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STEPHEN ABELL DEXTER

OF COUNSEL
ELIZABETH NICKELS LENN

RETIRED
JAMES G. SHEEHAN, JR

September 21, 2009

RECEIVED
SEP 22 2009
PUBLIC SERVICE COMMISSION

Mr. Jeff Derouen
Executive Director
Kentucky Public Service Commission
211 Sower Boulevard
Frankfort, KY 40601

Re: Case No. 2009-00143

Dear Mr. Derouen:

Please find enclosed an original and (7) copies of the responses to the Second Data Request of Commission Staff to Inter-County Energy Cooperative in Case No. 2009-00143 dated September 8, 2009.

Please advise if additional information is required.

Very truly yours,

James William Barnett
Counsel for Inter-County Energy Cooperative Corporation

INTER COUNTY
ENERGY COOPERATIVE

A Touchstone Energy® Cooperative

RECEIVED
SEP 22 2009
PUBLIC SERVICE
COMMISSION

CASE NO. 2009-00143

Responses To
Second Data Request of Commission Staff To
Inter-County Energy Cooperative Corporation

September 21, 2009

P. O. Box 87 • Danville, KY 40423-0087 • (859) 236-4561

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

APPLICATION OF INTER-COUNTY ENERGY COOPERATIVE FOR A CERTIFICATE OF CONVENIENCE AND NECESSITY PURSUANT TO KRS 278.020(1) AND 807 KAR 5:001, SECTION 9, AND RELATED SECTIONS, AUTHORIZING CERTAIN PROPOSED CONSTRUCTION IDENTIFIED AS THE 2009-2012 CONSTRUCTION WORK PLAN	)	CASE NO. 2009-00143

RESPONSES TO

SECOND DATA REQUEST OF COMMISSION STAFF TO INTER-COUNTY ENERGY COOPERATIVE

1. In its response to question 1 of the Commission Staff's first data request ("Staff's First Request") Inter-County states that "Board of Directors, staff and management have been reviewing various AMR vendors and asked for vendor quotes, as well as quotes for meter testing and meter change outs."

   a. What are the specifications that Inter-County has given the vendors regarding the AMR meters it plans to purchase? Explain in detail.

Response:

For the AMR vendors a "Points of Interest AMI questionnaire" along with GPS points for each of our members was sent to the following vendors: Cannon/Cooper, Elster, Sensus, Aclara (the GPS points were not sent to Aclara), Landis+Gyr radio system, Landis+Gyr Power line carrier system, and Tantalus systems. A copy of the "Points of Interest AMI Questionnaire" is attached as "Exhibit A" (3-pages).

Inter-County Energy ("ICE") received the questionnaires back from Cannon, Aclara, Tantalus, and Landis+Gyr, from which a comparison sheet was generated and the functionality of the systems was assessed. Presentations were made by Elster, Cannon/Cooper, Aclara, and Landis+Gyr, both power line carrier and radio. A copy of the comparison sheet is attached as "Exhibit B" (2-pages).

Therefore, specifications for AMR were not given. Instead, the vendors were asked to provide the functionality of their systems from which we could evaluate which system best suited ICE's needs.

As for the AMR meter choice, the AMR system chosen drives what is available from the various meter manufacturers. Here again, specifications were not written for the various AMR meters, but rather the meter functionality that best fits the needs of the cooperative.

b. Identify all vendors contacted by Inter-county regarding the supply of AMR meters. Include in your response a copy of all materials supplied by the vendors detailing the specific equipment to be supplied.

Response:

The vendors contacted are listed above. Presentations were given by Elster, Cannon/Cooper, Aclara, and Landis+Gyr. Based upon the functionality and the communications methods from the "Points of Interest AMI Questionnaire" and the presentations, management and staff were in agreement to focus our attention to the Aclara and Landis+Gyr systems. Site visits were made to review Aclara installed at Taylor County RECC and Tri County REMC. ICE also visited Blue Grass Energy and Win Energy, located in Vincennes, IN, to view the Landis+ Gyr/Hunt system. On August 13, 2009 during an Executive Staff Meeting, management and staff were in agreement to select the Landis+Gyr/Hunt system.

Attached is a spreadsheet labeled "Exhibit C", which details the materials that would be involved in the installation of both the Aclara and Landis+Gyr systems. Also attached, labeled "Exhibit D", are copies of the information provided by the vendors. Due to a confidentiality agreement signed with Landis+Gyr/Hunt system and emails with confidentiality disclosures, some items or information has been omitted.

2. The response to question 3 of Staff's First Request provided detailed information with respect to the capabilities of the new AMR meters at implementation.

a. Beyond its installation of the AMR equipment, describe what plans, if any, Inter-County has for future installation of Advanced Metering Infrastructure ("AMI").

Response:

With various functionalities of "AMI" circulating the industry, ICE has the opinion that many of these technologies, such as in-house display, smart appliances, and distribution automation are still in the developing stage.

Though not included in our recent Long Range Plan, it is the intent of ICE to continually monitor available technologies. Load control for example, is being implemented by various Kentucky cooperatives and East Kentucky Power. Remote connect/disconnect, pre-pay billing, time of use or real time pricing will be options that we would later review.

b. Explain if additional equipment would be needed to complete the plans identified in response to a. above. If additional equipment would be necessary, state whether the AMR meters as proposed would have to be replaced to complete these plans. Explain.

Response:

With the system ICE has chosen, of the technologies listed in the previous question, In-house display is available with "Zigbee" technology, at a cost multiplier of 2.86 of the base AMR meter. Load control costs are independent of the system and will be an additional cost regardless of the base AMR meter.

For remote connect/disconnect, this would also be an additional cost regardless of the AMR meter. Though they do manufacture meters with integrated disconnect, such meters are 6.4 times the cost of the base meter. Not knowing how many would be needed or where they would be placed, a separate disconnect collar would be a later option.

For pre-pay billing, the chosen system would allow for such billing, but would be at an additional cost of a third party software vendor whose pricing is currently unknown. Time of use is available with the current system for up to 4 times of use daily rates along with seasonable schedules. Real time pricing is available with this system but would require replacing the base meter at a cost multiplier of 3.31.

The cost multipliers used are based upon confidential prices provided from the vendor and only reflect the base cost of the AMR meter and module.

3. Section 3-B1 of the Construction Work Plan shows an average meter replacement cost between $180 and $203.

a. If known, identify and describe any future upgrades that will be necessary to implement the AMI plan described in the response to 2.a. of this request.

Response:

No future upgrades are planned. Review of other advances will most likely take place in 2012, at which time upgrades, rates, regulations, and consumer demands will drive ICE's decision.

b. If known, provide the cost difference between the AMR meters as proposed in the application and those that would be considered the most advanced AMI meters currently available. Also, if known, provide the cost difference between the proposed AMR meters and those AMI meters that are capable of providing the functions required to meet Inter-County's AMI plan, but are not considered the most advanced AMI meters available. If the AMR meters proposed by Inter-County are not the most advanced available, explain why Inter-County is not proposing more advanced meters.

Response:

Being unsure what "the most advanced AMI meters currently available" are, ICE will base its answer on the most functional meter that the selected vendor has to offer. From the pricing quoted, the most functional meter offered would be over 6 times the base AMR meter cost.

For the technologies reviewed, ICE management and staff believe the system chosen will satisfy our member's needs. If laws, technology, or costs indicate a system upgrade or replacement is warranted, ICE will take appropriate measures to comply.

Marvin Graham, being duly sworn, states that he has prepared the responses to the Second Data Request of Commission Staff to Inter-County Energy Cooperative in Case No. 2009-00143, dated September 8, 2009, and that the matters and things set forth therein are true and accurate to the best of my knowledge, information and belief, formed after reasonable inquiry.

Marvin Graham, Vice President-Operations
Inter-County Energy Cooperative Corporation

Subscribed and sworn to before me by Marvin Graham as Vice President-Operations of Inter-County Energy Cooperative Corporation this 21st day of September, 2009.

NOTARY PUBLIC
STATE OF KENTUCKY
COUNTY OF BOYLE

My Commission Expires 7/15/2013

James William Barnett
Counsel for Inter-County Energy Cooperative Corporation
114 South Fourth Street – Danville, KY 40422
Telephone: (859) 236-2641 / Fax: (859) 236-1483

David Phelps, being duly sworn, states that he has prepared the responses to the Second Data Request of Commission Staff to Inter-County Energy Cooperative in Case No. 2009-00143, dated September 8, 2009, and that the matters and things set forth therein are true and accurate to the best of my knowledge, information and belief, formed after reasonable inquiry.

