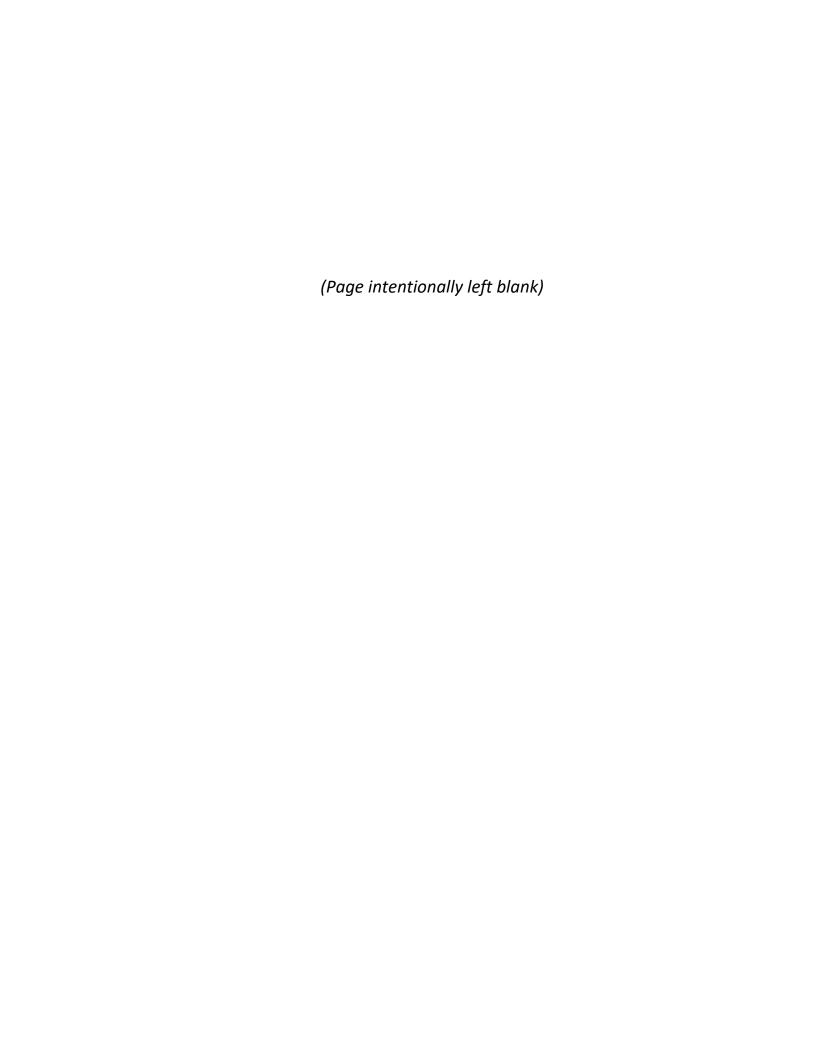


Net Metering & Interconnection Report 2021 - 2023

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% 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 Pennsylvania 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 reporting 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 2023 reporting year (June 1, 2022 - May 31, 2023), 19,202 interconnection requests were received in the EDC service territories. This represents an increase of 6,713 (54%) in the number of interconnection requests from 2022. From 2022 to 2023 interconnection requests respectively increased by 48% and 68% for Level I and Level II. There was a 219% increase in the rate of Level III requests and an 80% decrease in the rate of Level IV interconnection requests. Associated generating capacity increased to a cumulative 803,198 kW, a 23% increase from 2022. Finally, after eclipsing PECO last year, PPL remains the leader among EDCs as having the greatest number of customergenerators.

### 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>

<sup>&</sup>lt;sup>1</sup> See generally 73 P.S. § 1648.1 et seq. and also 52 Pa Code §75

<sup>&</sup>lt;sup>2</sup> See 52 Pa Code §75.1

<sup>&</sup>lt;sup>3</sup> See 52 Pa Code §75.13(h)

<sup>&</sup>lt;sup>4</sup> See 52 Pa. Code §75.34

<sup>&</sup>lt;sup>5</sup> See <u>52 Pa Code §75.22</u>

**Level 2** is used for small generation facilities with a nameplate capacity of 2 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.

## III. Summary of Customers Interconnected: 2021 - 2023

As of May 31, 2023, the number of interconnected customer-generators has risen to 59,663, representing a 30% increase over the prior year. There were no new Tier II customer-generators in energy year 2023. In keeping with prior years, solar interconnections constitute 99% of all interconnection requests.

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.

