

## **Appendix F – Additional KCP&L Alternative Resource Plan Results**

Plans contained in this appendix have been modeled for a variety of reasons:

- Plans that represent major changes in the view of the analysis universe – e.g. the Load Loss scenarios. A significant change such as this produces results that cannot be compared to the plans ranked in the Integrated Analysis framework.
- Plans that have been modeled to address specific stakeholder concerns, as a result from the last Triennial IRP filing.
- Plans viewed by KCP&L as providing useful information to the company planning process.

**Plan Ranking:**

Total Revenue Requirement - Other Plans						
Rank (L-H)	Plan	NPVRR (\$mm)	Delta	Retirements	Resource Additions	DSM
1	EDFKA	\$20,393	\$0.0	M1 2019, M2&3 2021	Load Loss Contingecy	Long-Term Load Loss
2	EDEKA	\$20,433	\$40.8	M1 2019, M2&3 2024	Load Loss Contingecy	Long-Term Load Loss
3	EDBKA	\$20,669	\$276.5	Montrose Station 2016	Load Loss Contingecy	Long-Term Load Loss
4	FDHKF	\$20,699	\$306.1	M1 2016, M2&3 2021	CTs & 2xRPS Wind @ No inflation cost wind	MEEIA - RAP
5	ADBKA	\$20,722	\$329.3	Montrose Station 2016	CTs 2028 193mw, 2032 193mw	RAP
6	FDHKZ	\$23,259	\$2,866.9	M1 2016, M2&3 2021	All Wind Case	MEEIA - RAP

## Probable Environmental Costs:

Total Revenue Requirement - Probable Environmental Costs	
ADBKA	\$1,207
EDBKA	\$1,216
EDEKA	\$1,283
EDFKA	\$1,262
FDHKF	\$1,237
FDHKZ	\$1,241

## Economic Impact:

### Plan ADBKA

Year	Revenue Requirement (\$MM)	Levelized Annual Rates (\$/kw-hr)	Rate Increase	Times Interest Earned	Debt to Capital	Internal Cash to Construction Expense
2014	1,503	0.096	0.91%	3.73	50.31	0.7
2015	1,756	0.112	16.54%	4.05	50.31	1.32
2016	1,704	0.108	-3.51%	3.90	50.31	1.03
2017	1,732	0.110	1.95%	3.79	50.30	1.19
2018	1,756	0.112	1.57%	3.86	50.30	1.02
2019	1,809	0.115	3.06%	3.94	50.30	1.16
2020	1,974	0.125	8.82%	3.84	50.28	0.88
2021	2,068	0.131	4.74%	3.56	50.29	1.25
2022	2,073	0.131	-0.16%	3.63	50.29	1.44
2023	2,147	0.135	3.06%	3.64	50.29	1.19
2024	2,200	0.137	1.57%	3.78	50.28	0.88
2025	2,201	0.137	-0.52%	3.61	50.29	1.76
2026	2,261	0.139	1.85%	3.63	50.29	1.7
2027	2,279	0.139	-0.20%	3.58	50.30	1.46
2028	2,336	0.141	1.21%	3.69	50.29	1.09
2029	2,390	0.142	1.39%	3.56	50.30	1.61
2030	2,433	0.143	0.59%	3.55	50.31	1.44
2031	2,486	0.145	0.88%	3.56	50.31	1.25
2032	2,641	0.151	4.64%	3.66	50.31	1.08
2033	2,669	0.151	0.03%	3.55	50.31	1.49

**Plan EDBKA**

Year	Rev Req	Rates	Rate Change % by Year	Times Int Earned	Debt to Capital	Int Cash to Const Exp
2014	1,497	0.097	-0.37%	3.98	50.35	1.1
2015	1,530	0.099	1.74%	4.02	50.34	1.06
2016	1,580	0.101	2.44%	3.99	50.33	0.89
2017	1,624	0.104	3.01%	3.86	50.33	1.09
2018	1,657	0.107	2.14%	3.95	50.32	0.92
2019	1,701	0.109	2.57%	4.01	50.32	1.15
2020	1,881	0.121	10.19%	3.92	50.30	0.84
2021	1,988	0.127	5.59%	3.62	50.30	1.28
2022	1,994	0.127	-0.18%	3.70	50.31	1.46
2023	2,098	0.133	4.60%	3.64	50.30	1.01
2024	2,173	0.136	2.61%	3.82	50.29	0.81
2025	2,175	0.136	-0.49%	3.61	50.29	1.6
2026	2,239	0.139	2.02%	3.64	50.30	1.48
2027	2,273	0.139	0.47%	3.60	50.31	1.61
2028	2,280	0.138	-0.93%	3.59	50.31	1.41
2029	2,340	0.140	1.70%	3.57	50.32	1.37
2030	2,394	0.142	1.04%	3.57	50.32	1.29
2031	2,443	0.143	0.77%	3.56	50.32	1.34
2032	2,540	0.146	2.44%	3.56	50.33	1.37
2033	2,580	0.147	0.52%	3.56	50.33	1.34