David L Phelps

David Phelps, System Engineer
Inter-County Energy Cooperative Corporation

Subscribed and sworn to before me by David Phelps as System Engineer of Inter-County Energy Cooperative Corporation this 21st day of September, 2009.

Cynthia Luttrell

NOTARY PUBLIC
STATE OF KENTUCKY
COUNTY OF BOYLE

My Commission Expires 7/15/2013

James William Barnett
Counsel for Inter-County Energy Cooperative Corporation
114 South Fourth Street – Danville, KY 40422
Telephone: (859) 236-2641 / Fax: (859) 236-1483

EXHIBIT A

Inter County Energy
Points of Interest
AMI Questionnaire

	YES	NO	DESCRIPTION
COMMUNICATIONS			
Power Line Carrier			
Mesh network			
Licensed Radio			
frequency			
Unlicensed Radio			
frequency			
Pager			
Other			
FUNCTIONALITY			
KWH			
Demand			
Real Time Pricing			
Net-Metering			
Forward			
KWH			
KW			
Reverse			
KWH			
KW			
Both			
KWH			
KW			
TOU			
Multiple KWH & KW			
Number of Seasons			
Number of Daily Intervals			
Meter Storage Capability			
Connect/Disconnect			
1PH			
3PH			
Outage Notification			
Notification Time			
Notification Accuracy			
Outage Verification			
Verification Time			
Voltage Monitoring			
% Tolerance			
3 phase availability			
Remote Display			
KWH usage			
Inst KW			
KWH/KW cost			
Billing Period Total Cost			
Real Time Pricing			
3 phase availability			
Load Management			
# of relays/points			
Relay sizes available			
Prepay Capability			
Substation Identification			
Feeder Identification			
Phase Identification			
Multi-Utility			
Gas			
Water			

EXHIBIT A

VENDER GENERAL INFORMATION			
# Of customers			
# Of endpoints sold			
Nearest Customer to Inter County			
# of Support Staff			
Years in business			
Hours of available support staff			
SOFTWARE			
Web Based			
Server Based			
Network functional			
Stand Alone Software			
Multi-Speak compliant			
Multi-level security			
INTEGRATION			
IVR			
OMS			
CIS			
Mapping			
METER COMPATIBILITY 1PH & 3PH			
ABB			
ELSTER			
GE			
ITRON			
LANDIS + GYR			
SENSUS			

EXHIBIT A

Inter County Energy
Facts Sheet

1. 24,000 residential members
2. 1,300 commercial accounts
3. 3,330 mile of overhead primary and secondary line
4. 360 mile of underground primary and secondary line
5. Territory covers an area 50 miles N to S and 100 miles E to W and includes these counties: Lincoln, Marion, Garrard, Boyle and parts of Casey, Larue, Madison, Mercer, Nelson, Rockcastle, Taylor, and Washington.
6. Electrical distribution only, no transmission, no water, no gas
7. Wholesale Power Supplier: East Kentucky Power
8. Terrain is primarily rolling hills and valleys.
9. C.E.O. - Jim Jacobus
   VP Finance and Accounting - Vickie Lay
   VP Operations - Marvin Graham
   VP Customer Services - Sheree Gilliam
10. Installation Time Frame - Jan. 2010 thru Dec. 2011

EXHIBIT B

Inter County Energy
Points of Interest

	Canon		Aclara		Tantalus		Landis + Gyr / Hunt	
	Yes	No	Yes	No	Yes	No	Yes	No
COMMUNICATIONS								
Power Line Carrier	X		YES			X	X	
Mesh network					Y		X	
Licensed Radio					Y			X
frequency					220			
Unlicensed Radio					Y		X	
frequency					900			
Pager	X					X		X
Other	X							X
FUNCTIONALITY								
KWH	X		Yes		Y		X	
Demand	X		Yes		Y		X	
Real Time Pricing	X		Yes		Y		X	
Net-Metering	X				Y		X	
Forward	X		Yes				X	
KWH	X		Yes				X	
KW	X		Yes				X	
Reverse	X		Yes				X	
KWH	X		Yes				X	
KW	X		Yes				X	
Both	X		Yes				X	
KWH	X		Yes				X	
KW	X		Yes				X	
TOU	X		Yes		Y		X	
Multiple KWH & KW	X		Yes				X	
Number of Seasons	X		Yes				X	
Number of Daily Intervals	X		?				X	
Meter Storage Capability	X		Yes					
Connect/Disconnect	X						X	
1PH	X		Yes		Y		X	
3PH	X		No			X		X
Outage Notification	X		Yes		Y		X	
Notification Time	X		Yes				X	
Notification Accuracy	X						X	
Outage Verification	X		Yes		Y		X	
Verification Time	X						X	
Voltage Monitoring	X		Yes		Y		X	
% Tolerance	X		Yes		1		X	
3 phase availability	X		Yes				X	
Remote Display	X				Y		X	
KWH usage	X		Yes				X	
Inst KW	X		No				X	
KWH/KW cost	X		Yes				X	
Billing Period Total Cost	X		Yes				X	
Real Time Pricing	X		No				X	
3 phase availability	X		No				X	
Load Management	X				Y		X	
# of relays/points			Yes		3		X	
Relay sizes available			Yes		30A			
Prepay Capability	X		Yes				X	
Substation Identification	X		Yes				X	
Feeder Identification	Possible		Yes				X	
Phase Identification	X		Yes				X	
Multi-Utility			Yes				X	
Gas	Future		Yes				X	
Water	X		Yes				X	

EXHIBIT B

VENDER GENERAL INFORMATION								
# Of customers			299					
# Of endpoints sold			> 5 Millior					
Nearest Customer to Inter County							X	
# of Support Staff			30					
Years in business								
Hours of available support staff								
SOFTWARE	X							
Web Based	X		No		Y		X	
Server Based	X		Yes		Y		X	
Network functional	X		Yes		Y		X	
Stand Alone Software	X		Yes		Y		X	
Multi-Speak compliant	X		Yes		Y		X	
Multi-level security	X		Yes		Y		X	
INTEGRATION			Yes					
IVR	X						X	
OMS	X		Yes		Y		X	
CIS	X		Yes		Y		X	
Mapping	X		Yes		Y		X	
METER COMPATIBILITY 1PH & 3PH								
ABB	X		Yes		Y	e/m only	X	
ELSTER	3PH		Yes		Y	e/m only	X	
GE	In Dev.		Yes		Y	1P/3P	X	
ITRON	X		Yes		Y	1P	X	
LANDIS + GYR	X		Yes			X	X	
SENSUS	X		No			X	X	

EXHIBIT C

SUBSTATION EQUIPMENT

	HUNT Description	Qnty	Unit Price	Total	TWACS Description	Qnty	Unit Price	Total
	SPU 3000 1 blade w fiber optic output	14			Control and Receiving Unit (Outdoor)	14		
	Blade Assy, w/o Fiber Optic output	29			Outbound Modulating Unit (One per Bus)	14		
	Blade Assy, Blank	41			High Density Feeder Panel	1		
	TCU, 1X (Single Configuration) <12MVA	7			Inbound Pickup Unit (One per Feeder)	43		
	TCU, 2X (Single Configuration) >12MVA	7						
	Transformers 75KVA 277/480	7			MUT with Fused Switch 150KVA/7.2KV	2		
	Transformers 75KVA 120/208	7			MUT with Fused Switch 150KVA/14.4KV	5		
					MUT with Fused Switch 225KVA/14.4KV	5		
					MTU with Fused Switch 300KVA/14.4KV	2		
	Misc. Switches, Conduit, Cable, ect.	14			Misc. Switches, Conduit, Cable, ect.	14		
	SUBSTATION TOTAL:							

METERS AND METER HARDWARE

modules	L+G Focus Endpoint (Solid State) - Integrated Type AL	12500			UMT-R-F Single Phase Module 240V FM2S	12500		
	L+G Focus Endpoint (Solid State) - not Integrated Type AX w Zigbee							
	L+G Focus Endpoint (Solid State) - not Integrated Type AX w/o Zigbee							
	Itron Centron Endpoint solid state state	12500			EMT-XM Module for Centron 240V FM2S	12500		
	L+G Polyphase Type S4 not intigrated							
	GE KV2/KV2C Polyphase Endpoint	250						
	Itron Sentinel Polyphase w/RTP				Poly Phase CMT Module any form 120-480V L1 Centron			
	Itron Sentinel Polyphase w/RTP and LC				Poly Phase UMT Module any form 120-480V KV2C	250		
meters	L+G Focus meter	12500			L+G Focus meter	12500		
	GE KV2C meter (estimated value)	250			GE KV2C meter (estimated value)	250		
	Centron Single Phase 2S CL 200 240V	12500			Centron Single Phase 2S CL 200 240V	12500		
	Sentinel Three Phase Level 1				Sentinel Three Phase Level 1			
	LG 3ph AXS4E				LG 3ph AXS4E			
	METERING TOTAL:							

