



Act 129 Update

Climate Change Advisory Committee

April 30, 2020



Act 129 Overview

- Act 129 of 2008 was signed into law on October 15, 2008 and became effective on November 14, 2008.
- Charged PUC with establishing an energy efficiency and conservation program (EE&C Program) by January 15, 2009 that was applicable to all electric distribution companies (EDCs) with at least 100,000 customers
- Required the Commission by November 30, 2013, and every five years thereafter, to assess the cost-effectiveness of the EE&C Program and set additional incremental reductions in electric consumption if the EE&C Program's benefits exceed its costs.



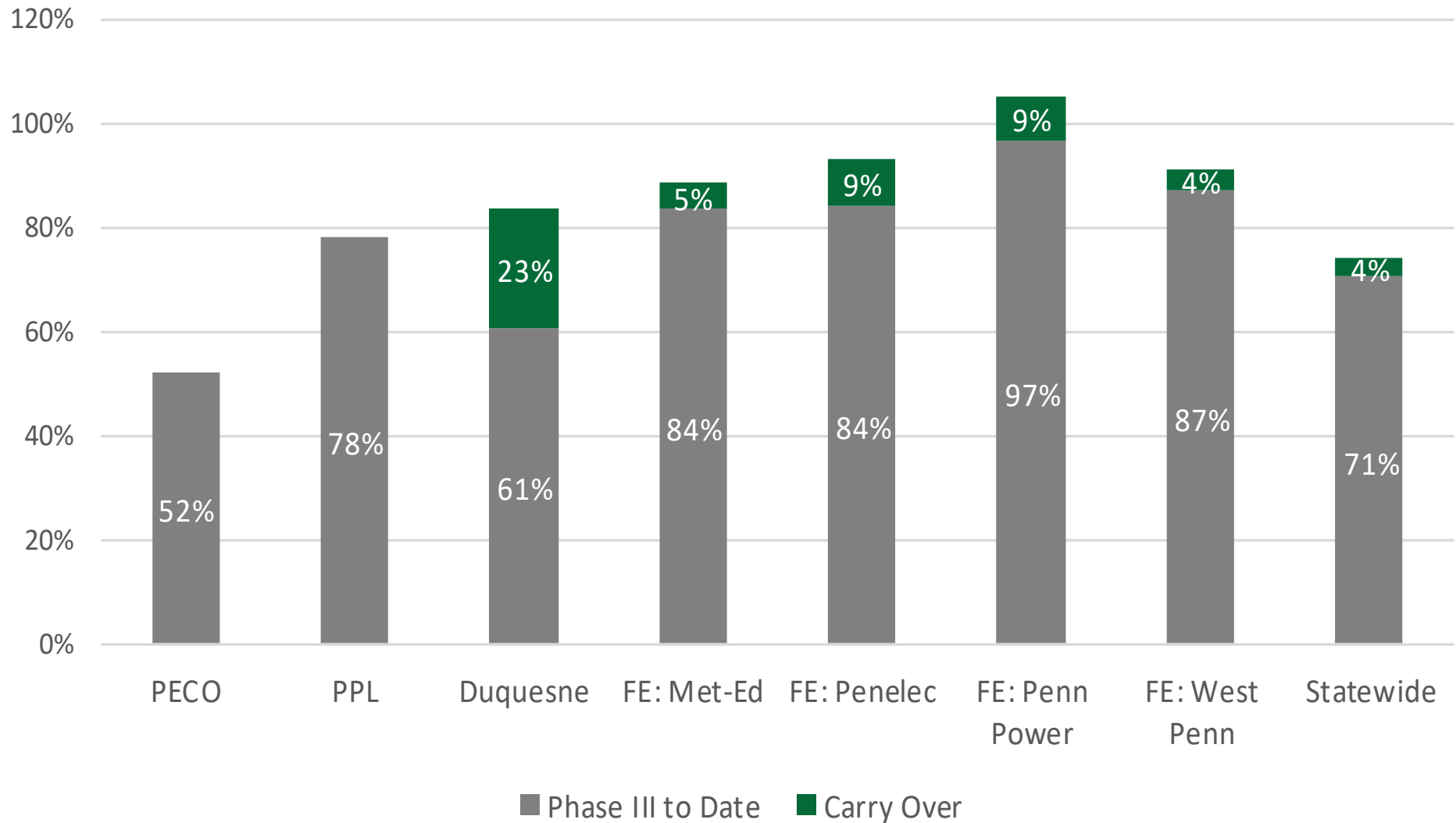
Cost-effectiveness of Act 129

- Cost-effectiveness measured using Total Resource Cost (TRC) test.

Total Resource Cost Analysis	
Phase	TRC Ratio
Phase I	2.4
Phase II	1.7
Phase III (PY8)	1.2
Phase III (PY9)	1.3
Phase III (PY10)	1.4

