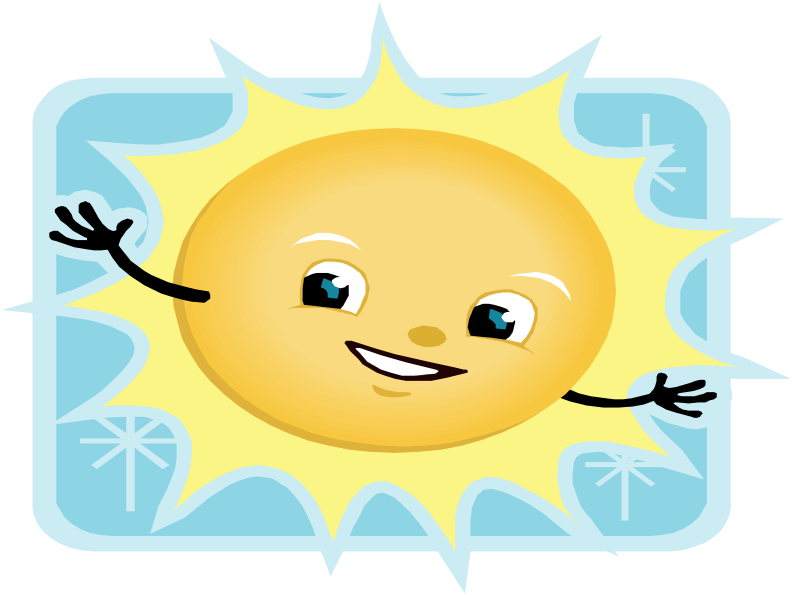
EZ-3 Residential TOU Price Plan

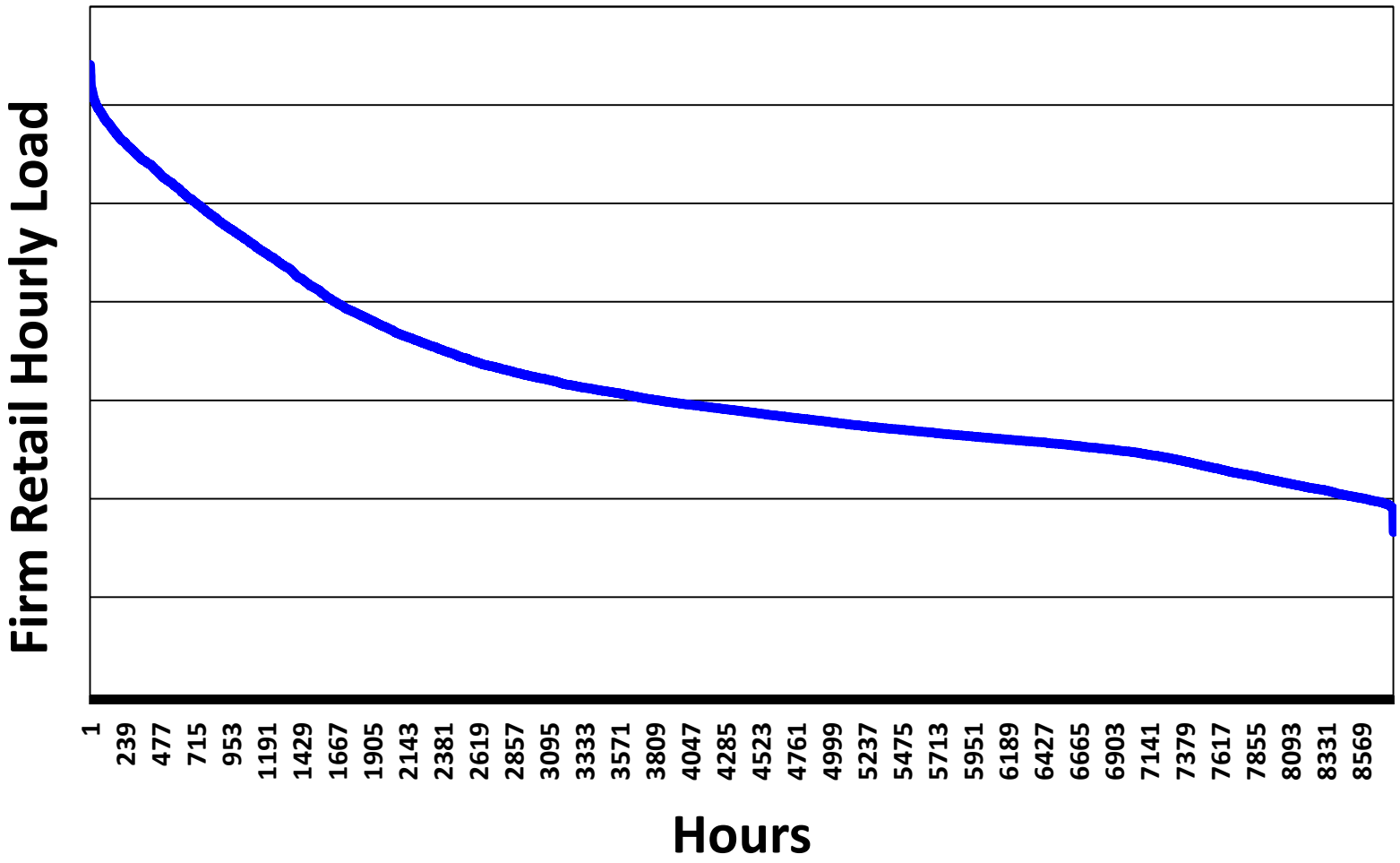


Loren Kirkeide

SRP Strategic Economic Services

September 23, 2009

SRP Load Duration Curve



Goals

- Create a strong & focused price signal to reduce summer weekday energy usage at 3-6 p.m.
- Provide non-TOU (E-23) customers with a more manageable on-peak period TOU option.
- Retain our current TOU (E-26) price plan for TOU customers who prefer the opportunity to save by having more on-peak hours.

