



# IEEE Benchmarking 2007 Results

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# Benchmarking

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- ◆ **Data is Never exactly the same!**
- ◆ **Two main reasons for differences:**
  - ◆ **Data Collection Process/System Differences**
  - ◆ **Exclusion Criteria Differences (Basis)**
- ◆ **IEEE 1366-2003**
  - ◆ **addresses data basis issues by clearly defining the rules**
  - ◆ **It **DOES NOT** address the data collection issues**

# The following slides...

- ◆ **Show company performance using the IEEE 2.5 Beta method to segregate data into:**
  - ◆ **Day-to-Day Operating Indices vs.**
  - ◆ **Performance considering the whole customer experience (All)**
- ◆ **To date 153 companies have participated in our benchmarking at sometime.**
- ◆ **62 companies total**
- ◆ **Customer density, use of step restoration, computerized reporting system, connected model, level of devices recorded.**
  - 100% of utilities use step restoration
  - 100% of utilities use a computerized reporting system
  - 97% of utilities had a connected model

# Classification of Respondents

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- ◆ **Urban, Suburban, Rural**
  - ◆ **Rural  $\leq 50$  cust/mi (31 cust/km)**
  - ◆ **Suburban  $> 50$  cust/mi  $< 150$  cust/mi**
  - ◆ **Urban  $\geq 150$  cust/mi (93 cust/km)**
- ◆ **2007 Survey\***
  - ◆ **7 Urban companies**
  - ◆ **38 Suburban companies**
  - ◆ **19 Rural companies**

\*Status unknown for 5 companies

# Classification of Respondents

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- ◆ **50M customers represented in US & Canada**
- ◆ **Small, Medium, Large**
  - ◆ **Small  $\leq 100,000$  customers**
  - ◆ **Medium  $>100,000$  and  $<1,000,000$  customers**
  - ◆ **Large  $\geq 1M$  customers**
- ◆ **2007 Survey\***
  - ◆ **7 Small companies**
  - ◆ **37 Medium companies**
  - ◆ **20 Large companies**

\* Status unknown for 2 companies

# Respondents

## ◆ 2007 Survey

### ◆ 64 provided details in 2007

All Respondents 2007						
Quartile	SAIDI IEEE	SAIDI All	SAIFI IEEE	SAIFI All	CAIDI IEEE	CAIDI All
1	109.36	141.53	1.06	1.21	84.91	105.71
2	143.51	206.72	1.33	1.53	109.07	133.89
3	200.10	333.27	1.71	2.03	126.74	177.47
4	385.94	958.86	3.20	3.97	205.81	466.68

### Small Respondents 2007

Quartile	SAIDI IEEE	SAIDI AII	SAIFI IEEE	SAIFI AII	CAIDI IEEE	CAIDI AII
1	94.63	94.63	1.00	1.27	71.60	79.54
2	110.52	151.87	1.617	1.96	84.24	99.18
3	187.17	261.50	2.31	2.40	87.01	116.60
4	244.70	525.46	2.766	3.71	105.75	141.50

### Medium Respondents 2007

Quartile	SAIDI IEEE	SAIDI AII	SAIFI IEEE	SAIFI AII	CAIDI IEEE	CAIDI AII
1	119.36	158.88	1.19	1.33	94.13	110.54
2	156.33	220.39	1.44	1.70	110.95	138.92
3	206.72	412.40	1.70	2.06	120.65	213.07
4	385.94	958.86	3.20	3.97	174.72	466.68

### Large Respondents 2007

Quartile	SAIDI IEEE	SAIDI AII	SAIFI IEEE	SAIFI AII	CAIDI IEEE	CAIDI AII
1	105.49	145.65	0.93	1.13	88.66	104.44
2	135.89	208.27	1.12	1.39	120.42	146.65
3	170.48	284.33	1.45	1.82	133.37	203.45
4	257.08	824.05	2.11	2.24	205.81	455.73

