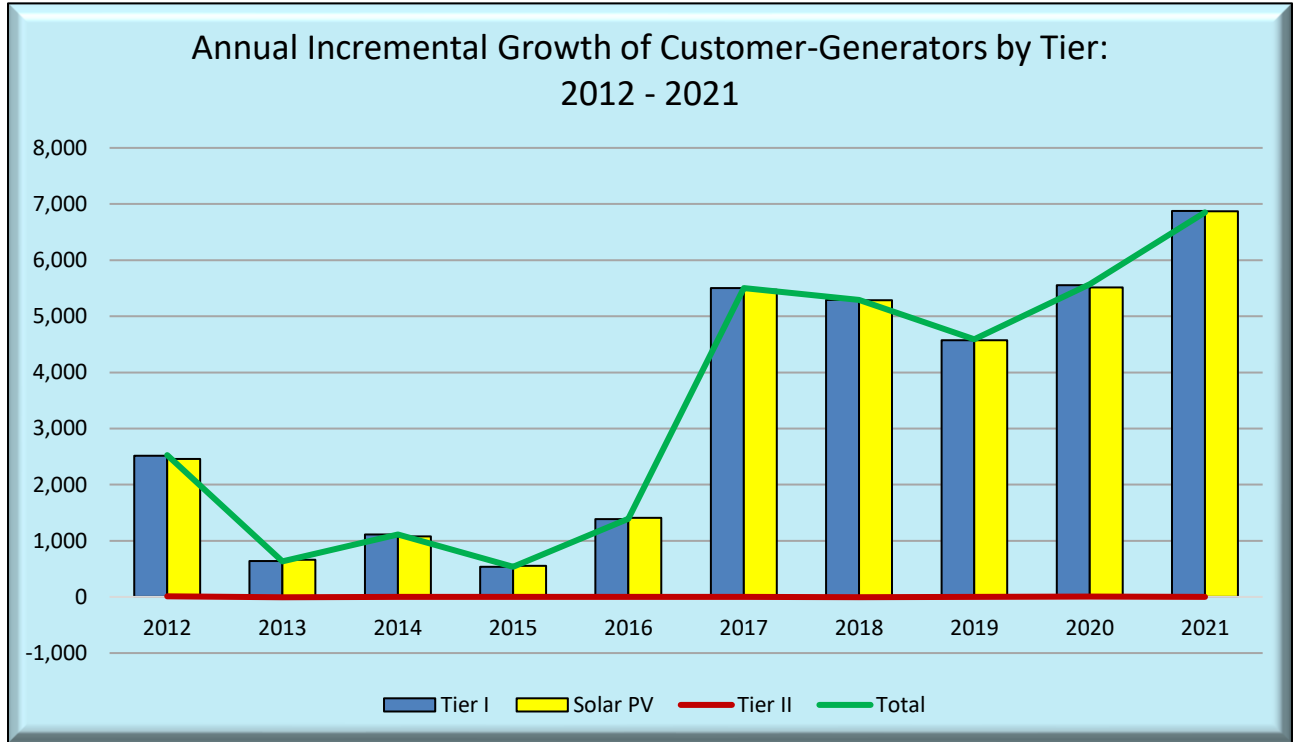
**Figure 1B: Number of Solar Customer-Generators by EDC Service Territory**



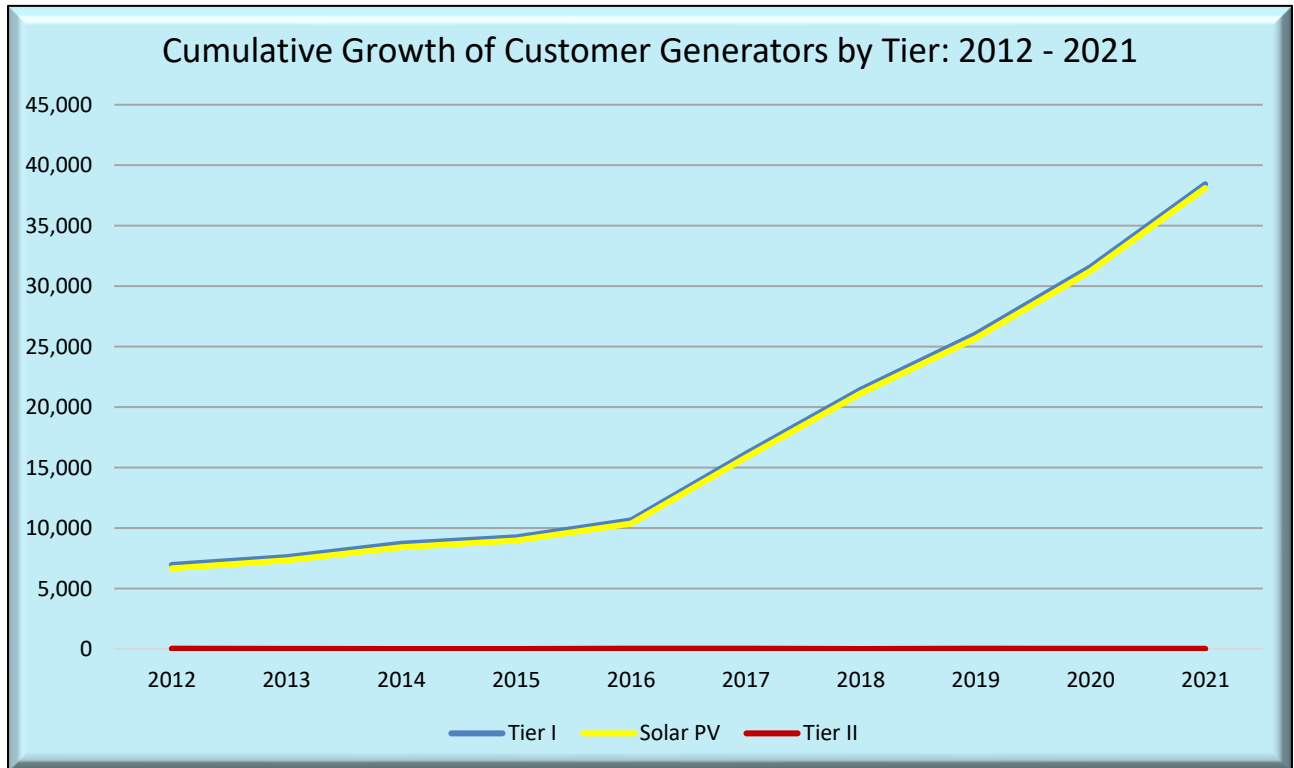
**Figure 1C: Number of Tier II Customer-Generators by EDC Service Territory**



**Figure 1D: Trends – Incremental Annual Growth of Customer-Generators**



**Figure 1E: Trends – Cumulative Annual Growth of Customer-Generators**





#### IV. **Interconnected Generation Capacity (kW) by EDC Service Territory: 2019 - 2021**

Tables 3A through 3C and associated Figures 2A through 2C show the annual growth in electric generating nameplate capacity for each AEPS Tier. In 2021, customer-generated electric generating capacity surpassed 500,000 kW. Figure 2D shows that cumulative customer-generated electric generating capacity reached 559,947 kW. Eighty-nine percent of this capacity is being provided by distributed solar PV systems.