**Plan EDEKA**

Year	Rev Req	Rates	Rate Change % by Year	Times Int Earned	Debt to Capital	Int Cash to Const Exp
2014	1,494	0.097	-0.35%	3.72	50.31	0.68
2015	1,616	0.105	7.69%	4.06	50.30	0.94
2016	1,673	0.107	2.69%	3.91	50.30	0.99
2017	1,714	0.110	2.65%	3.79	50.29	1.17
2018	1,772	0.114	3.52%	3.87	50.29	1.07
2019	1,780	0.115	0.41%	3.93	50.29	1.13
2020	1,954	0.125	9.33%	3.83	50.28	0.85
2021	2,057	0.132	5.15%	3.57	50.28	1.23
2022	2,265	0.144	9.64%	3.63	50.29	1.93
2023	2,121	0.134	-6.92%	3.58	50.29	1.17
2024	2,178	0.137	1.72%	3.72	50.28	0.87
2025	2,182	0.136	-0.39%	3.55	50.29	1.72
2026	2,240	0.139	1.75%	3.57	50.29	1.67
2027	2,260	0.138	-0.16%	3.53	50.30	1.68
2028	2,271	0.137	-0.79%	3.54	50.31	1.49
2029	2,324	0.139	1.43%	3.51	50.32	1.54
2030	2,364	0.140	0.49%	3.50	50.32	1.38
2031	2,417	0.141	0.96%	3.52	50.33	1.39
2032	2,514	0.145	2.44%	3.52	50.33	1.49
2033	2,546	0.145	0.25%	3.51	50.34	1.39

**Plan EDFKA**

Year	Rev Req	Rates	Rate Change % by Year	Times Int Earned	Debt to Capital	Int Cash to Const Exp
2014	1,494	0.097	-0.35%	3.72	50.31	0.68
2015	1,616	0.105	7.69%	4.06	50.30	0.94
2016	1,673	0.107	2.69%	3.91	50.30	0.99
2017	1,714	0.110	2.65%	3.79	50.29	1.17
2018	1,771	0.114	3.48%	3.87	50.29	1.09
2019	1,779	0.114	0.38%	3.93	50.29	1.16
2020	2,102	0.135	17.70%	3.84	50.29	1.11
2021	2,020	0.129	-4.03%	3.52	50.29	1.23
2022	2,028	0.129	-0.05%	3.59	50.29	1.42
2023	2,123	0.135	4.10%	3.60	50.29	1.17
2024	2,182	0.137	1.82%	3.74	50.28	0.87
2025	2,187	0.136	-0.39%	3.57	50.29	1.73
2026	2,245	0.139	1.75%	3.59	50.29	1.68
2027	2,264	0.139	-0.16%	3.55	50.30	1.68
2028	2,275	0.138	-0.79%	3.56	50.31	1.5
2029	2,329	0.140	1.43%	3.53	50.32	1.54
2030	2,369	0.140	0.49%	3.53	50.32	1.39
2031	2,422	0.142	0.95%	3.54	50.33	1.39
2032	2,518	0.145	2.43%	3.54	50.33	1.5
2033	2,551	0.145	0.25%	3.54	50.34	1.4

