SOM Section 7: Net Revenue

Market Monitoring Unit
Advisory Committee

December 5, 2025

IMM

Monitoring Analytics

Net Revenue

Net revenue equals total revenue received by generators from PJM energy, capacity and ancillary service markets, including uplift payments, and from the provision of black start and reactive services and capability, and from subsidies like RECs, less the short run marginal costs of energy production.

Net revenue is the amount that remains, after the short run marginal costs of energy production have been subtracted from gross revenue.

Net Revenue

- In a perfectly competitive, energy only market in long run equilibrium, net revenue from the energy market would be expected to equal the annualized fixed and avoidable costs for the marginal unit, including a competitive return on investment.
- In a perfectly competitive market in long run equilibrium, with energy, capacity and ancillary service markets, net revenue from all sources would be expected to equal the annualized fixed and avoidable costs of generation for the marginal unit.
- When compared to annualized fixed costs and avoidable costs, net revenue is an indicator of generation investment profitability, and is a measure of overall market performance as well as a measure of the incentive to invest in new generation and to maintain existing generation in PJM markets.
- In actual wholesale power markets, where equilibrium seldom occurs, net revenue is expected to fluctuate above and below the equilibrium level based on actual conditions in all relevant markets.

Spark Spreads and Dark Spreads

Theoretical energy market net revenues are based on explicitly stated assumptions about how a new unit with specific characteristics would operate under economic dispatch and are highly influenced by spark spreads and the volatility of spark spreads.

Spark and Dark Spreads	BGE		COMED		PSEG		Western Hub	
Jan-Sep	Spark	Dark	Spark	Dark	Spark	Dark	Spark	Dark
2024	$36.35	$24.84	$18.96	$13.59	$18.12	$0.94	$26.32	$15.15
2025	$44.29	$37.38	$24.07	$26.88	$18.85	$15.88	$32.74	$26.72
Percent change	22%	50%	27%	98%	4%	1,584%	24%	76%

Standard Deviation	BGE		COMED		PSEG		Western Hub	
Jan-Sep	Spark	Dark	Spark	Dark	Spark	Dark	Spark	Dark
2024	$57.2	$57.2	$27.6	$27.3	$28.9	$29.4	$33.8	$33.4
2025	$89.7	$91.1	$63.2	$63.4	$92.0	$74.9	$78.1	$75.1
Percent change	57%	59%	129%	133%	218%	154%	131%	125%

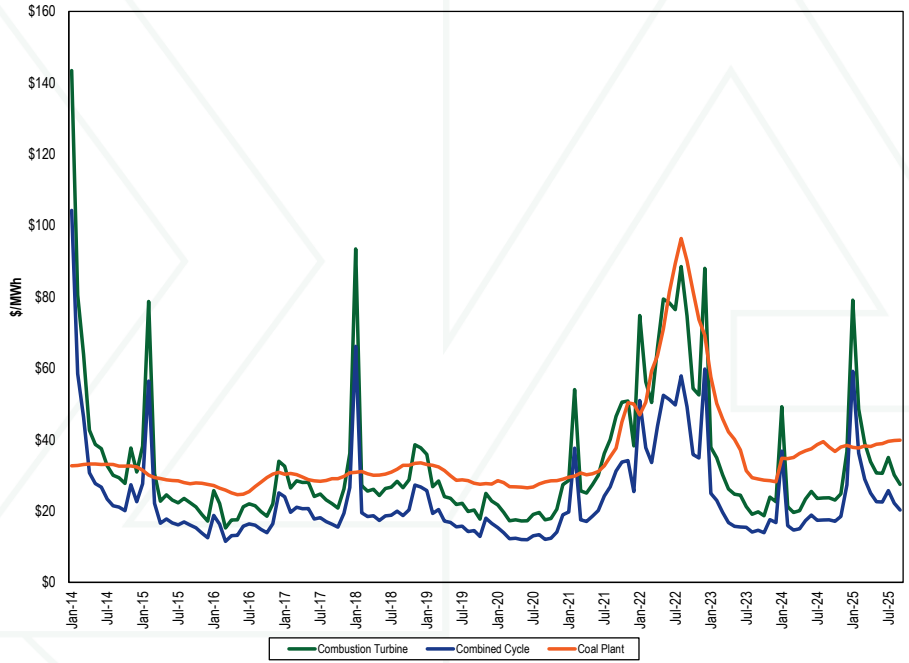
The spark or dark spread is defined as the difference between the LMP received for selling power and the cost of fuel used to generate power, converted to a cost per MWh.

The spark spread compares power prices to the cost of gas and the dark spread compares power prices to the cost of coal.