TABLE 3A: GENERATION NAMEPLATE CAPACITY (kW) BY EDC SERVICE TERRITORY: 2021

Resource	Citizens	DQE	Met-Ed	PECO	Penelec	Penn Power	Pike	PPL	UGI	Wellsboro	West Penn	TOTAL
Tier I	1,049	34,360	102,002	132,220	20,054	7,857	70	217,566	1,218	1,262	33,980	551,638
Solar PV	1,049	34,008	95,037	131,362	19,342	4,517	70	178,007	1,198	1,251	33,769	499,610
Tier II	0	1,992	3	45	4,505	0	0	1,764	0	0	0	8,309
Total	1,049	36,352	102,005	132,265	24,559	7,857	70	219,330	1,218	1,262	33,980	559,947

\*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: 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	468,424
Solar PV	922	25,622	80,880	118,131	11,383	3,295	59	156,190	1,081	103	27,666	425,332
Tier II	0	424	3	45	4,505	0	0	1,764	0	0	0	6,741
Total	922	26,439	87,848	119,034	16,596	4,635	59	190,513	1,100	122	27,897	475,165

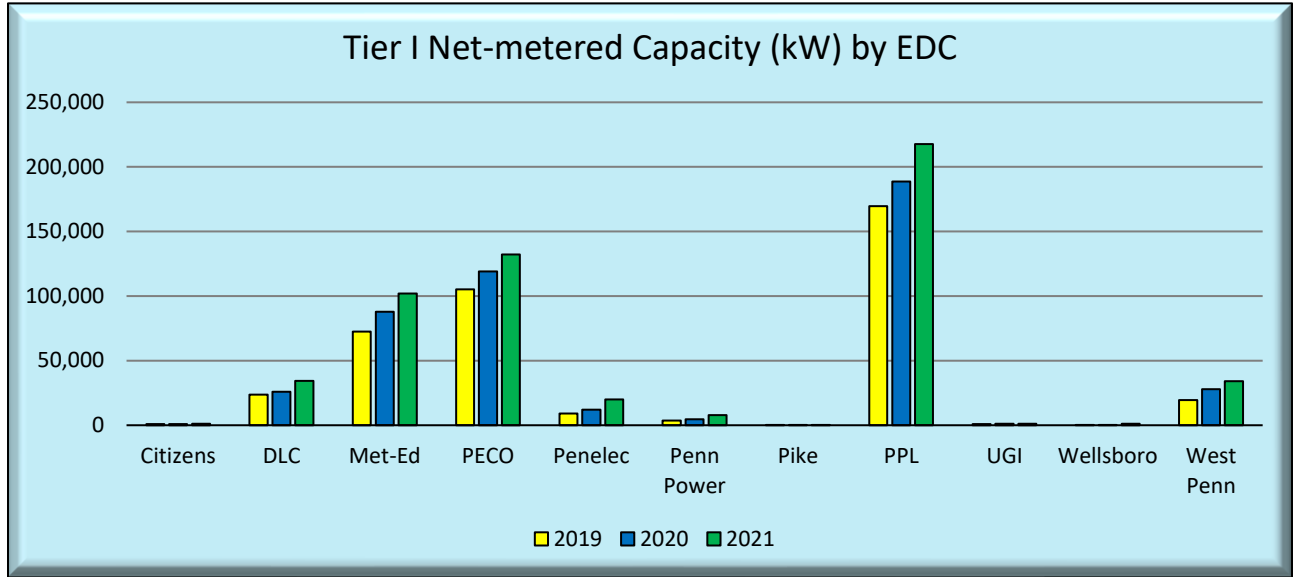
\*Solar PV is a Tier I resource. The Solar PV column separately identifies the Solar PV component of Tier I.

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

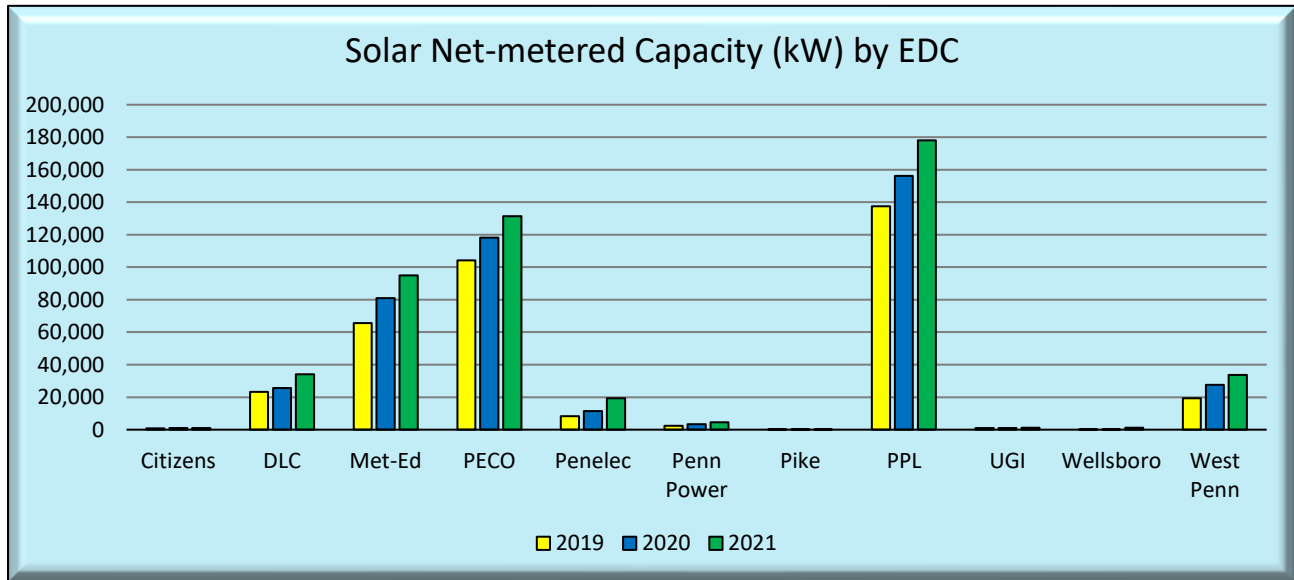
Resource	Citizens	DQE	Met-Ed	PECO	Penelec	Penn Power	Pike	PPL	UGI	Wellsboro	West Penn	TOTAL
Tier I	886	23,582	72,499	105,103	8,981	3,660	53	169,617	1,025	42	19,546	404,994
Solar PV	886	23,229	65,631	104,239	8,273	2,322	53	137,557	1,006	23	19,338	362,557
Tier II	0	0	3	45	4,505	0	0	0	0	0	0	4,553
Total	886	23,582	72,502	105,148	13,486	3,660	53	169,617	1,025	42	19,546	409,547

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

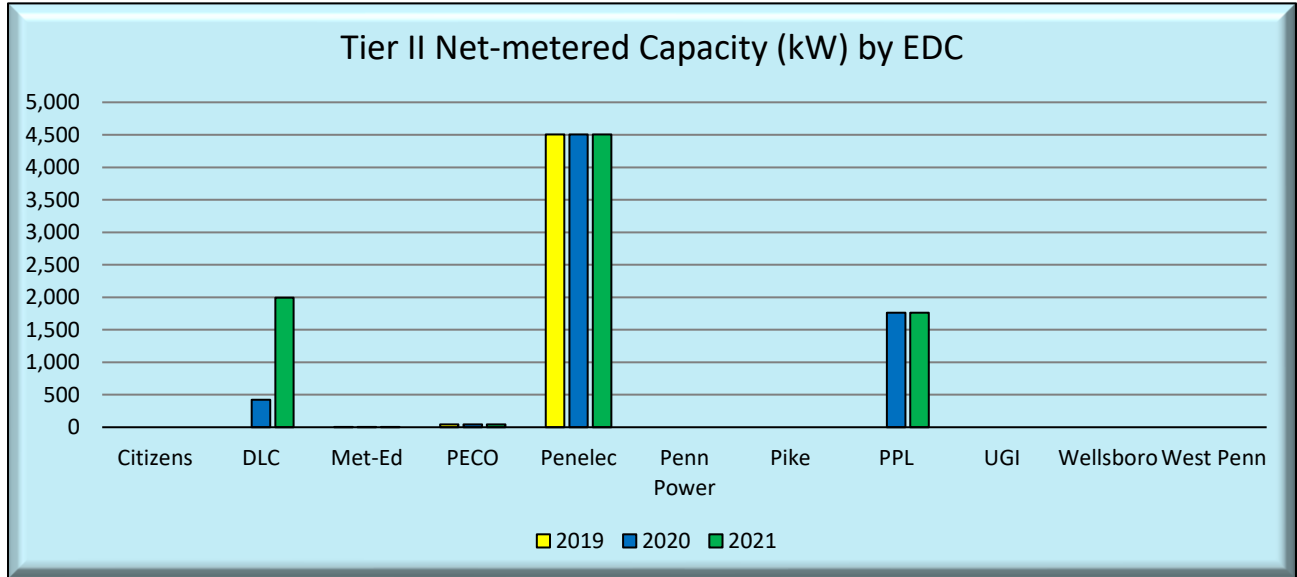
**Figure 2A: Tier I Net-metered Generation Capacity (kW) by EDC Service Territory 2019 - 2021**