# 2005 vs. 2006 vs. 2007

All Respondents 2007						
Quartile	SAIDI IEEE	SAIDI AII	SAIFI IEEE	SAIFI AII	CAIDI IEEE	CAIDI AII
1	109.36	141.53	1.06	1.21	84.91	105.71
2	143.51	206.72	1.33	1.53	109.07	133.89
3	200.10	333.27	1.71	2.03	126.74	177.47
4	385.94	958.86	3.20	3.97	205.81	466.68

2007

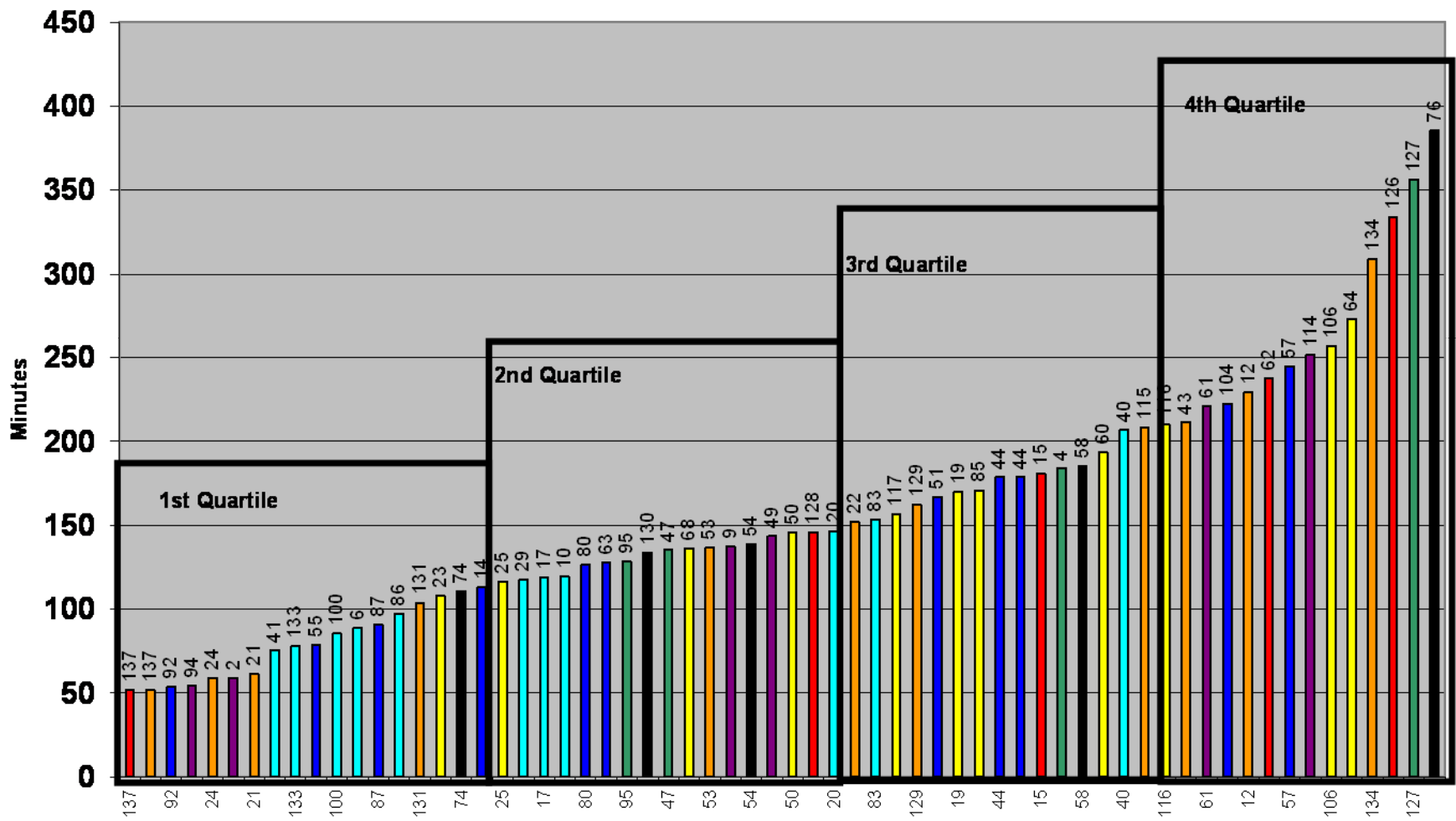
All Respondents 2006						
Quartile	SAIDI IEEE	SAIDI AII	SAIFI IEEE	SAIFI AII	CAIDI IEEE	CAIDI AII
1	105.37	134.40	1.11	1.33	81.73	100.62
2	146.08	235.91	1.36	1.69	107.50	136.67
3	197.97	439.95	1.70	2.17	130.68	208.33
4	502.13	4326.15	2.98	4.64	214.09	1450.88