SOFTWARE

	TS2 Command Center Software with MDM	1			TWACS Net Server Software (Free if purchased before end of August)	1		
	Remote Service Switch Funtionality within Command Center	1			ProAsys Outage Software	1		

Case No. 2009-00143

EXHIBIT C

Load Control Switch Functionality within Command Center	1		Optimum Interface Software (multispeak)	1
SQL Server 2008 standard edition	1			
SOFTWARE TOTAL:				

TRAINING AND IMPLEMENTATION

TS2 Project Management Services (See terms and conditions)	1		1st year Program Support & 4 Training classes	1
Orientation and First Substation Commissioning with Hunt Field Service Rep	1		1st year Software Support	1
Substation Optimization and Commissioning by Hunt Personel (per sub) optional	0			
On-site training with Hunt Personel for 3 days Optional	1			
Training Credits (# based on WebEx Classes or Classroom) required	32			
TS2 Command Center Introduction	6			
TS2 Command Center Advanced	3			
TS2 Substation Installation Certification Training	3			
TS2 Troubleshooting	3			
Travel	15			
TRAINING TOTAL:				

COMPUTER HARDWARE

Web and Application Server / blades	1		TNS Hardware Package for up to 50K meters	1
Database Server	1			
TOTAL COMPUTER HARDWARE:				

TOTAL EXTENDED PRICE LESS ANNUAL SUPPORT:

ANNUAL SUPPORT AND SOFTWARE AGREEMENTS

Based on 25, 450 TS2 deployed endpoints. Pricing is based on 2009 rates and is subject to change in 2011	1		Standard Support Level (20% Software Cost) Enhanced Support Level (28% Software Cost) Premium Support Level (40% Software Cost)	1

EXHIBIT C

ANNUAL SUPPORT FEE:					
FIELD TEST EQUIPMENT					
Commissioning Tools	1		STS Substation Test Set	1	
Feeder Study Kit	1		PRTU Portable Test Set	1	
Symbol HHP	1		RSRTU Stationary Test Set	0	
			PIA Interface Adapter	0	
TEST EQUIPMENT TOTAL:					
COMPANY LABOR INSTALL:					
Construction / yr (1 crew / week / sub)	14		Construction / yr (1 crew / week / sub)	14	
Maintenance / yr (Instr. Rated Change outs)	250		Maintenance / yr (Instr. Rated Change outs)	250	
Engineering / yr (2 eng / 20hrs/week for 50 weeks)	1		Engineering / yr (2 eng / 20hrs/week for 50 weeks)	1	
Member Services (IT 120 hrs)	1		Member Services (IT 120 hrs)	1	
COMPANY LABOR TOTAL			COMPANY LABOR TOTAL		
CONTRACT LABOR:					
Luthan Testing: Residential meters	25000		Luthan Testing: Residential meters	25000	
CONTRACT LABOR TOTAL			CONTRACT LABOR TOTAL		
COMMUNICATIONS:					
Unknown now	1		Unknown now	1	
COMMUNICATIONS TOTAL			COMMUNICATIONS TOTAL		
TOTAL INSTALLATION COST 1 YEAR COMPLETION TIME					

ACLARA

EXHIBIT D

CASE NO. 2009-00143

INTER COUNTY ENERGY AMI SOLUTION
TWACS by ACLARA
Presented by HD SUPPLY – UTILITIES
AUGUST 3, 2009

DESCRIPTION:	QTY	PRICE EACH	EXTENDED
SOFTWARE and HARDWARE:			
TNS Software package:			
TWACS Net Server Software	1		
ProAsys Outage Software	1		
Optimum Interface Software	1		
TNS Hardware Package for up to 50,000 meters	1		
1st Year Program Support & 4 Training classes	1		
1st Year Software Support	1		
SUBSTATION EQUIPMENT:			
Control and Receiving Unit (Outdoor)	14		
Outbound Modulating Unit (One per Bus)	14		
High Density Feeder Panel	1		
Inbound Pickup Unit (One per Feeder)	43		
MTU with Fused Switch 150KVA/7.2KV	2		
MTU with Fused Switch 150KVA/14.4KV	5		
MTU with Fused Switch 225KVA/14.4KV	5		
MTU with Fused Switch 300KVA/14.4KV	2		
Note: Transformers subject to CPI adder			
ELECTRIC METER MODULES:			
EMT-XM Module for Centron 240V FM2S	24,000		
UMT-R-F Single Phase Module 240V FM2S	100		
Poly Phase Module any form 120-480V L1	1,300		
METERS:			
Centron Single Phase 2S CL 200 240V	24,000		
Sentinel Three Phase Level 1	1,300		
OPTIONAL ITEMS:			
Disconnect Collar	50		
LCT Load Control Transponder	1		
IHD In Home Display	1		
STS Substation Test Set	1		
PRTU Portable Test Set	1		
RSRTU Stationary Test Set	1		

David Phelps

From: Stasalovich, Jessica L [HDS] [Jessica.Stasalovich@hdsupply.com]
Sent: Tuesday, August 04, 2009 11:49 AM
To: David Phelps
Subject: Twacs Pricing
Attachments: Inter County Energy TWACS Quote 8-3-09.doc

David-

Here is some of the info that you requested: (Please see the notes at the bottom)

TWACS Module Name	EMT-XM	UMT-R
Consumption		
Forward		☑
Reverse	☑	☑
Net	☑	☑
Secure		☑
Pulse Based	☑	
Mapped Registers		☑
History	☑	☑
Demand		
15 minute peak	☑	☑
30 minute peak	☑	☑
60 minute peak		☑
Fixed Block	☑	☑
Rolling Block		☑
Remotely Configurable		
Display Configurable	☑	☑
Interval Data		
60 minute	☑	☑
30 minute		☑
15 minute		☑
1 channel	☑	☑
2 channels		☑
4 channels		
History	☑	☑

TWACS Meter/Module Comparison Sheet						
	Residential Modules				Commercial Modules	
TWACS Module Name	EMT	IMT-XM EMT-XM	IMT-XMP EMT-XMP	UMT-R	CMT	UMT-C
Meters Supported	Itron® Centron®	Electro-Mechanical L+G Focus® AL GE I-210®	Electro-Mechanical L+G Focus® AL GE I-210®	L+G Focus® AL	Itron® Sentinel® L+G S4e	Elster A3 Alpha® GE kV2c™
Consumption						
Forward			☑	☑	☑	☑
Reverse		☑	☑	☑	☑	☑
Net	☑	☑	☑	☑		☑
Secure			☑	☑		☑
Pulse Based	☑	☑	☑			
Mapped Registers				☑	☑	☑
History		☑	☑	☑		☑
Demand						
15 minute peak	☑	☑	☑	☑	☑	☑
30 minute peak	☑	☑	☑	☑	☑	☑
60 minute peak				☑	☑	☑
Fixed Block	☑	☑	☑	☑	☑	☑
Rolling Block			☑	☑		☑
Remotely Configurable			☑[2]	☑[2]		☑[2]
Display Configurable		☑[1]	☑[1]	☑	**N/A**	**N/A**
Interval Data						
60 minute	☑	☑	☑	☑	☑	☑
30 minute			☑	☑	☑	☑
15 minute			☑	☑	☑	☑
1 channel	☑	☑	☑	☑	☑	☑
2 channels			☑	☑		☑
4 channels						☑
History		☑	☑	☑		☑
Remotely configurable			☑[2]	☑[2]	☑[2]	☑[2]
Voltage						
From Module	☑	☑	☑			
From Meter				☑	☑	☑
Additional Features						
Momentary & Sustained Interruptions				☑	☑	☑
Downloadable Firmware			☑	☑		☑
Multiport Capable	☑			☑		☑

NOTES:	1	Electromechanical meter demand display not configurable
	2	Remote configurability of Demand and Interval Data has not been developed in TNS.