	Data	as of Ma	ay 31, 20	021	Dat	a as of M	ay 31, 2	022	Data as of May 31, 2023			
	Tie	rl			Tie	er I			Tie	er I		
	Total	Solar PV	Tier II	Total	Total	Solar PV	Tier II	Total	Total	Solar PV	Tier II	Total
Number of Customer Generators	38,428	38,122	19	38,447	45,968	45,661	19	45,987	59,644	59,335	19	59,663
Estimated Nameplate Capacity (kW)	551,638	499,610	8,309	559,947	641,466	591,231	9,545	651,011	792,303	738,665	10,895	803,198

<sup>\*</sup>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: 2021 - 2023

TABLE 2A: NUMBER OF CUSTOMER-GENERATORS BY EDC SERVICE TERRITORY 2023

Resource	Citizens	DLC	Met- Ed	PECO	Penelec	Penn Power	Pike	PPL	UGI	Wellsboro	West Penn	Total
Tier I	62	6,508	10,000	17,010	2,491	733	30	19,685	176	19	2,930	59,644
Solar PV	62	6,486	9,967	16,998	2,461	722	30	19,535	170	15	2,889	59,335
Tier II	0	5	2	6	4	1	0	0	0	0	1	19
Total	62	6,513	10,002	17,016	2,495	734	30	19,685	176	19	2,931	59,663
% Growth	32%	36%	27%	24%	23%	41%	50%	36%	30%	6%	29%	30%

<sup>\*</sup>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 2022

Resource	Citizens	DLC	Met-Ed	PECO	Penelec	Penn Power	Pike	PPL	UGI	Wellsboro	West Penn	Total
Tier I	47	4,794	7,895	13,725	2,025	521	20	14,510	135	18	2,278	45,968
Solar PV	47	4,775	7,862	13,713	1,996	510	20	14,360	128	13	2,237	45,661
Tier II	0	5	2	6	4	1	0	1	0	0	0	19
Total	47	4,799	7,897	13,731	2,029	522	20	14,511	135	18	2,278	45,987
% Growth	12%	29%	23%	11%	23%	31%	150%	22%	23%	20%	24%	20%

<sup>\*</sup>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 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
Total	42	3,719	6,430	12,363	1,649	399	8	11,878	110	15	1,834	38,447

<sup>\*</sup>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 2021 - 2023

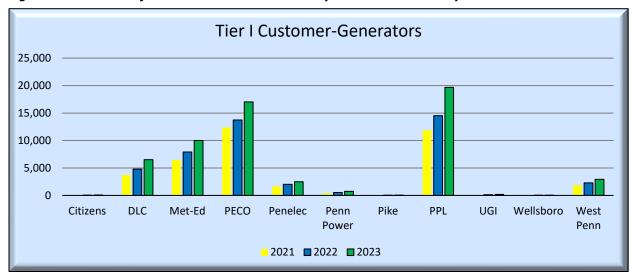


Figure 1B: Number of Solar Customer-Generators by EDC Service Territory 2021 - 2023

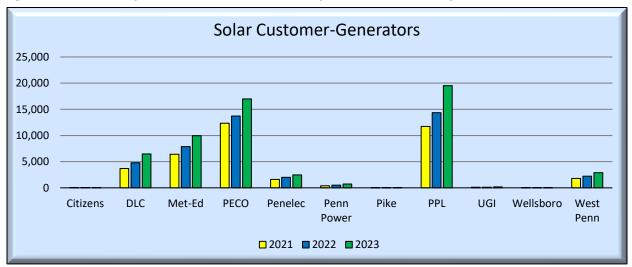


Figure 1C: Number of Tier II Customer-Generators by EDC Service Territory 2021 - 2023



Figure 1D: Trends – Incremental Annual Growth of Customer-Generators 2014 - 2023

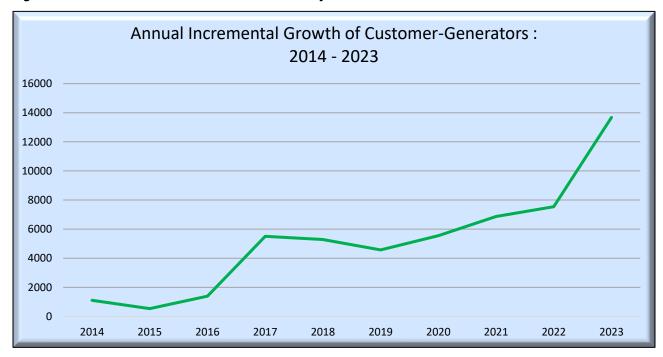
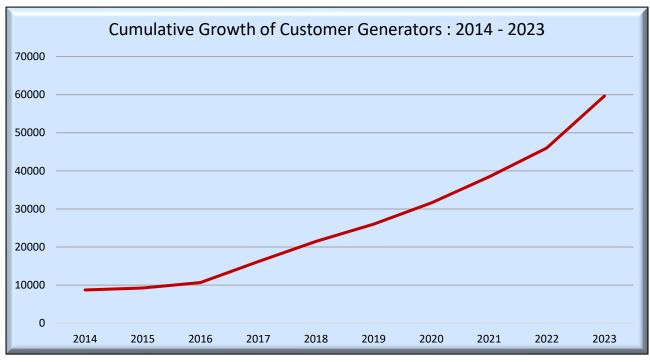