2008 Summer Prices

	E-23		E-26	E-20 (EZ-3)
Mo. Svc. Charge	$12.00		$15.00	$15.00
SUMMER			On-pk hours 1-8 p.m. M-F	On-pk hours 3-6 p.m. M-F
May,Jun,Sep,Oct	1st 2,000 kWh	All Add'l	All kWh	All kWh
On-Peak	$0.0970	$0.1012	$0.1751	$0.2750
Off-Peak	$0.0970	$0.1012	$0.0577	$0.0630
SUMMER PEAK				
July and August				
On-Peak	$0.1024	$0.1070	$0.1954	$0.3250
Off-Peak	$0.1024	$0.1070	$0.0581	$0.0630

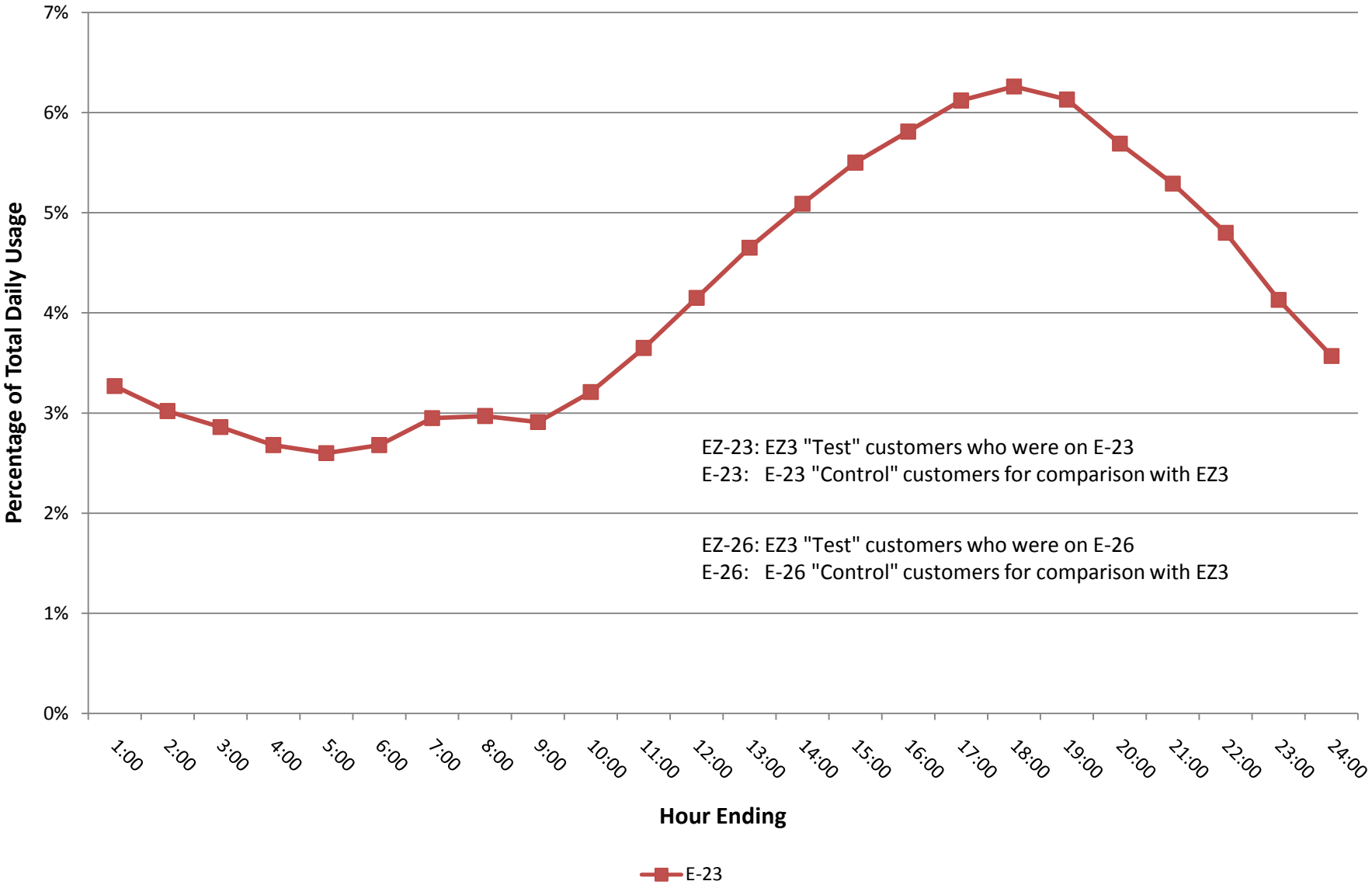
Experimental Design Highlights

- Pretest Posttest Control Group Design
  - High-use customers (over 1,800 kWh/mth Jun-Sep)
  - Recruited approx. 400 E-23 and 400 E-26 customers
  - Selected 800 E-23 and 800 E-26 comparable control
  - Customers required to already have smart meters
- Phase 2 implemented in August 2009
  - Recruited approx. 120 E-23 and 120 E-26 customers from control groups to switch to EZ-3
  - The remaining control customer in each test/control group is control for control that switched to EZ-3

Smart Meters for Load Research

- Installing Elster Rex Meters for residential
  - Approximately 845,000 residential customers
  - Approximately 410,000 Rex meters now installed
- Switch on interval data feature in Rex meters
  - SRP's first use of this feature to collect interval data
  - Currently collecting interval data on 4,000 meters for EZ-3 study and other load research studies
  - Collect data from 4,000 meters daily through Elster EnergyAxis Metering Automation System and process 1,000 meters daily through MV90

E-20 (EZ3) Study: System Peak Month Hourly Comparison
August Weekdays (Mon-Fri) 2008 Data