2006

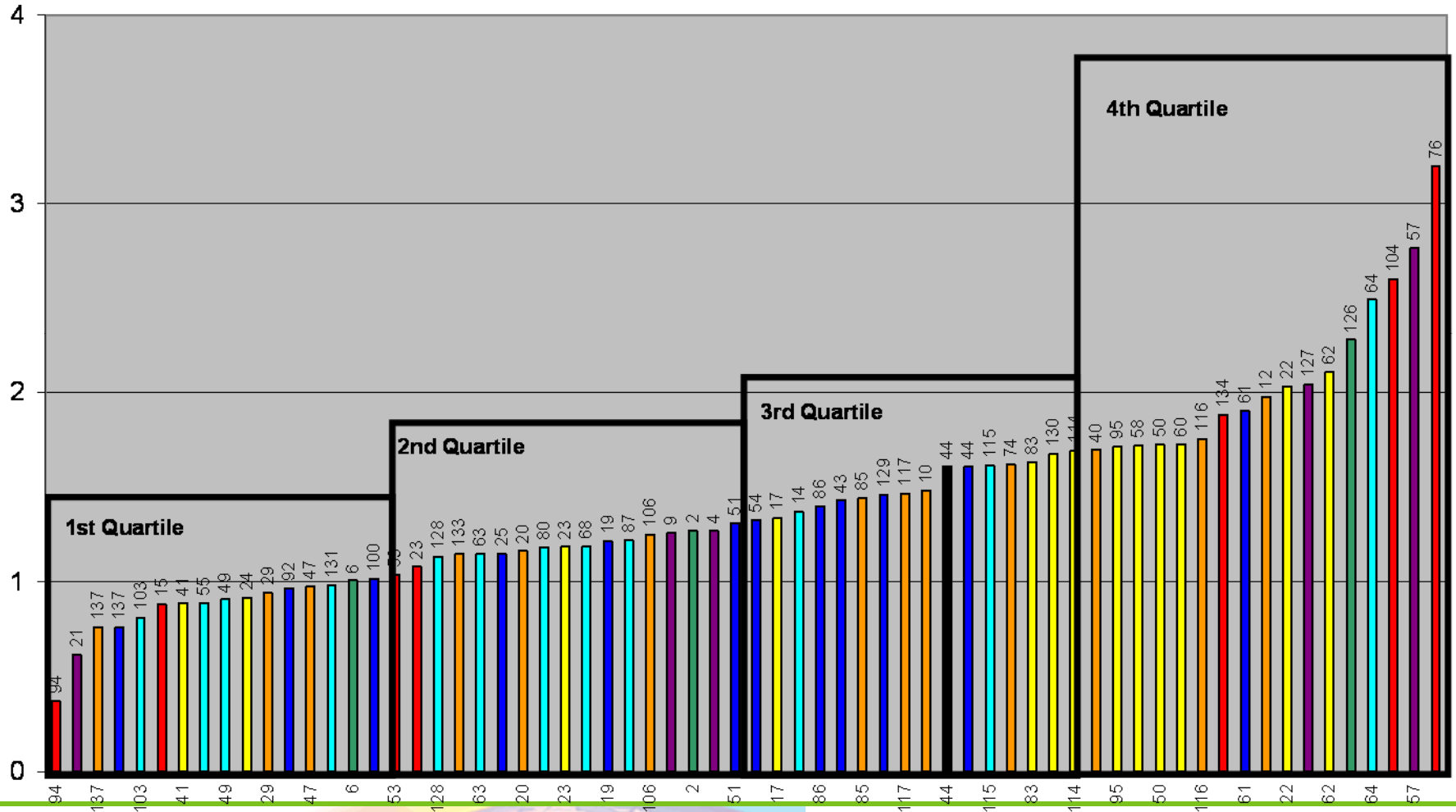
All Respondents 2005						
Quartile	SAIDI IEEE	SAIDI AII	SAIFI IEEE	SAIFI AII	CAIDI IEEE	CAIDI AII
1	98.27	128.39	1.09	1.25	82.50	101.40
2	144.63	216.52	1.39	1.63	104.87	134.12
3	191.83	365.99	1.63	2.13	127.42	179.82
4	410.37	2091.07	7.25	7.25	224.36	759.96