**Plan FDHKF**

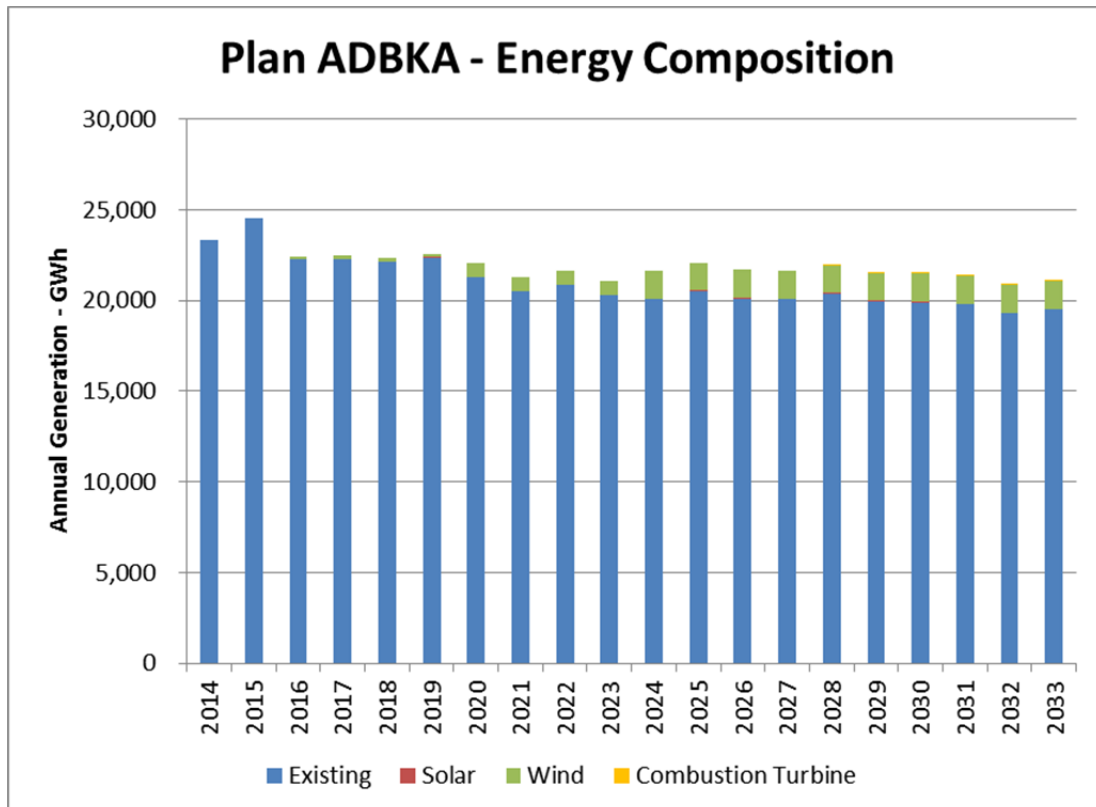
Year	Revenue Requirement (\$MM)	Levelized Annual Rates (\$/kw-hr)	Rate Increase	Times Interest Earned	Debt to Capital	Internal Cash to Construction Expense
2014	1,501	0.096	0.74%	3.72	50.31	0.68
2015	1,647	0.105	9.29%	4.06	50.30	0.96
2016	1,711	0.108	3.05%	3.93	50.29	0.89
2017	1,748	0.111	2.36%	3.78	50.29	1.19
2018	1,779	0.113	1.91%	3.87	50.29	0.95
2019	1,829	0.116	2.75%	3.91	50.28	1.06
2020	2,158	0.136	17.55%	3.90	50.27	0.94
2021	2,078	0.131	-3.82%	3.52	50.27	1.25
2022	2,079	0.130	-0.42%	3.57	50.28	1.51
2023	2,148	0.134	2.77%	3.57	50.27	1.09
2024	2,196	0.136	1.26%	3.80	50.26	0.76
2025	2,191	0.135	-0.81%	3.54	50.27	1.89
2026	2,242	0.136	1.46%	3.55	50.27	1.55
2027	2,299	0.139	1.49%	3.61	50.28	1.24
2028	2,300	0.137	-1.20%	3.53	50.28	1.64
2029	2,348	0.138	1.18%	3.50	50.29	1.66
2030	2,385	0.139	0.38%	3.50	50.30	1.48
2031	2,432	0.140	0.70%	3.51	50.30	1.28
2032	2,578	0.146	4.43%	3.61	50.30	1.1
2033	2,601	0.146	-0.12%	3.50	50.30	1.52