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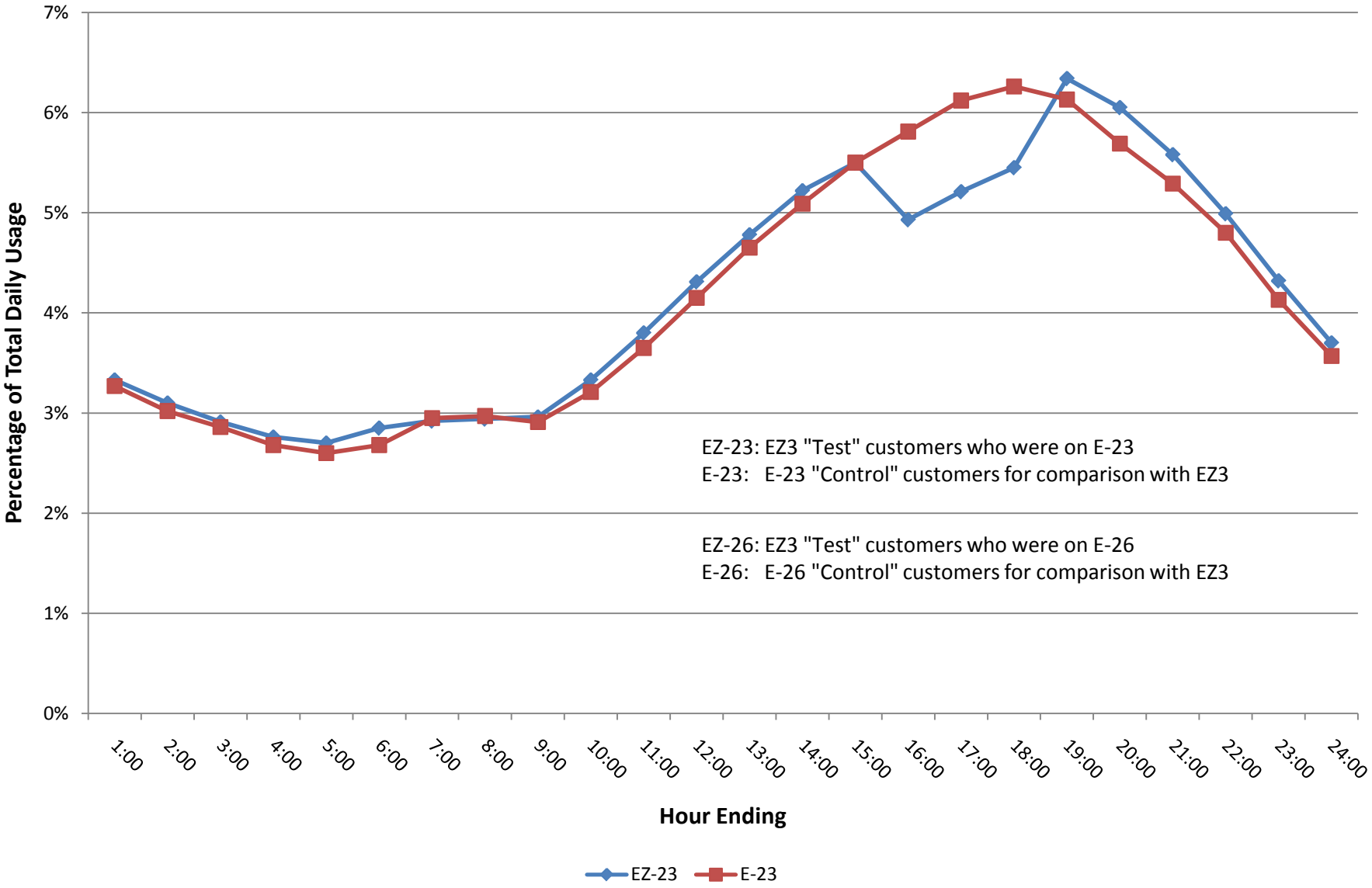

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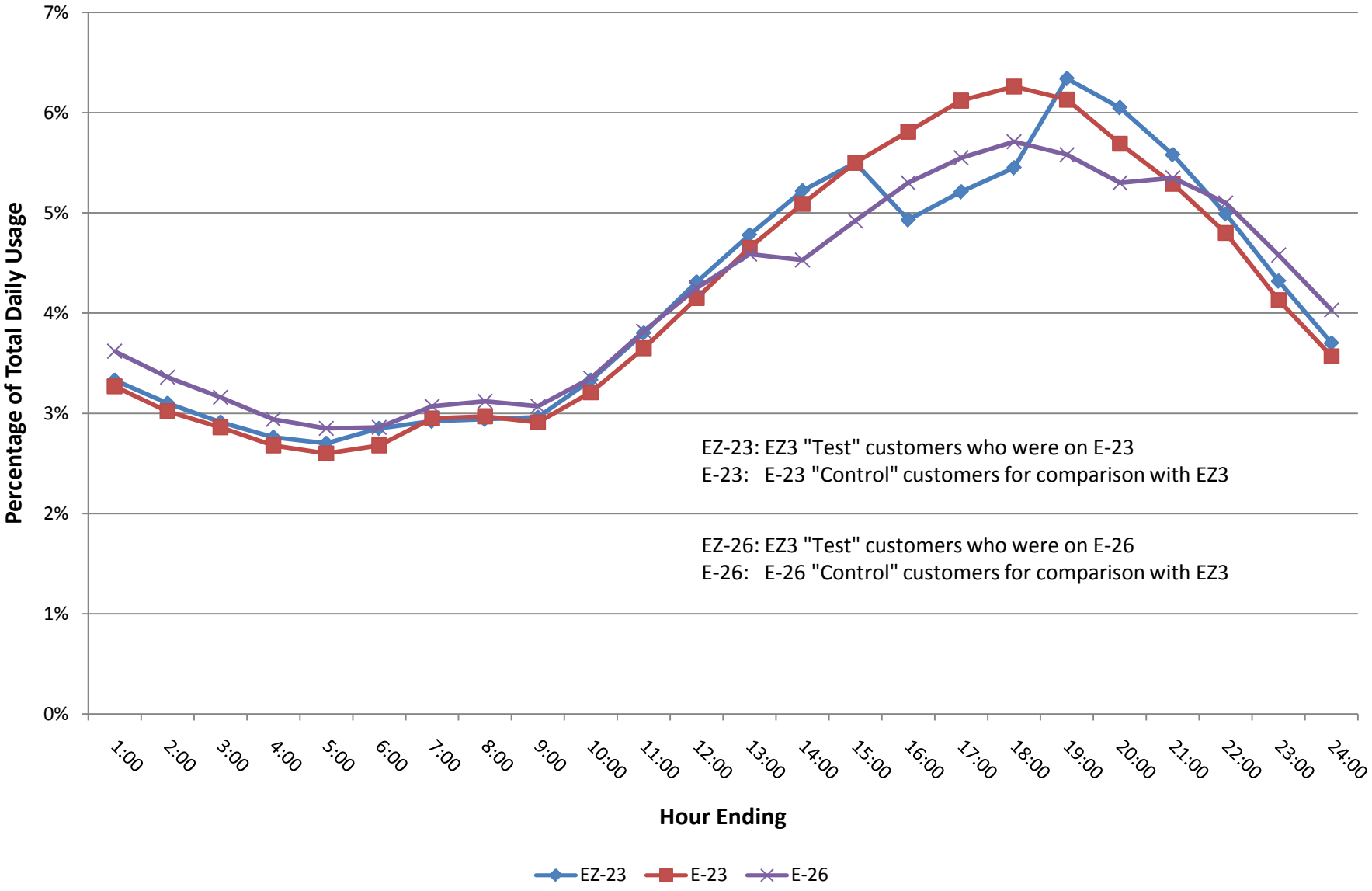