Figure 1E: Trends – Cumulative Annual Growth of Customer-Generators 2014 - 2023



## IV. Interconnected Generation Capacity (kW) by EDC Service Territory: 2021- 2023

Tables 3A through 3C and associated Figures 2A through 2C show the annual growth in electric generating nameplate capacity for each AEPS Tier. As shown in Table 3A 92% of customer-generator interconnected capacity is being provided by solar PV systems. In Figure 2D we show that cumulative customer-generated electric generating capacity surpassed 800,000 kW in 2023. Figure 2E shows the annual trend in incremental growth of customer-generator nameplate generating capacity.

TABLE 3A: GENERATION NAMEPLATECAPACITY (KW) BY EDC SERVICE TERRITORY 2023

Resource	Citizens	DLC	Met-Ed	PECO	Penelec	Penn Power	Pike	PPL	UGI	Wellsboro	West Penn	Total
Tier I	3.316	60,866	144,703	170,334	37,062	9,515	318	310,199	1,959	1,324	52,707	792,303
Solar PV	3,316	60,309	137,725	169,476	32,983	8,175	318	270,641	1,920	1,306	52,496	738,665
Tier II	0	1,992	3	45	4,505	2,000	0	0	0	0	2,350	10,895
Total	3,316	62,858	144,706	170,379	41,567	11,515	318	310,199	1,959	1,324	55,057	803,198
% Growth	197%	27%	23%	18%	18%	20%	65%	24%	32%	1%	20%	23%

<sup>\*</sup>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 2022

Resource	Citizens	DLC	Met-Ed	PECO	Penelec	Penn Power	Pike	PPL	UGI	Wellsboro	West Penn	Total
Tier I	1,115	47,679	117,445	144,186	25,572	7,616	193	249,014	1,482	1,312	45,852	641,466
Solar PV	1,115	47,327	110,467	143,328	24,693	6,276	193	209,455	1,443	1,293	45,641	591,231
Tier II	0	1,992	3	45	4,505	2,000	0	1,000	0	0	0	9,545
Total	1,115	49,671	117,448	144,231	30,077	9,616	193	250,014	1,482	1,312	45,852	651,011
% Growth	6%	37%	15%	9%	22%	22%	176%	14%	22%	4%	35%	16%

<sup>\*</sup>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 2021

	()													
Resource	Citizens	DLC	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		