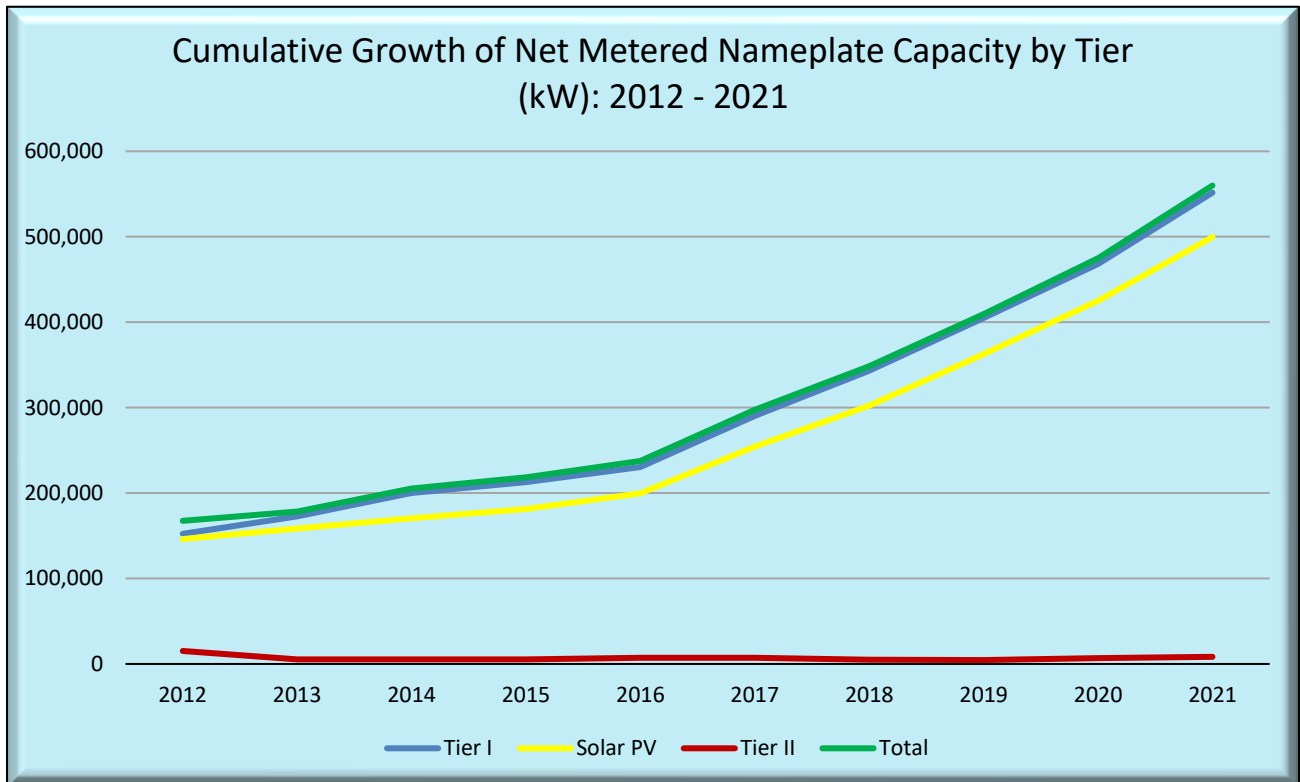
**Figure 2B: Solar Generation Capacity (kW) by EDC Service Territory 2019 - 2021**



**Figure 2C: Tier II Generation Capacity (kW) by EDC Service Territory 2019 – 2021**



**Figure 2D: Trends— Cumulative Net Metered Capacity (kW) by Tier: 2012 - 2021**



## V. *Interconnection Requests by EDC Service Territory: 2019 - 2021*

Tables 4A through 4C and Figures 3A through 3D show the numbers of net metering interconnection requests for energy years 2019 through 2021. The number of net metering interconnection requests rose to its highest level in energy year 2021, surpassing the spike realized in 2017, despite the challenges associated with COVID-19. As noted in Figure 3E, the top three EDC service territories for net meter interconnection requests are PECO, PPL and Met-Ed, respectively. The annual trend in interconnection requests is shown in Figure 3F. In Figure 3G we make a comparison between the annual number of net metering interconnection requests and requests for AEPS certification. While there is a similar trend for these two metrics, the two values are rarely, if ever, the same for a host of reasons. It's not unusual that newly interconnected customer-generators don't immediately seek out or request AEPS certification and in fact, some customer-generators never pursue AEPS certification. The lag between interconnection approvals and AEPS certifications naturally results in some AEPS certifications appearing in the subsequent energy year. Some large solar installers who pursue AEPS certifications on behalf of their customers hold onto large numbers of AEPS requests and submit them in large batches, sometimes delaying certifications for several months.

TABLE 4A: NUMBER OF INTERCONNECTION REQUESTS BY EDC SERVICE TERRITORY 2021

Resource	Citizens	DQE	Met-Ed	PECO	Penelec	Penn Power	Pike	PPL	UGI	Wellsboro	West Penn	Total
Level 1	3	859	963	1,934	409	95	1	1,869	11	2	393	6,539
Level 2	4	257	412	626	116	57	0	947	8	1	181	2,609
Level 3	0	6	0	6	2	0	0	1	0	0	3	18
Level 4	0	0	0	1	0	0	0	0	0	0	0	1
<b>Total</b>	<b>7</b>	<b>1,122</b>	<b>1,375</b>	<b>2,567</b>	<b>527</b>	<b>152</b>	<b>1</b>	<b>2,817</b>	<b>19</b>	<b>3</b>	<b>577</b>	<b>9,167</b>

TABLE 4B: 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
<b>Total</b>	<b>5</b>	<b>453</b>	<b>1,437</b>	<b>2,733</b>	<b>467</b>	<b>116</b>	<b>1</b>	<b>2,502</b>	<b>15</b>	<b>4</b>	<b>434</b>	<b>8,167</b>