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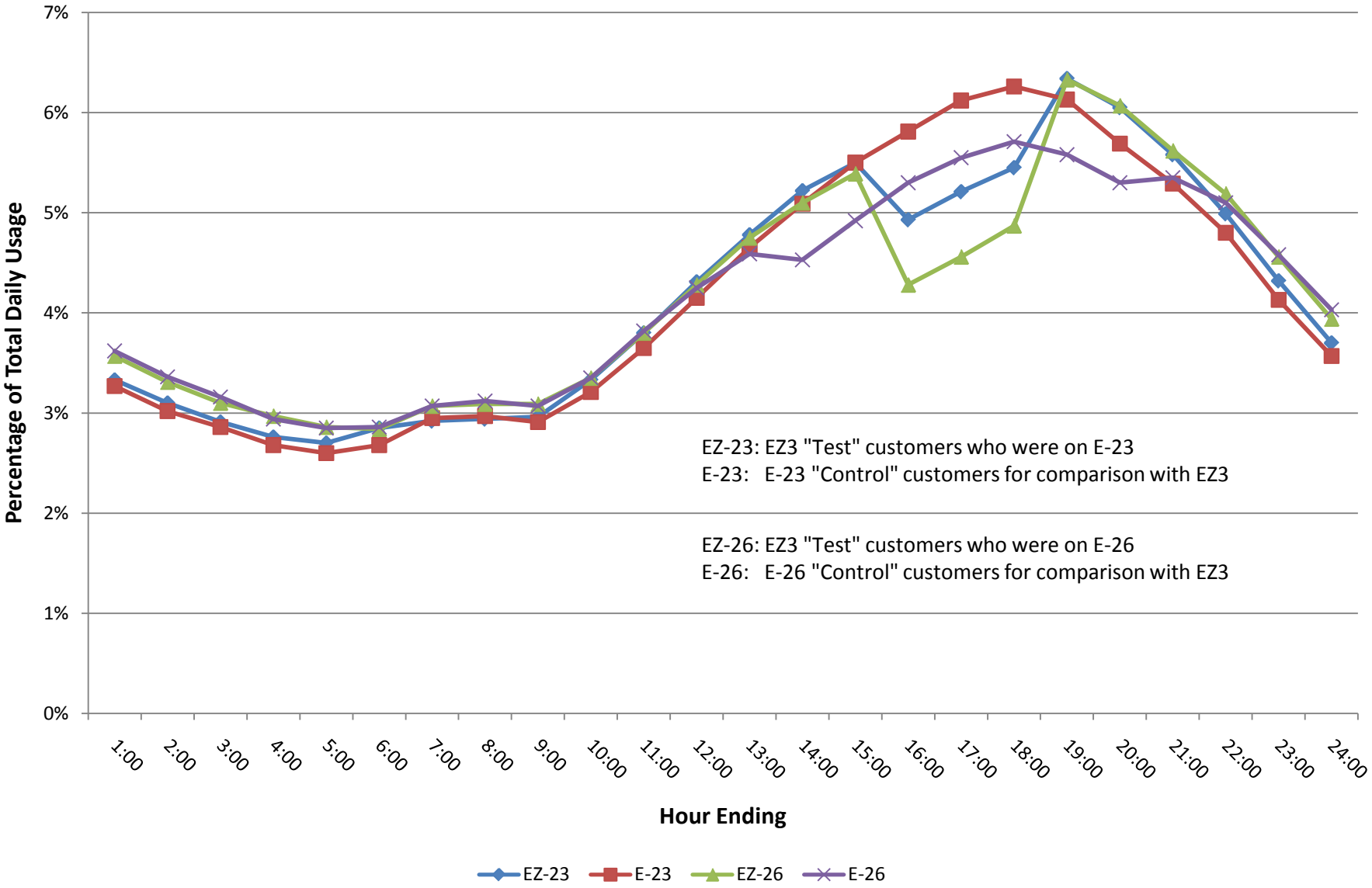
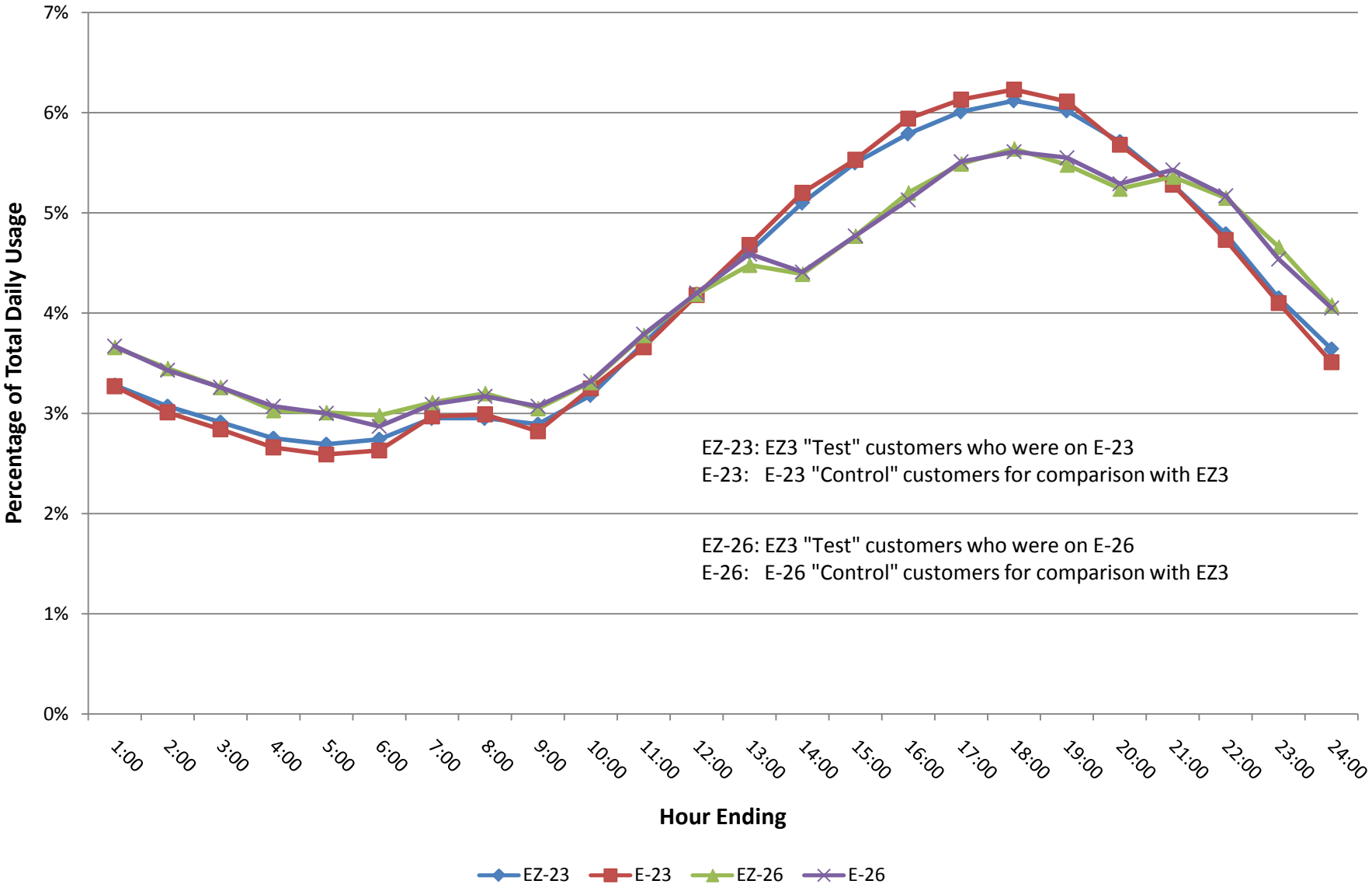