<sup>\*</sup>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 2021 - 2023

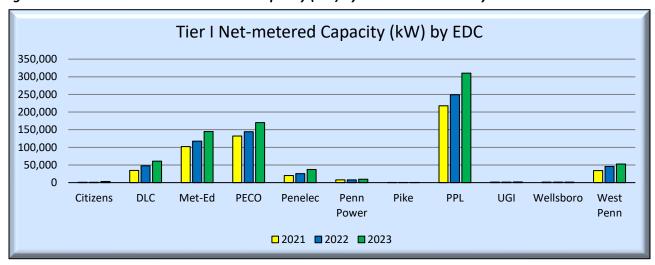


Figure 2B: Solar Generation Capacity (kW) by EDC Service Territory 2021 - 2023

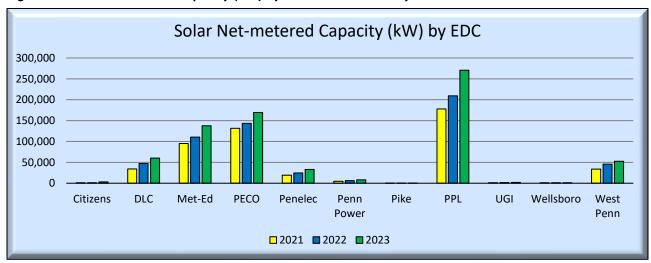


Figure 2C: Tier II Generation Capacity (kW) by EDC Service Territory 2021 – 2023

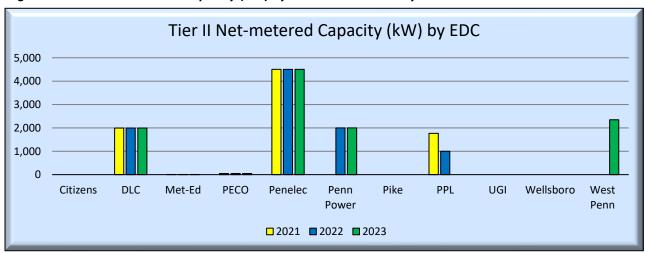


Figure 2D: Trends— Cumulative Net Metered Capacity (kW) 2014 - 2023

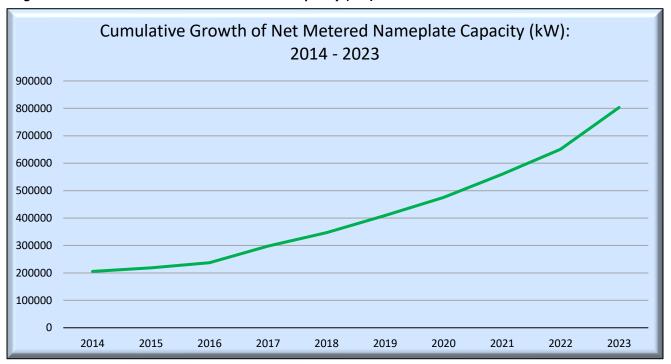
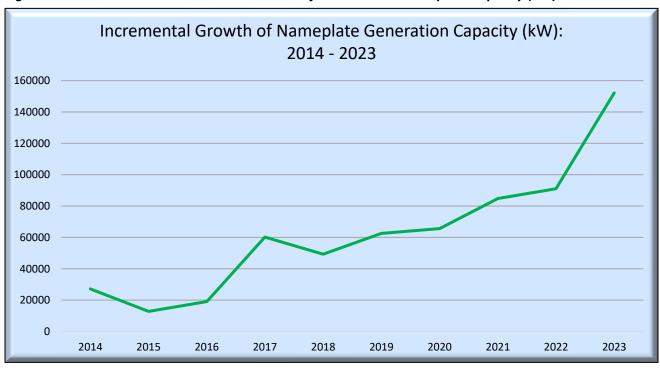


Figure 2E: Trends – Incremental Annual Growth of Net-Metered Nameplate Capacity (kW) 2014-2023



## V. Interconnection Requests by EDC Service Territory: 2021 - 2023

Tables 4A through 4C and Figures 3A through 3D show the number of net metering interconnection requests for energy years 2021 through 2023. Figure 3E shows that the top three EDC service territories for net metering interconnection requests are PPL, PECO and Met-Ed, respectively. Figure 3G shows the number of net metering interconnection requests has continually increased since 2018, reaching its highest level ever in energy year 2023. In Figure 3H 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 certification results in some AEPS certifications appearing in the subsequent energy year. Additionally, some large solar installers who pursue AEPS certifications on behalf of their customers hold onto large numbers of AEPS requests and submit them in batches, sometimes delaying certifications for several months.

TABLE 4A: NUMBER OF INTERCONNECTION REQUESTS BY EDC SERVICE TERRITORY 2023

Resource	Citizens	DLC	Met-Ed	PECO	Penelec	Penn Power	Pike	PPL	UGI	Wellsboro	West Penn	Total
Level 1	6	2,062	1,754	3,545	341	286	12	4,698	49	4	772	13,529
Level 2	11	261	863	982	186	104	0	2,854	33	1	294	5,589
Level 3	0	2	12	0	34	17	0	15	0	0	3	83
Level 4	0	0	1	0	0	0	0	0	0	0	0	1
Total	17	2,325	2,630	4,527	561	407	12	7,567	82	5	1,069	19,202
% Growth	240%	48%	31%	38%	37%	88%	-8%	77%	134%	67%	60%	54%

TABLE 4B: NUMBER OF INTERCONNECTION REQUESTS BY EDC SERVICE TERRITORY 2022

Resource	Citizens	DLC	Met-Ed	PECO	Penelec	Penn Power	Pike	PPL	UGI	Wellsboro	West Penn	Total
Level 1	1	1,360	1,444	2,538	257	146	13	2,876	26	1	464	9,128
Level 2	4	205	561	749	152	60	0	1,386	9	2	202	3,330
Level 3	0	4	2	1	0	11	0	5	0	0	3	26
Level 4	0	1	1	3	0	0	0	0	0	0	0	5
Total	5	1,570	2,008	3,291	409	217	13	4,267	35	3	669	12,489
% Growth	-29%	40%	46%	28%	-22%	43%	1200%	51%	84%	0%	16%	36%

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

Resource	Citizens	DLC	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
Total	7	1,122	1,375	2,567	527	152	1	2,817	19	3	577	9,167