2005

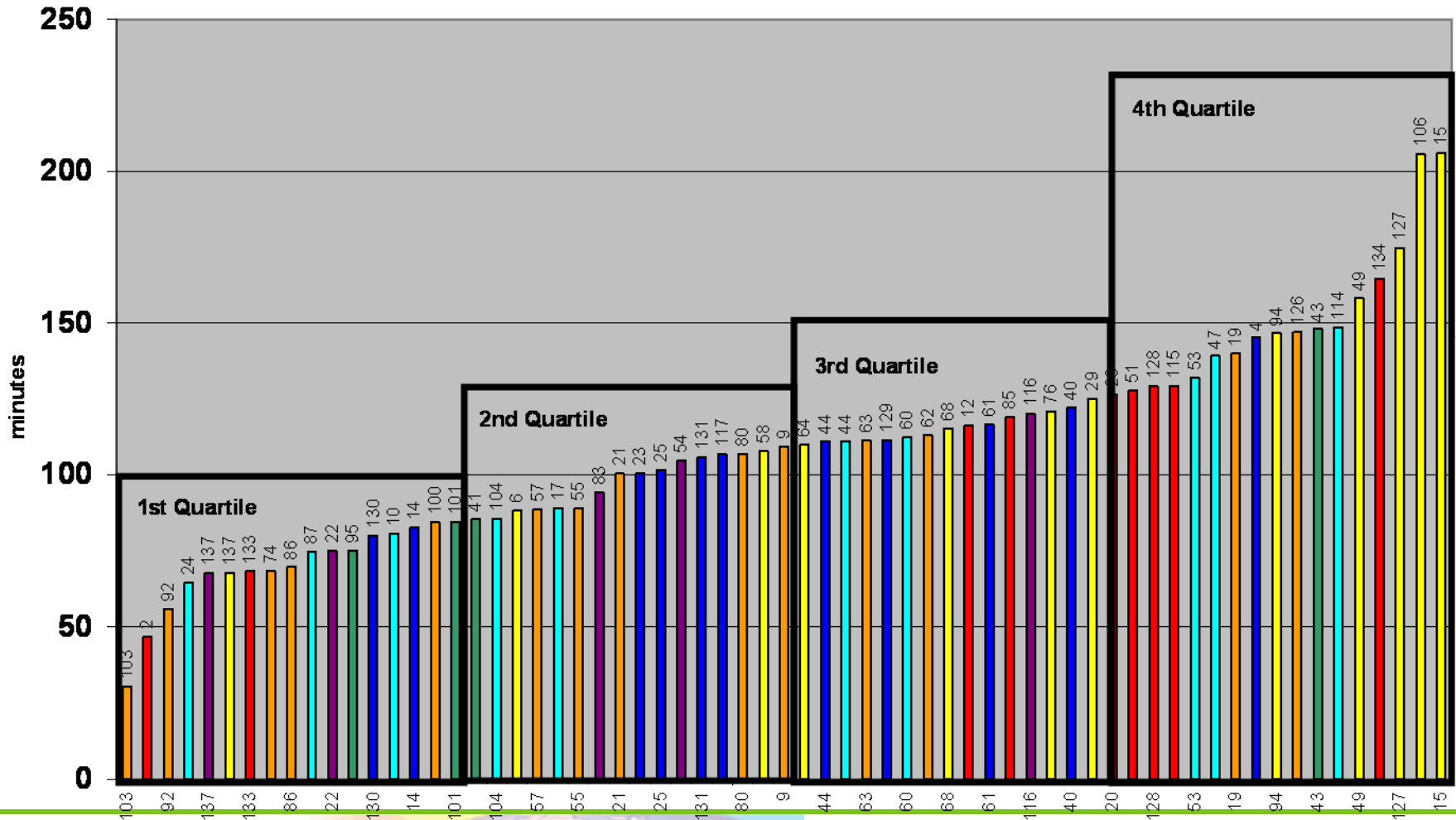
# SAIDI Day to day Performance



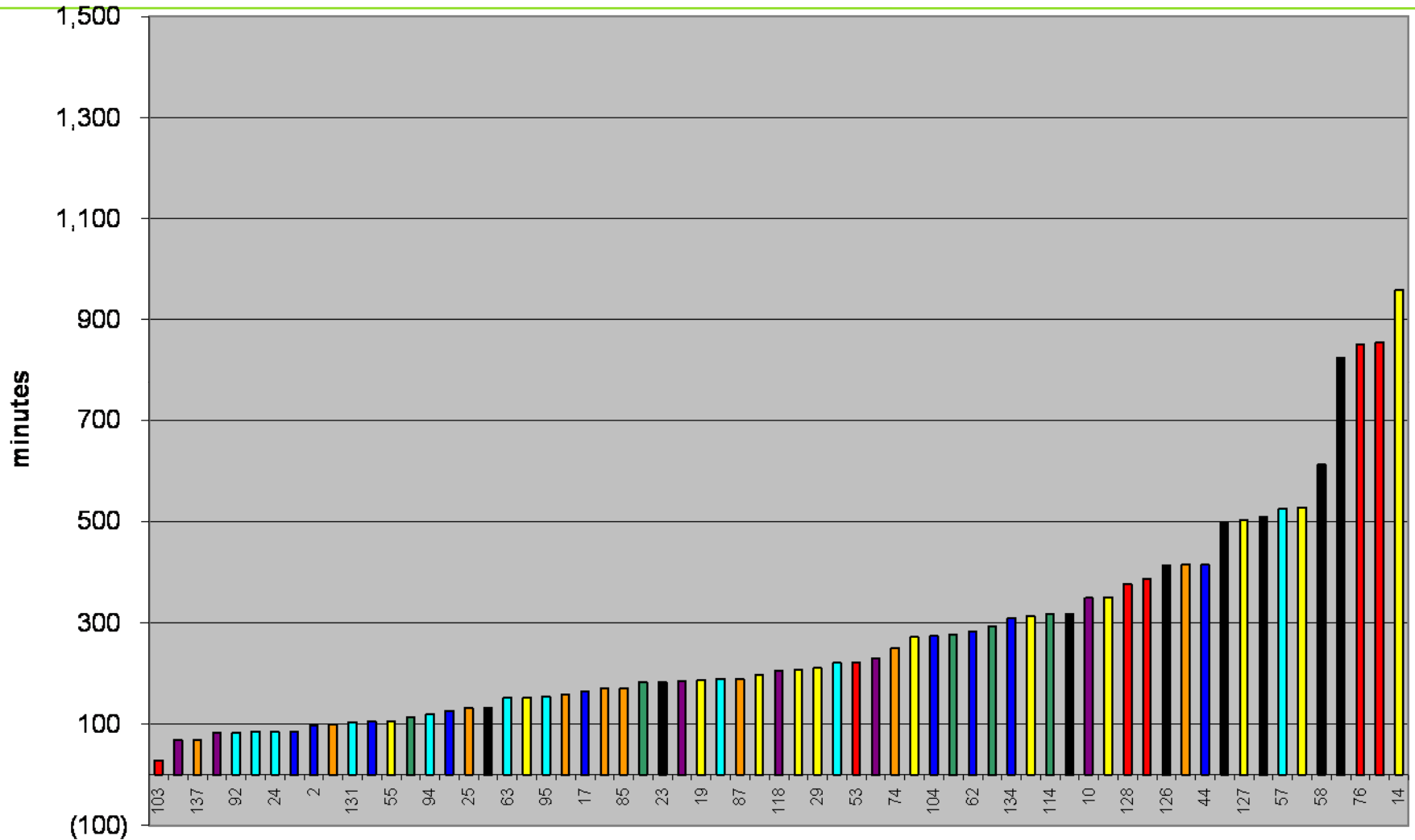
