



Empowering Utilities With Technology & People



Joe Thomas
Associate Vice President & General Manager – Client Fulfillment
The United Illuminating Company

October 18, 2006

Agenda

1. Company Profile

2. Technology – Past

3. Technology - Present

4. Benefits of Technology

5. Challenges

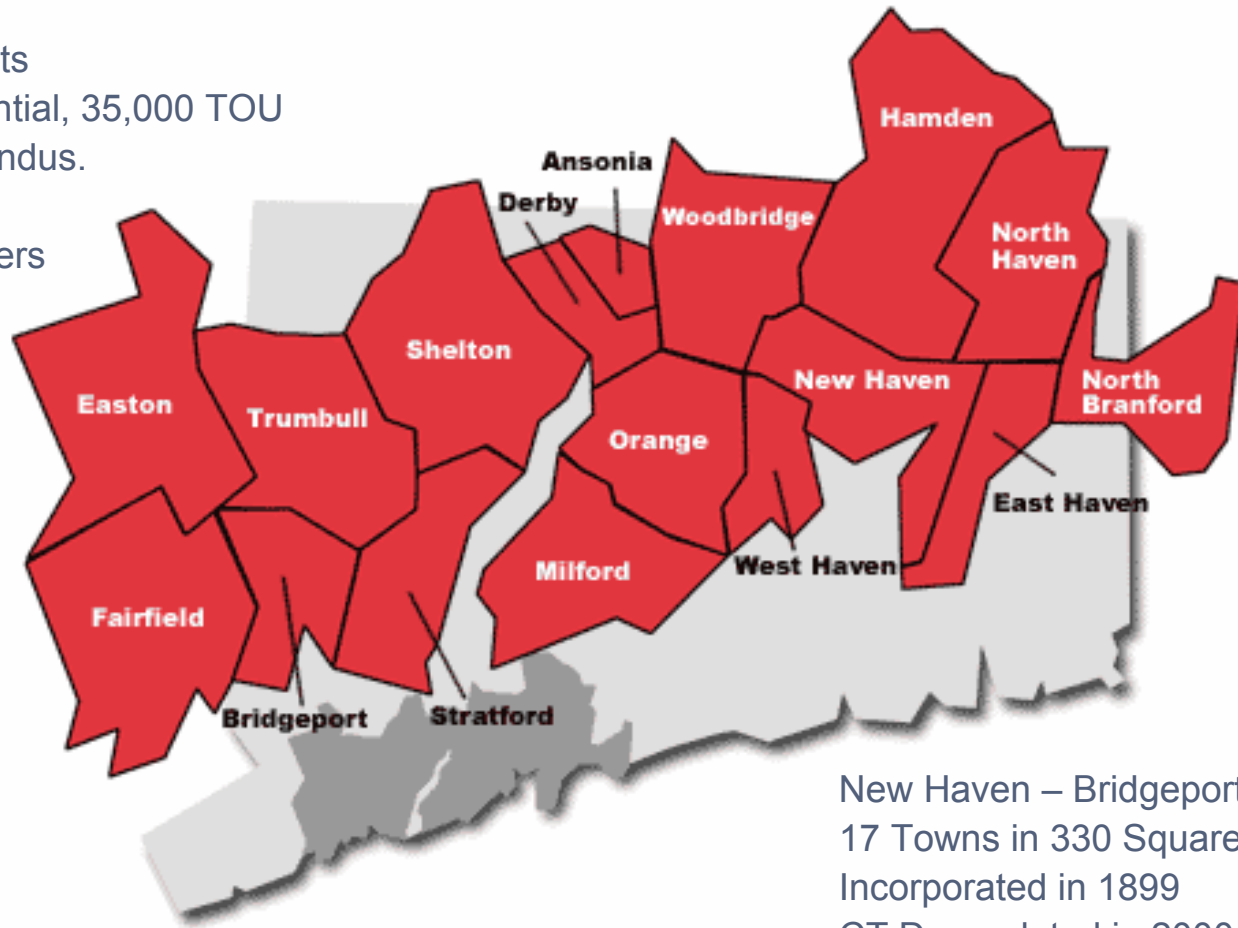
6. Technology - Future

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Company Profile

320,000 Accounts
288,000 Residential, 35,000 TOU
32,000 Comm./Indus.
20% Delinquent
40% Indoor Meters



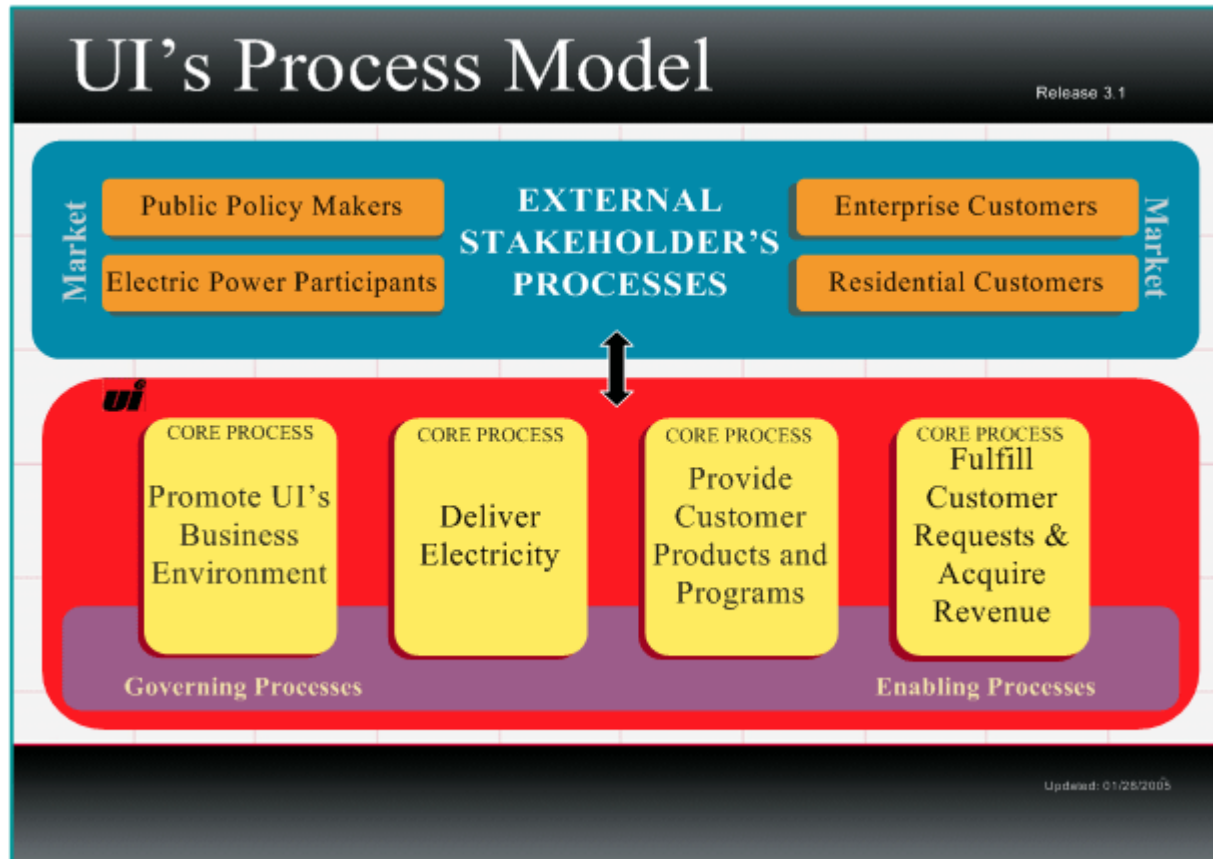
New Haven – Bridgeport, CT
17 Towns in 330 Square Miles
Incorporated in 1899
CT Deregulated in 2000
Wires Only Co. - No Generation

726,000 People – 21% of CT
7 Major Universities and Colleges
1/3 Population Transient

