

# SOM Section 7: Net Revenue

Market Monitoring Unit  
Advisory Committee  
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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<br>Jan-Sep | BGE     |         | COMED   |         | PSEG    |         | Western Hub |         |
|-----------------------------------|---------|---------|---------|---------|---------|---------|-------------|---------|
|                                   | 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<br>Jan-Sep | BGE    |        | COMED  |        | PSEG   |        | Western Hub |        |
|-------------------------------|--------|--------|--------|--------|--------|--------|-------------|--------|
|                               | 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.

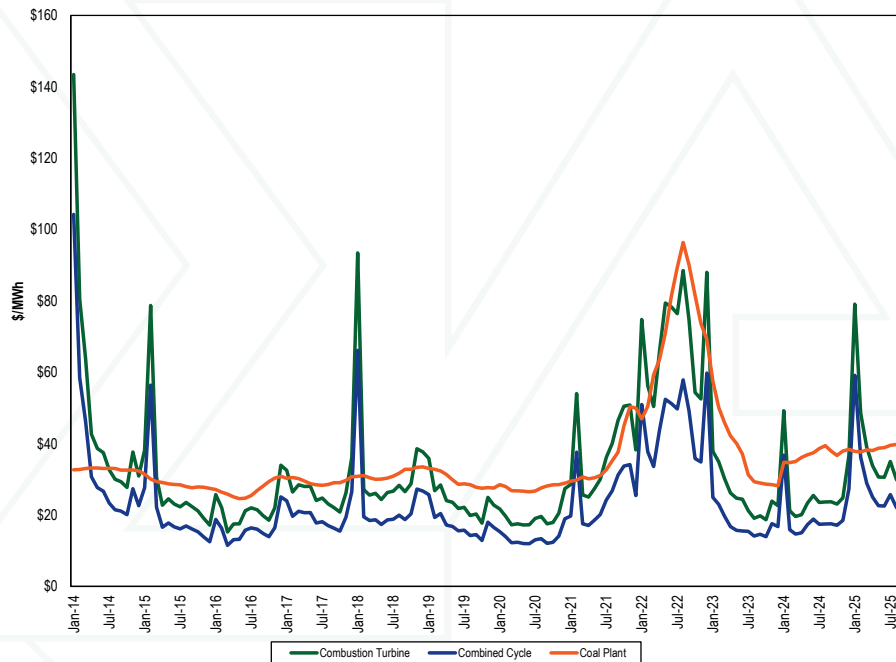
The spark spread compares power prices to the cost of gas and the dark spread compares power prices to the cost of coal.

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.

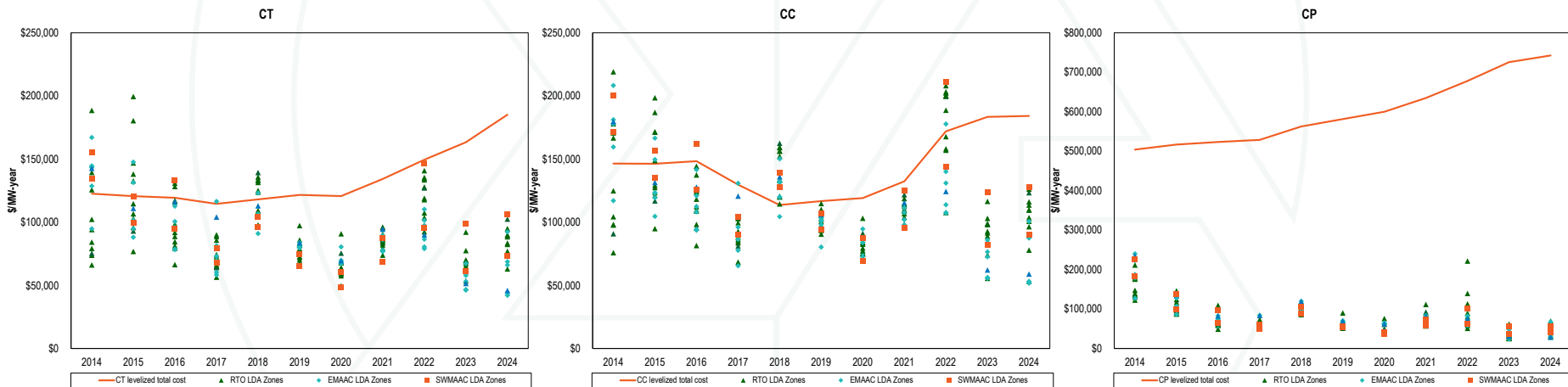
| Zone  | 2014     | 2015     | 2016     | 2017     | 2018     | 2019     | 2020     | 2021     | 2022     | 2023     | 2024     | 2025     | 2026      |
|-------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-----------|
| 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.

| Zone  | Percent of 20-year Levelized Total Costs Recovered by Solar |      |      |      |      |      |      |      |      |      |      |
|-------|-------------------------------------------------------------|------|------|------|------|------|------|------|------|------|------|
|       | 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% |

| Zone  | Percent of 20-year Levelized Total Costs Recovered by Onshore Wind |      |      |      |      |      |      |      |      |      |      |
|-------|--------------------------------------------------------------------|------|------|------|------|------|------|------|------|------|------|
|       | 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%  |

| Zone | Percent of 20-year Levelized Total Costs Recovered by Offshore Wind |      |      |      |      |      |      |      |      |      |      |
|------|---------------------------------------------------------------------|------|------|------|------|------|------|------|------|------|------|
|      | 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.

| Technology            | Units with full recovery from energy and ancillary net revenue |      |      |      |      |      |      |      |      |      |      |      |      |      | Units with full recovery from all markets |      |      |      |      |      |      |      |      |      |      |      |      |      |
|-----------------------|----------------------------------------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------------------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|
|                       | 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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