

Counting More Than Kilowatts: Monetizing Utility Cost Savings from Reduced Arrearages and Collections

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NMR Group, Inc.
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Pennsylvania's Act 129

- Requires electric distribution companies (EDCs) to implement energy-efficiency programs with a low-income carve-out.

Utility Cost Context

- Arrearages and collection activities increase the cost of supplying electricity.
- Reducing these costs should be recognized as a benefit in the TRC Test for low-income programs.

Study Goal

- Estimate and monetize utility cost savings from:
 - Lower arrearage carrying costs
 - Reduced bad debt write-offs
 - Fewer service shutoffs and reconnects
 - Reduced notice mailings
 - Fewer collection calls

Data for Quantification

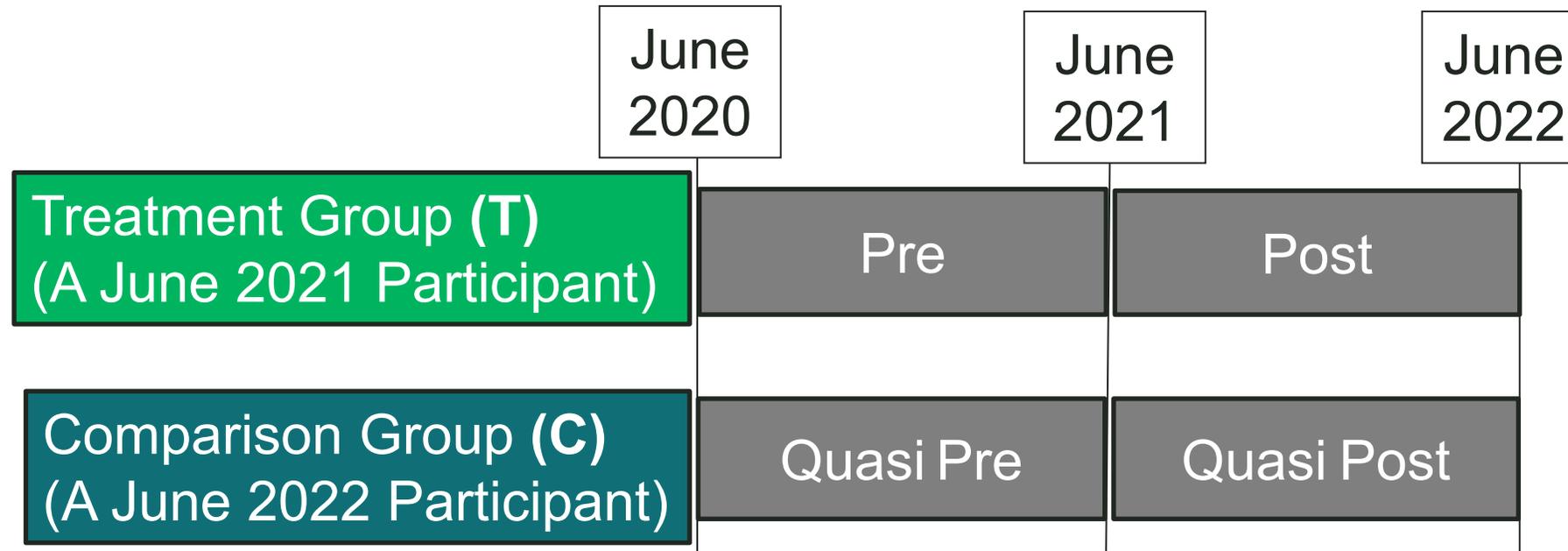
Financial and collections transactions, June 2020–May 2023, for Act 129 IE participants in PY13–PY14)

- Arrearages
- Collection calls
- Late payment and collection notices
- Terminations
- Reconnections
- Participation in other programs

Data for Monetization

- Short-term debt interest rate (PY14)
- % of arrears written off (2020–2022)
- Cost per shutoff and reconnect
- Cost per notice
- Cost per collection call