E-20 (EZ-3) Study Phase 2: Summer Month Hourly Comparison
August Weekdays (Mon-Fri) 2008 Data



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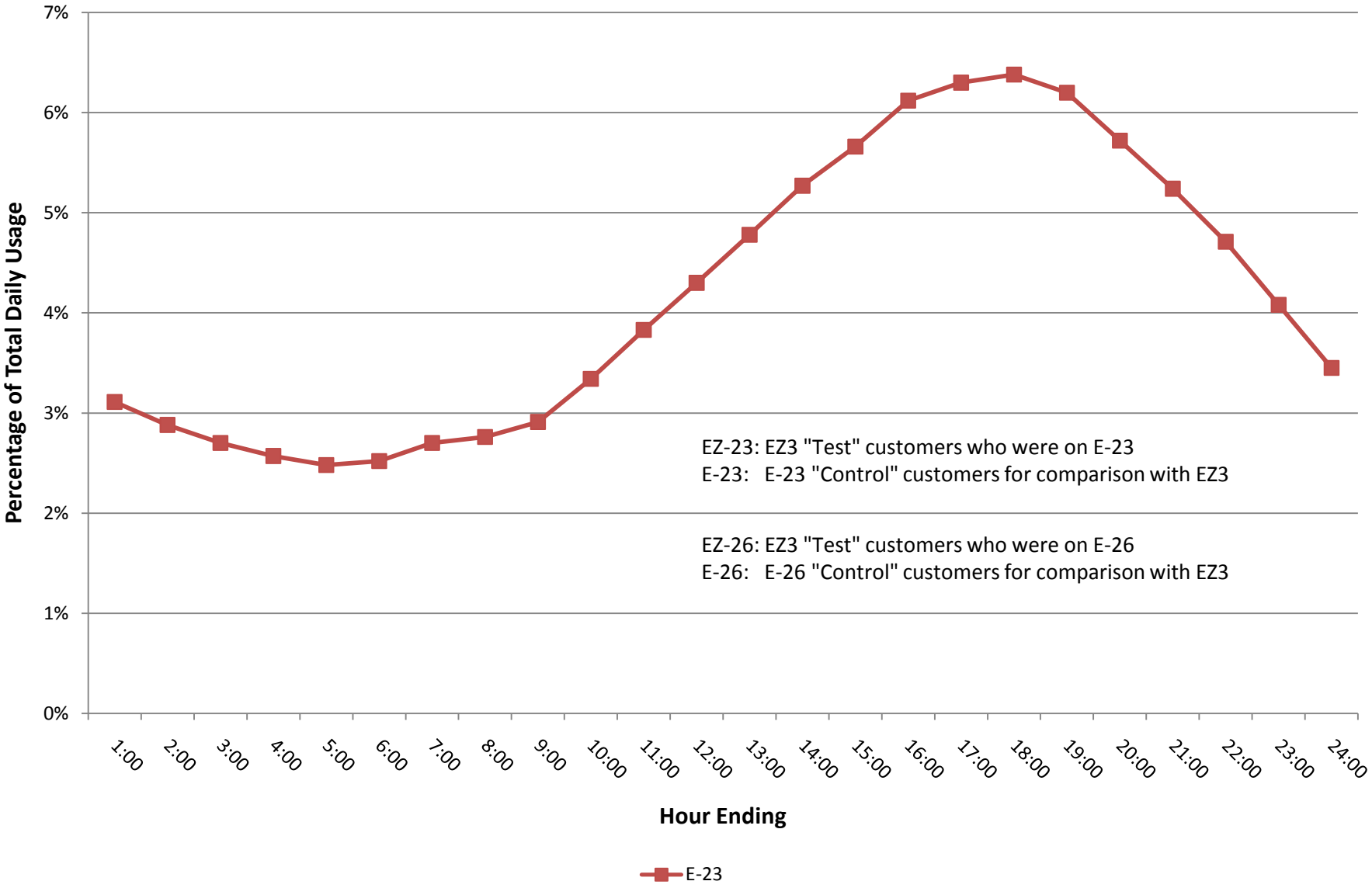