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

Resource	Citizens	DLC	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

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

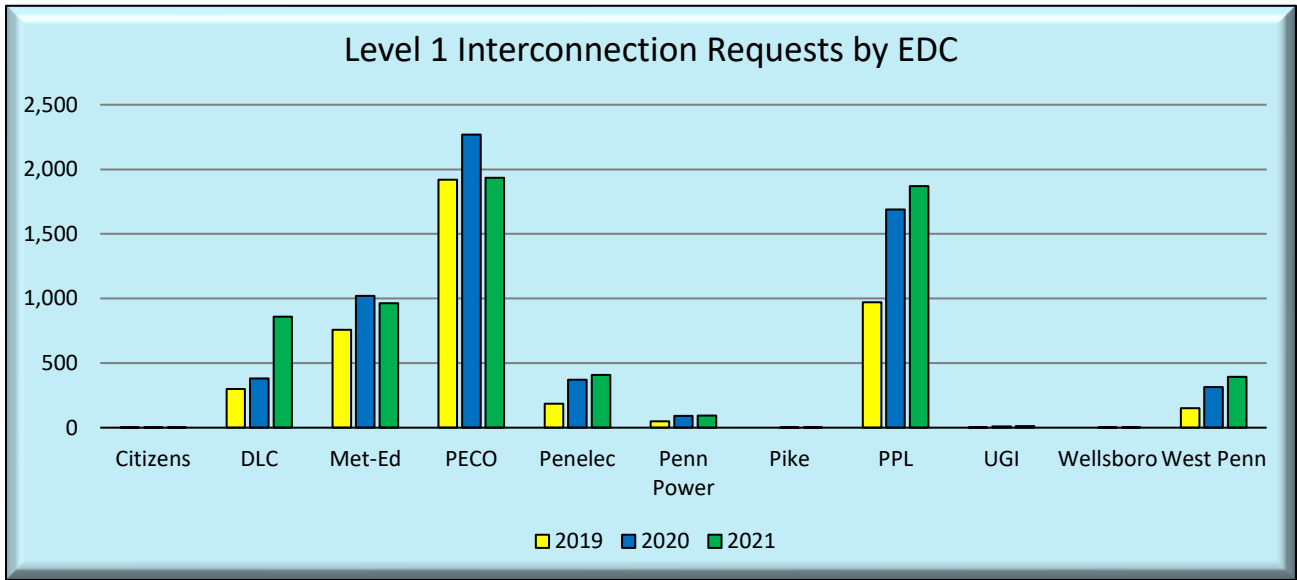
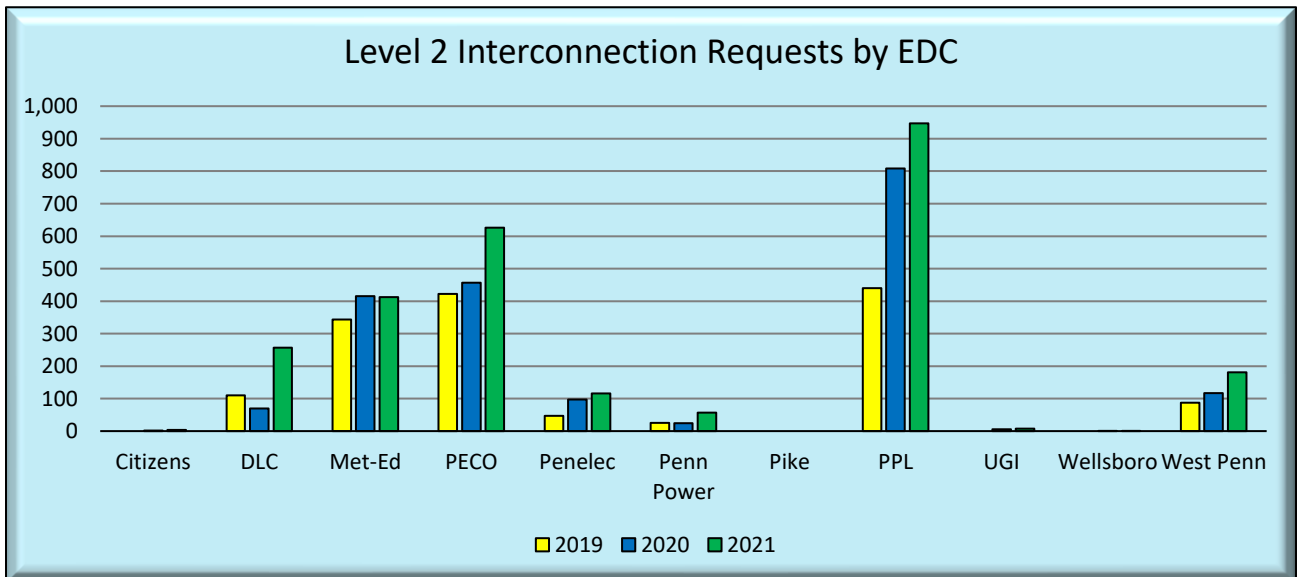
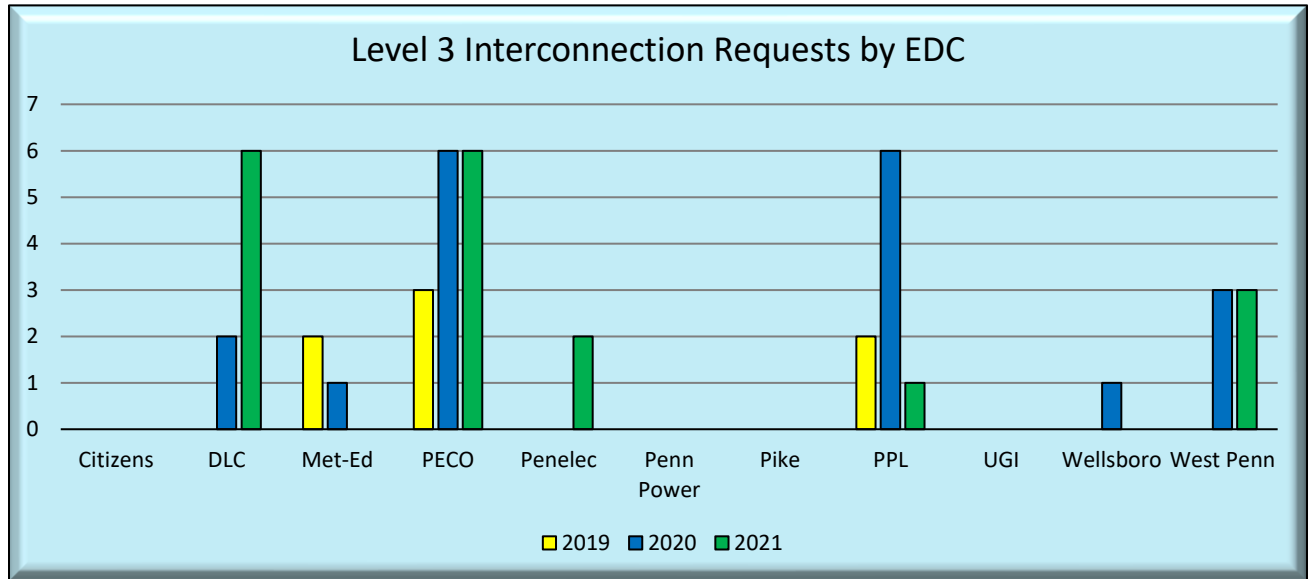