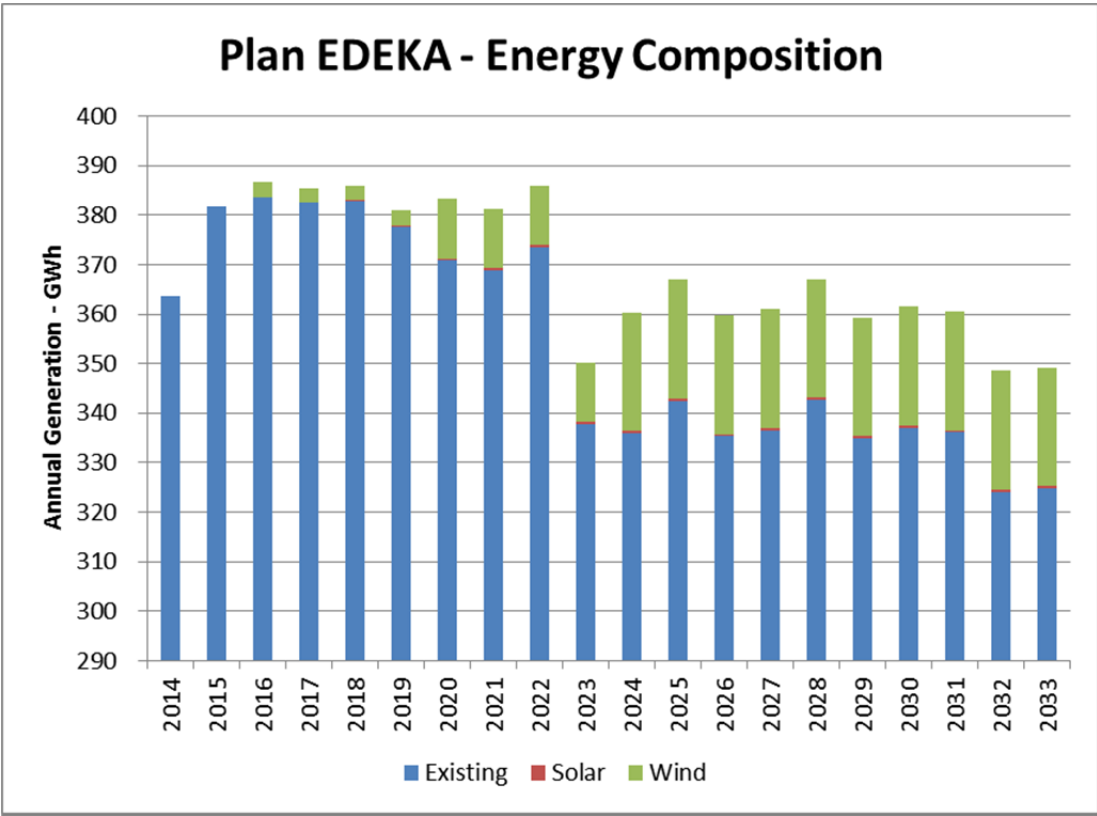
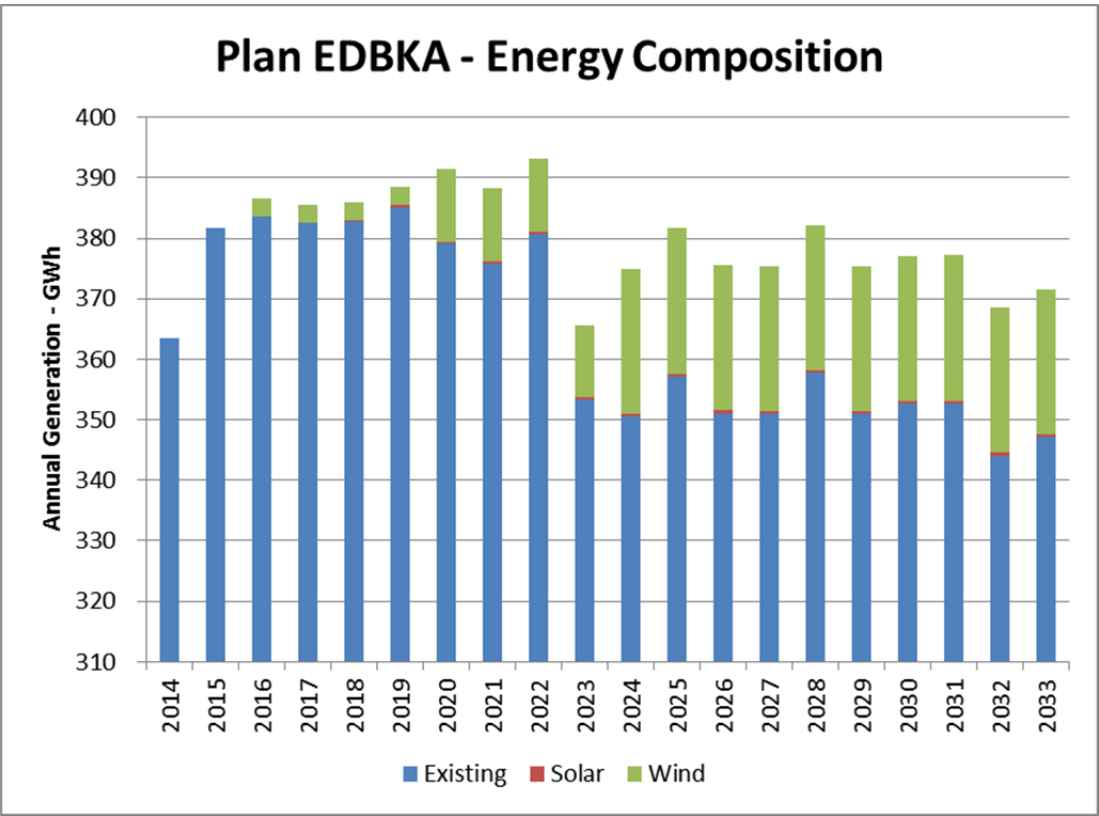