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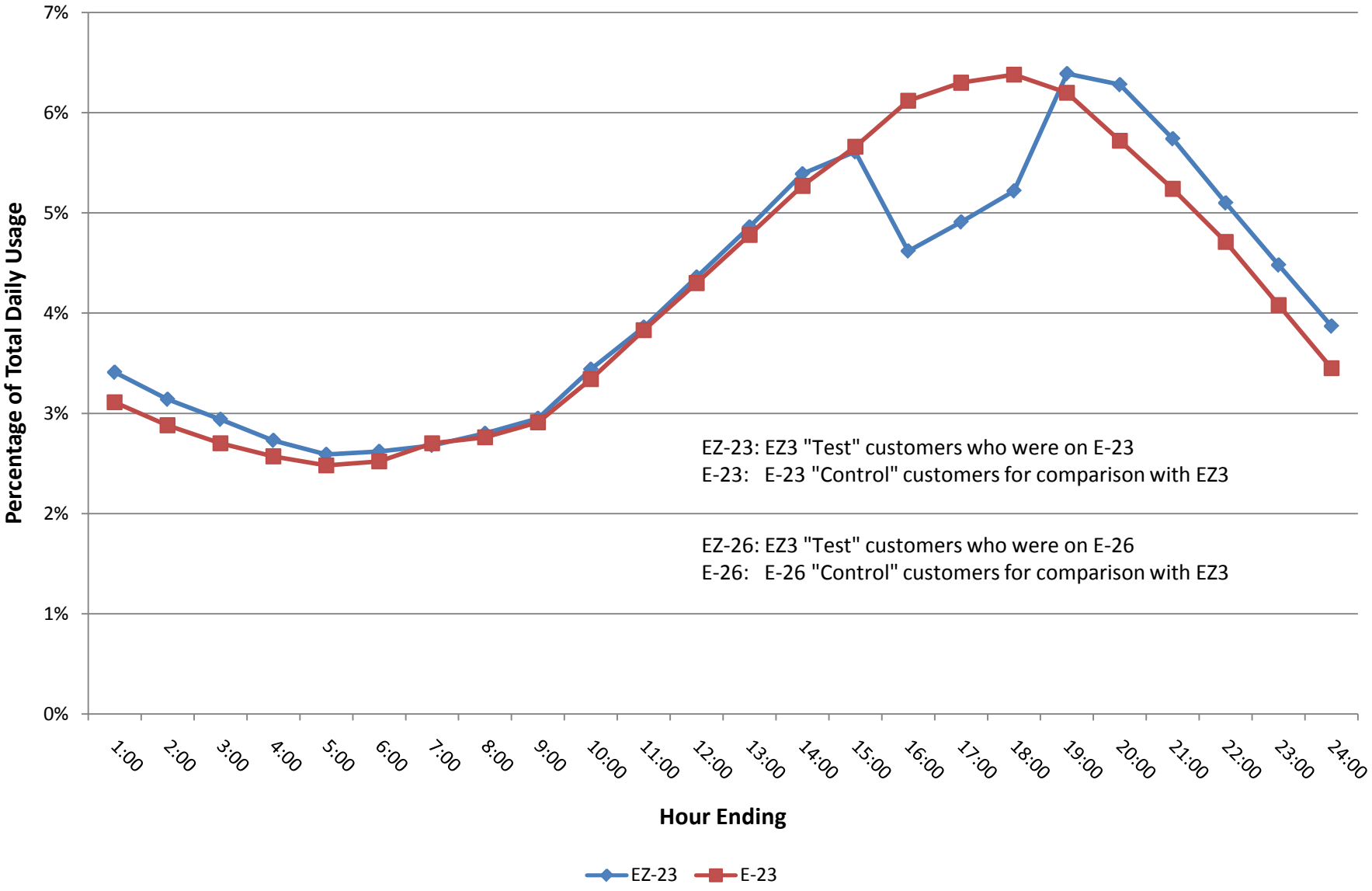