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Process Based Organization



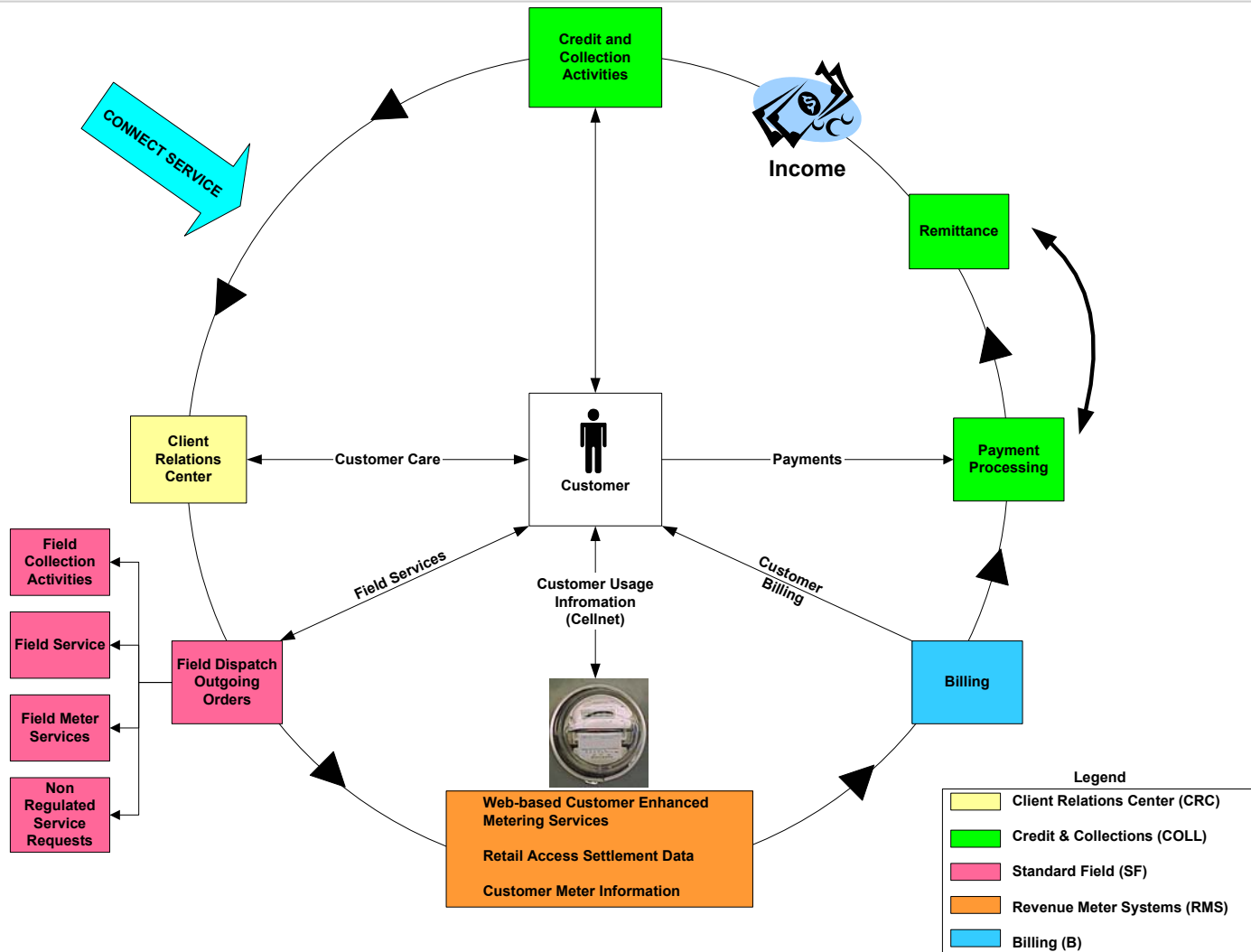
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September 19, 2005



Fulfill Requests & Acquire Revenue



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Fulfill Requests & Acquire Revenue

Activity	Annual Average
Customer Calls to Call Center	804,704
Interactive Voice Response Volume (IVR)	414,279
Work Orders – Electric System	22,000
Work Orders – Client Fulfillment	121,994
Daily Meter Reads	110,000,000
Monthly Invoices	320,000



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Technology Drivers – Past

■ Customer Expectations

- The Demand for Information – Usage & Account Management
- Flexible Billing Model
- Credit Card
- New Products & Services

■ Industry Drivers

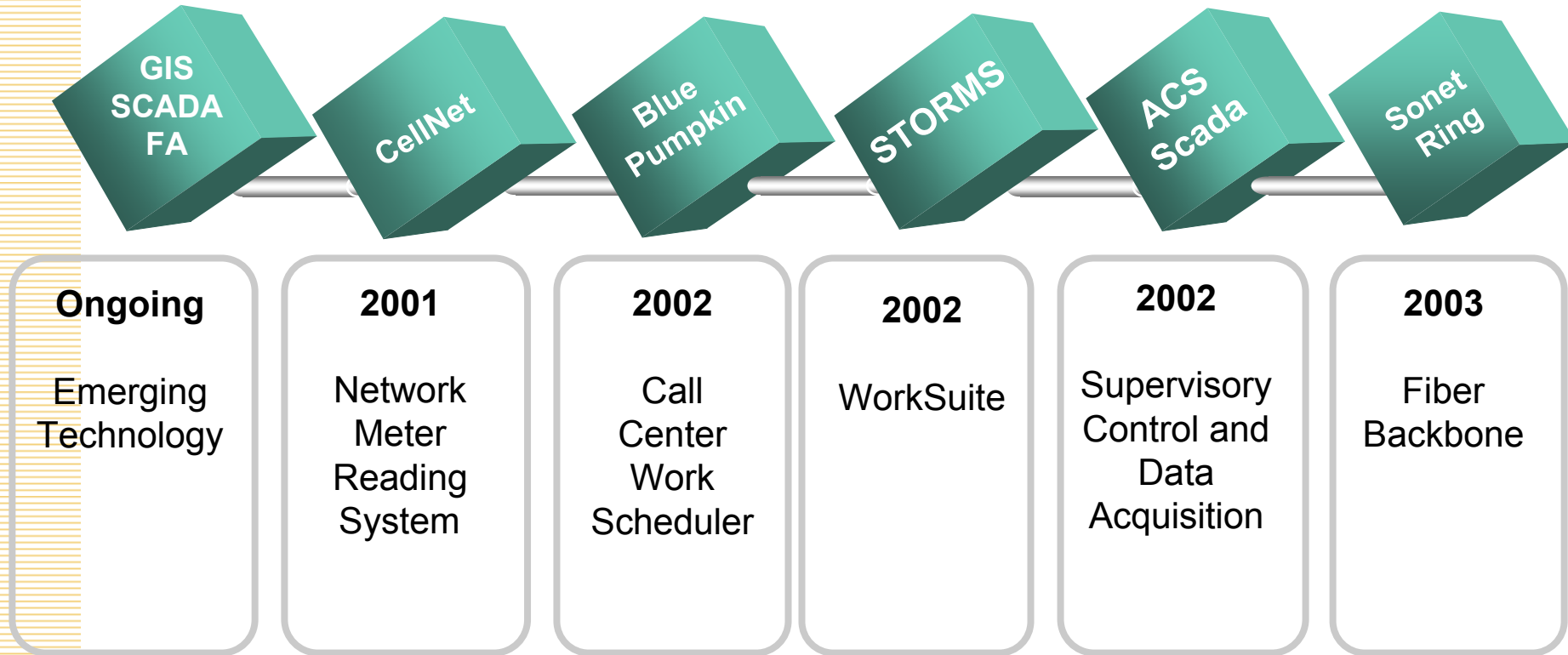
- Deregulated Energy / Delivery Model
- NAICS Code (Old SIC Code Update)
- Supplier Rate Implementation – 200 to 1,200 New Rates
- Federally Mandated Congestion Charges
- Conservation & Load Management Bond Securitization

■ Inflexible Technology

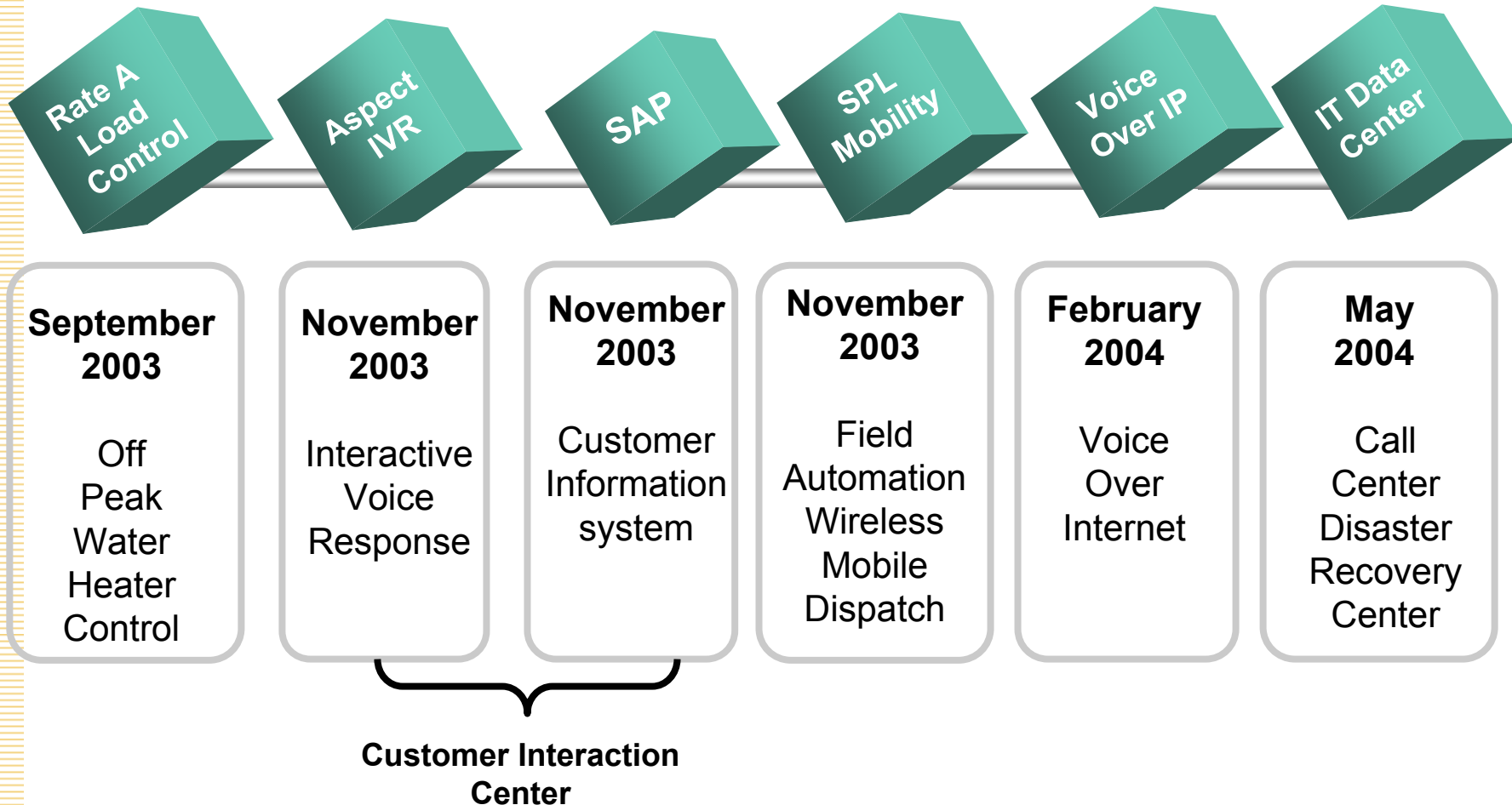
- Unsupported Systems
- Islands of Information – Multiple Interfaces
- Costly to Maintain