**Plan FDHKZ**

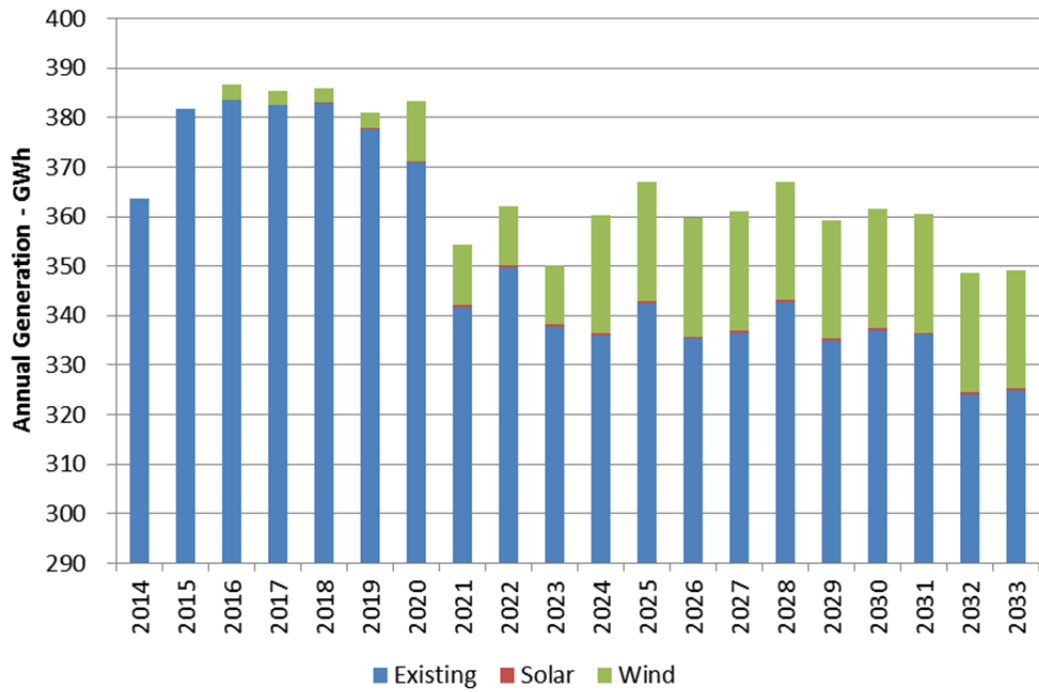
Year	Revenue Requirement (\$MM)	Levelized Annual Rates (\$/kw-hr)	Rate Increase	Times Interest Earned	Debt to Capital	Internal Cash to Construction Expense
2014	1,501	0.10	0.74%	3.72	50.31	0.68
2015	1,647	0.10	9.29%	4.06	50.30	1.01
2016	1,703	0.11	2.58%	3.90	50.30	0.99
2017	1,741	0.11	2.41%	3.79	50.30	1.16
2018	1,767	0.11	1.63%	3.86	50.29	1.01
2019	1,819	0.12	2.88%	3.94	50.29	1.16
2020	2,141	0.13	17.28%	3.84	50.29	1.12
2021	2,066	0.13	-3.60%	3.53	50.29	1.23
2022	2,071	0.13	-0.22%	3.59	50.29	1.42
2023	2,147	0.13	3.07%	3.60	50.29	1.17
2024	2,202	0.14	1.61%	3.75	50.28	0.87
2025	2,366	0.15	6.87%	3.96	50.24	0.53
2026	2,950	0.18	23.58%	4.46	50.17	0.32
2027	2,934	0.18	-1.51%	3.33	50.18	3.23
2028	2,902	0.17	-2.32%	3.37	50.20	2.69
2029	3,095	0.18	5.73%	3.68	50.18	0.75
2030	3,673	0.21	17.28%	4.18	50.14	0.39
2031	3,665	0.21	-1.44%	3.27	50.15	3.51
2032	3,901	0.22	4.87%	3.58	50.15	0.85
2033	4,489	0.25	13.95%	4.03	50.12	0.44