Study Design: Illustration of Difference-in-Differences Approach

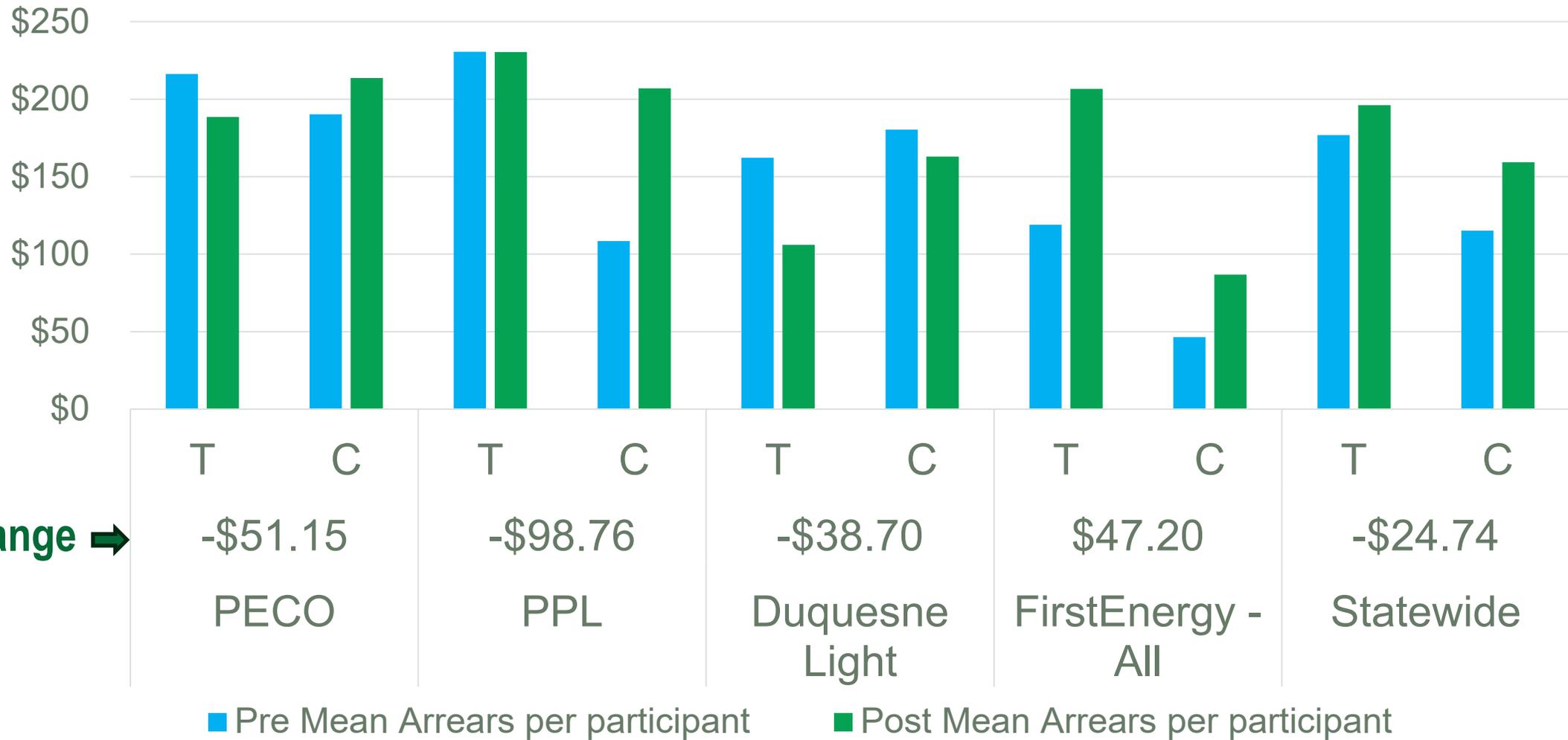


Difference-in-Differences:

$$(Post - Pre)_{Treatment\ Group} - (Quasi\ Post - Quasi\ Pre)_{Comparison\ Group}$$