Technology - Present

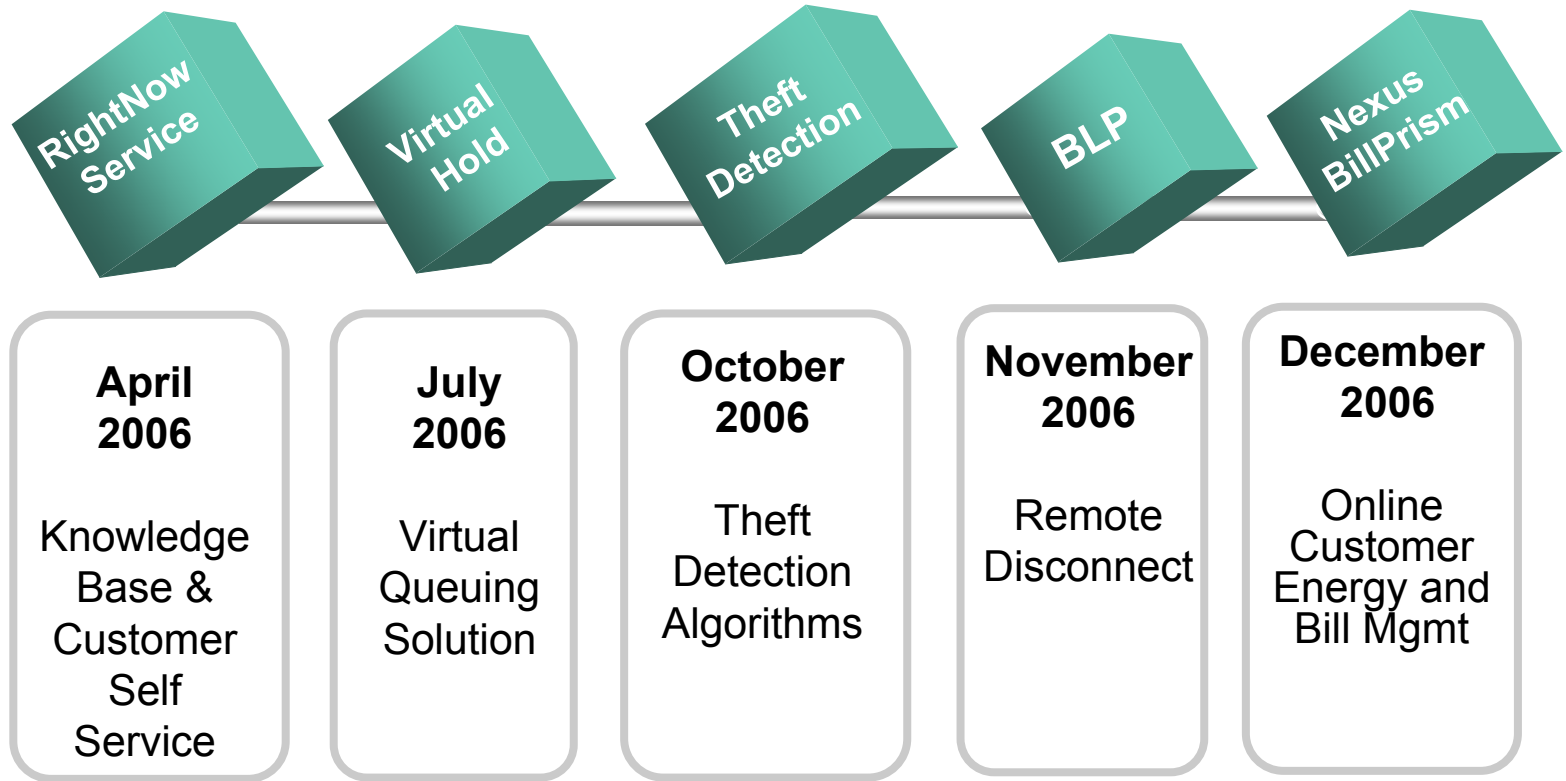


Technology - Present



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Technology - Present



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Benefits - Operation

■ Information Availability and Access

- Robust Information and Analysis Capabilities
- Information Available to All End Users
- Automated Outage Reporting
- Customer Information Systems are Available 7 x 24
 - SAP
 - Field Automation (FA)
 - Interactive Voice Response (IVR)

■ Enhanced Billing/Invoice Edits/Functionality

- Supplier Management – Electronic Data Interchange (EDI)
- New Rates/Suppliers due to Deregulation
- Rate Analysis for Call Center (What – If – Billing)
- Virtual Disconnect Process
- Remote Disconnect Process
- Identity Theft Risk Mitigation
- Theft of Service Detection
- Ground Level Inspection (GLI)



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Benefits - Company

■ Minimal Customization

- Allows for industry wide upgrades - All stakeholders will benefit
- Reduced future upgrade cost due to minimal customization
- Supports changes for deployment of new products and services

■ Order Entry / Completion

- Improved office / field workflow and information
- Drop down options available to minimize errors
- Improved workflow assignments

■ Improved Business Continuity

- Mobile Computing – Anytime, Anywhere, Any Place
- Disaster Recovery

■ Accountability

- Significantly Improved Audit Trail
- Increased Billing Controls
- Improved Customer Data Accuracy



Benefits - Company

■ Energy Policy Act of 2005

- Daylight Savings Time
- Net Metering Offerings
- Time-of-Use Rates
- Demand Response Programs
- Smart Metering Technology
- Data Presentment for Conservation and Awareness

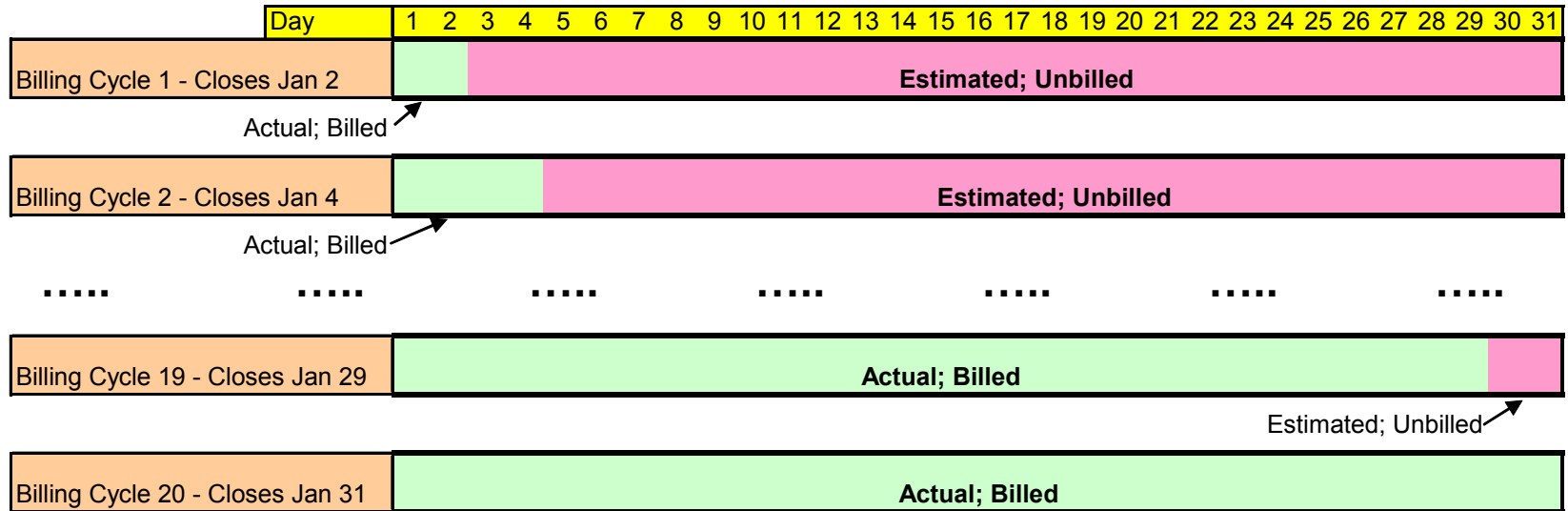
■ Flexible Billing/Accounting Programs

- Daily Sales of Energy
- Real Time Billing (hourly) for Large Commercial and Industrial Customers
- Reduced DSO and Increased Profitability
- Easier Daily and Monthly Balancing
- Sarbanes-Oxley Compliance



Benefits - Company

Unbilled Revenue



For the January 31st month-end close, about half the revenue is actual, and half is estimated. (The billed and unbilled totals are derived from the sum of data from the 20 billing cycles.)

New methodology eliminates unbilled estimates by receiving actual reads at end of month for every meter.