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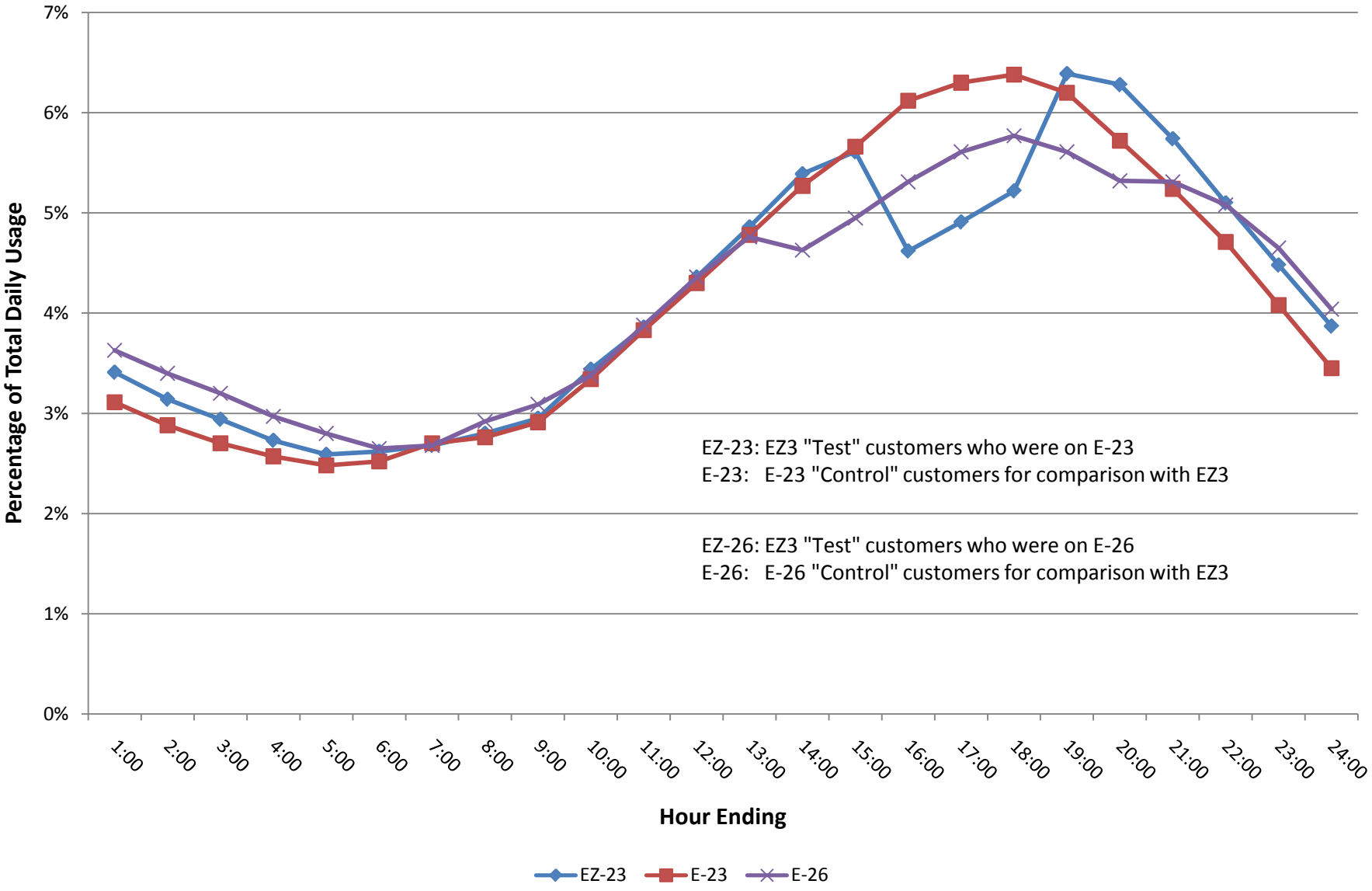

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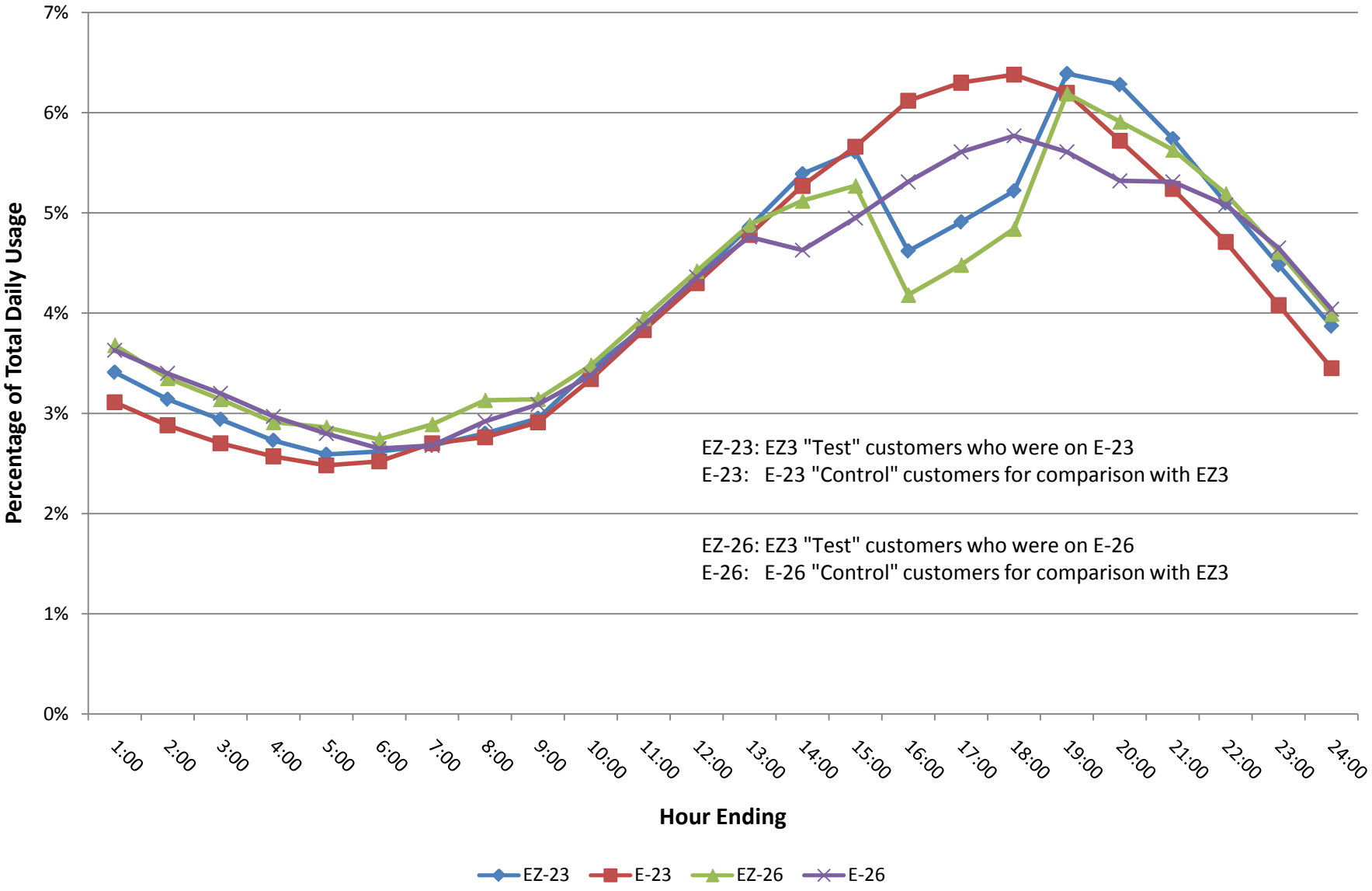