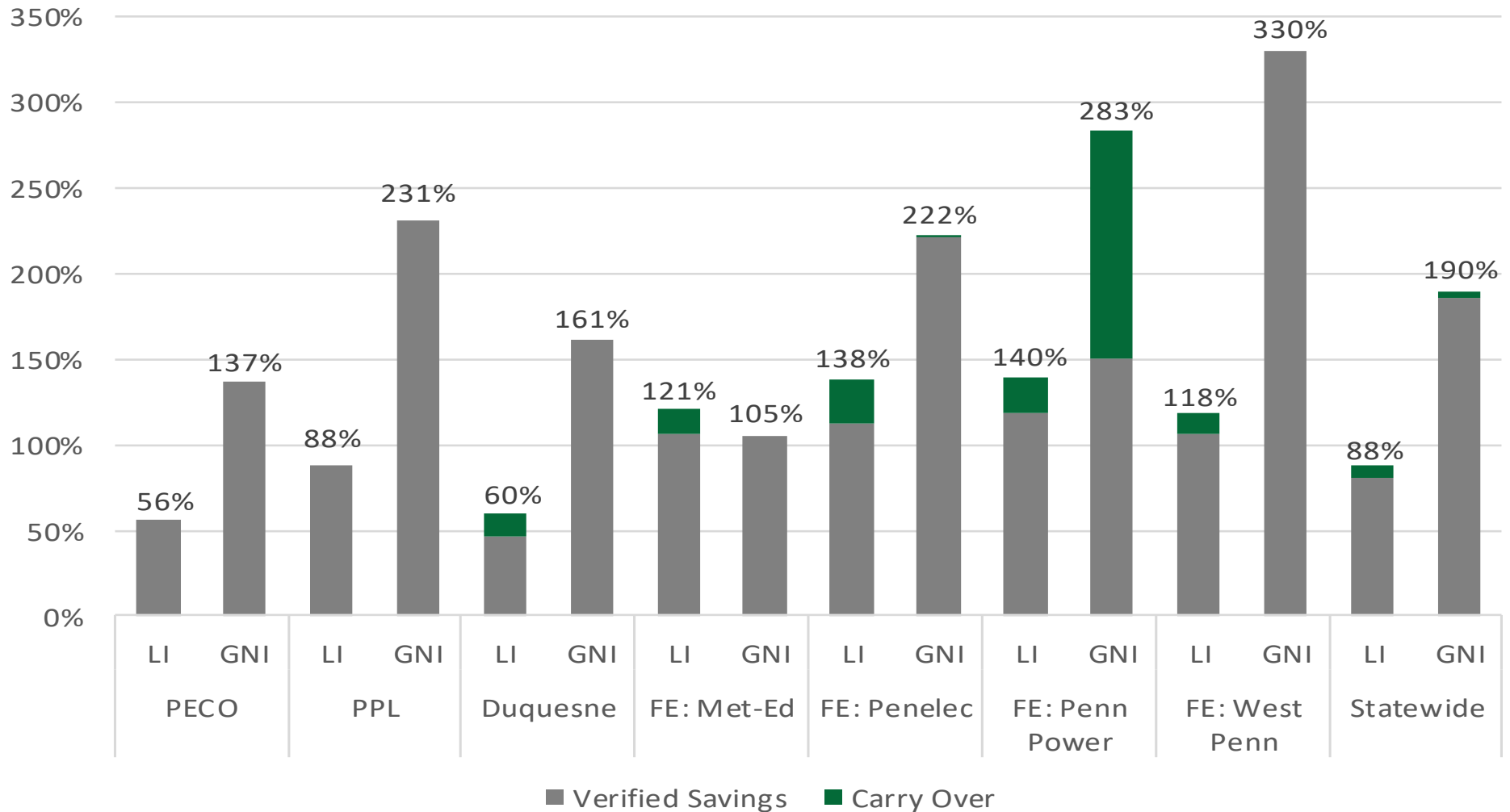


Phase III-to-Date Portfolio-level Compliance





Phase III-to-Date LI & GNI Compliance





Phase III-to-Date DR Compliance

EDC	Phase III Demand Response Target (MW)	VTD Average Event Performance
PECO	161	173.0
PPL	92	116.6
Duquesne Light	42	54.8
FE: Met-Ed	49	51.3
FE: Penelec	0	0
FE: Penn Power	17	41.9
FE: West Penn	64	119.6
Statewide	425	557.2



PY 10 Cost-effectiveness

EDC	Gross Benefits (\$1000)	Gross Costs (\$1000)	Gross TRC	Net Benefits (\$1000)	Net Costs (\$1000)	Net TRC
PECO	\$173,845	\$145,031	1.20	\$118,969	\$115,587	1.03
PPL	\$225,373	\$131,215	1.72	\$176,826	\$103,444	1.71
Duquesne Light	\$54,025	\$28,044	1.93	\$31,777	\$20,418	1.56
FE: Met-Ed	\$75,522	\$47,810	1.58	\$48,382	\$34,668	1.40
FE: Penelec	\$75,745	\$54,862	1.38	\$53,939	\$41,650	1.30
FE: Penn Power	\$26,205	\$15,625	1.68	\$17,970	\$11,861	1.52
FE: West Penn	\$64,399	\$42,189	1.53	\$41,280	\$30,589	1.35