Figure 3B: Level 2 Interconnection Requests by EDC Service Territory



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



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

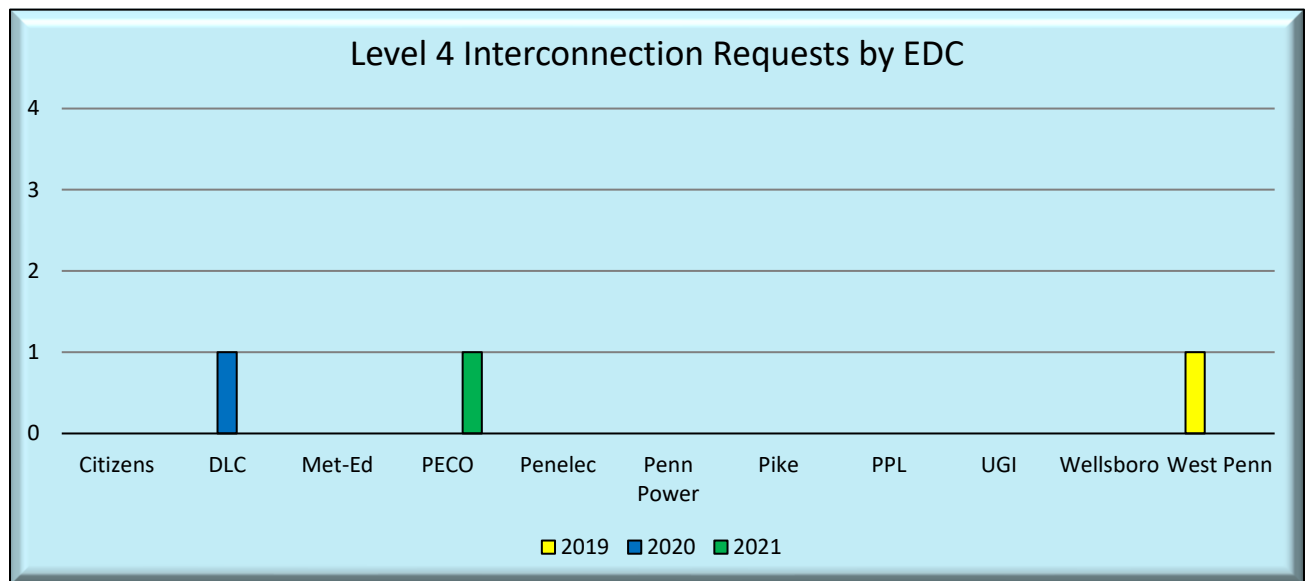
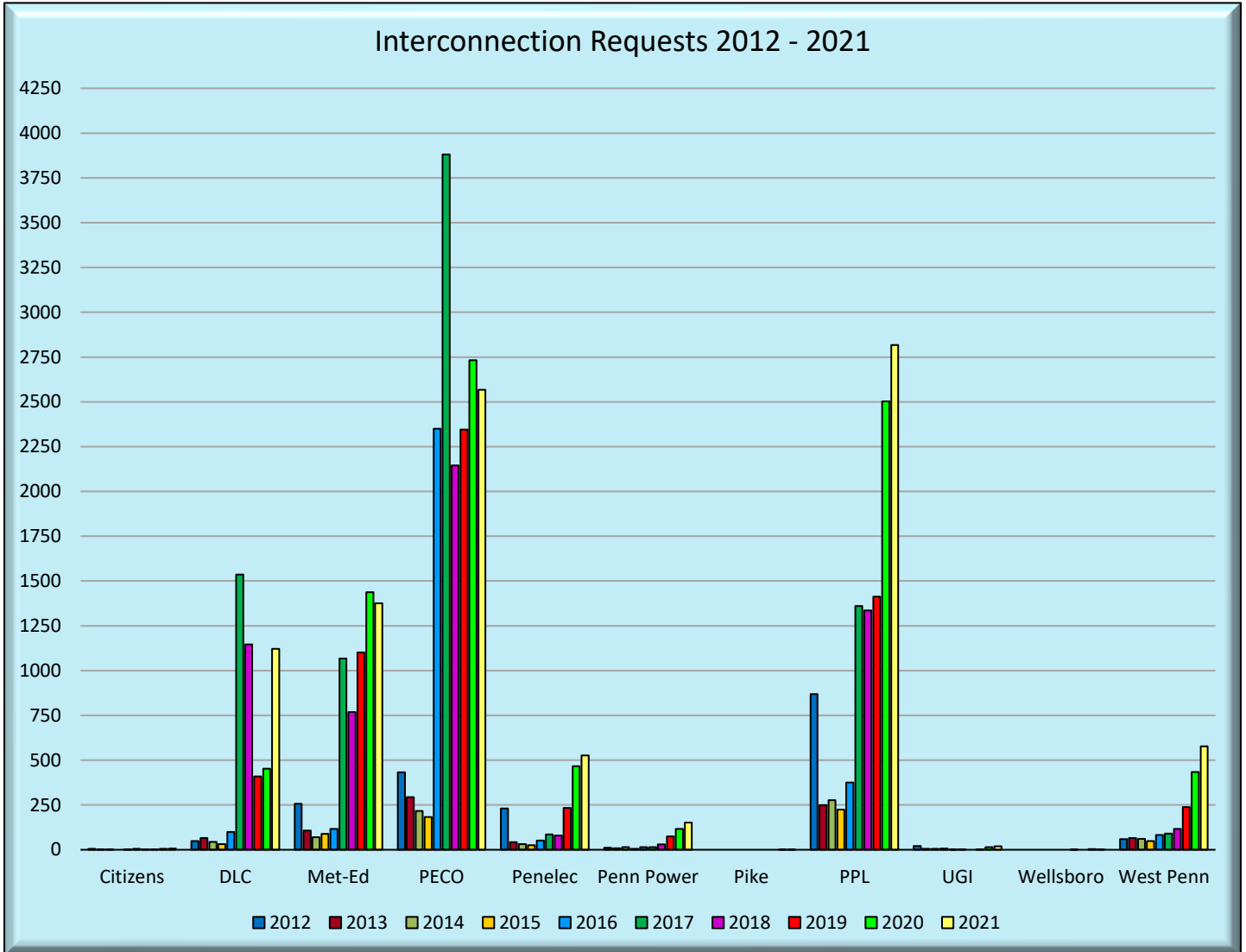
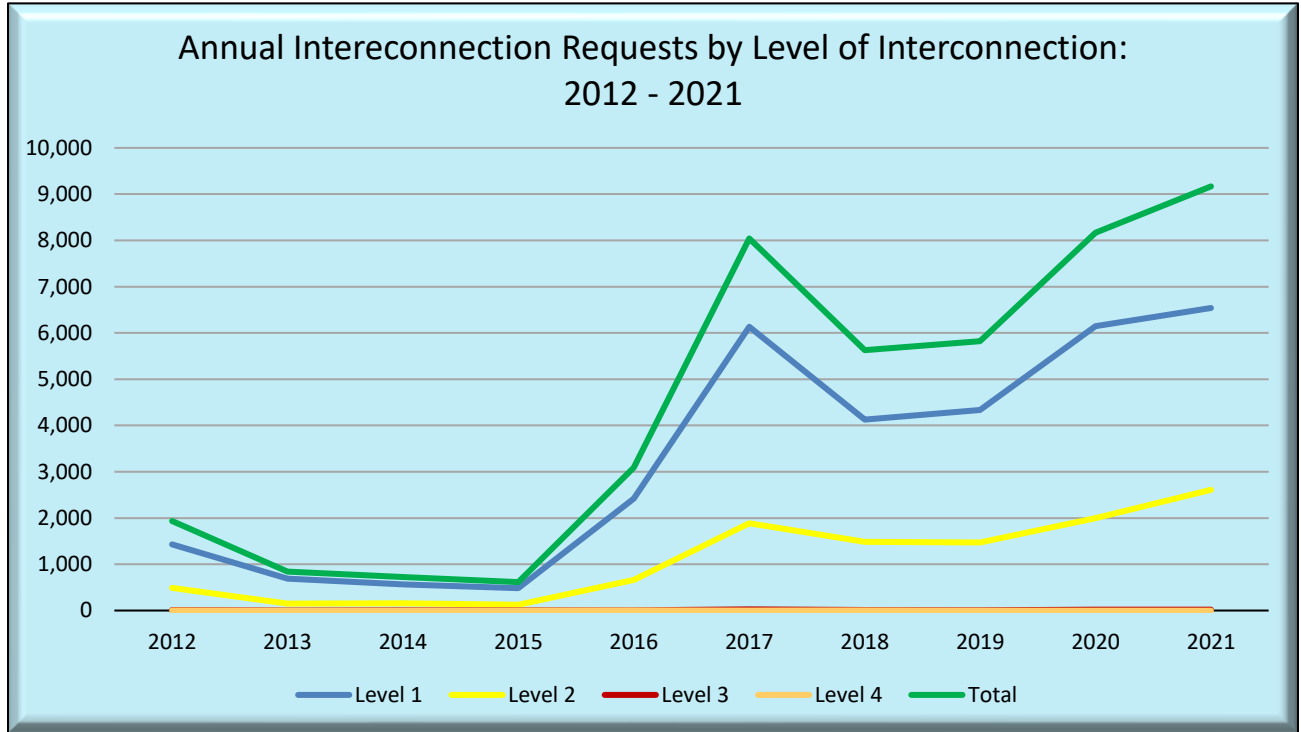