Figure 3A: Level 1 Interconnection Requests by EDC Service Territory 2021 – 2023

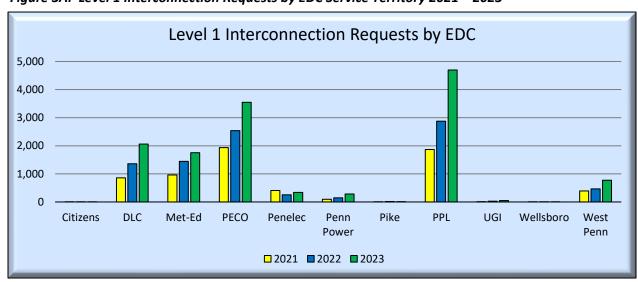


Figure 3B: Level 2 Interconnection Requests by EDC Service Territory 2021 – 2023

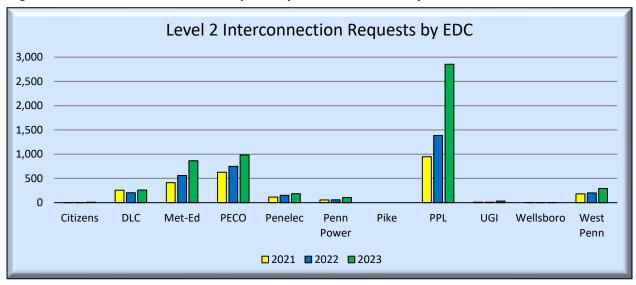


Figure 3C: Level 3 Interconnection Requests by EDC Service Territory 2021 – 2023

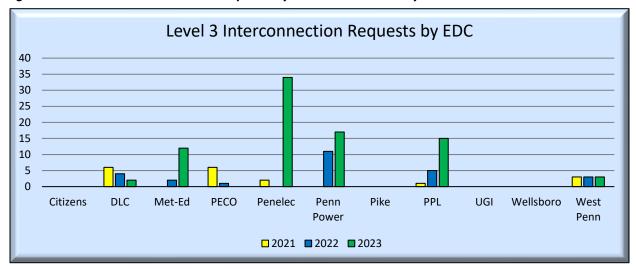


Figure 3D: Level 4 Interconnection Requests by EDC Service Territory 2021 – 2023

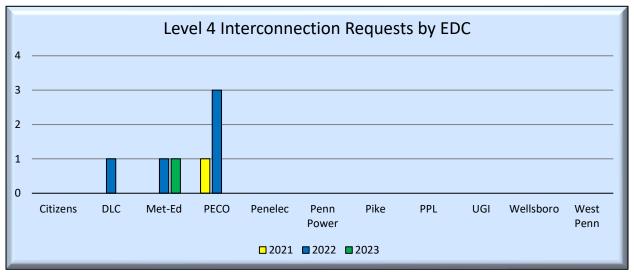


Figure 3E: Trends-- Number of Interconnection Requests for Large EDCs 2014 – 2023

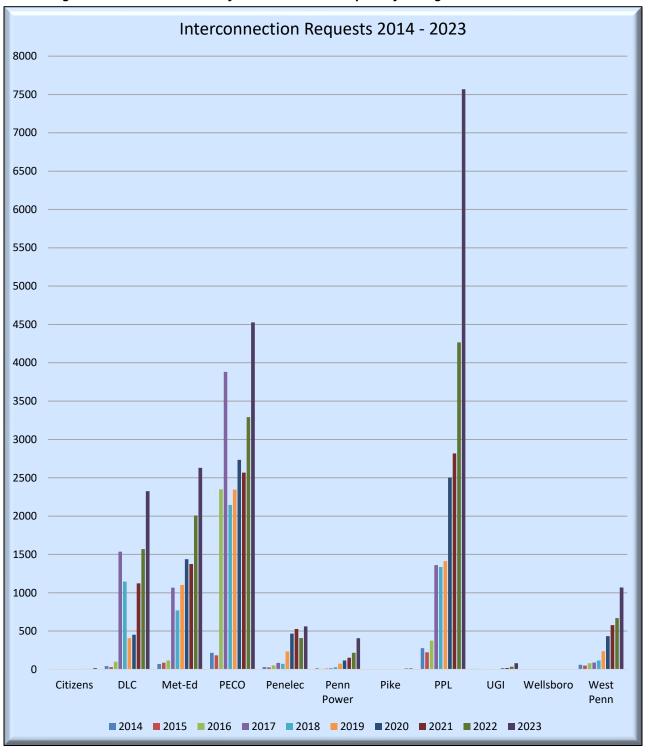


Figure 3F: Trends-- Number of Interconnection Requests for Small EDCs 2014 – 2023

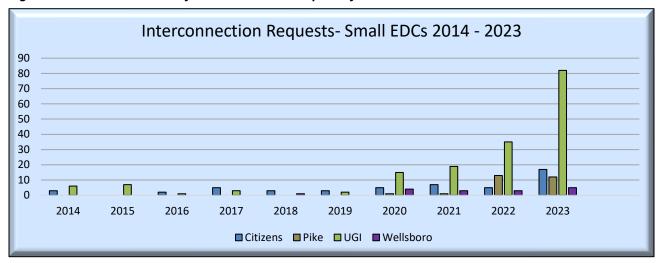


Figure 3G: Trends – Number of Annual Interconnection Requests by Level 2014 - 2023