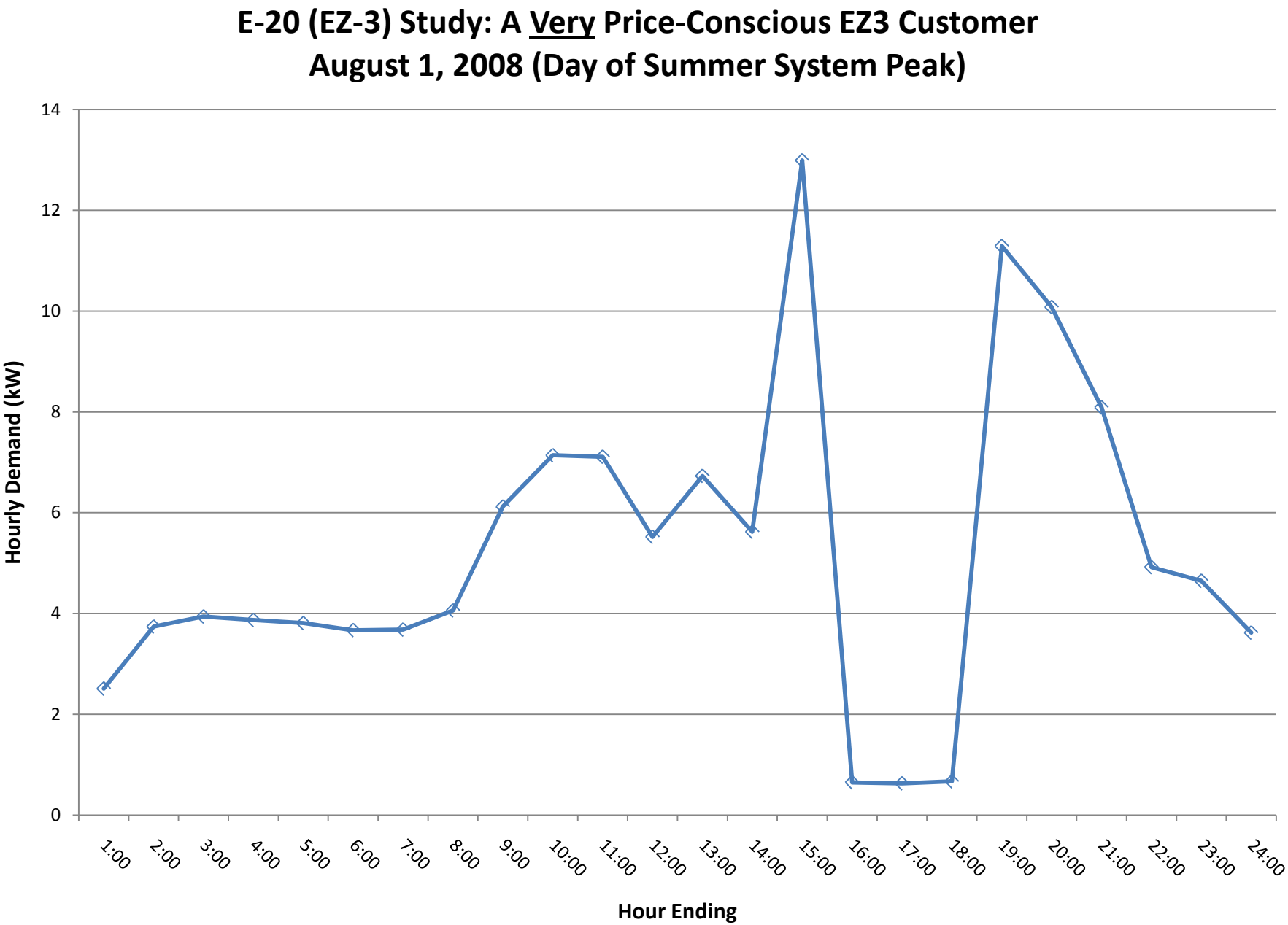
E-20 (EZ-3) Study: A Very Price-Conscious EZ3 Customer
August 1, 2008 (Day of Summer System Peak)
Hourly Demand (kW)
0
2
4
6
8
10
12
14
1:00
2:00
3:00
4:00
5:00
6:00
7:00
8:00
9:00
10:00
11:00
12:00
13:00
14:00
15:00
16:00
17:00
18:00
19:00
20:00
21:00
22:00
23:00
24:00
Hour Ending

You may wonder:

Why is Loren so passionate about TOU pricing?

Is he just another TOU price signal fanatic?

TOU is old news…it's all about dynamic pricing.

TOU pricing more accurately reflects our costs, but it's not what "we" really need, so why waste time and effort trying to implement it?

I offer you this view to consider:

I think it's good to have price signals that more accurately reflect costs, but….

I strongly believe that customers have the RIGHT to be given an opportunity to save money by choosing a TOU option and shifting energy usage to reduce their bill.

We have an obligation to provide this opportunity and it is wrong for us to deny them the ability to reduce their bill on a daily basis even when we are not at risk of being unable to serve load.

Summary

- EZ-3 is producing very strong demand response
  - Highly significant price elasticities
  - Phase 1 E-26 cust. matching the demand response of E-23 cust. likely due to experience with TOU
  - Currently analyzing EZ-3's effect on total kWh usage
- Very different Phase 1 elasticities between E-23 and E-26 groups, producing similar % decrease in summer coincident demand
  - Approximately 25% decrease in coincident kW
- Estimating Phase 2 coincident kW elasticities

Summary

- Why have both TOU rates?
  - Think of them as a pricing portfolio.
  - The combined effect is better than either one alone
  - Appeal to different people, improving satisfaction
- An improvement being considered
  - There are many off-peak hours that do not promote conservation
  - Introduce inclining blocks in the off-peak period