**Generation:**

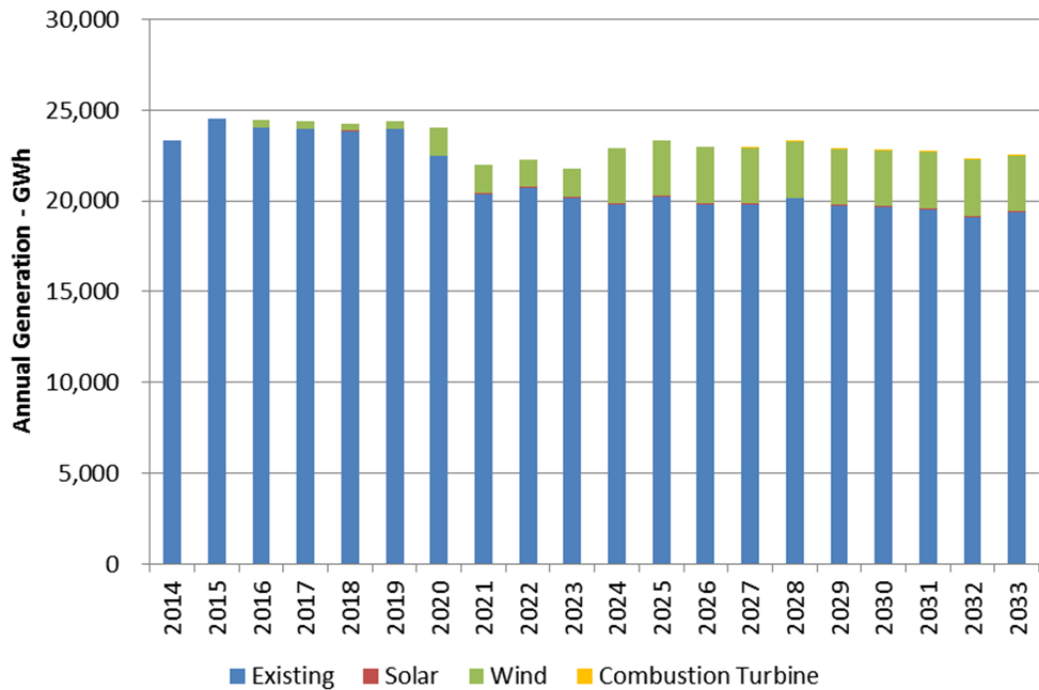




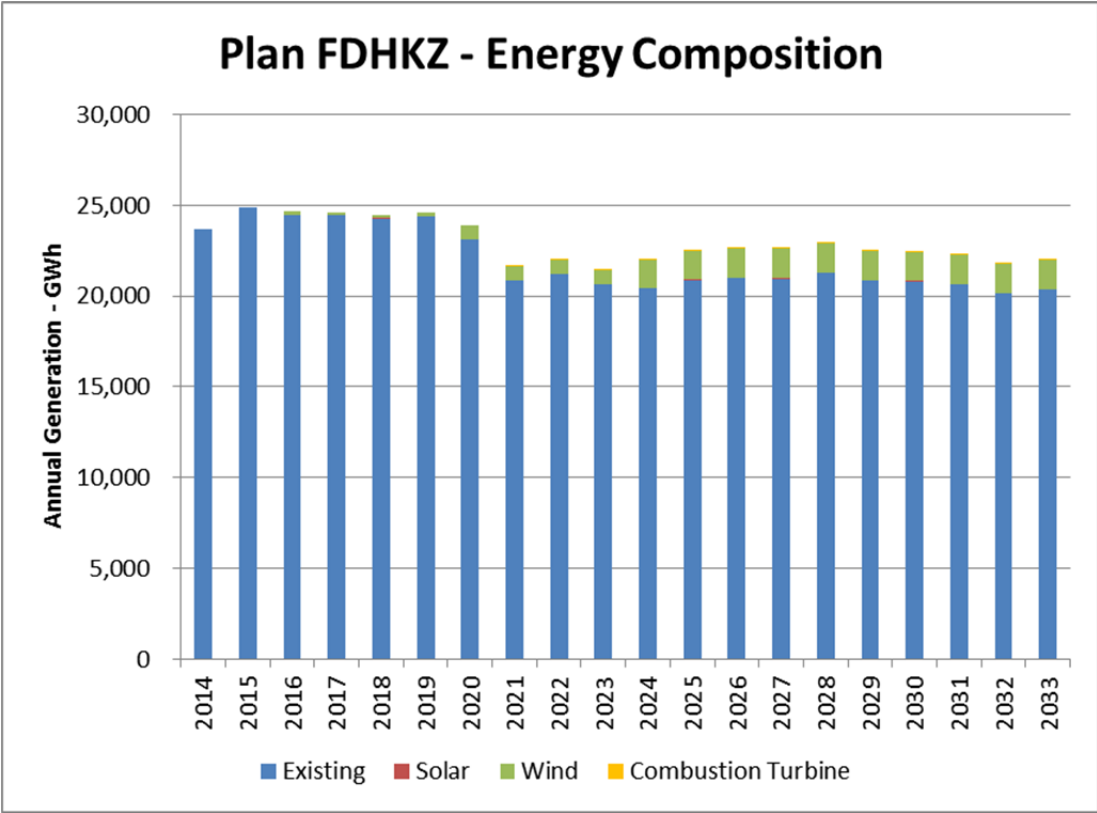
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