Q3 2025 SOM. Table 7-1 Peak hour spark and dark spreads ($/MWh).
Q3 2025 SOM. Table 7-2 Peak hour spark and dark spread standard deviation ($/MWh).

Average Short Run Marginal Costs

Short run marginal cost includes fuel costs, emissions costs, and the short run marginal component of VOM costs.



Q3 2025 SOM. Figure 7-4 Average short run marginal costs: 2014 through September 2025.

Capacity Market Revenue by Zone ($/MW-Yr)

Capacity market revenue for 2025 includes five months of the 2024/2025 RPM capacity market clearing price and seven months of the 2025/2026 RPM capacity market clearing price.

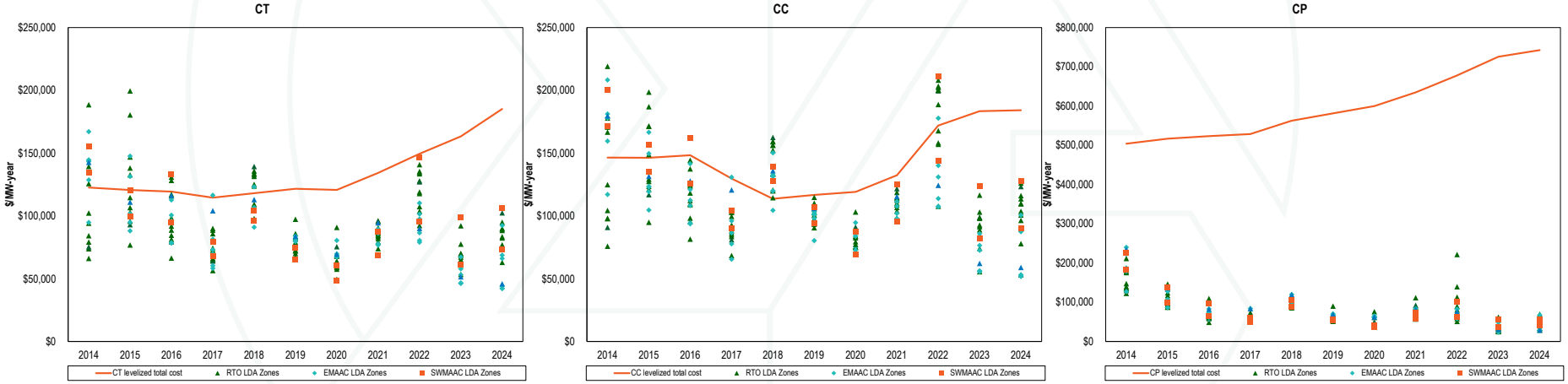
Zone	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
ACEC	$66,206	$56,448	$50,948	$43,669	$65,655	$58,103	$57,650	$63,835	$45,967	$25,368	$18,993	$65,856	$111,200
AEP	$31,149	$48,128	$33,377	$34,645	$53,235	$45,873	$31,371	$41,525	$31,842	$14,854	$11,377	$62,130	$111,200
APS	$31,149	$48,128	$33,377	$34,645	$53,216	$45,948	$31,425	$41,647	$31,932	$14,854	$11,377	$62,130	$111,200
ATSI	$31,149	$95,422	$78,709	$42,929	$53,124	$45,781	$31,351	$48,221	$36,571	$14,854	$11,377	$62,130	$111,200
BGE	$63,360	$56,448	$50,948	$43,669	$52,953	$45,651	$33,380	$49,311	$49,777	$30,062	$22,618	$75,299	$116,917
COMED	$31,149	$48,128	$33,377	$34,645	$63,994	$75,508	$70,901	$70,256	$44,273	$17,708	$11,377	$62,130	$111,200
DAY	$31,149	$48,128	$33,377	$34,645	$52,760	$44,969	$30,957	$41,516	$31,840	$14,854	$11,377	$62,130	$111,200
DOM	$31,149	$48,128	$33,377	$34,645	$53,219	$45,665	$31,221	$41,516	$31,840	$14,854	$11,377	$99,436	$137,524
DPL	$66,206	$56,448	$50,948	$43,669	$65,106	$57,607	$57,573	$63,835	$45,967	$26,669	$42,886	$82,063	$111,200
DUKE	$31,149	$48,128	$33,377	$34,645	$52,338	$44,515	$42,289	$49,590	$36,482	$18,129	$25,783	$72,295	$111,200
DUQ	$31,149	$48,128	$33,377	$34,645	$53,045	$45,567	$31,239	$41,516	$31,840	$14,854	$11,377	$62,130	$111,200
EKPC	$31,149	$48,128	$33,377	$34,645	$52,400	$44,611	$30,883	$41,516	$31,840	$14,854	$11,377	$62,130	$111,200
JCPLC	$66,206	$56,448	$50,948	$43,669	$64,763	$56,462	$56,932	$63,832	$45,965	$25,367	$18,993	$65,856	$111,200
MEC	$63,360	$56,448	$50,948	$43,669	$53,353	$46,138	$33,526	$42,952	$41,639	$25,055	$18,113	$65,236	$111,200
PE	$63,360	$56,448	$50,945	$43,667	$53,154	$45,760	$33,376	$42,966	$41,639	$25,055	$18,113	$65,236	$111,200
PECO	$66,206	$56,448	$50,948	$43,669	$65,707	$58,548	$57,940	$63,835	$45,967	$25,368	$18,993	$65,856	$111,200
PEPCO	$66,529	$56,448	$50,948	$43,669	$53,323	$46,207	$33,590	$42,952	$41,639	$25,055	$18,113	$65,236	$111,200
PPL	$63,360	$56,448	$50,948	$43,669	$52,218	$45,398	$33,569	$42,980	$41,659	$25,055	$18,113	$65,236	$111,200
PSEG	$72,567	$60,936	$67,224	$73,401	$79,190	$59,582	$58,370	$69,285	$49,813	$25,368	$18,993	$65,856	$111,200
REC	$72,567	$60,936	$67,224	$73,401	$79,190	$59,582	$58,370	$69,285	$49,813	$25,368	$18,993	$65,856	$111,200
PJM	$46,247	$54,646	$48,568	$44,809	$58,432	$52,009	$42,222	$50,695	$39,442	$20,155	$15,684	$70,102	$115,240

