

# ***Common C&I Rate Issues Advanced Profitability Analysis***

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# ***Commercial/Industrial Rates Then and Now***

- ***Capacity vs. Energy***
- ***kW vs. kVA***
- ***Rate Classes***
- ***Load Factor***
- ***Power Factor***
- ***Contracts***
- ***Base vs. Growth***
- ***COS vs. Profitability***
- ***Multi-Site Issues***

# ***C&I Customers***

- ***Who are they?***
- ***What do they expect from their utility?***
- ***How are we doing?***
- ***What new tools can we use?***
- ***How can we use profitability analysis?***
- ***What can we do to achieve a***

***WIN-WIN-WIN***

***for the Customer, Distribution System, G&T?***

# ***C&I Customers Defined***

- ***Strategic accounts***
- ***Large power customers***
- ***High revenue producers***
- ***High load factor***
- ***High margin***
- ***Major employers***
- ***Major contributors to communities***
- ***If they went away, would we be sad?***

# ***Primary Sectors for Co-ops***

- ***Manufacturing***
- ***Pipelines***
- ***Casino/Hospitality***
- ***Health Care***
- ***Federal, State, Local Government Facilities***
- ***Higher Education***
- ***Business Parks***
- ***Supercenters & Big Box Retail***
- ***Agribusiness & Ethanol Plants***
- ***Mining & Processing***
- ***Data Centers, Call Centers, Technology R&D***

# ***C&I Expectations***

- ***The new meaning of reliability: six sigma***
- ***Adequate long term energy supply***
- ***Flexible rate options with customer choice***
- ***Stable, predictable energy costs***
- ***The highest possible power quality***
- ***Easy to understand energy bills***
- ***Single point of contact, advocate***
- ***Immediate response, 24/7***
- ***Help them solve their problems***
- ***Help them stay in business and expand here***
- ***Energy conservation ideas, qualify for \$\$\$***
- ***Frequent communication***

# ***How Are We Doing?***

- ***The new meaning of reliability: six sigma***
- ***Adequate long term energy supply***
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- ***Energy conservation ideas, qualify for \$\$\$***
- ***Frequent communication and trust***

# ***Electrical Worries Looming***

## ***Utility Execs Fret About the Future***

- *“My biggest fear is that we are running out of generation. That is an issue the average person doesn’t know a thing about. When we tell corporate America, they say, ‘What do you mean you’re running out of power?’”—Michael G. Morris, CEO of American Electric Power, with 5 million customers in 11 states.*
- *“In two to three years, the margin between power supply and demand will drop below levels necessary to ensure reliability on peak days in Texas, the Northeast and Midwest. Demand for electricity is expected to rise 19% by 2015 but generation capacity will grow by just 6% and the number of miles of transmission lines will increase by only about 7%. The situation has existed for a long time but we cannot let it continue.” – NERC Annual Report.*