Statewide*	\$695,114	\$464,776	1.50	\$489,143	\$358,217	1.37

*Individual columns may not sum to the total due to rounding.



Phase IV Market Potential

Incremental Annual Energy Savings for Economic, Achievable, and Program Potential

EDC	Economic Potential		Achievable Potential		Program Potential	
	Incremental Savings (GWh)	Savings as % Sales	Incremental Savings (GWh)	Savings as % Sales	Incremental Savings (GWh)	Savings as % Sales
PECO	6,340.3	16.1%	2,770.5	7.0%	1,330.1	3.4%
PPL	5,716.3	15.0%	2,476.0	6.5%	1,214.0	3.2%
Duquesne Light	1580.8	11.2%	680.6	4.8%	339.8	2.4%
FE: Met-Ed	2,132.1	14.3%	913.1	6.1%	451.1	3.0%
FE: Penelec	1,889.5	13.1%	846.0	5.9%	423.0	2.9%
FE: Penn Power	564.1	11.8%	236.6	5.0%	125.3	2.6%
FE: West Penn	2,331.8	11.0%	975.9	4.7%	492.0	2.3%
Statewide	20,535.0	14.0%	8,898.6	6.1%	4,375.4	3.0%



Phase IV Market Potential

Incremental Annual Peak Demand Reductions for Economic, Achievable, and Program Potential