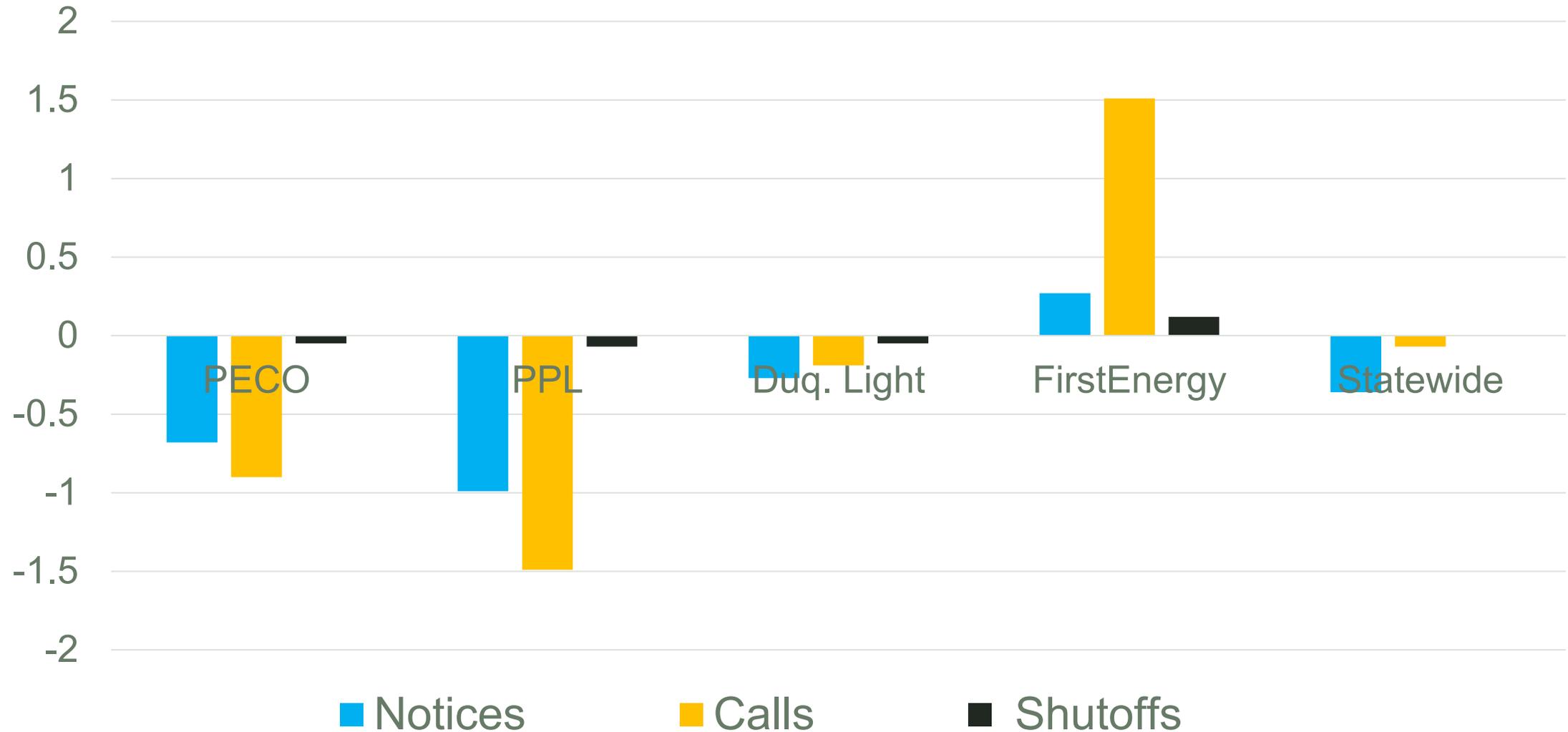
Impact (Annual)	Calculation
Reduced arrearage carrying cost	Reduction in annual arrears per participant (\$) × EDC's annual interest rate on short-term debt
Reduced bad debt write-off	Reduction in annual arrears per participant (\$) × EDC's percentage of arrears written off
Fewer collection notices	Reduction in the number of collection notices per participant × EDC's cost per notice (\$)
Fewer collection calls	Reduction in the number of collection calls per participant × EDC's cost per call (\$)
Fewer shutoffs	Reduction in the number of shutoffs due to non-payment per participant × EDC's cost per shutoff (\$)