FOCUS Single-Phase

Product Specification Sheet

Product Specifications

Operating Temperature

-40°C to +85°C under cover

Nominal Voltage

120V & 240V

Operating Voltage

80% to 115% of Vn

Frequency

60Hz +/- 5%

Humidity

5% to 95% relative humidity (non condensing)

Starting Load

Class 200	0.050 Amp
Class 100	0.025 Amp
Class 20	0.004 Amp
Class 320	0.050 Amp
Class 480	0.120 Amp

Starting Watts (Form 2S)

12W

Burden

1.8W Max

Load Performance Accuracy

0.2

Available Forms

Self-Contained	2S, 2SE, 12S, 25S
Transformer Rated	3S, 4S
K-Base	2K

Applicable Standards

ANSI C.12.1 - 2001 for electricity metering

ANSI C.12.10 - 1987 for watt-hour meters

ANSI C.12.20 - 1998 for solid-state electricity meters

ANSI C.12.19 - 1997 American National Standard, Utility Industry End Device Data Tables

CAN3-C17 - M84 Canadian specifications for approval of type of electricity meters

FOCUS Advanced Function

Product Specification Sheet

Product Specifications

General Specifications

Active Energy kWh/kW/TOU meter
Digital Multiplication Measurement Technique
Non-Volatile Memory
Designed for 20+ years life
Meets ANSI standards for performance
Utilizes ANSI C12.19 protocol (between meter and AMR device)
9-Digit LCD
Display scroll sequence programmable (factory or end user)
Type 2 ANSI C12.18 optical port

Operating Temperature

-40ºC to +85ºC under cover

Nominal Voltage

120V & 240V

Operating Voltage

80% to 115% of Vn

Frequency

60Hz +/- 5%

Humidity

5% to 95% relative humidity (non condensing)

Power Consumption

Digital Power Indicator, DPI

Burden

< 1.9W Max

Starting Load

Class 200	0.050 Amp	Class 320	0.050 Amp
Class 100	0.025 Amp	Class 480	0.120 Amp
Class 20	0.005 Amp		

Starting Watts (Form 2S)

12W

Load Performance Accuracy

0.2

Available Forms FOCUS AX Advanced Function

Self-Contained	1S, 2S, 2SE, 12S, 25S
Transformer Rated	3S, 4S
K-Base	2K

Available Forms FOCUS AX-SD Advanced Function Service Disconnect

Self-Contained 1S, 2S, 12S

Display Options

Energy Metrics: +kWh, -kWh, NetkWh, and added kWh (Security)
Metric Display Format – 4x1, 4x10, 5x1, or 6x1

AMR Platform

Modular or Integrated

Selectable Meter Multiplier

Up to 240 (1200:5 CT)

Applicable Standards

ANSI C.12.1 - 2001 for electricity metering
ANSI C.12.10 - 1987 for watt-hour meters
ANSI C.12.20 - 1998 for solid-state electricity meters
ANSI C.12.19 - 1997 American National Standard, Utility Industry End Device Data Tables

View Measure Vision

DCSI FOCUS

Technical Specifications

Meter Compatibility

FORM	CLASS	VOLTAGE
1S	100	120
2S	200	240
2SE	320	240
2K	480	240
3S	10/20	120
3S	10/20	240
4S	10/20	240
12S	200	120/208
25S	200	120/208

Functional Specifications

Programming Parameter:	IDR interval
Tamper Detection:	Power outage detection Reverse rotation detection Voltage monitoring
Meter/Module Interface:	Quadrature Energy Pulse
Application:	Two-way power line carrier (PLC) enabled IDR

Operational Specifications

Transmit Frequency:	Standard PLC line frequency — 60 Hz

Environmental Specifications

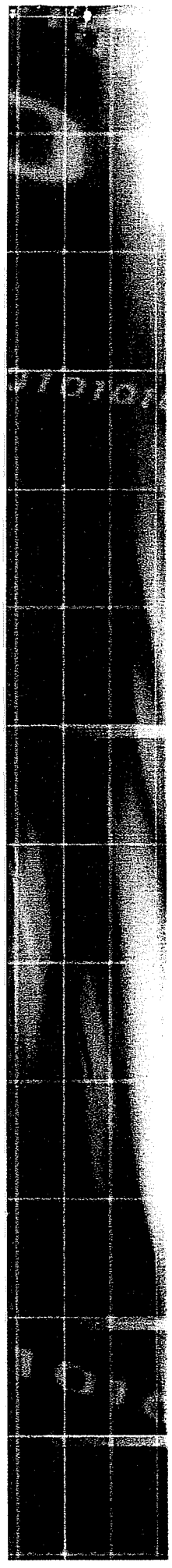
Operating Temperature:	-40°C to +85°C
Operational Relative Humidity:	5% to 95% (non-condensing)

Surge Withstand Specifications

ANSI C37.90.1 - 1989 Surge withstand capability

ANSI C12.20 - 2002 Electrical Fast Transient/Burst

ANSI C12.20 - 2002 Effect of High-Voltage Line Surges



FAQ's

Meter Forms	Form 1S (Class 100) Form 2S (Class 200 or 320) Form 3S, 4S (Class 20) Form 12S, 25S (Class 200, 120 Volt)
Communication Type	PLC for 2-Way AMR
P.O. Details	PO to Itron for Meters, PO to Aclara for EMT-3C or EMT-3C-MP Modules
Itron Factory Integration	Yes
Meter Warranty & Meter Repair	3 Years

Itron Inc.

Itron is a leading technology provider and critical source of knowledge to the global energy and water industries. Itron operates in two divisions; as Itron in North America and as Actaris outside of North America. Our combined company is the world's leading provider of metering, data collection and software solutions, with nearly 8,000 utilities worldwide relying on our technology to optimize the delivery and use of energy and water. Itron delivers industry leading solutions for electricity, gas and water meters; data collection and communication systems, including automated meter reading (AMR) and advanced metering infrastructure (AMI); meter data management and utility software applications; as well as comprehensive project management, installation, and consulting services.

To know more, start here: www.itron.com

Itron

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Publication 100857CC-01
02/08

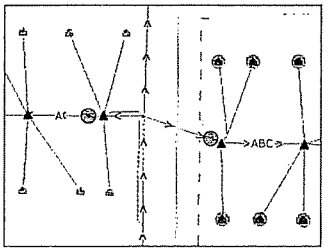
dataVoice ACLARA/TWACS INTERFACE

Technology that makes life better for utilities and their customers

Check Meter Voltage

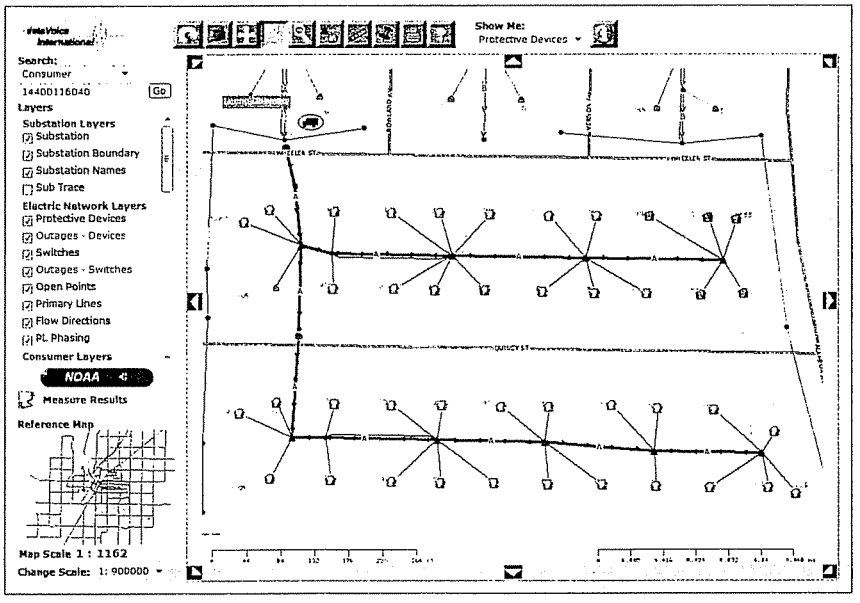
Often a customer will call to report that lights are dim. Performing a voltage check allows the utility to determine if the customer is experiencing low voltage. With this function, a utility can immediately check the voltage of an individual or group of meters.