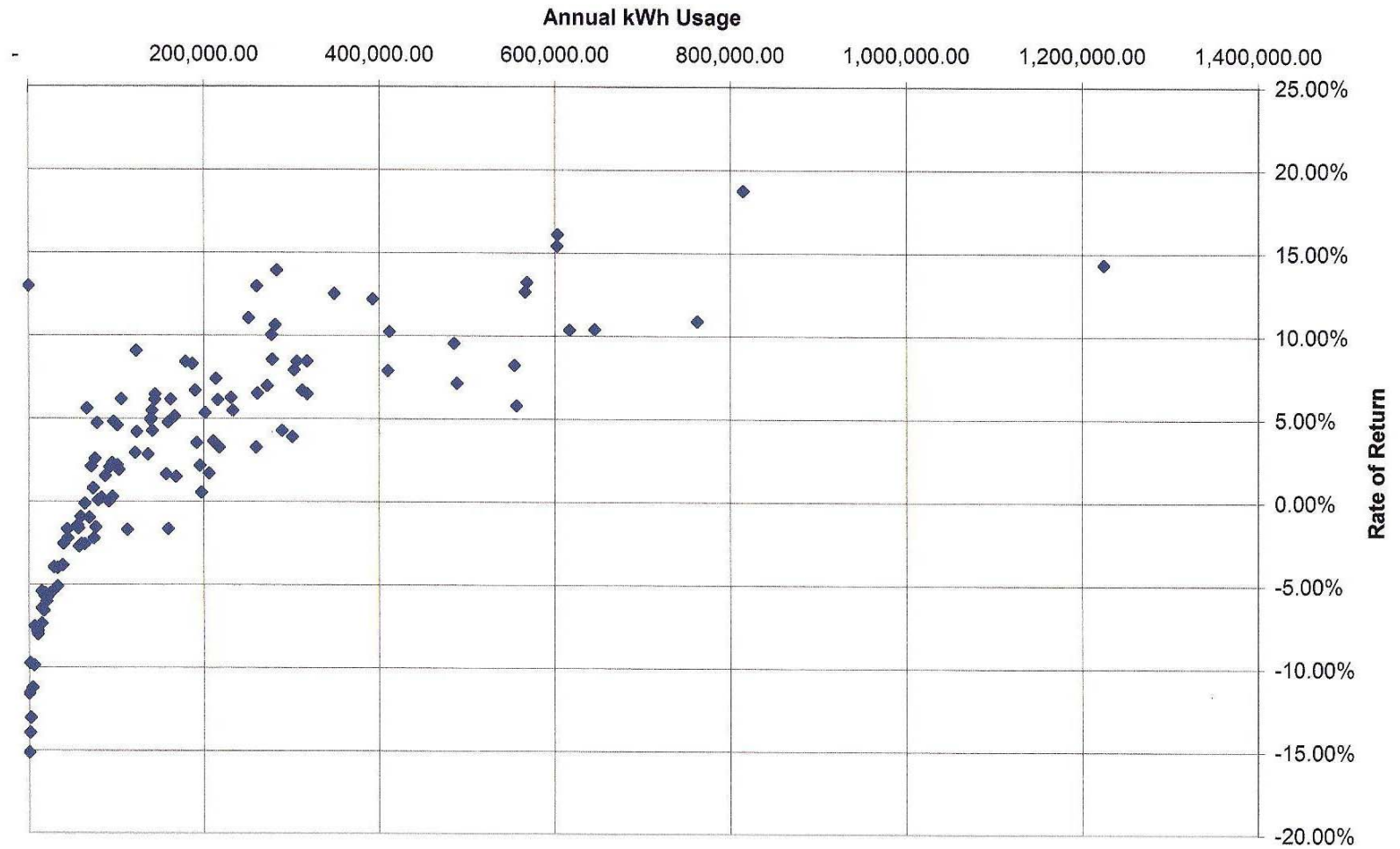
# ***New Tools We Can Use***

- ***Update COS***
- ***Review customer classes***
- ***Explore load profile, load factor, power factor***
- ***Multi-site contracts***
- ***Lean manufacturing audits***
- ***Economic development long range planning***
- ***Distributed generation***
- ***Technology transfer***
- ***Renewable energy***

# ***Individual Customer Profitability Analysis***

- Who are your most profitable customers?
- Are all of your customers contributing to margins?
- Are margins on some customers negative?
- Which customers are your competitors most likely to target?
- How can you protect revenues from your core business in a retail choice environment?
- Individual customer profitability analysis picks up where your most recent cost of service study leaves off. A cost of service study allocates costs to customer classes and provides margins and rates of return for these customer classes.
- Our individual customer profitability process takes the costs allocated to a particular class and further allocates these costs to individual customers.
- We have developed algorithms for effectively allocating costs for both demand metered and non-demand metered customers. Combined with 12 months of revenue and billing unit data provided by the utility, we can calculate margins for your individual customers, including residential and small commercial customers.
- Because we have to allocate rate base to individual customers as a part of this process, we also provide the rate of return on investment for each individual customer.
- The results can be graphed to detect patterns in profitability relative to main cost drivers, such as load factor, kWh usage or kW demand.
- With profitability for individual customers, you are in a better position to effectively target your marketing efforts and to make the decisions necessary to effectively manage your finances.