# SAIFI IEEE Day to Day Performance



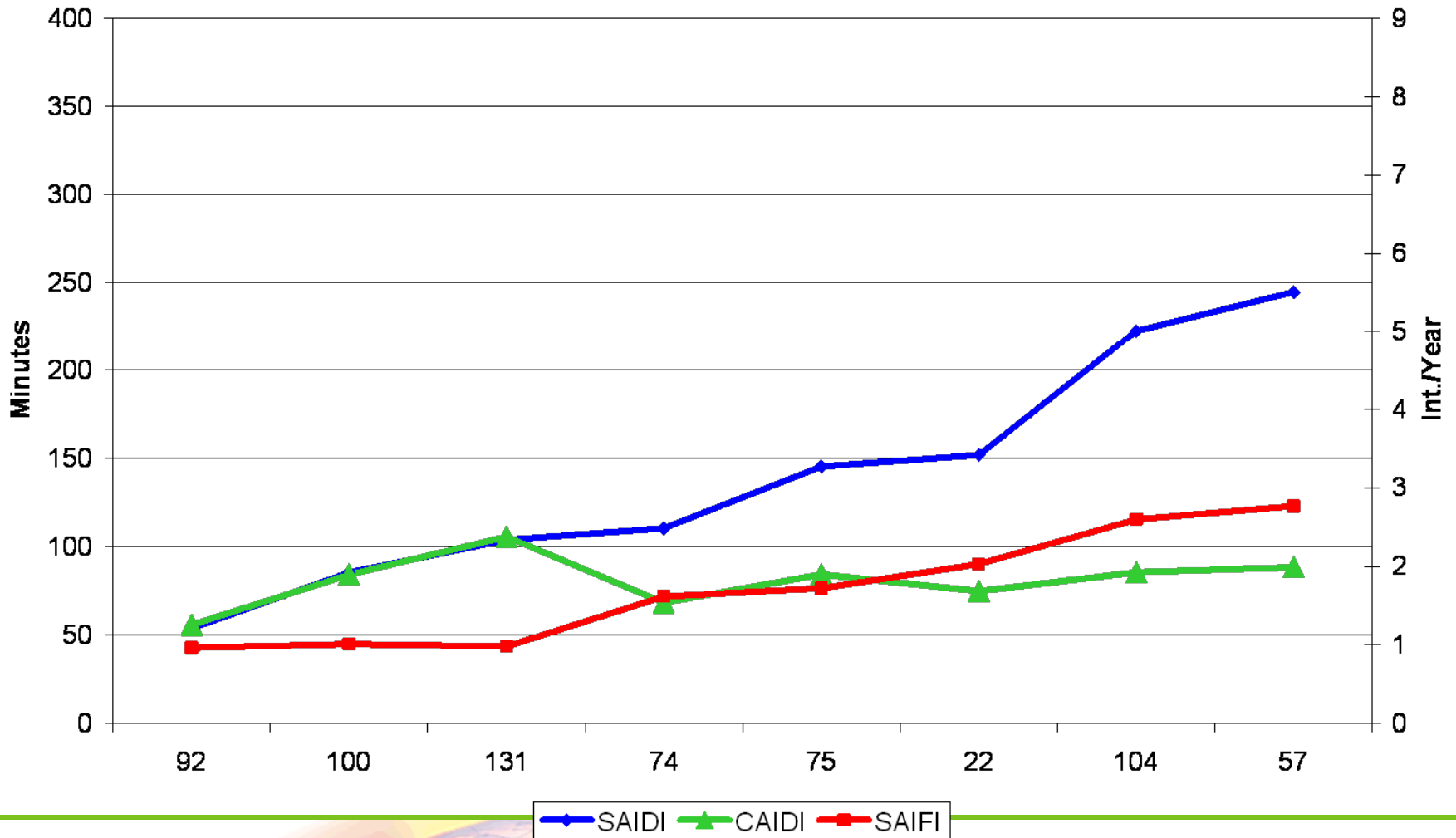
# CAIDI Day to Day Performance