AMR Blink Analysis



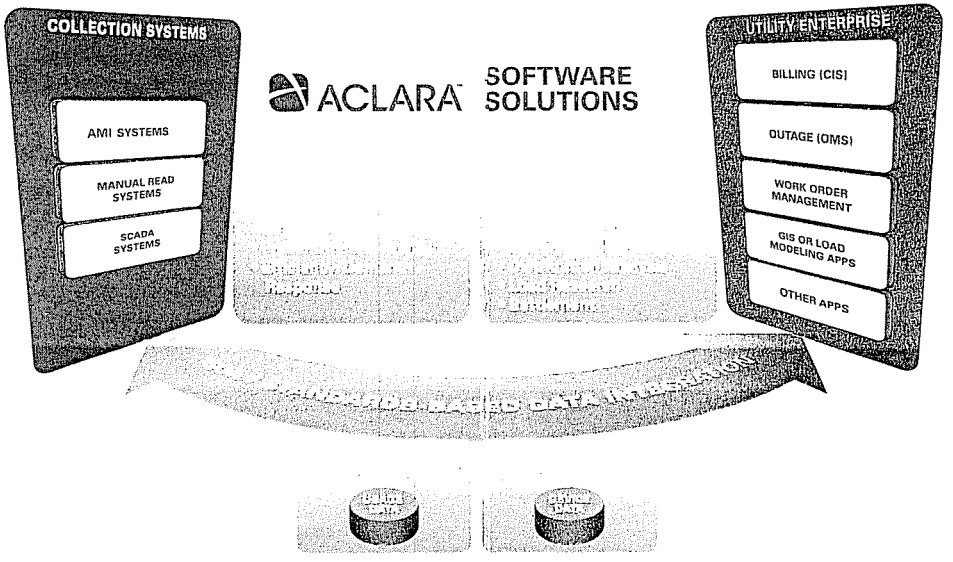
An added benefit of the dataVoice OMS – TWACS® module, is the ability to predict the likely source of a problem based on the blinks reported by the AMR system. The system imports the blink history from the AMR and then summarizes that data using connectivity and outages in the OMS. A new report also allows users to add a layer to the dataVoice Map Viewer, which shows if a meter has had a blink in the last 7 days. Meters blinks are indicated by a yellow, orange, or red circle, depending on the number of blinks (a configurable setting).

The results of the ping request are posted to the dataVoice Map Viewer



METER PING BENEFITS

- Check meter voltage to better isolate power degradation problems.
- Increase customer satisfaction by responding in a faster more positive manner to customer needs and concerns (dims/blinks).
- Blink Analysis provides a side-by-side comparison of AMR and OMS data by specified date ranges.
- Automatically select a group of meters from the map, and submit meter pings as one job.
- Choose to view all AMI jobs that include a particular meter. The results page shows the job and the status of all meters in the job.
- Instantly view the customer's last meter status, from the 'View Open Incidents' page. The result displayed is based on its status the last time the meter was checked.
- The dVIMS dashboard displays the AMI status, showing all substations and feeders with current AMI meter status jobs and the number of meters reporting off/on.



Turning knowledge into action.

Aclara Software™ is the only company providing a true end-to-end utility data management and presentation solution. By marrying best-of-breed meter data and meter asset management systems with enterprise- and customer-facing systems that use value-added analytics to leverage data, Aclara Software unlocks the benefits of AMI investment while reducing the risk of complex software integration. These benefits are amplified by integrating Aclara Software solutions with Aclara AMI technologies.

Aclara Software provides a comprehensive solution for meter data management with a flexible and scalable system designed to easily integrate with utility enterprise applications, along with a set of business and customer applications that leverage the data.

A vision for the future.

Aclara Software solutions are the key to unlocking the power of energy information for the utility of the future, where price volatility, energy-literate customers, a smarter grid, and intelligent end-use technologies will change the way utilities interact with their customers.

Increased Operational Efficiency

- Accurate load forecasting and settlement
- Distribution asset planning and operations
- Flexible wholesale and retail complex billing
- Revenue protection

Enhanced Customer Care

- Integrated billing and load data presentation and analysis to help customers understand their bills
- Improved customer access to online self-service, plus enhanced call-center support
- Personalized customer energy management
- Enhanced customer information on how to manage costs and conserve resources

CONNECTIONS

RURAL ELECTRIC MAGAZINE

October 2008

LOAD CONTROL GROWS INTO POWER QUALITY PARTNERSHIP

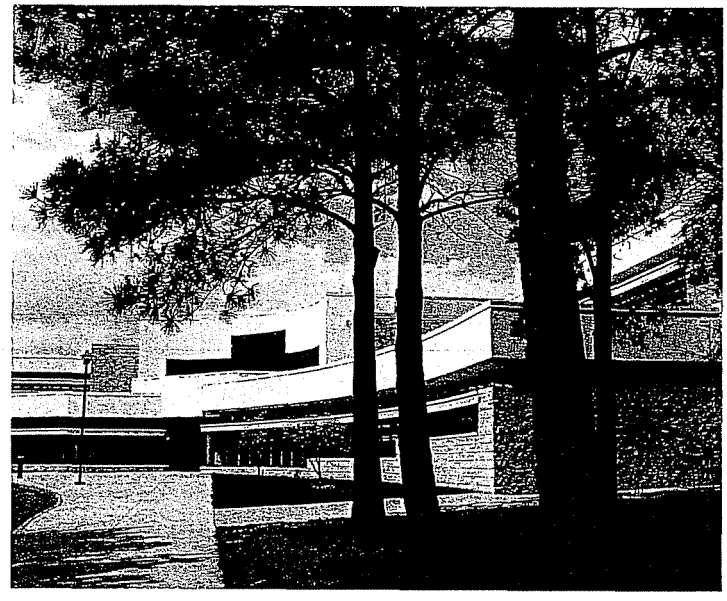
For almost a quarter-century, Rappahannock Electric Cooperative in Fredericksburg, Va., has offered its nearly 100,000 members a popular electric water heater load management option under a partnership with Aclara, formerly known as DCSI.

About 29,000 Rappahannock Electric consumers volunteer to help lower electric bills by letting the co-op switch off their water heaters during demand peaks. In exchange, members receive free water heater repair and maintenance.

"The cost of operating this program is significantly less than maintenance and repair trips each year," notes Oliver Price, Rappahannock Electric district customer service director. "Not only have we reduced our demand for electricity over the past 23 years, but we have produced gross savings of more than $50 million."

Pleased with that program, Rappahannock Electric expanded it using Aclara's two-way automatic communications system (TWACS). Hourly meter reads now create a comprehensive profile of a member's energy use—data that comes in especially handy for billing questions and other consumer support.

"The ability to provide hourly data to a member is a great tool," confirms Marsha Rutherford, Rappahannock Electric automated meter reading system administrator.



The co-op added TWACS Disconnect Switch Interface (DSI) collars in 2005 and the PROasys system for additional efficiencies. Nearly 4,450 TWACS DSI collars have been installed at remote or multiple-meter services, saving the co-op 23,000 service calls—and $600,000—since they were deployed.

The PROasys system provides another value-added service through TWACS technology. For $3 a month, members can purchase an outage notification service.

"The outage notification service gives our members a bit more security in knowing what's going on at their properties while they're away," Rutherford concludes.

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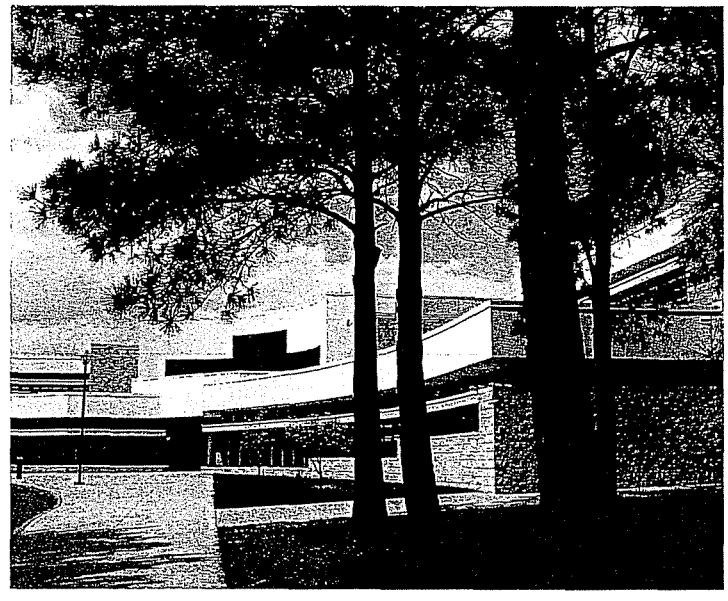

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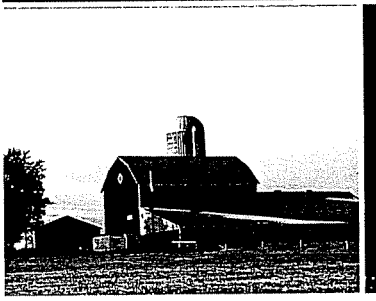
Aclara™ Technologies



- Improve operations
- Increase customer satisfaction
- Conserve resources
- Mitigate risk

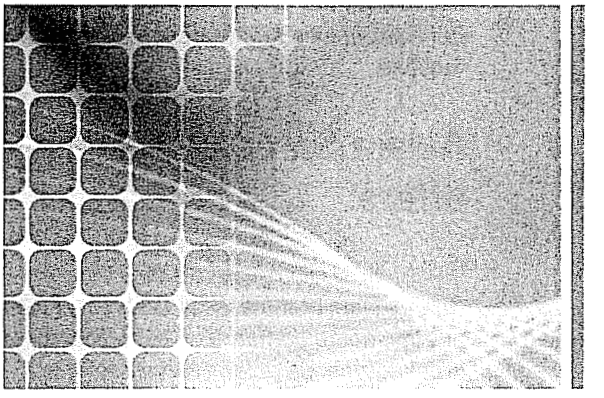
Electric, gas, and water utilities rely on proven, reliable Aclara AMI solutions to meet their most pressing data-communication challenges. In urban locations and rural communities, the need to collect, understand, and use metering data is universal for the demands of today – and tomorrow.