**ABC ELECTRIC UTILITY, INC.**  
**Scatter Plot of Commercial and Industrial Customers (Rate GSD)**





**East Central Energy  
Profitability Analysis  
Rate Class: Large Power  
Pro Forma Billings at New Rates**

Account Number	Customer	Rate Class	Annual Energy (kWh)	Demand (kW)	Customer Months	Average kWh per Month	Service Charge	Dollars kW	Dollars kWh	Calculated Revenue
1038000		LARGE	1,426,080	3,504.00	12	118,840	300.00	27,894.36	55,240.80	83,435.16
1189700		LARGE	447,840	1,128.00	12	37,320	300.00	9,131.52	17,239.52	26,671.04
1588400		LARGE	171,310	660.80	12	14,276	300.00	5,202.32	6,681.09	12,183.41
1613700		LARGE	1,088,520	2,751.00	12	90,710	300.00	22,205.40	42,178.44	64,683.84
1627900		LARGE	769,040	1,892.80	12	64,087	300.00	15,353.44	29,688.48	45,341.92
1729300		LARGE	341,160	3,574.80	12	28,430	300.00	29,138.40	13,305.24	42,743.64
1788001		LARGE	37,240	135.60	12	3,103	300.00	1,131.72	1,448.44	2,880.16
1915800		LARGE	176,240	610.20	12	14,687	300.00	4,871.34	6,873.36	12,044.70
1991800		LARGE	377,680	742.80	12	31,473	300.00	5,912.40	14,165.60	20,378.00
200201		LARGE	148,720	514.80	12	12,393	300.00	4,136.04	5,800.08	10,236.12
200401		LARGE	163,840	778.00	12	13,653	300.00	6,137.20	6,389.76	12,826.96
203601		LARGE	101,400	640.80	12	8,450	300.00	5,091.48	3,954.60	9,346.08
2039400		LARGE	516,000	1,509.60	12	43,000	300.00	11,459.28	20,048.40	31,807.68
208400		LARGE	375,440	1,272.80	11	34,131	275.00	9,881.60	14,530.72	24,687.32
2088901		LARGE	117,840	508.40	12	9,820	300.00	4,052.36	4,595.76	8,948.12
2096200		LARGE	524,480	1,264.00	12	43,707	300.00	10,187.20	20,173.60	30,660.80
2627300		LARGE	569,760	1,625.60	12	47,480	300.00	13,193.60	22,141.12	35,634.72
281000		LARGE	490,160	1,520.80	12	40,847	300.00	11,799.04	19,080.96	31,180.00
281300		LARGE	87,760	336.00	12	7,313	300.00	2,724.60	3,422.64	6,447.24
3077000		LARGE	1,343,040	3,693.60	12	111,920	300.00	29,675.16	51,827.52	81,802.68
3130200		LARGE	484,740	1,586.40	12	40,395	300.00	12,894.90	18,904.86	32,099.76
3135000		LARGE	373,120	1,065.60	12	31,093	300.00	8,539.20	14,551.68	23,390.88
3137500		LARGE	488,000	1,451.60	12	40,667	300.00	11,820.08	19,027.80	31,147.88
3249900		LARGE	345,980	725.50	8	43,248	200.00	5,359.30	13,088.83	18,648.13
3250000		LARGE	449,040	1,208.00	7	64,149	175.00	8,488.40	17,353.52	26,016.92
3250100		LARGE	494,310	998.08	12	41,193	300.00	7,850.56	18,612.54	26,763.10
3250200		LARGE	1,835,760	3,937.60	12	152,980	300.00	31,485.76	69,501.92	101,287.68
3378900		LARGE	1,040,160	1,928.00	12	86,680	300.00	15,321.20	38,683.52	54,304.72
3448700		LARGE	462,160	1,524.80	12	38,513	300.00	11,859.44	18,009.68	30,169.12
3452500		LARGE	292,400	596.48	12	24,367	300.00	4,755.32	11,026.38	16,081.70
3560700		LARGE	1,112,280	1,994.40	12	92,690	300.00	15,927.48	41,177.28	57,404.76
3639701		LARGE	-	-	0	-	0.00	0.00	0.00	0.00
3639702		LARGE	50,240	80.00	2	25,120	50.00	560.00	1,808.16	2,418.16
3718800		LARGE	244,710	595.60	12	20,393	300.00	4,750.24	9,438.48	14,488.72
3900800		LARGE	660,720	2,325.60	12	55,060	300.00	18,337.68	25,768.08	44,405.76
3902200		LARGE	340,960	867.20	12	28,413	300.00	7,070.48	13,133.36	20,503.84
3996300		LARGE	468,840	1,063.20	12	39,070	300.00	8,410.08	17,925.52	26,635.60
403900		LARGE	258,480	600.40	12	21,540	300.00	4,783.84	9,925.88	15,009.72
4044100		LARGE	292,960	875.20	12	24,413	300.00	7,107.04	11,425.44	18,832.48