EDC	Economic Potential		Achievable Potential		Program Potential	
	Incremental Savings (MW)	Savings as % Sales	Incremental Savings (MW)	Savings as % Sales	Incremental Savings (MW)	Savings as % Sales
PECO	1,312.7	16.6%	510.2	6.5%	269.3	3.4%
PPL	1,132.3	17.2%	451.8	6.9%	239.5	3.6%
Duquesne Light	318.3	12.6%	113.6	4.5%	66.4	2.6%
FE: Met-Ed	399.0	15.1%	156.4	5.9%	83.4	3.2%
FE: Penelec	400.8	16.7%	162.2	6.8%	88.6	3.7%
FE: Penn Power	105.0	10.7%	36.4	3.7%	21.1	2.2%
FE: West Penn	452.6	12.9%	167.0	4.8%	93.2	2.7%
Statewide	4,120.7	15.5%	1,597.6	6.0%	861.6	3.2%



Phase IV Market Potential

Cost-effectiveness for Economic, Achievable, and Program Potential

EDC	Economic Potential			Program Potential		
	Costs (\$MM)	Benefits (\$MM)	TRC benefit-cost ratio (X:1)	Costs (\$MM)	Bene-fits (\$MM)	TRC benefit-cost ratio (X:1)
PECO	\$1,866	\$4,689	2.51	\$603	\$975	1.62
PPL	\$1,558	\$4,070	2.61	\$488	\$885	1.81
Duquesne Light	\$388	\$898	2.31	\$132	\$193	1.47
FE: Met-Ed	\$551	\$1,357	2.46	\$181	\$291	1.61
FE: Penelec	\$545	\$1,327	2.43	\$178	\$293	1.64
FE: Penn Power	\$133	\$298	2.24	\$44	\$63	1.44
FE: West Penn Power	\$552	\$1,289	2.34	\$172	\$269	1.57
Statewide	\$5,593	\$13,927	2.49	\$1,798	\$2,970	1.65



Phase IV Market Potential

High-Level Results - Act 129 Potential 2021-2025

EDC	Acquisition cost (\$/MWh)	Budget (\$MM)	TRC costs (\$MM)	TRC benefits (\$MM)	Net TRC benefits (\$MM)	TRC benefit - cost ratio (X:1)	GWh (Ann. Incr.)
PECO	\$309.51	\$427	\$639	\$1,019	\$379	1.59	1,381
PPL	\$245.97	\$308	\$513	\$912	\$399	1.78	1,250
Duquesne Light	\$281.57	\$98	\$137	\$197	\$60	1.44	347
FE: Met-Ed	\$268.42	\$124	\$190	\$301	\$110	1.58	463
FE: Penelec	\$262.46	\$115	\$188	\$303	\$115	1.61	438
FE: Penn Power	\$258.31	\$33	\$46	\$65	\$19	1.42	129
FE: West Penn Power	\$233.32	\$118	\$180	\$277	\$97	1.54	505
Statewide	\$271.01	\$1,223	\$1,894	\$3,073	\$1,178	1.62	4,513



Tentative Implementation Order

- Phase IV Tentative I.O. issued 03/12/20
- Published in PA Bulletin 03/28/20
- Comments due 04/27/20
- Reply Comments due 05/12/20



Phase IV Proposed EE Targets

EDC	Portfolio-level Proposed Target (MWh)	Low-Income Proposed Target (MWh)	GNI Proposed Target (MWh)
Duquesne Light	347,084	20,131	N/A
PECO	1,380,837	80,089	N/A
PPL	1,250,157	72,509	N/A
FE: Met-Ed	463,215	26,866	N/A
FE: Penelec	437,676	25,385	N/A
FE: Penn Power	128,909	7,477	N/A
FE: West Penn Power	504,951	29,287	N/A
Statewide	4,512,829	261,744	N/A



Peak Demand Reductions

- Focus on Peak Demand Reductions (PDR) vs Dispatchable Demand Response (DDR)
- PDR via EE provides the following benefits:
 - EE provides greater cumulative, lasting benefits (year-round, for about 10+ years)
 - Addresses winter peaking issues, too
 - \$35M net benefit vs. dispatchable DR
 - Revenue recycling lowers cost recovery



Phase IV Proposed PDR Targets

EDC	MW
Duquesne Light	67
PECO	276
PPL	244
FE: Met-Ed	85
FE: Penelec	91
FE: Penn Power	22
FE: West Penn Power	95
Statewide	878