ACLARA™

Capturing data. Liberating knowledge.™

ACLARA™

Aclara Software™ Member Energy Analysis



Residential customers of electric cooperatives benefit from understanding the value of their energy use and are encouraged to conserve.

Member Energy Analysis builds a powerful database for future communications and for marketing utility products and services. It includes a variety of energy management-related analysis, information, and calculators that are organized into a well-constructed, online home-energy center.

Aclara Software Member Energy Analysis delivers

Enhanced customer satisfaction
Provides a sophisticated tool to build customer relations

Personalized reports
Helps customers make individual smart-energy choices

Customer profiles
Generates profiles to target users for other products and services

Tailored communications
Allows utilities to send personalized messaging

Customer engagement
Supports energy-management and marketing initiatives

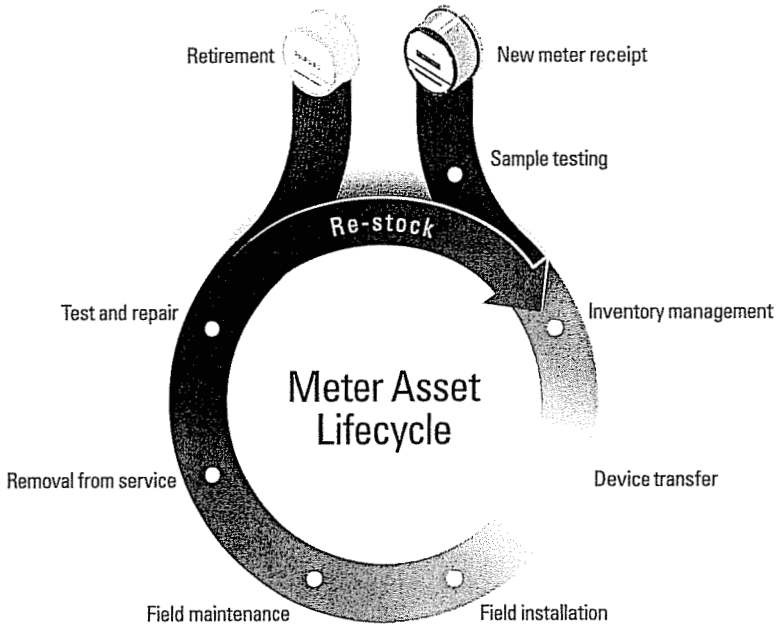
ACLARA™

Aclara Software™ AMI Device Management

FOR MIDSIZED UTILITIES

Electric, water, and gas utilities effectively track meter assets from purchase to retirement using software specifically designed to do the job.

Aclara Software AMI Device Management for Midsized Utilities is a rapidly deployed, out-of-the-box solution for managing metering devices. It handles tasks that general-purpose asset-management systems cannot, including testing meters and communication modules as well as managing device configurations.



AMI Device Management for Midsized Utilities delivers

Total asset visibility
Tracks meters in the warehouse as well as those connected to premises

Efficient AMI operations
Supports device testing

Configuration management
Stores device data in a central, controlled repository and maintains device configuration integrity.

Scalability
Expands as business requirements grow

Interoperability
Connects to business systems via Service-Oriented Architecture

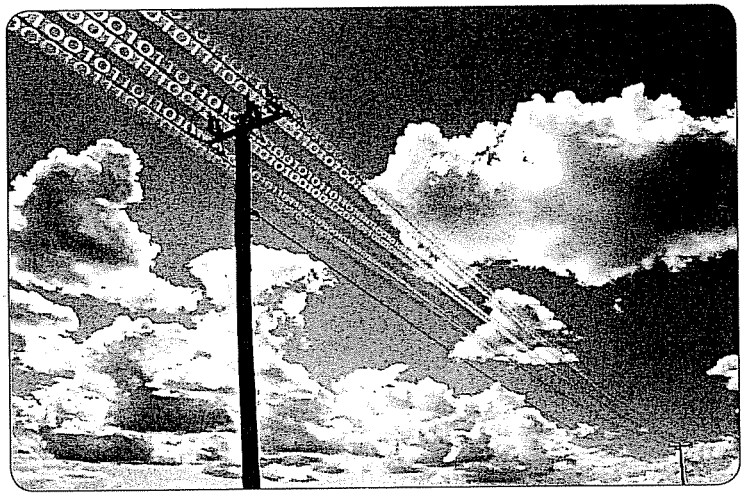
ACLARA™

Aclara Software™ MDMS

FOR MIDSIZED UTILITIES

A low-risk and quickly deployable solution that allows cooperatives to leverage existing AMR data into AMI knowledge without the need for upgrading meters.

The Aclara Software Meter Data Management System (MDMS) for Midsized Utilities provides the foundation for customer time-of-use billing and demand response programs. The MDMS cleanses and manages large volumes of interval data, and calculates time-based usage while giving detailed views of your data. MDMS applications do more than present the data – they provide customers with the tools and understanding needed to make smart decisions.



Aclara Software MDMS for Midsized Utilities delivers

Convenient and reliable installation
Deploys in just a few months

Pre-integration
Manages billing integration process with billing applications such as NISC and Daffron

Scalability
Provides the foundational MDMS for adding future modular applications

Proven accuracy
Verified with advanced validation engines

Interoperability
Supported by Service Oriented Architecture (SOA)

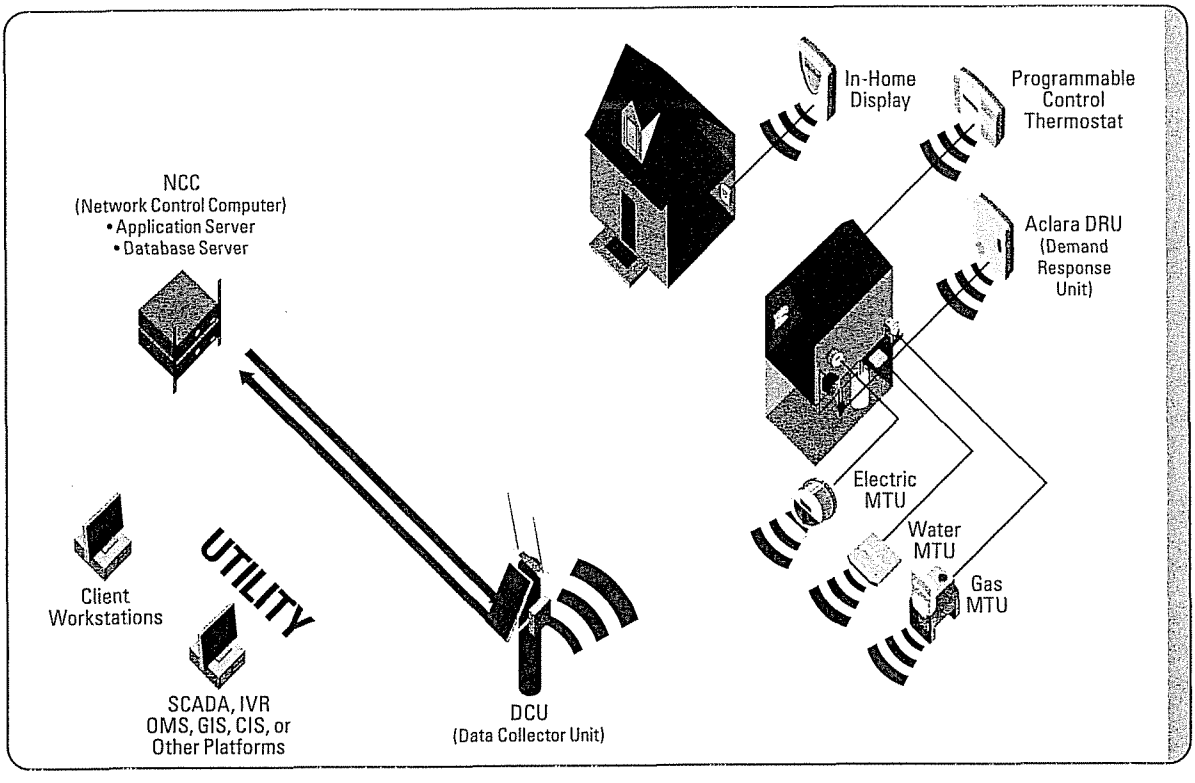
Aclara STAR® Network

The foundation of the flexible Aclara STAR Network system is a uniquely designed meter transmission unit (MTU) that reads the utility meter. MTUs operate on a schedule specified by the utility and can transmit multiple readings per hour.