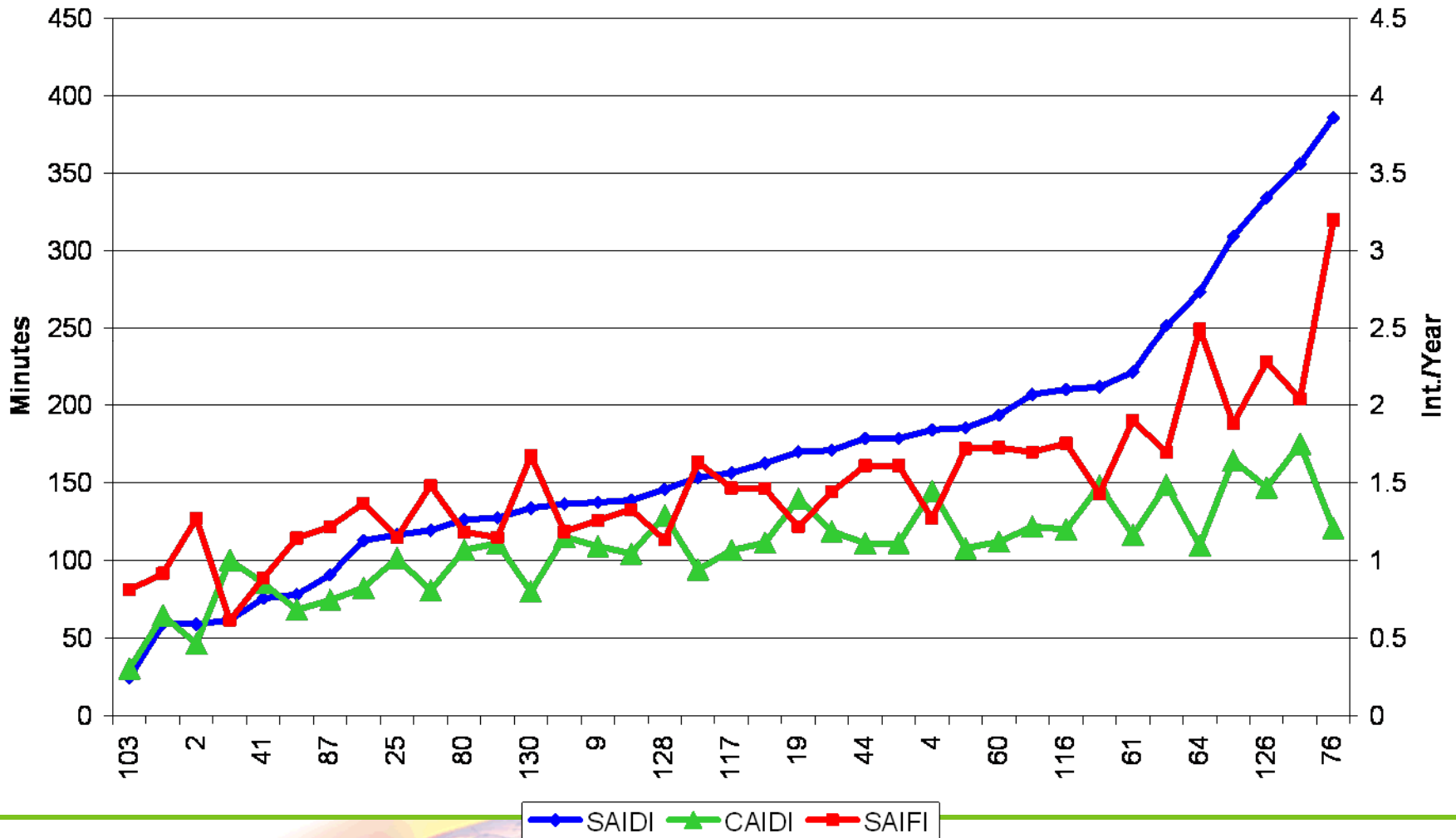
# SAIDI All Data



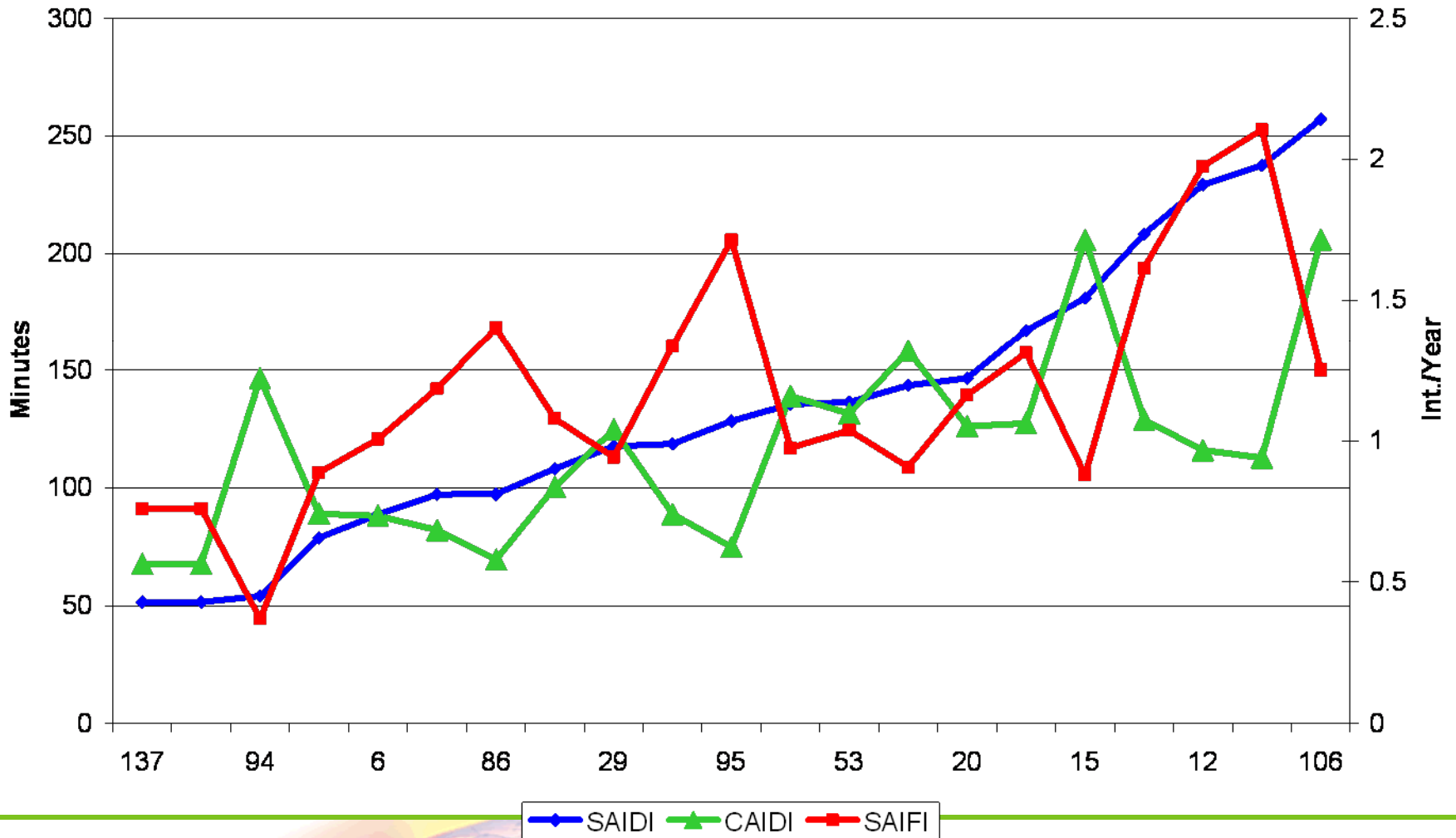
## Day to Day Performance Small Utilities



## Day to Day Performance Medium Utilities



## Day to Day Performance Large Utilities



# Trends for Utilities providing data between 2003-2007

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