Benefits - Call Center

Load and Usage Analysis

Pinpoint when and possibly why a customer's usage increased

High Bill Resolution

Bill Comparison

Accurately explain a sudden bill increase

Quick Guide

Explain estimates, budget billing, and other billing issues that confuse customers

Customer Offers

Targeted guidance on programs to promote

Alerts

Quickly identify the most important billing issues

JOE USER at 100 MAIN ST, OSHKOSH, WI 54901
 Account #: 9997445 Bill Date: 12/30/2004 Premise: 100 MAIN ST - 9997445 Service: Gas - 294354 Close Session

Summary | Bill Wizard | Bill History | Load Analysis | Send Report | Facts | Home Appliances | Meter Reading

Quick Guide

- ☐ Billing Summary
- ☐ Change alerts
- ☐ Usage Estimator
- ☐ Send Report
- ☐ Web Site

High Bill Help

[Meter Readings:](#) Check reading, estimated, actual, make-up, meter exchange

[Average Usage Change:](#) Identify Increase, Reasons, Weather, Billing Days, Appliances, Living Habits, Home

Customer Offers

[Payment Options](#)

[Billing Options](#)

[Change Service](#)

[Link1](#)

Bill Comparison | Compare with: Previous Month

Account: Gas Meter 294354 | Rate Class: GRG-R

	12/30/2004	12/01/2004	Impact
Bill Days	29 Days	32 Days	↓ \$17.28
Customer Charge	\$9.50	\$9.50	No change
Average Cost	\$0.955 / Therm	\$1.082 / Therm	↓ \$19.69
Average Use	5.32 Therms/Day	2.63 Therms/Day	↑ \$93.36
Other Service Charges	\$0.00	\$0.00	No change
Total	\$156.80	\$100.41	↑ \$56.39

Alerts

Rate Change	↑	\$ 19.70
Billing Period	↑	\$ 17.28
Budget		Budget
Weather (Default)	↑	\$ 29 - 48

Bill History | Gas - 294354

Bill Date	Gas Used (Therms)	Total Gas Charges
3/30/2005	133.5	\$184.67
3/01/2005	154.5	\$191.08
1/28/2005	179.7	\$217.60
12/30/2004	154.3	\$192.80
12/01/2004	84.0	\$136.41
11/01/2004	39.0	\$77.29
9/30/2004	20.0	\$61.97
8/30/2004	18.1	\$61.92
7/29/2004	19.1	\$63.21
6/30/2004	20.1	\$64.90

Bill History (side by side)

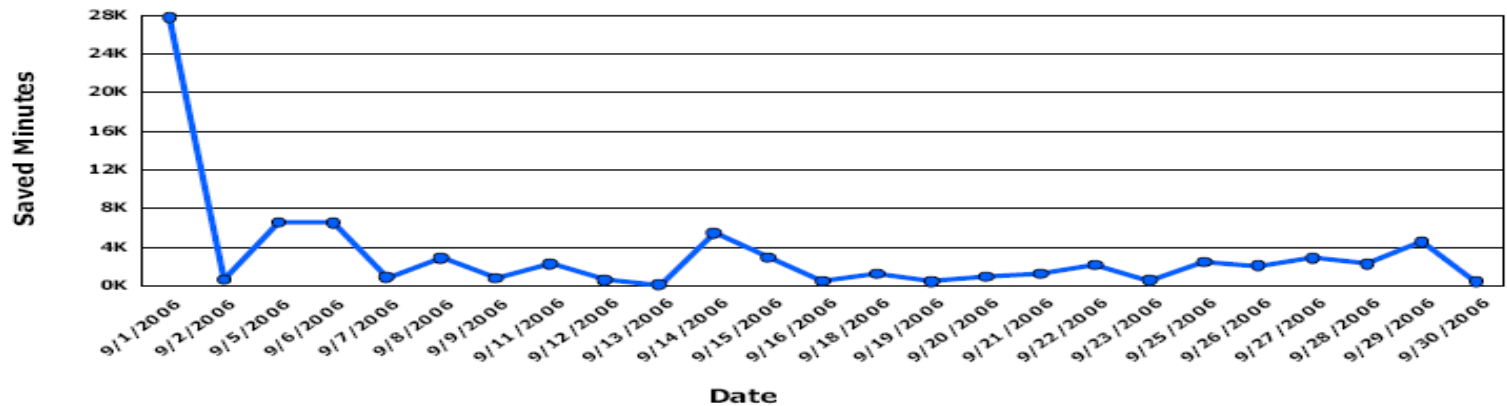
Reassure a customer who believes their bill is out of line with bills from past years

Benefits – Call Center

Virtual Queuing – Managing Call Volumes

Saved Minutes Summary – Includes VirtualQueue, VirtualQueue via Web and ResQueue Reconnect calls

Successful Reconnect	5,433
Total Saved Minutes	78,009
Average Saved Minutes / Return Call	14
Total Dollar Savings @ \$0.10 / minute	\$7,800.90
Average Dollar Savings / Call	\$1.40



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Benefits – Dispatch

Service
Order
Status
Window

Crew and
Order
Mapping /
AVL

Crew Status
Window

Scheduling
Engine

All Orders View - 24 Orders

Priority	Tracking Status	FSMS Order #	Crew	CIS Calltaker	Order Type	Order Description
S	Assign	000000134	CREW1	CAD WEST SERVER ID	MRF9	Shared Meter Pro
S	Dspth	000000138	CREW1	CAD WEST SERVER ID	MRG2	Verify Meter # and
S	Dspth	000000143	CREW2	CAD WEST SERVER ID	SC06	Remove Meter O
S	Worked	000000189	CREW2	CAD WEST SERVER ID	MRF6	Pickup Meter Re
S	Enrout	000000205	CREW5	CAD WEST SERVER ID	SC05	Disconnect and
S	Assign	000000207	CREW4	CAD WEST SERVER ID	MR40	Health Impairme

Crew Status - View = All Crews Logged On Crews Only 10 Crews

Crew	Status	Order Number	Time	Crew Name	#Assn	#Disp	#
CREW3	Logged On		01/20/2001 08:21:20	Patty Thomas	01	00	01
CREW4	Logged On		01/20/2001 08:21:22	Robert Lawson	02	00	00
CREW5	Enroute	000000205	01/20/2001 08:29:00	Cheryl Hahn	01	01	00
CREW6	Logged On		01/20/2001 08:21:28	Steve Whiteman	01	00	00
CREW7	Onsite	000000182	01/20/2001 08:28:00	Tom Oliver	01	01	00
CREW8	Complete	000000176	01/20/2001 08:29:11	George Warner	03	01	01

W-6 Service Scheduler [Jan/19/2001 - Jan/22/2001] - [W-6 Engineers Gantt]

Name	ID	6:00 AM	06:30 AM	07:00 AM	07:30 AM	08:00 AM	08:30 AM	09:00 AM	09:30 AM	10:00 AM	10:30 AM
CREW3	Patty Thomas					000000189	000000198				
CREW7	Tom Oliver										
SVCSUP	Jerry Guthrie					000000172	000000190	000000182			
CREW2	Bill Barnes					000000143	000000176	000000206			

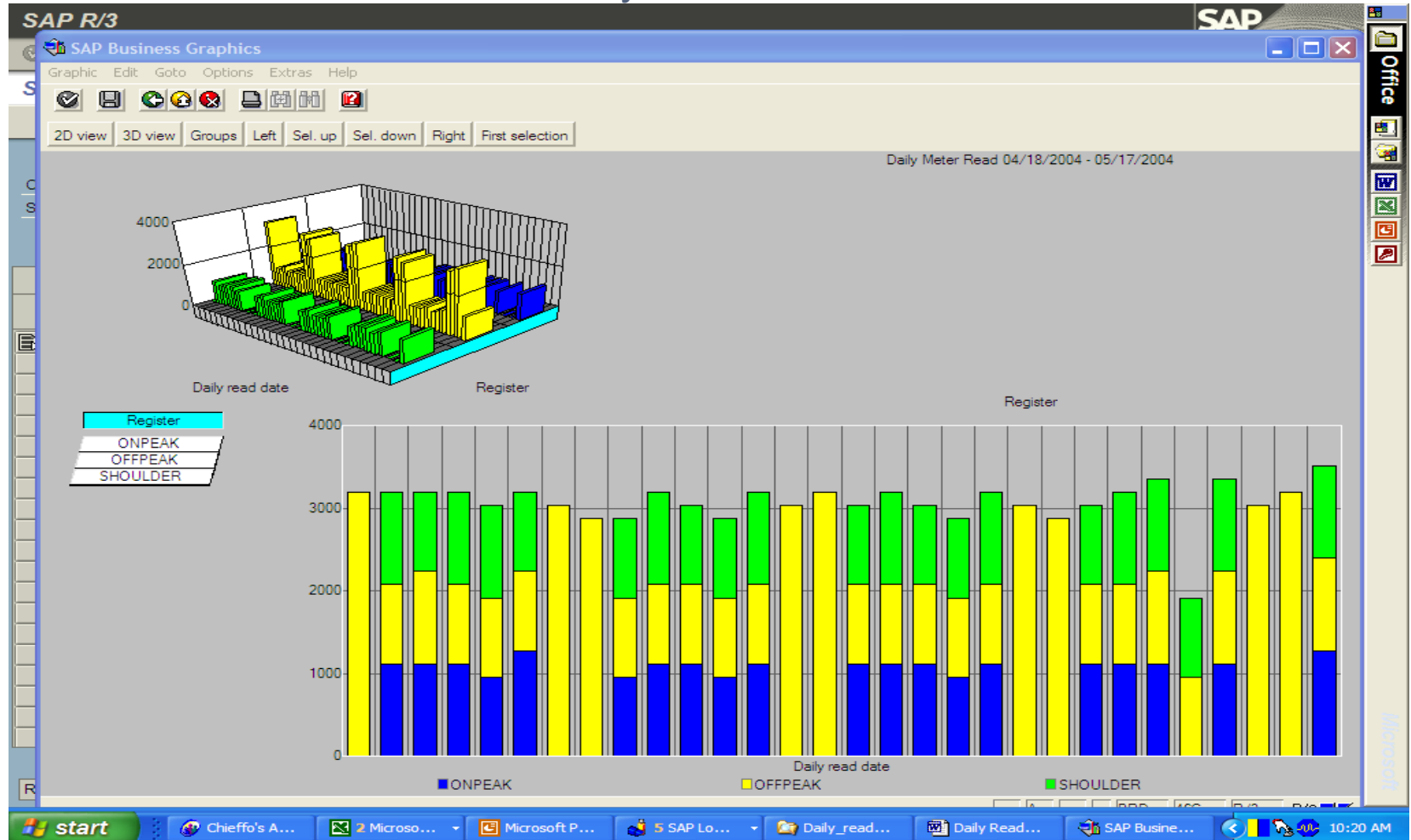
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Benefits - Customer