Gas and water units are mounted near or on the meter, and are powered by a permanent, lithium-ion battery that guarantees trouble-free operation for up to 20 years, depending on how often the unit communicates. Electric MTUs integrate with the meter and offer a battery backup that ensures continuous receipt of data from the meter during outages.

MTUs transfer data over secure, licensed 450- to 470-MHz radio frequencies to data collector units (DCUs) positioned strategically throughout the utility's service area. DCUs use a variety of backhaul options to transfer data to the utility – radio and cellular signals, fiber-optics, Ethernet, and Wi-Fi. Robust system architecture ensures no missed readings and guarantees security and revenue protection.

Within the utility, the system's network control computer (NCC) provides user-friendly access to usage data through a Web browser-based interface. Utilities can also integrate the NCC database with other applications such as billing programs or data management systems. If the STAR Network system is configured for two-way communications, the utility also can send data to the meter.



Aclara Software™

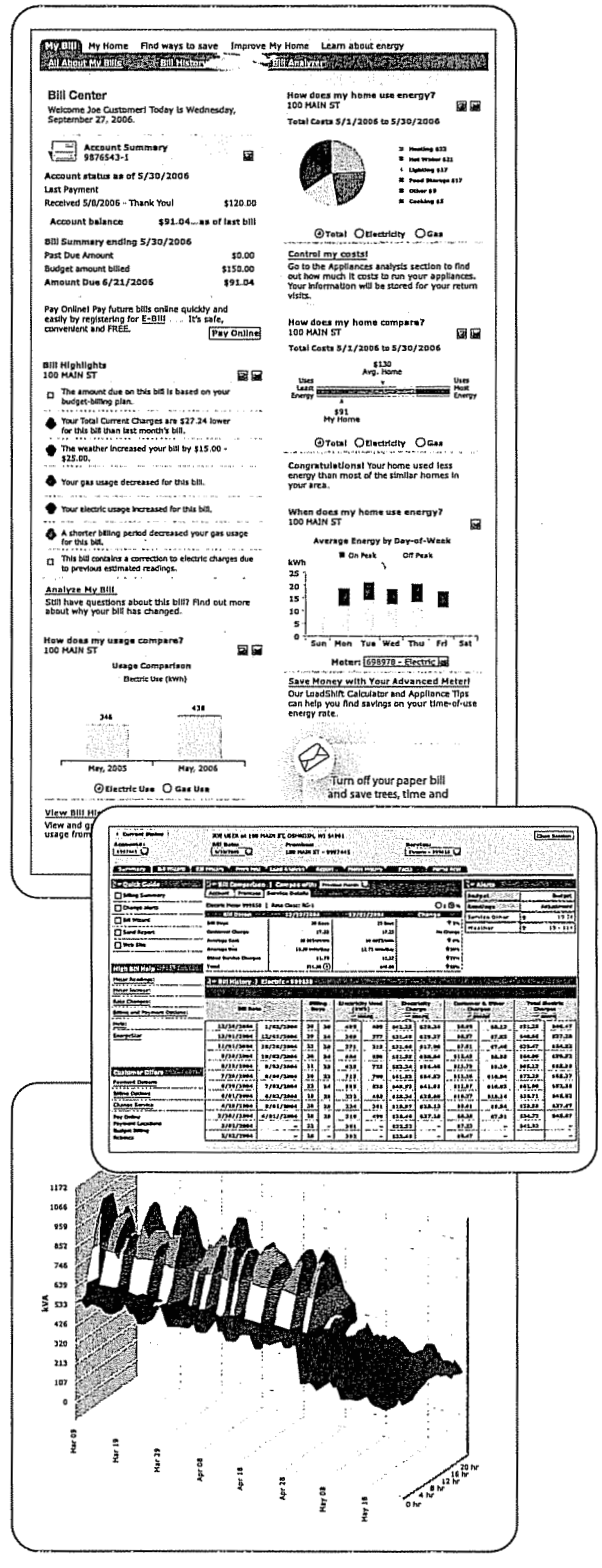
Aclara Software unlocks the power of AMI systems, delivering enhanced billing and metering data to the utility and its customers in support of:

- Meter data and meter asset management
- Revenue management and protection
- Distribution asset planning and analysis
- Customer care
- Resource efficiency and demand management

Over 100 major energy and water organizations worldwide rely on Aclara Software to reduce capital and operating costs, increase customer satisfaction, and provide the foundation for efficiency and resource management programs.

Aclara Software's enterprise-wide approach creates the infrastructure necessary to manage AMI, meter data, and utility assets. A proven-at-scale solution, Aclara Software provides a data structure flexible enough to meet the needs of today and tomorrow. Our collection of powerful Operational Efficiency solutions helps our clients leverage critical data assets.

From an end-use customer perspective, Aclara Software does much more than simply present data. Our Customer Care solutions help utility customers understand their bills, utility rates, and efficiency options, delivering content and analytics that provide customers more control of their resource usage.



Aclara AMI solutions enhance every utility's ability to increase customer satisfaction while improving operations, conserving resources, and reducing risks.

Operational Excellence

- Provides PLC- and RF-based AMI systems for gas, water, and electric
- Improves service scheduling, delivery, and outage planning
- Applies integrated technologies to the Smart Grid
- Introduces comprehensive meter data and assets for greater system value and ROI

Customer Satisfaction

- Retains loyal customers with innovative energy programs
- Delivers pricing and billing via in-home displays or web pages
- Provides fast and efficient service
- Enables customers to make usage decisions with energy profiles and conservation programs

Resource Conservation

- Provides two-way demand response to reduce peak energy use
- Identifies precisely water-leak losses
- Manages and transmits high-resolution usage data
- Develops time-based rate determinates

Risk Mitigation

- Offers proven AMI solutions with service-oriented MDM
- Employs open-standard technologies for future-proof AMI investment
- Integrates new technologies for legacy systems
- Detects tampering and deters theft

ACLARA™
Aclara Technologies of ESCO

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info@Aclara.com | www.Aclara.com

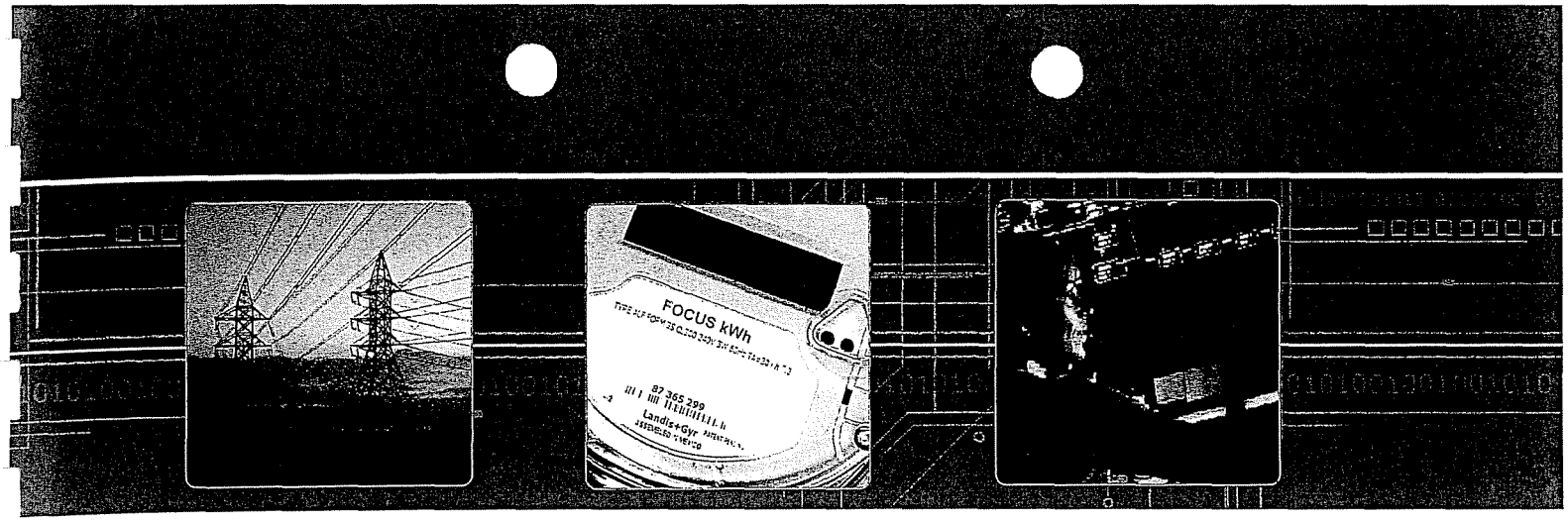
Critical questions for critical decisions.