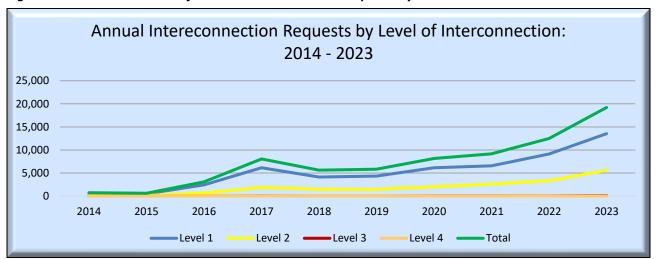
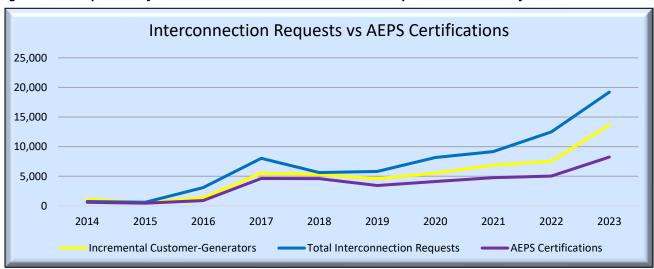


Figure 3H: Comparison of Annual Net Metered Interconnection Requests to AEPS Certifications 2014 - 2023



# VI. Mean Number of Days to Complete Interconnection Request Approvals: 2021 - 2023

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 an application 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. 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 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.

As indicated in Table 5A, Duquesne Light was the only EDC whose average review time for Level 1 exceeded the 25-business day requirement during the past reporting year. PPL remains consistently the best at reviewing Level 1 applications, primarily because of their highly automated process, which should be a model for other EDCs to consider adopting for this most basic level of interconnection. Review times for Level 2 and Level 3 interconnection requests vary widely across the EDCs. These applications require a greater level of attention and review due to their complexity and potential impacts to distribution circuits.

Aside from reported values for mean number of days for review, Commission staff are aware of several instances when interconnection application review times have been excessive. When Commission staff have been notified of these matters, staff have investigated with the respective EDCs and often have determined that staffing limitations among the EDCs is a root cause for many lengthy reviews. Responsiveness from applicants is also a contributing factor in some lengthy review times. Commission staff are preparing recommendations to improve the overall review process.

TABLE 5A: MEAN NUMBER OF DAYS TO COMPLETE INTERCONNECTION REQUESTS, BY EDC SERVICE TERRITORY - 2023

Resource	Citizens	DLC	Met-Ed	PECO	Penelec	Penn Power	Pike	PPL	UGI	Wellsboro	West Penn
Level I	6	27	7	16	6	10	10	1	5	1	10
Level II	5	33	45	19	8	10	0	30	10	1	12
Level III	0	0	0	0	90	120	0	30	0	0	125
Level IV	0	0	0	0	0	0	0	0	0	0	0

TABLE 5B: MEAN NUMBER OF DAYS TO COMPLETE INTERCONNECTION REQUESTS, BY EDC SERVICE TERRITORY - 2022

Resource	Citizens	DLC	Met-Ed	PECO	Penelec	Penn Power	Pike	PPL	UGI	Wellsboro	West Penn
Level I	12	16	10	17	10	5	10	1	3	3	8
Level II	1	21	14	24	15	6	0	15	10	0	20
Level III	0	0	0	27	0	20	0	20	0	0	20
Level IV	0	0	0	25	0	0	0	0	0	0	0

TABLE 5C: MEAN NUMBER OF DAYS TO COMPLETE INTERCONNECTION REQUESTS, 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

Figure 4A: Mean Number of Days to Approve Level 1 Interconnection Requests 2021 – 2023

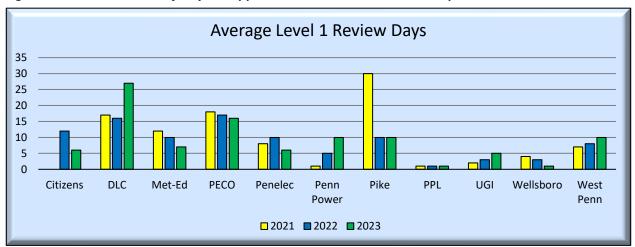


Figure 4B: Mean Number of Days to Approve Level 2 Interconnection Requests 2021 – 2023