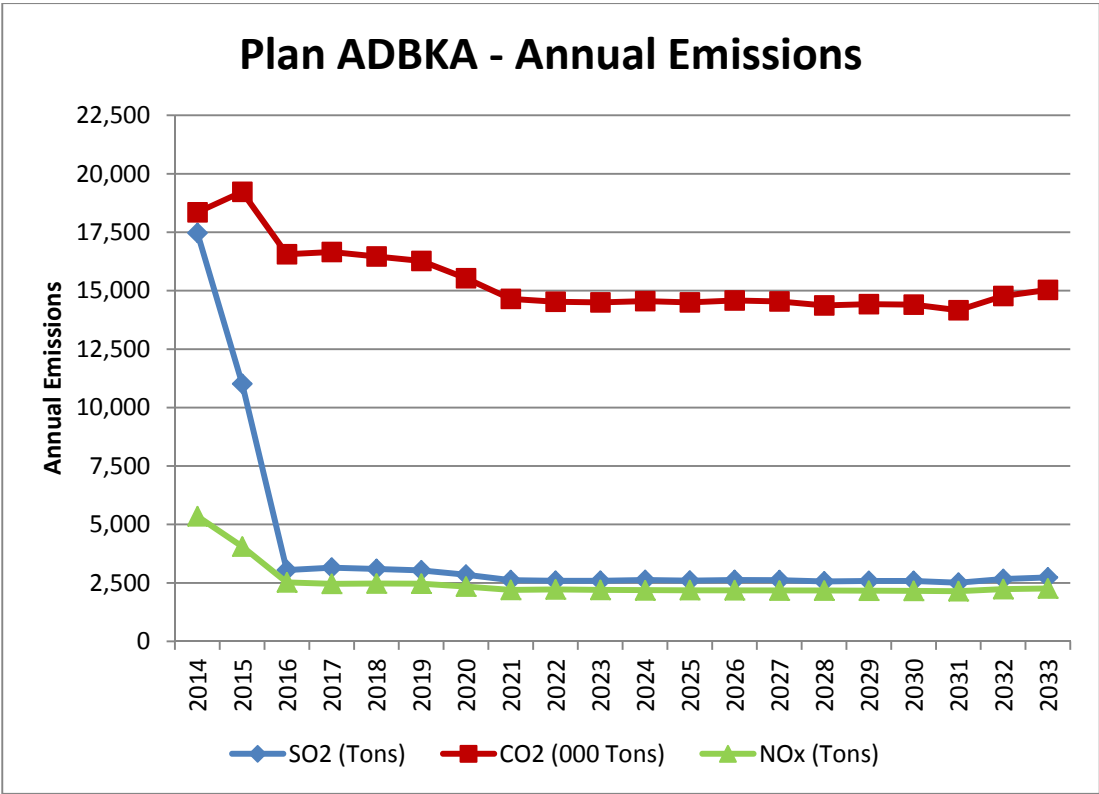
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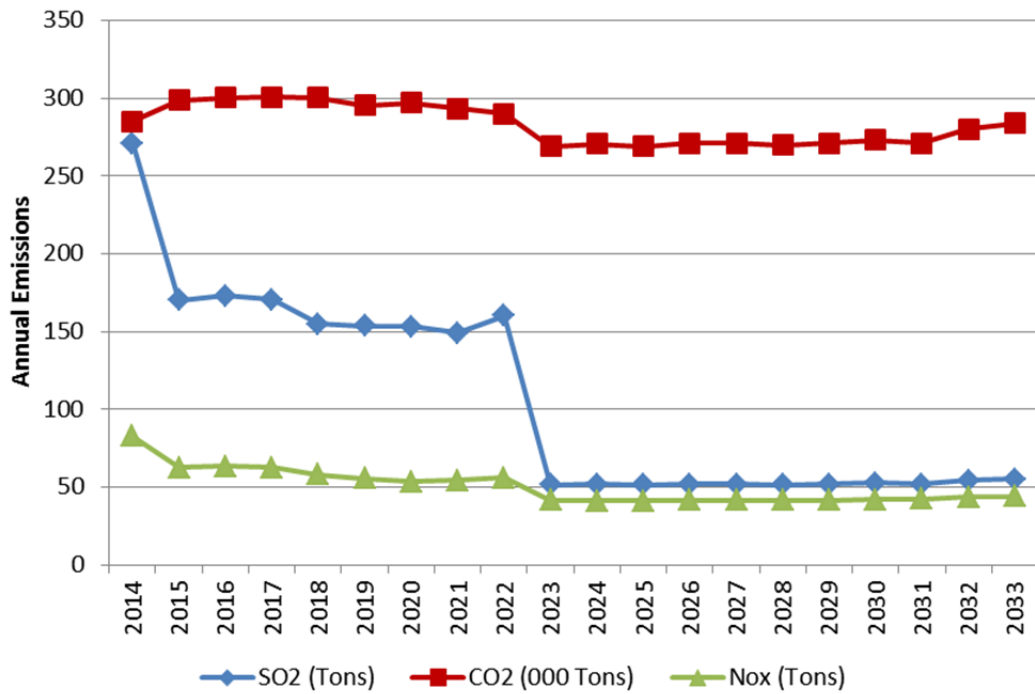