Daily Reads - kWh



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Provides Easy
Escalation
Channel

Benefits - Customer

Knowledge Base & Customer Self Service

Easy to Use
Search

FAQs Ask a Question My Profile

Customer Type **i** Residential **v** Topic **i** Billing **v** Search Text (optional) High Bill **v** Search **v** Search Tips **v** Powered by **RIGHT NOW**

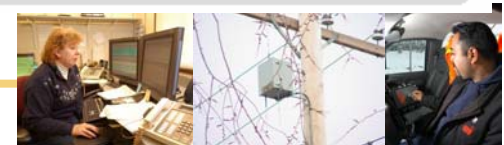
142 Answers Found Page: 1 **v** of 10 **v** Go **v**

	Summary
1	Have a question about your online bill?
2	Why does UI have to obtain a new generation contract?
3	Is there information available for consumers regarding energy related topics in Connecticut?
4	What can I do to help offset the coming price increase?
5	Why is my electric bill so high?
6	How do I enroll in UI's online bill payment?
7	How do I start service with UI?
8	I need more time to pay. What are my options?
9	How can I save money on my home energy costs?
10	Where can I pay my bill in person?
11	How can I contact UI?
12	Why did my bill due date change?
13	Can I pay by debit card or credit card?
14	How do I transfer my service?
15	What payment options are available?

Order Based
on Historical
Usefulness

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October 18, 2006



Benefits - Customer

What If Bill – Bill Comparison

What-If Billing Simulation SAP

Contract Acct: 100000137704
Customer Name: CHIEFFO, RALPH
Service Address: 15 COUNTRY WAY NORTH HAVEN CT

Current Rate: RESIDENTIAL/RATE R
Simulated Rate 1: RES. OFF PEAK/RATE A
Simulated Rate 2: RS TIME OF USE/RATE
Simulated Rate 3:

Simulation Results

From date	To date	Total days	Consumption	RESIDENTIAL/RATE R	RES. OFF PEAK/RATE A	RS TIME OF USE/RATE ...
03/26/2005	04/27/2005	33	611	78.26	77.80	71.37
02/25/2005	03/25/2005	29	670	85.02	84.11	77.46
01/27/2005	02/24/2005	29	718	90.51	89.28	82.39
12/23/2004	01/26/2005	35	876	108.61	106.25	98.74
11/23/2004	12/22/2004	30	815	101.62	99.70	92.41
10/21/2004	11/22/2004	33	774	96.92	95.29	88.21
09/22/2004	10/21/2004	30	629	83.76	82.96	79.68
08/24/2004	09/21/2004	29	575	83.36	83.86	87.24
07/28/2004	08/23/2004	27	801	118.60	111.98	118.28
06/25/2004	07/27/2004	33	856	127.18	118.87	125.83
05/27/2004	06/24/2004	29	605	86.24	85.81	87.80
04/27/2004	05/26/2004	30	558	72.18	72.11	65.91

Comparison Rate Difference (%):
RESIDENTIAL/RATE R \$ 1,132.26
RES. OFF PEAK/RATE A \$ 1,108.02 2.14%
RS TIME OF USE/RATE \$ 1,075.32 5.03%
\$ 0.00 0.00%

Simulation of contract 3000576313 completed with document number 4000012186

start | Andrea Chieffo ... | SAP Logon F... | Selective New P... | Microsoft Excel ... | Microsoft Power ... | 9:16 AM

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Benefits - Customer

Jon Doe ([My Accounts](#)) [\(Update Profile\)](#) Service details at:
Account #: 1234567 123 Something Ave, City Name, ST 12345

Bill Center

Welcome! Review your bill, your energy usage and factors that caused changes from your last bill.

Account Summary

Account Summary
1234567 [View Bill](#)

Account Status as of 10/26/2004
Last Payment
Received 9/12/2004 - Thank you! - \$197.65

Account Balance **\$218.33**
[Payment History](#) [Make Payment](#)

Bill Summary ending 9/12/2004
Previous balance \$0
Total current charges \$218.33
Amount Due 10/31/2004 **\$218.33**

Get notification of your bills through email and pay your bills online. [Register for e-billing.](#)

Promote TOU and Conservation programs

Time-Of-Use Program
Learn more about our new time-of-use program and how you can sign up.

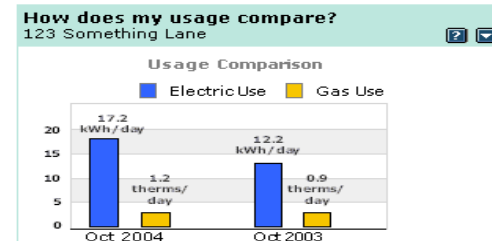
Load Shift Calculator
Identify numerous options to shift your energy usage to lower cost periods.

How did weather, rate, appliance or lifestyle changes affect my bill?

Bill Highlights
123 Something Lane

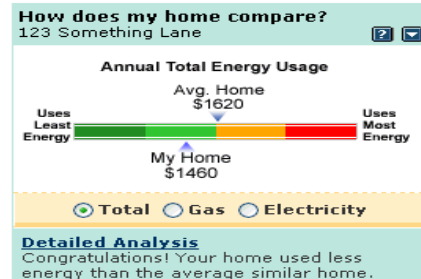
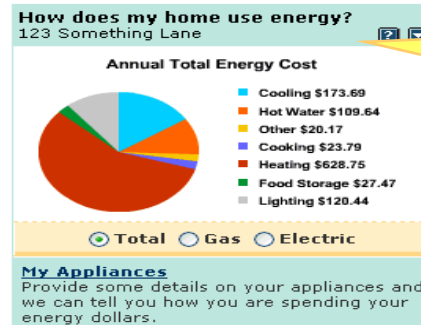
- The **weather** increased your bill \$13 - \$22.
- Other **"non-energy"** charges totaling \$###.## are included in this bill.
- An estimated gas reading was used for this bill.
- Your **gas usage** increased for this bill.

Bill Analysis
How did the weather affect my bill?

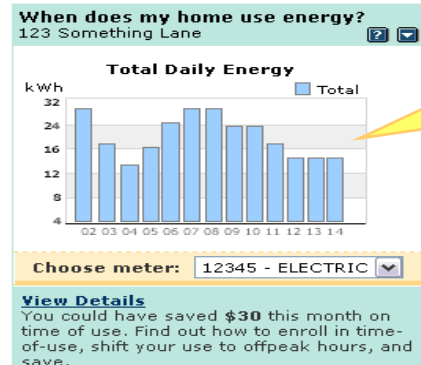


Bill History
View up to 18 months of bills and usage graphs...

How did my home/facility use energy?