Updated from 2024 Annual SOM. Table 7-6 Capacity market revenue by zone (Dollars per MW-year): 2014 through 2024.

New Entrant Net Revenue and Levelized Cost

When total net revenues exceed the annual, nominal levelized total costs for the technology, that technology is covering all its costs including a return on and of capital and all the expenses of operating the facility.

The extent to which net revenues cover the levelized total costs of investment is significantly dependent on technology type and location, which affect both energy and capacity revenue.



2024 Annual SOM. Figure 7-5 New entrant CT net revenue and 20-year levelized total cost by LDA (Dollars per installed MW-year): 2014 through 2024.
2024 Annual SOM. Figure 7-6 New entrant CC net revenue and 20-year levelized total cost by LDA (Dollars per installed MW-year): 2014 through 2024.
2024 Annual SOM. Figure 7-7 New entrant CP net revenue and 20-year levelized total cost by LDA (Dollars per installed MW-year): 2014 through 2024.

New Entrant Wind and Solar

When compared to annualized fixed costs and avoidable costs, net revenue is an indicator of generation investment profitability, and is a measure of overall market performance as well as a measure of the incentive to invest in new generation and to maintain existing generation in PJM markets.

	Percent of 20-year Levelized Total Costs Recovered by Solar										
Zone	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
ACEC	124%	146%	165%	143%	128%	130%	153%	205%	182%	134%	129%
DOM	-	-	74%	48%	47%	64%	95%	141%	155%	80%	81%
DPL	-	-	57%	40%	42%	58%	83%	111%	94%	66%	73%
JCPLC	119%	125%	149%	136%	121%	122%	150%	200%	168%	124%	116%
PSEG	113%	138%	171%	154%	131%	134%	164%	220%	183%	131%	122%

	Percent of 20-year Levelized Total Costs Recovered by Onshore Wind										
Zone	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
AEP	59%	46%	33%	36%	44%	35%	27%	34%	66%	41%	45%
APS	60%	45%	30%	37%	44%	30%	28%	31%	59%	40%	41%
COMED	56%	42%	30%	36%	34%	35%	28%	37%	65%	39%	45%
PE	73%	54%	33%	38%	44%	30%	26%	31%	57%	35%	35%

	Percent of 20-year Levelized Total Costs Recovered by Offshore Wind										
Zone	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
ACEC	33%	24%	18%	15%	20%	15%	14%	19%	37%	21%	22%
DOM	32%	25%	19%	16%	22%	16%	14%	20%	46%	24%	25%
DPL	34%	25%	19%	16%	21%	16%	15%	21%	40%	22%	25%

2024 Annual SOM. Table 7-23 Percent of 20-year levelized total costs recovered by onshore wind net revenue (Dollars per installed MW-year): 2014 through 2024.
2024 Annual SOM. Table 7-28 Percent of 20-year levelized total costs recovered by offshore wind net revenue (Dollars per installed MW-year): 2014 through 2024.
2024 Annual SOM. Table 7-33 Percent of 20-year levelized total costs recovered by solar net revenue (Dollars per installed MW-year): 2014 through 2024.