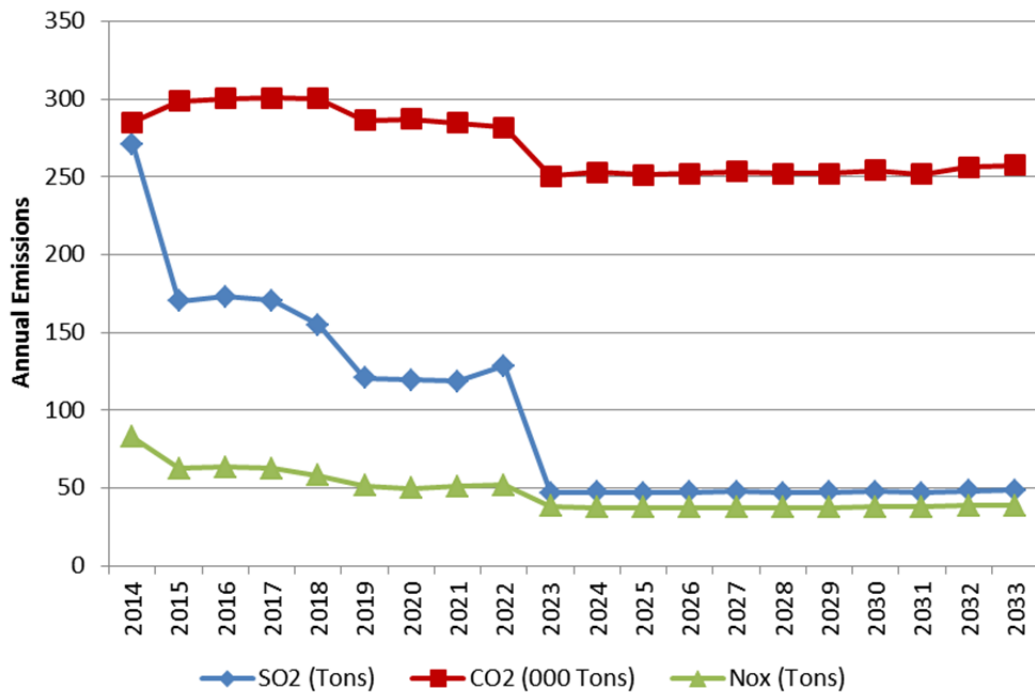
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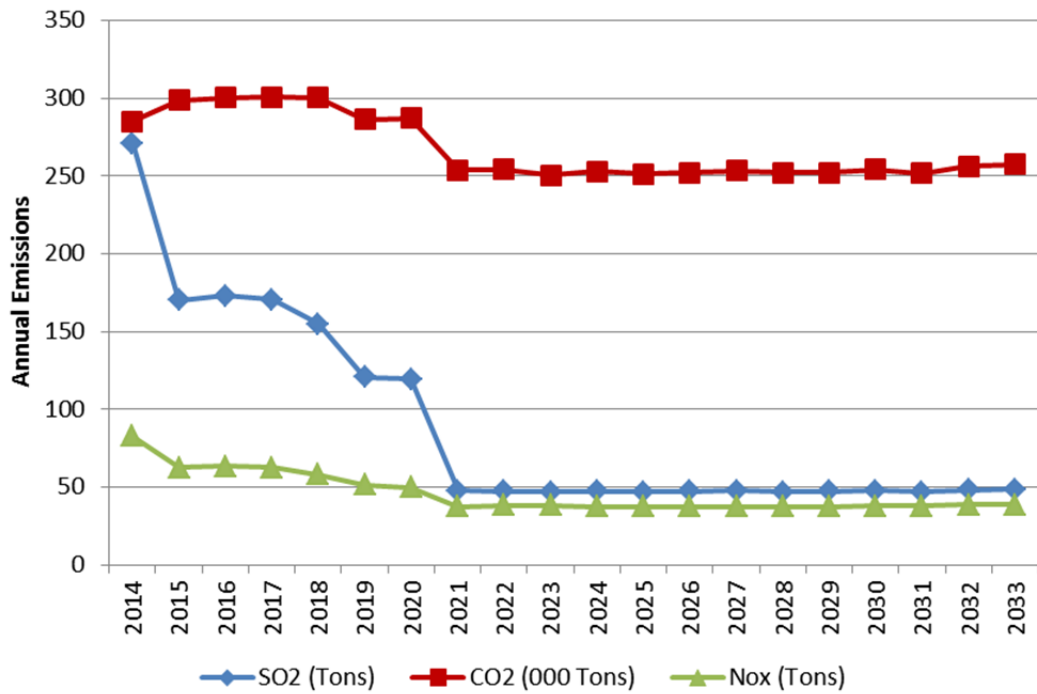
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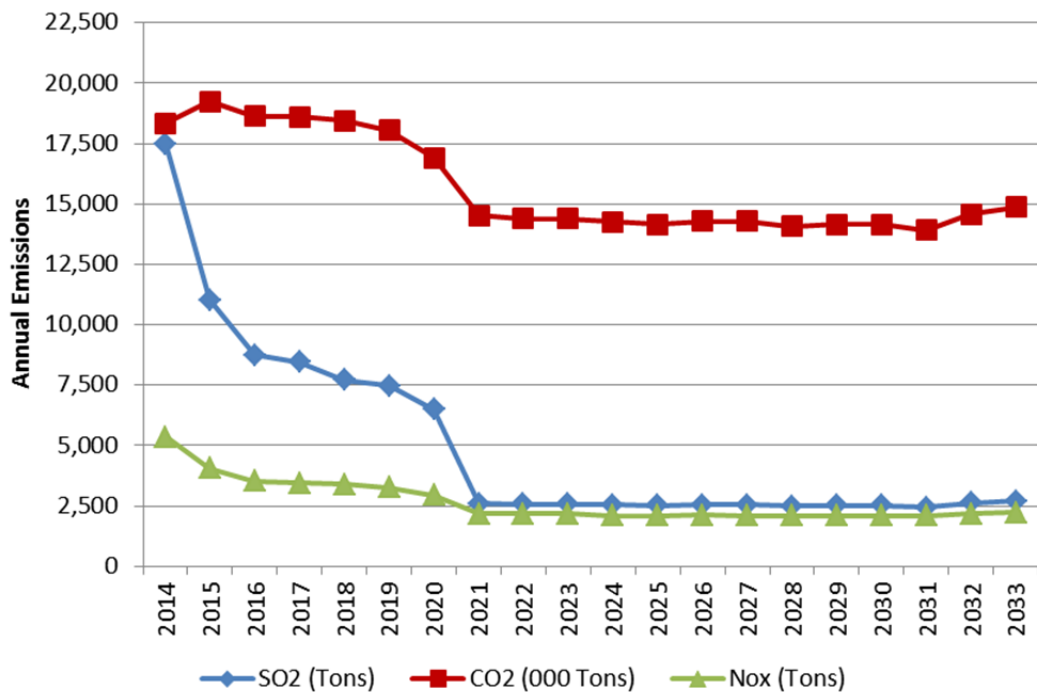
## Plan EDEKA - Annual Emissions



### Plan EDFKA - Annual Emissions



### Plan FDHKF - Annual Emissions



## Plan FDHKZ - Annual Emissions