Results: Change in Annual Average Arrears



Net Change →

Results: Net Change in Annual Number of Notices, Calls, Shutoffs



Monetized Impacts: Reduced Arrearage Carrying Cost

EDC	Average \$ reduction in annual arrearage per participant (A)	EDC annual interest rate on short-term debt* (B)	Annual monetized value per participant (A*B)
PECO	\$51.15	3.10%	\$1.59
PPL	\$98.76	3.10%	\$3.06
Duquesne Light	\$38.70	3.10%	\$1.20
FirstEnergy- All	\$0.00	3.10%	\$0.00
Statewide	\$24.74	3.10%	\$0.77

* Median projected federal funds rate for 2025 at the time of the study.

Total Monetized Impacts

Annual Impact (\$ per Participant)	EDC				Statewide
	PECO	PPL	Duquesne Light	FirstEnergy	
Reduced arrearage carrying cost	\$1.59	\$3.06	\$1.20	\$0.00	\$0.77
Reduced bad debt write-off	\$12.62	\$10.60	\$7.47	\$0.00	\$4.77
Reduced notice cost	\$0.49	\$0.67	\$0.18	\$0.00	\$0.26
Reduced collection call cost	\$0.05	\$0.98	\$0.07	\$0.00	\$0.02
Reduced service termination cost	\$1.05	\$0.84	\$0.86	\$0.00	\$0.00
TOTAL	\$15.80	\$16.16	\$9.78	\$0.00	\$5.82

Benchmarking

Impact	Pennsylvania Statewide	The Literature*		
		Low	High	Typical
Reduced Arrearage Carrying Cost	\$0.77	\$1.50	\$4.00	\$2.50
Reduced Bad Debt Write-off	\$4.77	\$0.50	\$3.75	\$1.75
Reduced Collection Notice Cost	\$0.26	\$0.05	\$1.50	\$0.60
Reduced Collection Call Cost	\$0.02	\$0.40	\$1.50	\$0.90
Reduced Shutoff Cost	\$0.00	\$0.10	\$3.65	\$0.65
TOTAL	\$5.82	\$2.55	\$14.40	\$6.40

*Source: Northeast Energy Efficiency Partnerships. (2017). Non-Energy Impacts Approaches and Values: An Examination of the Northeast, Mid-Atlantic, and Beyond.

Findings & Conclusions

- Act 129 IE programs cut EDC costs (arrearages, bad debt, notices, calls, shutoffs)
- Savings integrated into PUC TRC Test & Avoided Cost Calculator; persist over EULs
- Adopt EDC-specific results for PECO, PPL, Duquesne Light
- Apply conservative statewide averages for FirstEnergy districts until updated analysis
- Methodology transferable to other jurisdictions looking to quantify utility-side benefits from Low Income EE Programs

Thank You

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A photograph of a brick wall with a sign. The sign is rectangular and has a textured, reddish-brown background. The letters 'NMR' are prominently displayed in large, green, 3D-style block letters. Below 'NMR', the words 'Group, Inc.' are written in a smaller, grey, sans-serif font. The sign is mounted on a red brick wall. In the background, a window with white frames is visible, slightly out of focus.

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