Contact Information

Joe Sherrick
Supervisor, Policy & Planning
Technical Utility Services
josherrick@pa.gov
(717) 787-5369



Extra Slides





Phase III Portfolio-level Compliance

Portfolio					
EDC	CO from Phase II (MWh)	Phase III Savings to date (MWh)	Phase III Savings incl. CO (MWh)	Percent of Phase III Target	Phase III Target (MWh)
Duquesne	100,467	268,217	368,684	84%	440,916
Duquesne	100,467	47,715	416,399	94%	440,916
Met-Ed	30,482	500,620	531,102	89%	599,352
Met-Ed	30,482	76,137	607,239	101%	599,352
PECO	0	1,029,235	1,029,235	52%	1,962,659
PECO	0	236,212	1,265,447	64%	1,962,659
Penelec	49,695	477,681	527,376	93%	566,168
Penelec	49,695	81,774	609,150	108%	566,168
Penn Power	13,866	152,201	166,067	106%	157,371
Penn Power	13,866	25,879	191,946	122%	157,371
PPL	0	1,129,648	1,129,648	78%	1,443,035
PPL	0	220,231	1,349,879	94%	1,443,035
West Penn	20,540	472,368	492,908	91%	540,986
West Penn	20,540	71,632	564,540	104%	540,986
TOTAL*	215,050	4,029,970	4,245,020	85%	5,710,487
TOTAL**	215,050	4,789,550	5,004,600	98%	5,710,487



Phase III LI-level Compliance

Low-Income Carve-Out (5.5% of Portfolio Target)

EDC	CO from Phase II (MWh)	Phase III Savings to date (MWh)	Phase III Savings incl. CO (MWh)	Percent of Phase III Target	Phase III Target (MWh)
Duquesne	3,266	11,372	14,638	60%	24,250
Duquesne	3,266	1,199	15,837	65%	24,250
Met-Ed	5,025	34,900	39,925	121%	32,964
Met-Ed	5,025	1,974	41,899	127%	32,964
PECO	0	60,670	60,670	56%	107,946
PECO	0	15,679	76,349	71%	107,946
Penelec	7,872	35,142	43,014	138%	31,139
Penelec	7,872	2,111	45,125	145%	31,139
Penn Power	1,805	10,290	12,095	140%	8,655
Penn Power	1,805	594	12,689	147%	8,655
PPL	0	69,659	69,659	88%	79,367
PPL	0	23,029	92,688	117%	79,367
West Penn	3,354	31,819	35,173	118%	29,754
West Penn	3,354	1,872	37,045	125%	29,754
TOTAL*	21,322	253,852	275,174	103%	314,077
TOTAL**	21,322	300,310	321,632	114%	314,077



Phase III GNI-level Compliance

G/E/NP Carve-Out (3.5% of Portfolio Target)					
EDC	CO from Phase II (MWh)	Phase III Savings to date (MWh)	Phase III Savings incl. CO (MWh)	Percent of Phase III Target	Phase III Target (MWh)
Duquesne	0	24,847	24,847	161%	15,432
Duquesne	0	3,770	28,617	185%	15,432
Met-Ed	0	22,082	22,082	105%	20,977
Met-Ed	0	2,142	24,224	115%	20,977
PECO	0	94,260	94,260	137%	68,693
PECO	0	26,579	120,839	176%	68,693
Penelec	82	43,945	44,027	222%	19,816
Penelec	82	4,771	48,798	246%	19,816
Penn Power	7,316	8,289	15,605	283%	5,508
Penn Power	7,316	826	16,431	298%	5,508
PPL	0	116,748	116,748	231%	50,507
PPL	0	56,611	173,359	343%	50,507
West Penn	0	62,465	62,465	330%	18,935
West Penn	0	6,097	68,562	362%	18,935
TOTAL*	7,398	372,636	380,034	210%	199,868
TOTAL**	7,398	473,432	480,830	247%	199,868