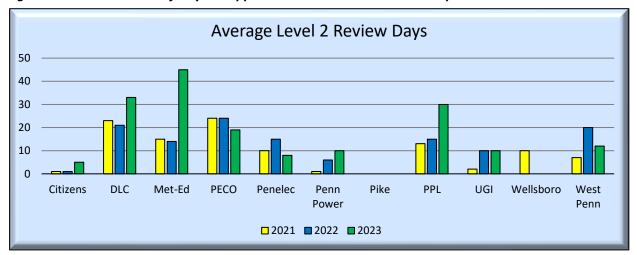


Figure 4C: Mean Number of Days to Approve Level 3 Interconnection Requests

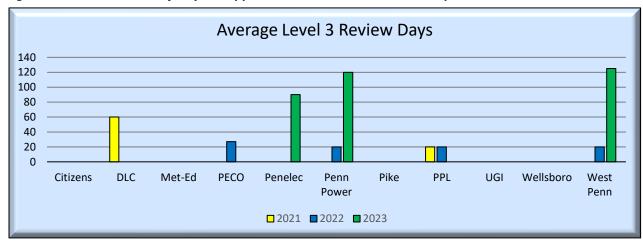
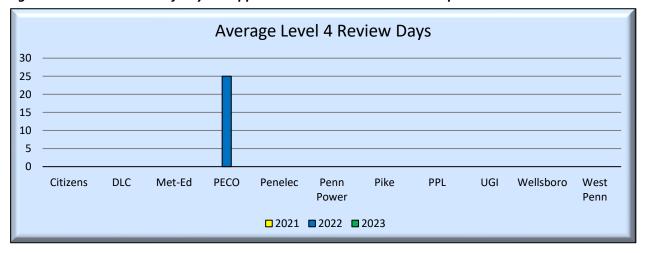


Figure 4D: Mean Number of Days to Approve Level 4 Interconnection Requests 2021 – 2023



### VII. Status of Interconnection Requests: 2021 - 2023

Interconnection requests for reporting year 2023 have increased 54% above the previous year's totals, which were already 32% above 2021 totals. The current rate of growth for interconnection requests is anticipated to exceed that of the latest reporting year. As discussed in Section VI of this report, it is Commission staff's opinion that the EDCs are strained to keep up with the growth of interconnection requests and may not be adequately staffed to address this influx and maintain the required timeframes for interconnection reviews.

Tables 6A through 6C reflect the status of interconnection requests that have been submitted. The percentage of requests that were reviewed and approved during this past reporting year was 85%, down from a high of 90% in 2021, however, the number of applications has more than doubled in this time. The percentage of requests denied by the EDCs in the past reporting year has decreased from about 1.4% in 2021 to 0.04% in 2023. While the number of proposed systems being cancelled by customers is higher in 2023, the relative percentage is actually lower than in reporting year 2022, 6% versus 9%, respectively. The reasons for customer cancellations are unknown and most likely varied.

Tables 6D through 6F show the total number of interconnection requests moved to another level for proper review. Table 7 provides the reasons for the 79 interconnection requests that were moved to a different level for review in 2023. The vast majority of interconnections requiring a different level of review are in PECO's service territory and predominantly because of the extensive number of antiquated low voltage distribution circuits throughout portions of PECO's service territory.

2023	Citizens	DLC	Met-Ed	PECO	Penelec	Penn Power	Pike	PPL	UGI	Wellsboro	West Penn	Total
Submitted	17	2,325	2,630	4,527	561	407	12	7,567	82	5	1,069	19,202
Completed	17	2,250	2,570	4,478	519	338	10	5,182	81	0	966	16,411
Approved	17	1,480	2,573	3,304	455	194	0	5,175	80	5	655	13,938
Denied	0	0	0	0	0	5	0	2	0	0	0	7
Cancelled by Customer	0	120	83	697	21	35	0	5	1	0	27	989
Pending Customer Action	2	8	854	362	56	108	2	2,385	0	0	284	4,061
Pending EDC Action	0	0	0	115	0	0	0	0	0	0	0	115

TABLE 6B: STATUS OF INTERCONNECTION REVIEWS COMPLETED, BY EDC SERVICE TERRITORY - 2022

2022	Citizens	DLC	Met-Ed	PECO	Penelec	Penn Power	Pike	PPL	UGI	Wellsboro	West Penn	Total
Submitted	5	1,570	2,008	3,291	409	217	13	4,267	35.	3	669	12,487
Completed	5	1,114	1,936	3,291	500	217	12	2,634	25	0	669	10,403
Approved	5	1,055	2,043	2,381	498	217	12	2,634	25	3	669	9,542
Denied	0	0	0	0	0	0	0	0	0	0	0	0
Cancelled by Customer	0	38	46	828	2	18	0	0	0	0	15	947
Pending Customer Action	0	14	738	73	179	80	0	1,633	10	0	285	3,012
Pending EDC Action	0	10	0	9	0	0	0	0	0	0	0	19

<sup>\*</sup>The data in Table 6B do not match the data in last year's report due to an amended filing submitted by PECO.