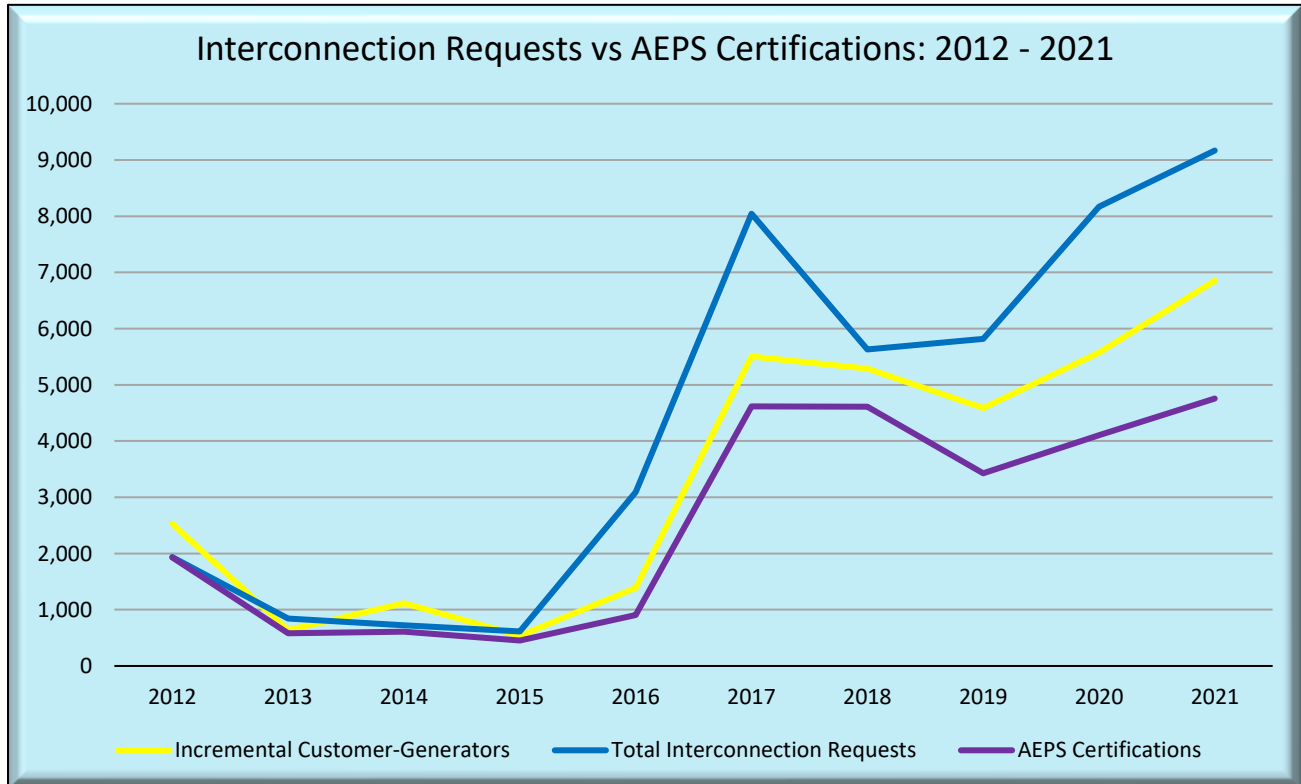
Figure 3E: Trends-- Number of Interconnection Requests by EDC Service Territory 2012 – 2021



**Figure 3F: Trends – Number of Annual Interconnection Requests by Level: 2012 - 2021**



**Figure 3G: Comparison of Annual Net Metered Interconnection Requests to AEPS Certifications: 2012 - 2021**





## **VI. Mean Number of Days to Complete Interconnection Request Approvals: 2019-2021**

The Commission's regulations at [52 Pa. Code Chapter 75. Subchapter C. Interconnection Standards](#), contain review procedures for each of the four Levels of interconnection request. Within the review procedures are review timelines that the EDCs are to follow. Technical review of all applications begins once a fully completed application, with payment, has been received. The applications are placed into a queue for review and analysis of any potential impacts to the distribution circuit/system. Following review and if approved, after receipt of a certificate of completion, the EDC will complete a witness test within 10 business days, at a time that is mutually agreeable to the customer-generator and the EDC, or the EDC will waive the witness test. Below is a summary of the regulations, with a focus on the review times.

### **Level 1 Interconnection Requests**

Level 1 interconnection applications are appropriate for inverter-based systems that are limited to not more than 10 kWac. Applications received for Level 1 review are to be completed by the EDC within 25 business days. The EDC has 10 business days after receipt of the interconnection request, to inform the applicant that the interconnection request is complete or incomplete and what materials are missing. After the 10 business days, the EDC has 15 business days to verify that the small generator facility equipment can be interconnected safely and reliably using Level 1 screens.

Interconnection requests for Levels 2 through 4 are more complicated and cover a broader range of equipment installations than a Level 1 interconnection request. Thus, the time to complete a review may be impacted by studies needed to complete a review.

### **Level 2 Interconnection Requests**

Level 2 interconnection requests are appropriate for inverter-based systems that are greater than 10 kWac but not more than 2 MWac. The Level 2 procedure requires that within 10 business days after receipt of the interconnection request, the EDC is to inform the applicant that the interconnection request is complete or incomplete and what materials are missing. When it is determined that additional information is required to complete an evaluation, the EDC shall request the information. Time to complete the evaluation may be extended, to the extent of the delay required for receipt of the additional information. The EDC shall schedule a scoping meeting to notify the interconnection customer about other higher-queued interconnection customers on the same substation bus or spot network for which interconnection is sought. Within 20 business days after the EDC notifies the interconnection customer it has received a completed interconnection request, the EDC shall:

- (i) Evaluate the interconnection request using the Level 2 screening criteria.
- (ii) Review the interconnection customer's analysis, if provided by interconnection customer, using the same criteria.
- (iii) Provide the interconnection customer with the EDC's evaluation, including a comparison of the results of its own analyses with those of interconnection customer, if applicable.

When an EDC determines that the interconnection request passes the Level 2 screening criteria or fails one or more of the Level 2 screening criteria but determines that the small generator facility can be interconnected safely and reliably, it shall provide the interconnection customer a standard small generator interconnection agreement within five business days after the determination.

After receipt of a certificate of completion for the generator facility, the EDC shall complete a witness test within 10 business days or waive the witness test.

### ***Level 3 Interconnection Requests***

Level 3 interconnection requests are appropriate for non-inverter-based systems that are limited to not more than 2 MWac or for systems that don't pass review under Levels 1 or 2 review criteria. Within 10 business days from receipt of an interconnection request, the EDC shall notify the interconnection customer whether the request is complete. If the interconnection request is not complete, the EDC shall provide a written list detailing information that shall be provided to complete the interconnection request. The interconnection customer shall have 10 business days to provide appropriate data to complete the interconnection request or the interconnection request will be considered withdrawn. The interconnection request shall be deemed complete when the required information has been provided, or the parties have agreed that the interconnection customer may provide additional information later. The EDC shall notify the interconnection customer at the scoping meeting about other higher-queued interconnection customers.

A scoping meeting will be held within 10 business days, or as agreed to by the parties, after the EDC has notified the interconnection customer that the interconnection request is deemed complete, or the interconnection customer has requested that its interconnection request proceed after failing the requirements of a Level 2 review or Level 4 review. The purpose of the meeting is to review the interconnection request, existing studies relevant to the interconnection request, and the results of the Level 1, Level 2, or Level 4 screening criteria. Depending upon what is agreed to by the parties at the scoping meeting, the EDC shall provide one of the following within five business days after the meeting:

- An interconnection feasibility study agreement, including an outline of the scope of the study and a nonbinding good faith estimate of the cost to perform the study.
- An interconnection system impact study agreement, including an outline of the scope of the study and a nonbinding good faith estimate of the cost to perform the study.
- An interconnection facilities study agreement including an outline of the scope of the study and a nonbinding good faith estimate of the cost to perform the study.

A distribution interconnection system impact study shall be performed when a potential adverse impact to the distribution system is identified in the interconnection feasibility study. The EDC shall send the interconnection customer an interconnection system impact study agreement within five business days of transmittal of the interconnection feasibility study report.

Within five business days of completion of the interconnection system impact study, a report will be transmitted to the interconnection customer with an interconnection facilities study agreement, which includes an outline of the scope of the study and a nonbinding good faith estimate of the cost to perform the study.

Upon completion of the interconnection facilities study, and with the agreement of the interconnection customer to pay for any necessary interconnection facilities and distribution upgrades identified in the interconnection facilities study, the EDC shall provide the interconnection customer with a standard small generator interconnection agreement within five business days.

#### **Level 4 Interconnection Review**

Level 4 interconnection requests are appropriate for systems that don't qualify for review under Levels 1 or 2, and which do not export power. Review time for Level 4 interconnection applications is governed by the size of the generator facility.

For interconnection requests involving systems of not more than 10 kW and which do not export power, the EDC shall evaluate such requests using Level 1 interconnection review procedures. The EDC has 20 business days to conduct an area network impact study to determine potential adverse impacts of interconnecting to the EDC's area network.

For interconnection requests involving non-inverter-based systems greater than 10 kW but not more than 50 kW and which do not export power, the EDC shall evaluate such requests using Level 2 interconnection review procedures. The EDC has 25 calendar days to conduct an area network impact study to determine potential adverse impacts of interconnecting to the EDC's area network.