Actual Net Revenue

Net revenues from energy, ancillary service, RECs and capacity markets are compared to avoidable costs to determine the extent to which the revenues from PJM markets provide sufficient incentive for continued operations in PJM markets. Avoidable costs are the costs that must be paid each year in order to keep a unit operating. Avoidable costs are less than total costs, which include the return on and of capital, and more than marginal costs, which are the purely short run incremental costs of producing energy.

	Units with full recovery from energy and ancillary net revenue														Units with full recovery from all markets											
Technology	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Combined Cycle	55%	46%	50%	72%	59%	63%	57%	66%	64%	67%	50%	72%	73%	68%	85%	79%	79%	95%	88%	93%	89%	98%	90%	93%	83%	80%	87%	81%
CT - Aero Derivative	15%	6%	6%	53%	15%	8%	10%	30%	46%	42%	2%	7%	-	-	100%	96%	76%	98%	100%	99%	100%	99%	96%	96%	89%	33%	-	-
CT - Industrial Frame	26%	23%	17%	38%	13%	8%	3%	21%	30%	21%	2%	6%	-	-	99%	98%	83%	100%	100%	100%	100%	96%	92%	86%	84%	27%	-	-
Combustion Turbine	-	-	-	-	-	-	-	-	-	-	-	-	2%	13%	-	-	-	-	-	-	-	-	-	-	-	-	21%	29%
Coal Fired	31%	17%	27%	78%	16%	15%	12%	11%	2%	2%	22%	27%	2%	10%	82%	36%	54%	83%	64%	40%	36%	63%	31%	5%	66%	33%	2%	10%
Diesel	48%	42%	37%	69%	56%	33%	32%	39%	11%	37%	25%	35%	0%	34%	100%	100%	77%	100%	100%	100%	100%	97%	91%	89%	83%	83%	72%	59%
Hydro	74%	61%	95%	97%	81%	79%	95%	94%	90%	72%	95%	100%	100%	100%	81%	77%	97%	98%	100%	100%	97%	98%	100%	74%	95%	100%	100%	100%
Nuclear	-	-	50%	94%	17%	6%	17%	53%	0%	0%	94%	100%	24%	24%	-	-	61%	100%	56%	17%	50%	88%	81%	0%	100%	100%	14%	14%
Oil or Gas Steam	8%	6%	11%	15%	3%	0%	0%	10%	73%	6%	10%	10%	7%	1%	92%	78%	86%	85%	91%	88%	81%	76%	66%	34%	67%	10%	40%	46%
Pumped Storage	100%	100%	95%	100%	100%	100%	100%	100%	100%	100%	29%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Solar	-	95%	97%	99%	97%	95%	95%	98%	96%	95%	100%	97%	88%	77%	-	95%	97%	99%	97%	95%	95%	98%	96%	95%	100%	97%	91%	79%
Wind	88%	85%	96%	93%	92%	89%	93%	91%	88%	79%	94%	99%	81%	85%	88%	85%	96%	93%	92%	89%	93%	91%	89%	79%	95%	99%	83%	85%

2024 Annual SOM. Table 7-42 Proportion of units recovering avoidable costs: 2011 through 2024.

Avoidable Cost Recovery

In 2024, a substantial portion of units did not achieve full recovery of avoidable costs through energy markets alone. After including capacity revenues, net revenues from all markets cover avoidable costs for even the first quartile of most technology types, although this is not the case for every individual unit and it is not the case for coal or CT units.

Technology	Total Installed Capacity (ICAP)	Recovery of avoidable costs from energy and ancillary net revenue			Recovery of avoidable costs from all markets		
		First quartile	Median	Third quartile	First quartile	Median	Third quartile
Combined Cycle	48,097	51%	280%	430%	147%	340%	519%
Combustion Turbine	25,291	9%	27%	65%	52%	71%	115%
Coal Fired	25,760	0%	11%	48%	14%	25%	59%
Diesel	676	(3%)	30%	194%	76%	159%	563%
Hydro	2,222	100%	100%	100%	100%	100%	100%
Nuclear	26,111	79%	83%	91%	137%	140%	142%
Oil or Gas Steam	2,869	(2%)	1%	80%	40%	93%	175%
Pumped Storage	2,308	100%	100%	100%	100%	100%	100%
Solar	6,917	103%	127%	169%	105%	131%	177%
Wind	11,092	139%	207%	395%	139%	212%	396%

2024 Annual SOM. Table 7-41 Avoidable cost recovery by quartile: 2024.

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