TABLE 6C: STATUS OF INTERCONNECTION REVIEWS COMPLETED, BY EDC SERVICE TERRITORY - 2021

TABLE	00. 3170	103 01	HALLINGO	TATALCT	ION KEVI	L 113 CO	IVII LL	ILD, DI	LDC 3	LIVICE TEN	INTION	1 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	1,368	2,386	527	152	1	2,817	19	3	577	8,971
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 6D INTERCONNECTION REQUESTS MOVED TO ANOTHER LEVEL - 2023
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2023	Citizens	DLC	Met-Ed	PECO	Penelec	Penn Power	Pike	PPL	UGI	Wellsboro	West Penn	Total
Moved to Level 1	0	0	0	0	0	0	0	0	0	0	8	8
Moved to Level 2	0	0	4	62	0	0	0	0	0	0	5	71
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 REQUESTS MOVED TO ANOTHER LEVEL - 2022

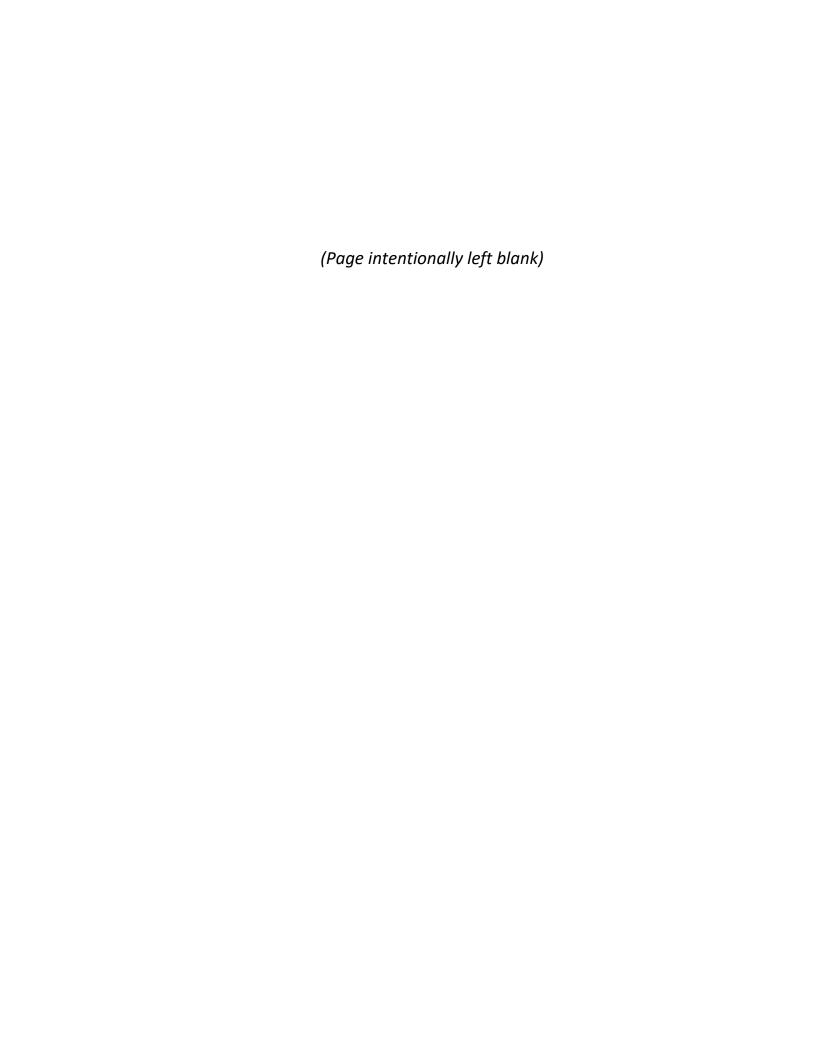
2022	Citizens	DLC	Met-Ed	PECO	Penelec	Penn Power	Pike	PPL	UGI	Wellsboro	West Penn	Total
Moved to Level 1	0	0	5	0	0	2	0	0	0	0	0	7
Moved to Level 2	0	0	6	61	0	1	0	0	0	0	3	71
Moved to Level 3	0	0	0	0	0	0	0	0	0	0	0	0
Moved to Level 4	0	0	0	0	0	0	0	0	0	0	0	0

TABLE 6F: 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	0	15	1	0	0	0	0	0	1	17
Moved to Level 2	0	0	11	6	0	0	0	0	0	0	4	21
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 7: INTERCONNECTION REVIEWS MOVED TO ANOTHER LEVEL - 2023

Interconnection Reviews Moved to Another Level			
EDC	Up/Down	Number	Reason
Met-Ed	Up	2	Approved to add Solar PV kW
Met-Ed	Up	2	Approved to add Solar PV kW plus battery
PECO	Up	62	Engineering Study Required
West Penn	Up	5	Power calculation incorrect
West Penn	Down	4	Wrong form
West Penn	Down	2	Misunderstood the levels
West Penn	Down	1	Power calculation incorrect
West Penn	Down	1	Used DC values
REVIEWS MOVED UP 71		71	
REVIEWS MOVED DOWN		8	





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