For other Level 4 interconnection requests, including those on non-networked circuits, the requirements and timing for review varies, depending on the circumstances. Please refer to 52 Pa. Code, Chapter 75, Section 75.40 for more details.

TABLE 5A: MEAN NUMBER OF DAYS TO COMPLETE INTERCONNECTION REQUEST APPROVALS BY EDC SERVICE TERRITORY 2021

Resource	Citizens	DLC	Met-Ed	PECO	Penelec	Penn Power	Pike	PPL	UGI	Wellsboro	West Penn
Level I	0	17	12	18	8	1	30	1	2	4	7
Level II	1	23	15	24	10	1	0	13	2	10	7
Level III	0	60	0	0	0	0	0	20	0	0	0
Level IV	0	0	0	0	0	0	0	0	0	0	0

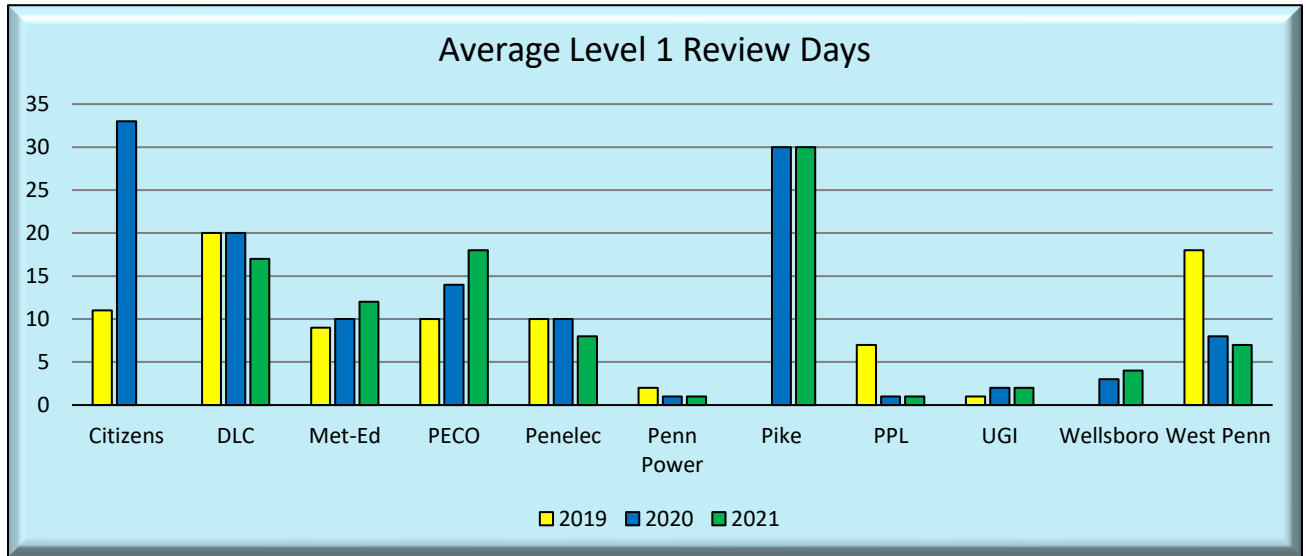
TABLE 5B: MEAN NUMBER OF DAYS TO COMPLETE INTERCONNECTION REQUEST APPROVALS BY EDC SERVICE TERRITORY 2020

Resource	Citizens	DLC	Met-Ed	PECO	Penelec	Penn Power	Pike	PPL	UGI	Wellsboro	West Penn
Level I	0	20	10	14	10	1	30	1	2	3	8
Level II	20	23	12	15	10	1	0	10	2	1	7
Level III	0	0	0	0	0	0	0	15	0	1	7
Level IV	0	0	0	0	0	0	0	0	0	0	0

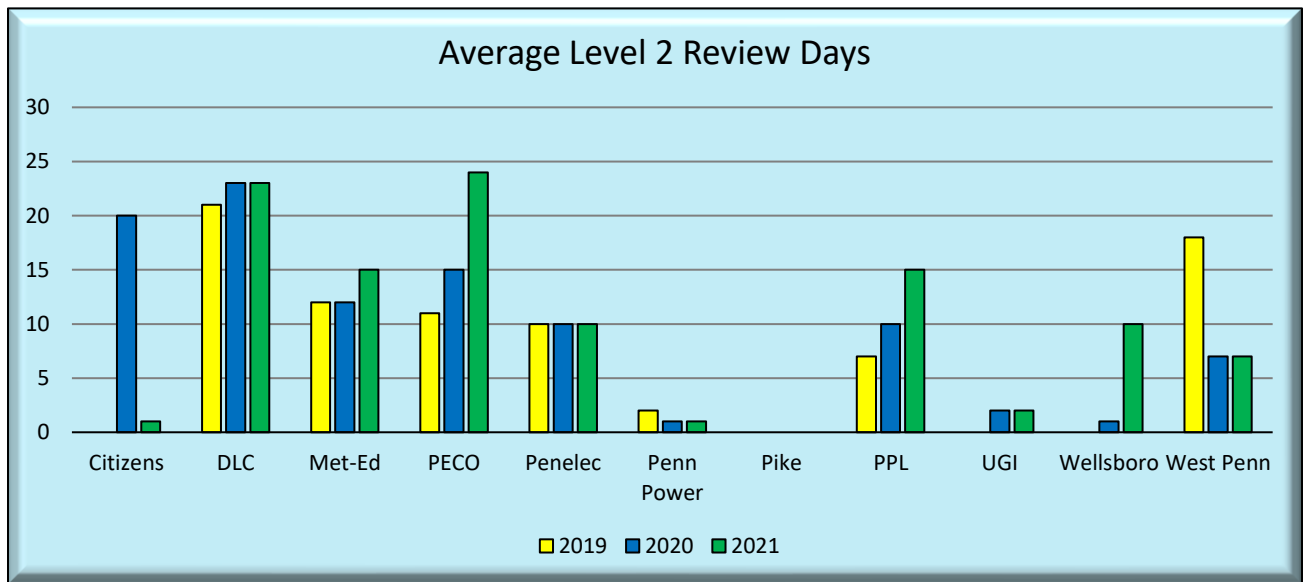
TABLE 5C: MEAN NUMBER OF DAYS TO COMPLETE INTERCONNECTION REQUEST APPROVALS BY EDC SERVICE TERRITORY 2019

Resource	Citizens	DLC	Met-Ed	PECO	Penelec	Penn Power	Pike	PPL	UGI	Wellsboro	West Penn
Level I	11	20	9	10	10	2	0	7	1	0	18
Level II	0	21	12	11	10	2	0	7	0	0	18
Level III	0	0	17	0	0	0	0	7	0	0	0
Level IV	0	0	0	0	0	0	0	0	0	0	53

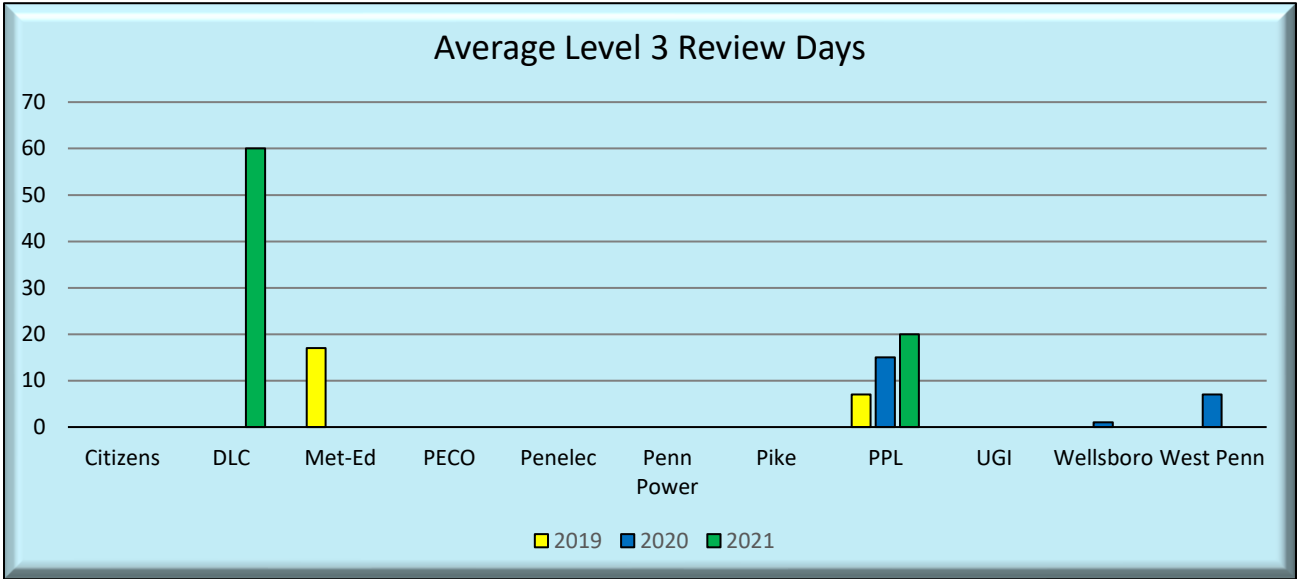
**Figure 4A: Mean Number of Days to Approve Level 1 Interconnection Requests**