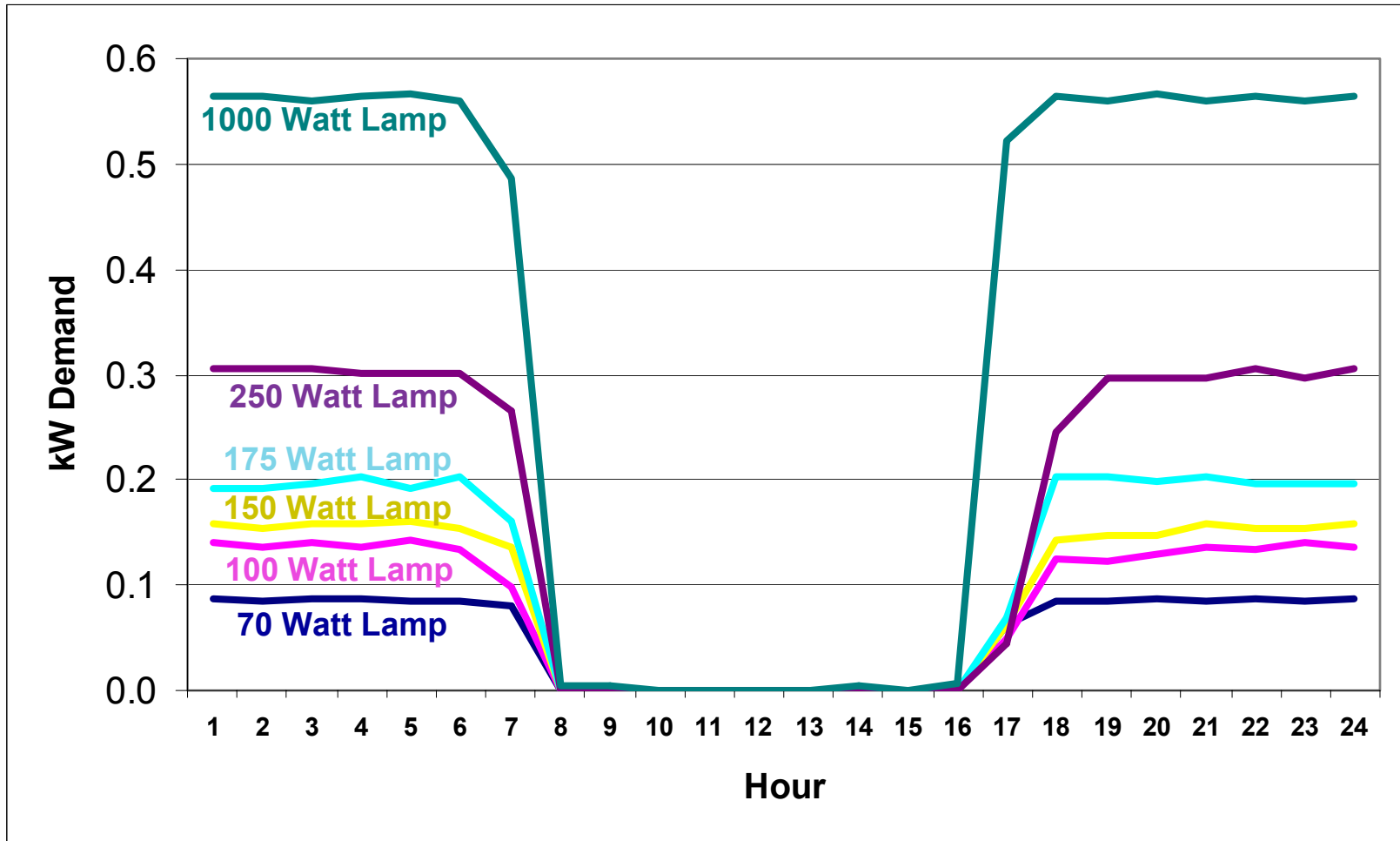


Leverage NMR data to provide load analysis.



Benefits - Customer

Average Measured Streetlight Energy



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Revenue Protection

■ Revenue Protection Drivers

- Rising Energy Costs
- Obligation to Ratepayers, Stockholders, Suppliers, and Employees
- Improved Data and Theft Detection Technology
- Increase in Unbilled Usage as a Result of Virtual (Soft) Disconnects

■ It Makes Good Business Sense

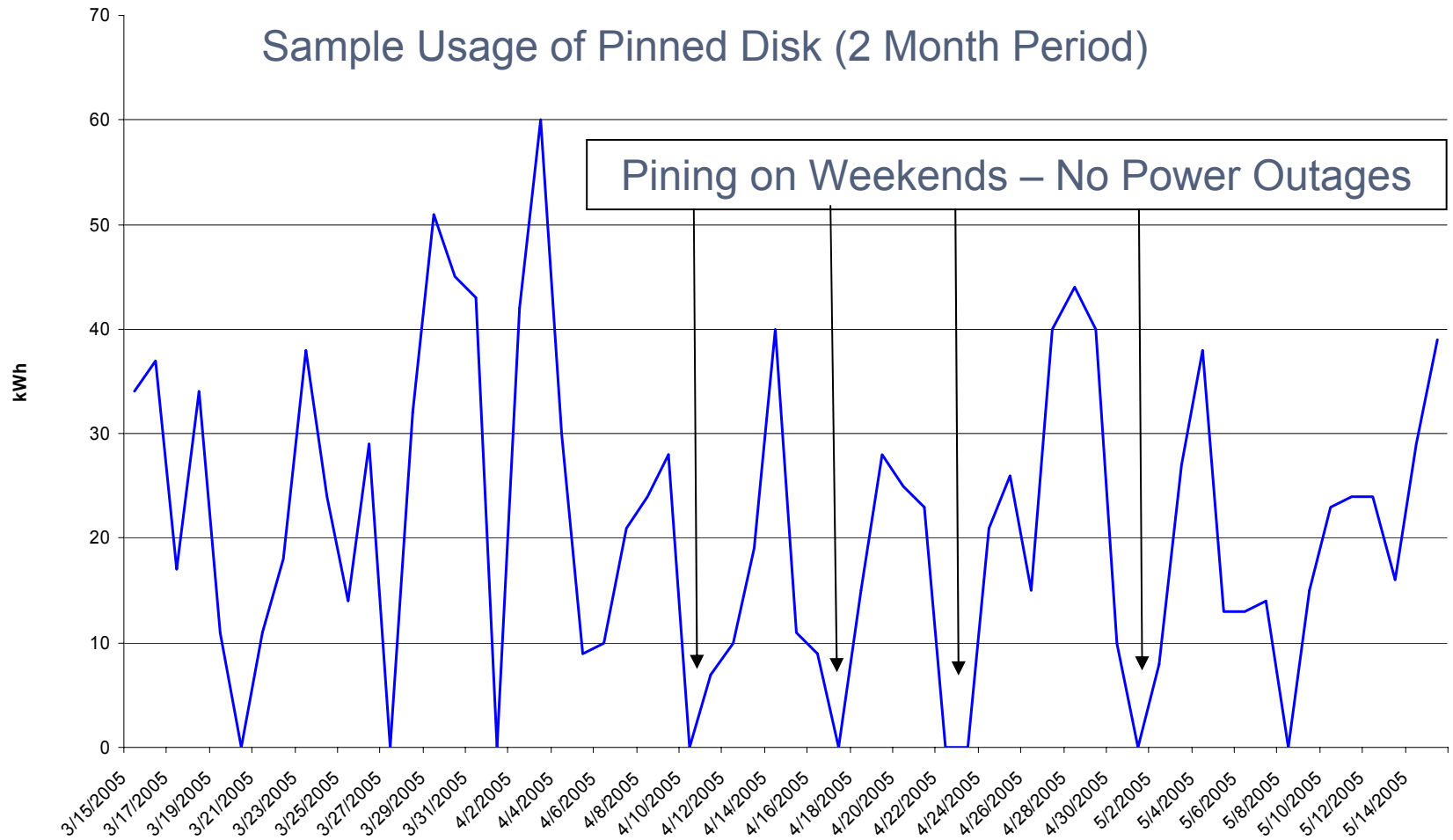
- Helps Prevent Safety Hazards for Public Service Agencies
- High Return on Investment (ROI) – 245.14% 2006 (YTD)
- Protects Against Fraud
- Detects Theft Occurrences
- Assists in Reducing Uncollectibles

■ What Needs to be Done?

- Need to Focus on Revenue Protection (Staffing, Data Mgmt, Remote Disconnect)
- Need for Legislative and Regulatory Changes
- Need to Share Best Practices Among Utilities
- Support & Participate in NURPA & IURPA
- Increase Revenue Protection Staffing Levels



Revenue Protection



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Revenue Protection

UI Network Meter Reading Reporting System - [Illegal Usage]

File Edit Insert Records Window Help

Main Menu

Illegal Usage Tracking Form

Review Load Dates Run Physical Disconnect Report Close

Lookups and Filters

Device Lookup: Buss Part Lookup: POD (CIS Acct #): Contr Acct Lookup:

Status Filter: New City Filter: Clear Filters

Account Type Filter: Disconnect Date Filter: Usage Filter: Equal or > than 500

Establish Detection Parameters

Usage Since Service Disconnected

Device ID	Buss Part	POD (CIS Act #)	Contract Act	Buss Part Name	Buss Part Address	City	Service End Dt	Disco Read	Cur Read	Mtr Con	Total Usage	Type	Status	Comments
014025889	2000554979	218-0040736-020	100000601873			BRIDGEPORT	05/30/06	3589	5213	1	1624	VIR	New	
014021351	2000563453	183-0012311-023	100000616113			EAST HAVEN	11/18/05	49279	54743	1	5464	VIR	New	
014016699	2000564952	193-0020220-021	100000616783			MILFORD	06/13/06	2934	3260	40	13040	VIR	New	
015045860	2000326524	152-0025169-026	100000657864			HAMDEN	05/23/06	11770	12395	1	625	VIR	New	
079633491	2000302085	216-0081439-027	100000462004			BRIDGEPORT	01/31/06	5944	7032	1	1088	VIR	New	
054136139		218-0015698-020				BRIDGEPORT	12/10/02	7805	32614	1	24809	VIR	New	
017712018		195-0028775-020				MILFORD	12/02/04	0	7668	1	7668	PHY	New	
082472729		193-1011718-001				MILFORD	12/10/02	1675	5995	1	4320	VIR	New	
014011440		218-1010280-001				BRIDGEPORT	03/02/05	1307	20495	1	19188	VIR	New	
014022822	2000373651	161-0013899-020	100000017682			NORTH HAVEN	12/01/05	4862	7182	1	2320	VIR	New	
015038246	2000122812	212-0051473-032	100000167363			BRIDGEPORT	09/06/05	28498	31693	1	3195	VIR	New	
016030386	2000125724	216-0067198-033	100000679468			BRIDGEPORT	08/16/06	3693	4373	1	680	VIR	New	
014016366	2000275662	211-0025142-021	100000289684			BRIDGEPORT	09/29/06	1196	1276	80	6400	VIR	New	
072358784	2000497789	112-0034392-023	100000678589			NEW HAVEN	08/01/06	11323	12561	1	1238	PHY	New	
014025094	2000187973	154-0018390-022	100000246220			HAMDEN	05/26/05	12798	21285	1	8487	VIR	New	
015029116	2000550812	211-0069998-024	100000592382			BRIDGEPORT	08/03/06	25739	26550	1	811	VIR	New	
015056907	2000507495	124-0029652-031	100000525352			WEST HAVEN	06/06/05	18811	24695	1	5884	PHY	New	
084569516	2000566683	124-0029878-025	100000619528			WEST HAVEN	07/31/06	16070	17266	1	1196	VIR	New	
015064083	2000367836	217-0043623-030	100000419701			BRIDGEPORT	10/22/05	20164	25631	1	5467	VIR	New	
015028241	2000105354	212-0043885-028	100000148892			BRIDGEPORT	09/07/06	84039	84737	1	698	VIR	New	
015058159		111-0024384-031				NEW HAVEN	05/02/04	7202	14774	1	7572	VIR	New	
091392253	2000562272	117-0020444-023	100000614959			NEW HAVEN	12/20/05	23732	30499	1	6767	VIR	New	
063252319	2000157719	213-0014674-025	100000577513			BRIDGEPORT	05/01/06	28269	29074	1	805	VIR	New	
016020887	2000247465	217-0002305-022	100000301549			BRIDGEPORT	07/17/06	20748	21647	1	899	VIR	New	
087168125	2000566427	215-0076762-024	100000618515			BRIDGEPORT	08/03/06	43624	45828	1	2204	VIR	New	
014001977	2000385826	122-0005743-023	100000047102			WEST HAVEN	09/18/06	4487	4531	40	1760	VIR	New	
096497162	2000409743	262-0004257-021	100000018868			ANSONIA	01/03/06	28163	29587	1	1424	VIR	New	
061685571	2000256255	114-0037018-023	100000278389			NEW HAVEN	06/30/06	56464	57065	1	601	VIR	New	
034543109	2000274016	116-0024334-026	100000238807			NEW HAVEN	07/14/06	32272	32778	1	506	VIR	New	

Total Number of Meters: 912

Start George Balsamo ... NURPA 2006 Interaction Center Interaction Center UI Network Me... Microsoft Power... Desktop 2:24 PM

Identify Virtual vs. Physical Disconnect

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October 18, 2006

25

Revenue Protection

Man stole 14 years' worth of power, utility claims

By MATTHEW HIGBEE
mhigbee@ctpost.com

ANSONIA — For 14 years, a former city man tapped into a United Illuminating Co. power line, diverting tens of thousands of dollars in free electricity to his home and

garage, power company officials say.

██████████, 49, of East Haven, stole \$36,136 in power since 1992, UI spokesman Al Carbone said Tuesday.

██████████, who Carbone said has a background as an

electrician, escaped the utility's attention until an anonymous tip to the company led to an investigation.

██████████ was arrested on a warrant charging him with first-degree larceny.

On Feb. 8, 2006, UI investigators and Ansonia police exe-

cuted a search-and-seizure warrant at ██████████ former home on Kathy Lane in Ansonia.

Tracing the power line from the utility pole, authorities found a breaker panel on the side of the house, where ██████████ had allegedly tapped in

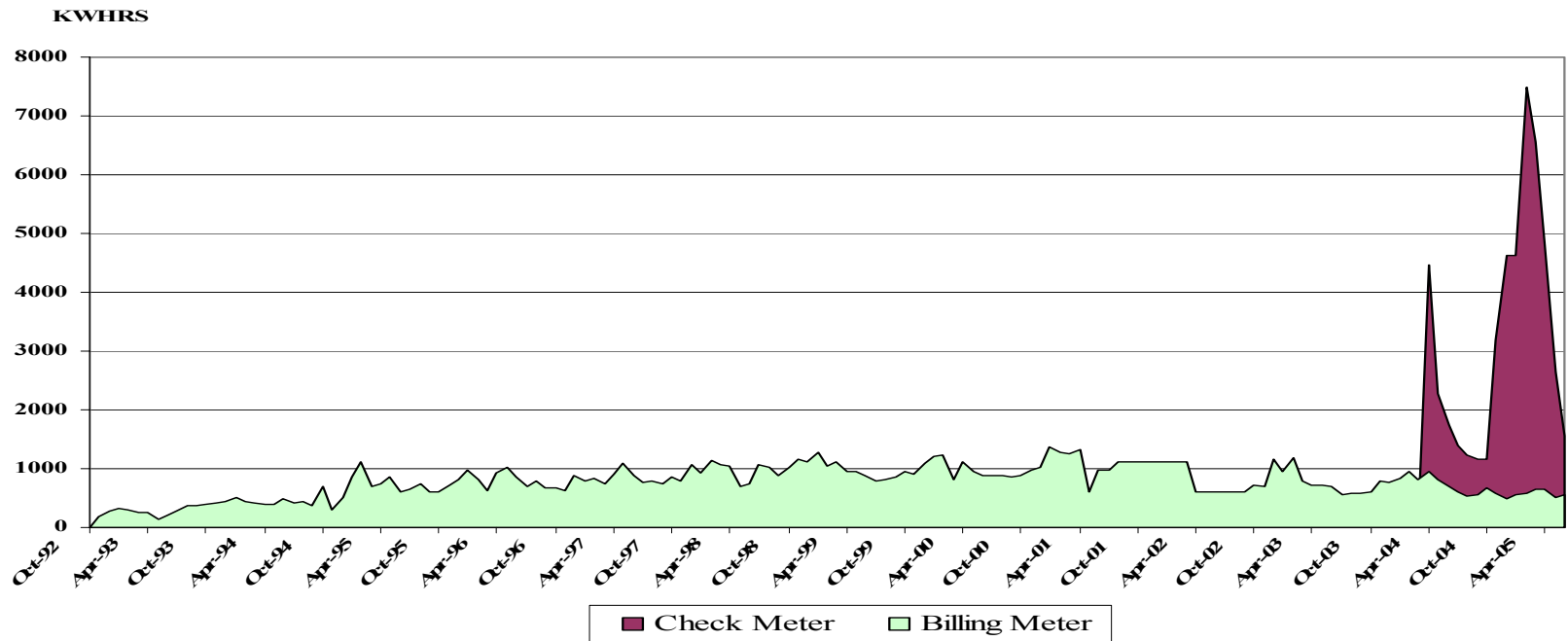
ahead of the electric meter, Carbone said.

The unmetered electricity from the breaker panel supplied power for heat and air conditioning in the house, as well as a detached garage with