**East Central Energy  
Profitability Analysis  
Rate Class: Large Power  
Pro Forma Billings at New Rates**

Account Number	Customer	Rate Class	Total Rate Base	Net Operating Income (Margins)	Rate of Return	Load Factor	Average Rate per kWh	Partial Year Indicator
1038000		LARGE	78,743	14,754	18.7%	0.56	0.059	
1189700		LARGE	27,008	4,344	16.1%	0.54	0.060	
1588400		LARGE	16,835	1,176	7.0%	0.36	0.071	
1613700		LARGE	62,347	11,415	18.3%	0.54	0.059	
1627900		LARGE	43,661	7,929	18.2%	0.56	0.059	
1729300		LARGE	80,285	1,859	2.3%	0.13	0.125	
1788001		LARGE	5,399	(33)	-0.6%	0.38	0.077	
1915800		LARGE	15,733	1,350	8.6%	0.40	0.068	
1991800		LARGE	18,621	3,250	17.5%	0.70	0.054	
200201		LARGE	13,656	1,094	8.0%	0.40	0.069	
200401		LARGE	19,387	992	5.1%	0.29	0.078	
203601		LARGE	16,400	344	2.1%	0.22	0.092	
2039400		LARGE	35,317	4,366	12.4%	0.47	0.062	
208400		LARGE	29,957	3,056	10.2%	0.40	0.066	#
2088901		LARGE	13,517	671	5.0%	0.32	0.076	
2096200		LARGE	29,969	5,140	17.2%	0.57	0.058	
2627300		LARGE	37,843	5,773	15.3%	0.48	0.063	
281000		LARGE	35,561	4,317	12.1%	0.44	0.064	
281300		LARGE	9,763	462	4.7%	0.36	0.073	
3077000		LARGE	82,871	13,642	16.5%	0.50	0.061	
3130200		LARGE	36,989	4,806	13.0%	0.42	0.066	
3135000		LARGE	25,649	3,566	13.9%	0.48	0.063	
3137500		LARGE	34,054	4,945	14.5%	0.46	0.064	
3249900		LARGE	17,428	2,753	15.8%	0.65	0.054	#
3250000		LARGE	27,730	3,275	11.8%	0.51	0.058	#
3250100		LARGE	24,179	4,353	18.0%	0.68	0.054	
3250200		LARGE	88,184	18,093	20.5%	0.64	0.055	
3378900		LARGE	44,427	9,484	21.3%	0.74	0.052	
3448700		LARGE	35,648	4,005	11.2%	0.42	0.065	
3452500		LARGE	15,435	2,464	16.0%	0.67	0.055	
3560700		LARGE	45,873	10,116	22.1%	0.76	0.052	
3639701		LARGE	-	-	0.0%	0.00	0.000	#
3639702		LARGE	2,150	279	13.0%	0.86	0.048	#
3718800		LARGE	15,416	2,128	13.8%	0.56	0.059	
3900800		LARGE	53,085	6,053	11.4%	0.39	0.067	
3902200		LARGE	21,329	3,252	15.2%	0.54	0.060	
3996300		LARGE	25,597	4,324	16.9%	0.60	0.057	
403900		LARGE	15,520	2,246	14.5%	0.59	0.058	
4044100		LARGE	21,504	2,768	12.9%	0.46	0.064	

# ***Working with Clusters***

- ***Develop individual customer marketing plans***
- ***Group C&I customers by industry type***
- ***High load factor, high margin***
  - ***Pipelines, prisons, DG, DCs, 24/7 mfg***
- ***Low load factor, low margin***
  - ***Elevators, welders, small biz, ball fields, churches***
- ***Mid-range***
  - ***Medcenters, schools, office towers, govt. facilities***
- ***Native American tribes***
  - ***Casinos, schools, govt. centers, clinics***
- ***National Accounts & Franchises***

# ***Business Development Tools***

- ***Cost-shared energy audits***
- ***Sales tax exemption audits***
- ***Site location & facility planning***
- ***Heat pumps, chillers, VFDs, lighting, controls***
- ***Annual rate reviews to squelch rate-hawks***
- ***Newsletters, seminars, tours, special events***
- ***Capital credit checks & retirement schedule***
- ***Energy grants for electro-technologies***
- ***Power quality/power factor consulting***
- ***Business financing***
- ***Hunters and farmers***

# ***Distributed Generation***

- ***Defers need for peaking capacity***
- ***Customer provides capacity—peaking***
- ***Reduces spot market energy purchases***
- ***Enhances reliability***
- ***Enhances margin for the cooperative***
- ***May utilize renewable fuels***
- ***Provides low-cost energy rate option***
- ***Reasonable payback for the customer***
- ***Rebates, financing help speed process***
- ***What's the real cost of an outage?***

# ***DG Candidates***

- ***Medical centers, prisons, jails***
- ***Schools, community centers***
- ***Supermarkets, C-stores, refrigerated DCs***
- ***JIT manufacturers***
- ***Data centers***
- ***Food processors, ethanol plants***
- ***Casinos/entertainment***
- ***Bioscience R&D***
- ***Hotels, water parks***
- ***Landfills, water/wastewater treatment***
- ***Large dairy farms***

# ***Potential DG Pitfalls***

- ***Engineering design, application, fees***
- ***Permits, testing***
- ***Switchgear, visible lockable***
- ***Control periods***
- ***Customer notification and verification***
- ***Signal strength to load mgmt. receivers***
- ***Code staging during emergencies***
- ***Automatic start-stop capability***
- ***Fuel quantity, refills***
- ***Maintenance***
- ***Multiple gensets on same feeder***
- ***Penalties***

***“It all boils down to trust.”***



***“We exist because IOUs and Munis refused to serve our area. If we lose C&Is, residential rates will go up.***

***We can do anything we want that the law and our members allow.”– Bryan Singletary, NRECA Key Account Trainer***