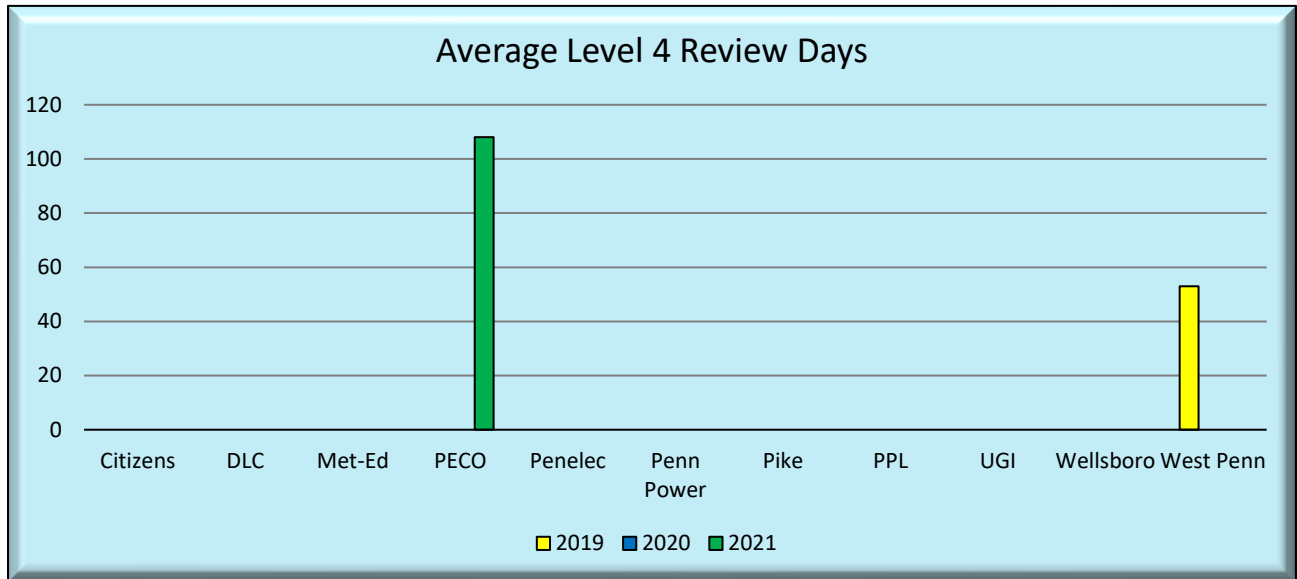
**Figure 4B: Mean Number of Days to Approve Level 2 Interconnection Requests**



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



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



**VII. Status of Interconnection Requests: 2020 - 2021**

As of the time the reporting data was submitted by the EDCs, reviews of 80% of all interconnection requests received during the year had been conducted. The number of completed reviews reflects applications received during the reporting year whereas, the higher number of approved interconnection requests reflects carry-over of applications from the prior year that were still in process at the end of the previous reporting year.

In reporting year 2021, a total of 123 interconnection requests were denied due to over-voltage issues on distribution circuits and an additional 86 interconnection requests were cancelled by customers for reasons not reported to the EDCs. Interconnection requests sometimes require being moved to a different level for review. Tables 6C and 6D show the total number of interconnection requests that had to be moved to another level for proper review. Table 6E reflects the reasons that interconnection requests required a different level of review in 2021.

TABLE 6A: STATUS OF INTERCONNECTION REQUESTS BY EDC SERVICE TERRITORY 2021

2021	Citizens	DLC	Met-Ed	PECO	Penelec	Penn Power	Pike	PPL	UGI	Wellsboro	West Penn	Total
Submitted	7	1,122	1,375	2,567	527	152	1	2,817	19	3	877	9,467
Completed	6	1,115	0	2,386	527	152	1	2,817	19	0	577	7,600
Approved	6	1,064	1,368	2,193	520	152	1	2,143	19	3	576	8,045
Denied	0	0	0	123	0	0	0	0	0	0	1	124
Cancelled by Customer	0	33	20	9	3	2	0	0	8	0	11	86
Pending Customer Action	1	14	333	37	91	43	0	674	0	0	140	1,333
Pending EDC Action	0	4	0	24	0	0	0	0	0	0	0	28

TABLE 6B: STATUS OF INTERCONNECTION REQUESTS BY EDC SERVICE TERRITORY 2020

2020	Citizens	DLC	Met-Ed	PECO	Penelec	Penn Power	Pike	PPL	UGI	Wellsboro	West Penn	Total
Submitted	5	453	1,437	2,733	467	116	1	2,502	15	4	434	8,167
Completed	5	434	1,422	2,552	467	116	1	2,502	0	0	434	7,933
Approved	0	398	1,422	1,945	467	116	1	1,701	0	4	430	6,484
Denied	0	0	0	63	0	0	0	0	0	0	0	63
Cancelled by Customer	0	9	17	162	1	1	0	0	0	0	7	197
Pending Customer Action	1	15	477	329	122	23	0	796	0	1	137	1,901
Pending EDC Action	0	14	0	53	0	0	0	5	0	0	0	72

TABLE 6C INTERCONNECTION REQUESTS MOVED TO ANOTHER LEVEL 2021

2021	Citizens	DLC	Met-Ed	PECO	Penelec	Penn Power	Pike	PPL	UGI	Wellsboro	West Penn	Total
Moved to Level 1	0	0	11	15	1	0	0	0	0	0	5	32
Moved to Level 2	0	0	0	6	0	0	0	0	0	0	0	6
Moved to Level 3	0	0	0	1	0	0	0	0	0	0	0	1
Moved to Level 4	0	0	0	0	0	0	0	0	0	0	0	0

TABLE 6D: INTERCONNECTION REQUESTS MOVED TO ANOTHER LEVEL 2020

2020	Citizens	DLC	Met-Ed	PECO	Penelec	Penn Power	Pike	PPL	UGI	Wellsboro	West Penn	Total
Moved to Level 1	0	0	0	18	0	0	0	0	0	0	1	19
Moved to Level 2	0	0	12	1	0	0	0	0	0	0	2	15
Moved to Level 3	0	0	0	0	0	0	0	0	0	0	0	0
Moved to Level 4	0	0	0	0	0	0	0	0	0	0	0	0

TABLE 6E: INTERCONNECTION REVIEWS MOVED TO ANOTHER LEVEL

Interconnection Reviews Moved to Another Level			
EDC	Up/Down	Number	Reason
Met-Ed	Up	11	Capacity additions
PECO	Up	6	Incorrect request
PECO	Up	1	Non-inverter based
West Penn	Up	4	Incorrect request
Duquesne	Down	1	Incorrect request
PECO	Down	11	Reduced project size
Penelec	Down	1	Reduced project size
West Penn	Down	1	Incorrect request
<b>REVIEWS MOVED UP</b>		<b>22</b>	
<b>REVIEWS MOVED DOWN</b>		<b>14</b>	



Pennsylvania Public Utility Commission  
400 North Street  
Harrisburg, PA 17120  
[www.puc.pa.gov](http://www.puc.pa.gov)