► Please see **POWER** on A6

Consumption History

Exhibit 4

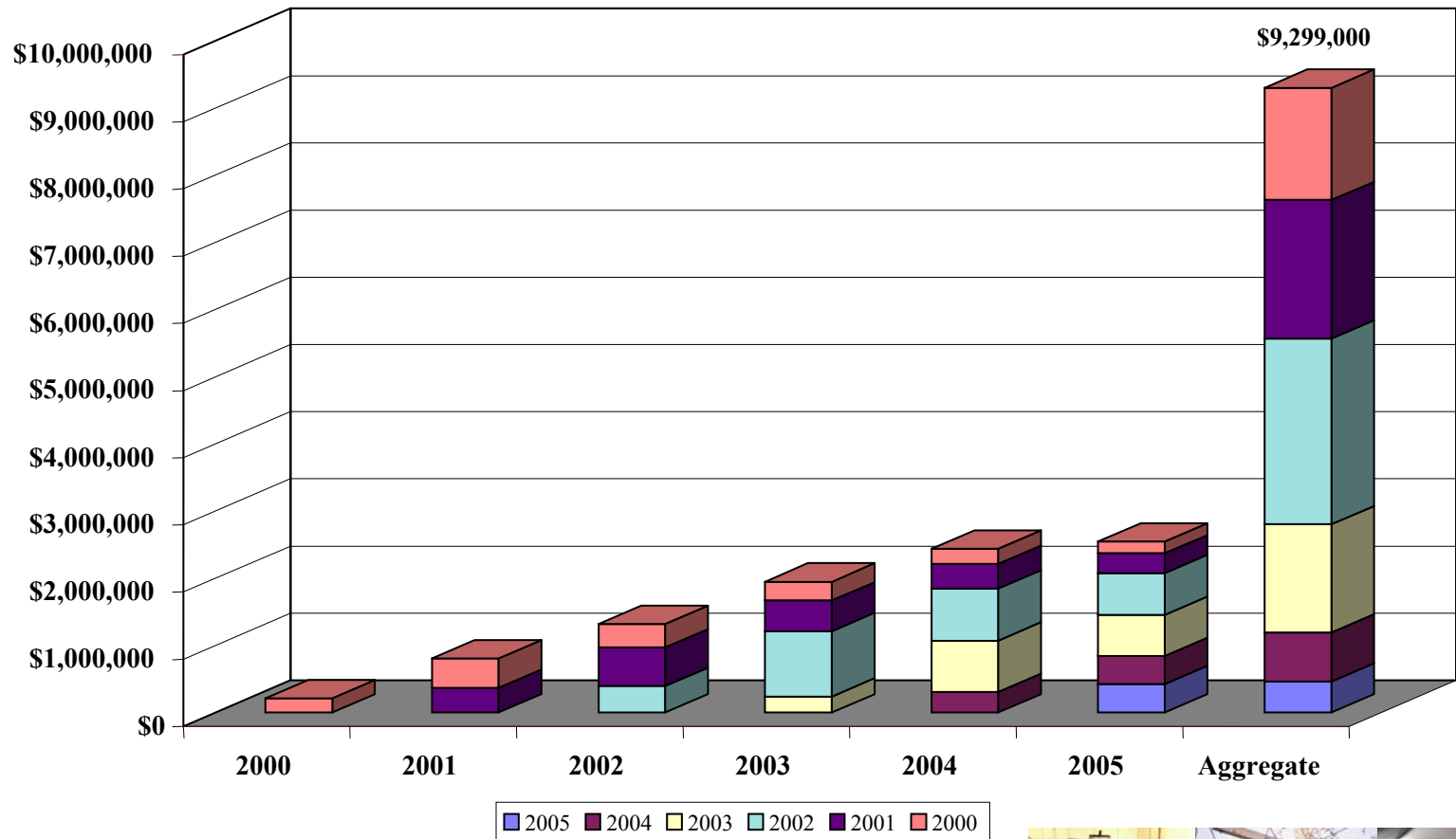


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Revenue Protection

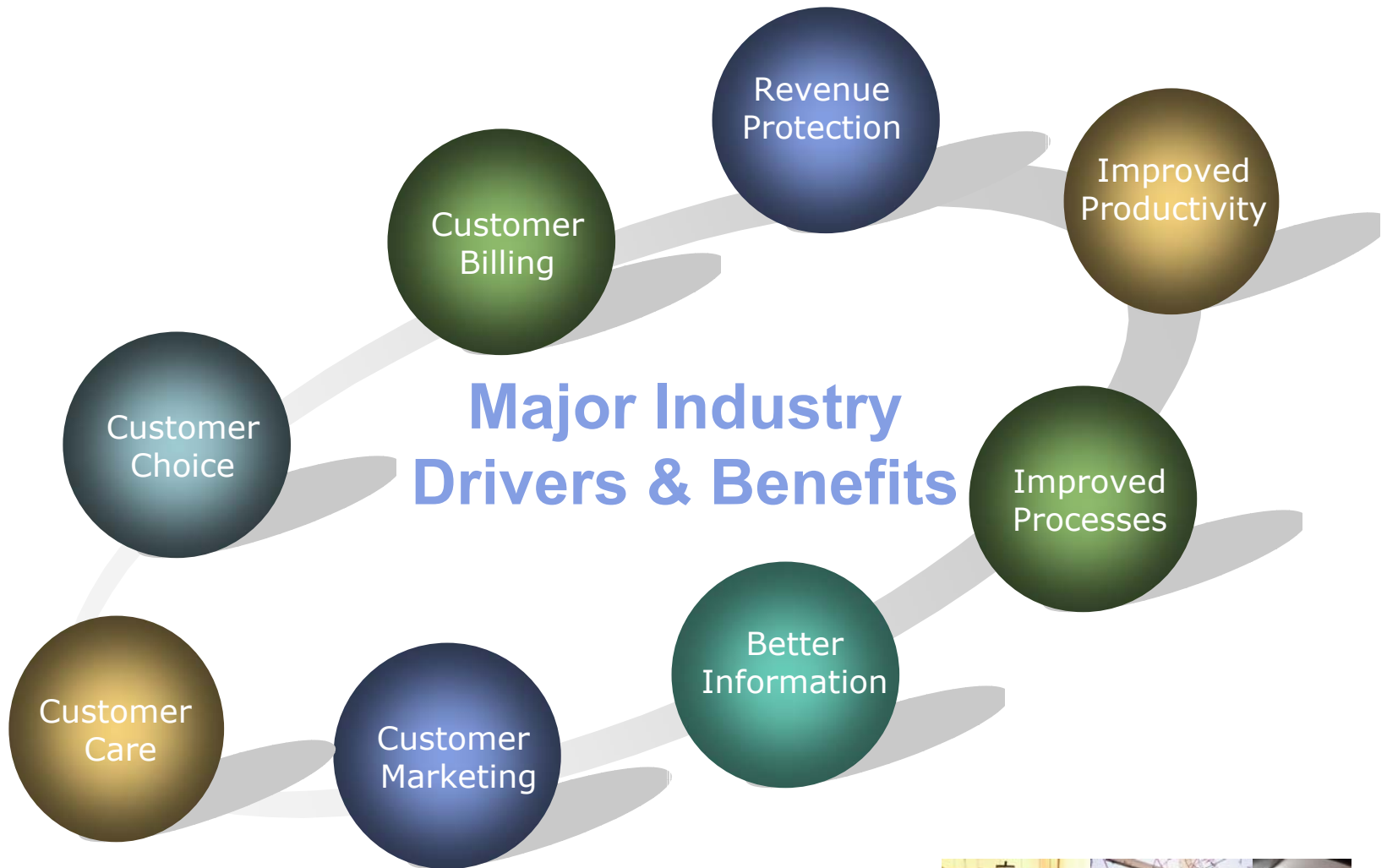
Aggregated Revenues
2000-2005



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Overall Benefits



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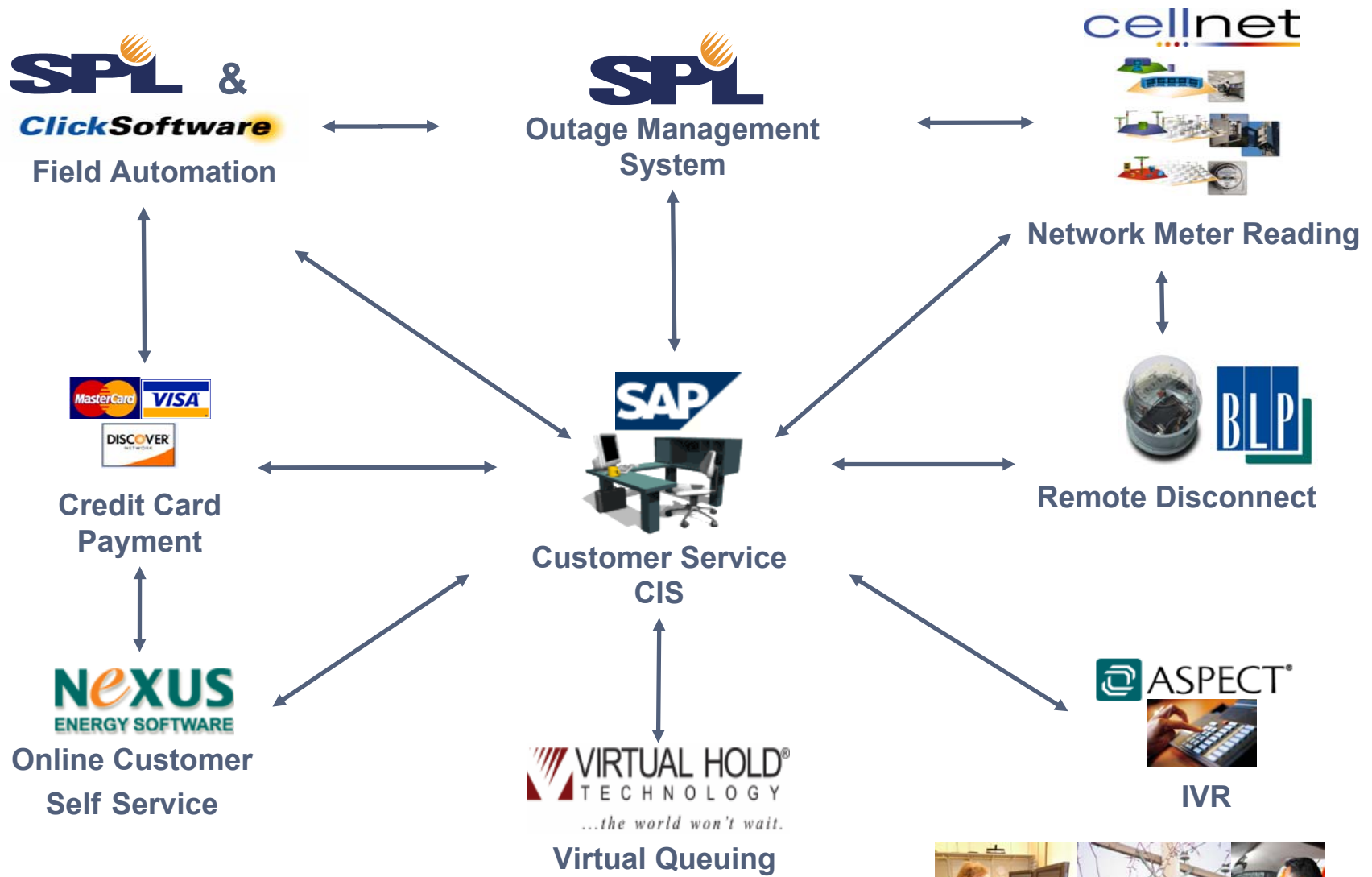


Future Technology Utilization

- **Credit Card Payments**
 - Phone, Web, Field
- **Outage Management System**
 - Improved Power Restoration Process
 - Enhanced Outage Information & Accessibility
- **Street Light Management System**
 - Automate Street Light Failure Detection
 - Improve Asset Management & Location of Assets
- **Increase Customer Self Service Functionality**
 - Connect Process – Contractor/Inspector/Homeowner
 - Full Service – Move In/Move Out, Update Acct Information, etc.
- **Increase Conservation Initiatives**
 - TT, Education, Solar
- **Improve Transformer Load Analysis**



Technology Platform



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Questions

Customer Service



Integration

People

Planning

Persistence

innovation



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