When it comes to selecting the fundamental metering and data management technologies that will determine how your utility will collect, understand, and use metering information, you need to ask one simple question: *Do they work?*

- Are they proven in the field and at work today?
- Are they reliable—with documentation that proves it?
- Are they scalable to the size of your utility and ready to accommodate future growth?
- Do they expand your data collection and interval-reading capabilities across all metering requirements—electric, gas, and water?
- Are they flexible enough to meet your utility's specific requirements, from end-to-end solutions to individual, customizable products?

If the answer is yes to all of these questions, you have found a company that can serve as the communications foundation of your utility operations.

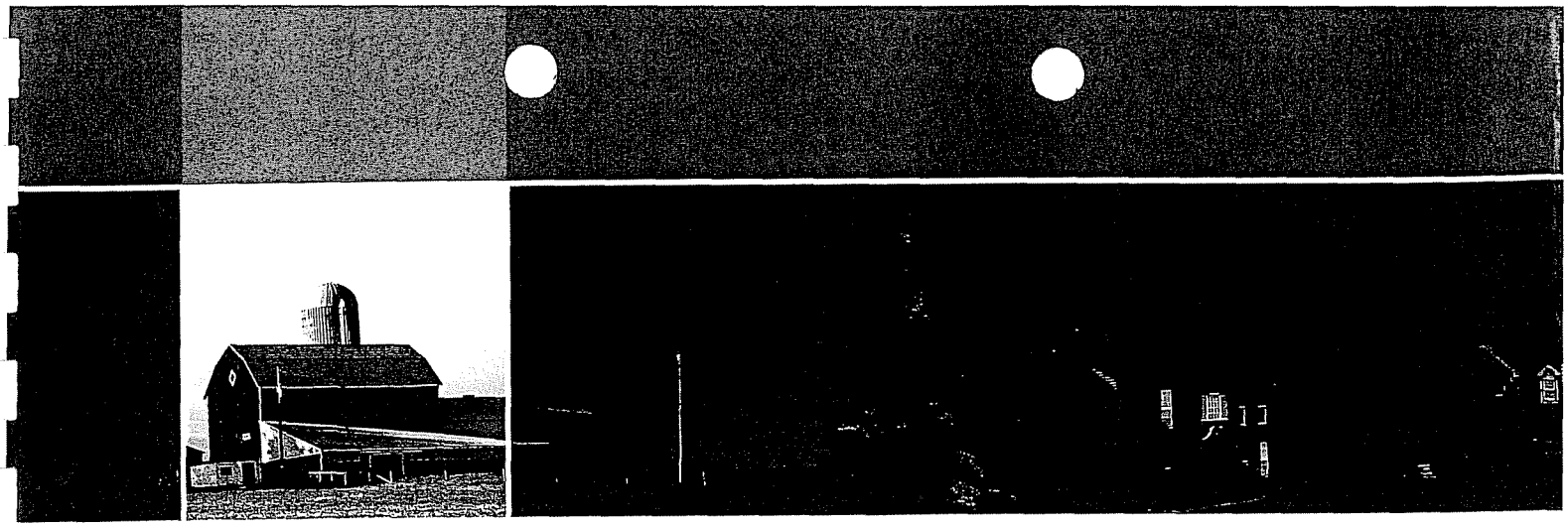
That company is Aclara.™



- **Aclara TWACS® Technology:** The most direct connection to every meter.
  Every consumer is connected to a power line. And there is no more powerful or reliable technology to use those power lines for two-way communications, control, monitoring, and disconnect/connect capabilities than the multifunctional TWACS® Technology, the industry's most extensive and robust fixed network power line AMI.

- **Aclara STAR® Network:** Vastly extending the reach of radio frequency (RF) communications.
  The Aclara STAR® Network fulfills the promise of RF communications, the first fixed network AMI to use secure licensed radio frequencies to remotely collect and transfer data at regular intervals from gas, water, and electric meters directly to utilities. Its redundant system architecture makes certain that utilities never miss a reading—ensuring security and revenue protection.

- **Aclara Software™:** Liberating knowledge. Aclara Software™ solutions add value to existing billing and metering infrastructures, allowing utilities and their customers to better manage energy-driven transactions and decision-making. In use at more than 100 major energy organizations worldwide, Aclara Software applications add value across the enterprise, addressing meter and energy data management, distribution planning and operations, customer service and revenue management, and energy and resource management.



Aclara integrates advanced, proven AMI technologies to capture, analyze, and apply utility data to meet the demands of today—and tomorrow.

- Reduce distribution costs with scalable and automated meter reading, outage management, service quality, and power-restoration capabilities
- Decrease customer-service costs with the immediate data that provides customers the information they need to understand and make energy decisions
- Lower operating costs with tools to plan and optimize investments in maintenance and capital upgrades
- Create demand-side resources to develop and expand the utility's ability to serve customers and manage usage efficiently
- Support sustainability efforts to protect our environment and conserve our natural resources

ACLARA™

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www.Aclara.com

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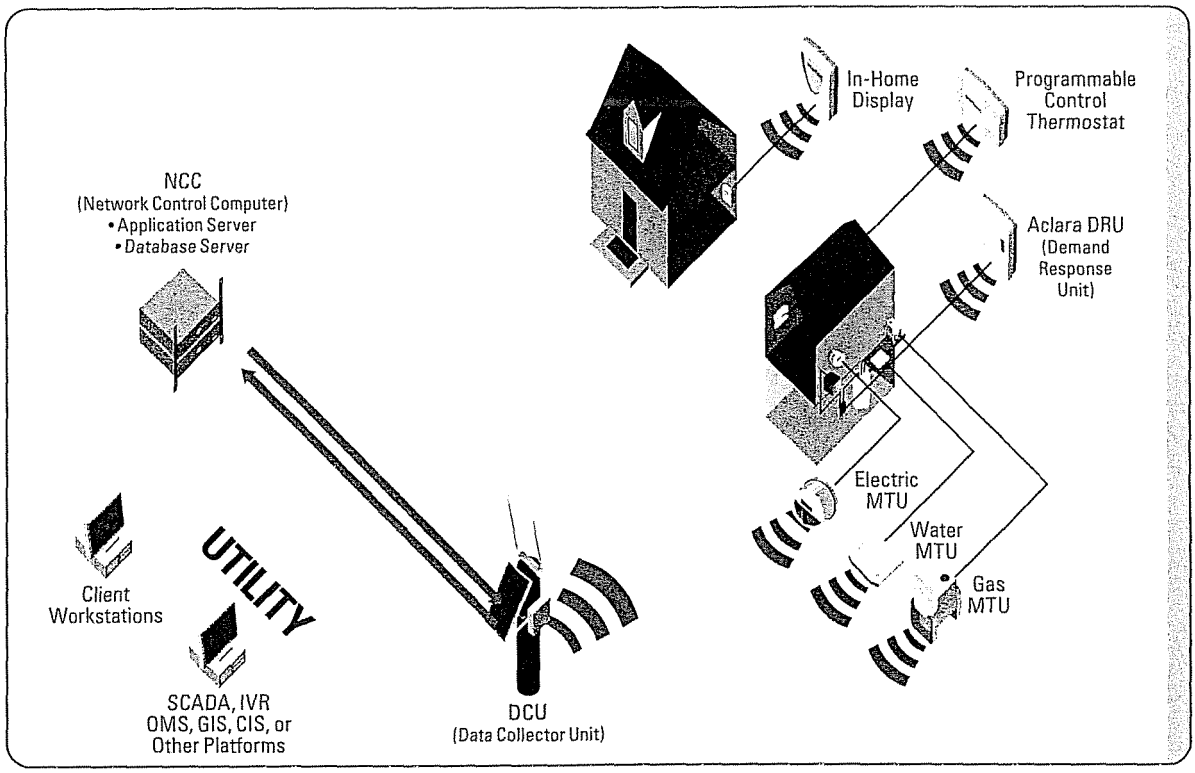
Within the utility, the system's network control computer (NCC) provides user-friendly access to usage data through a Web browser-based interface. Utilities can also integrate the NCC database with other applications such as billing programs or data management systems. If the STAR Network system is configured for two-way communications, the utility also can send data to the meter.



Capturing data. Liberating knowledge.™

Aclara Software™

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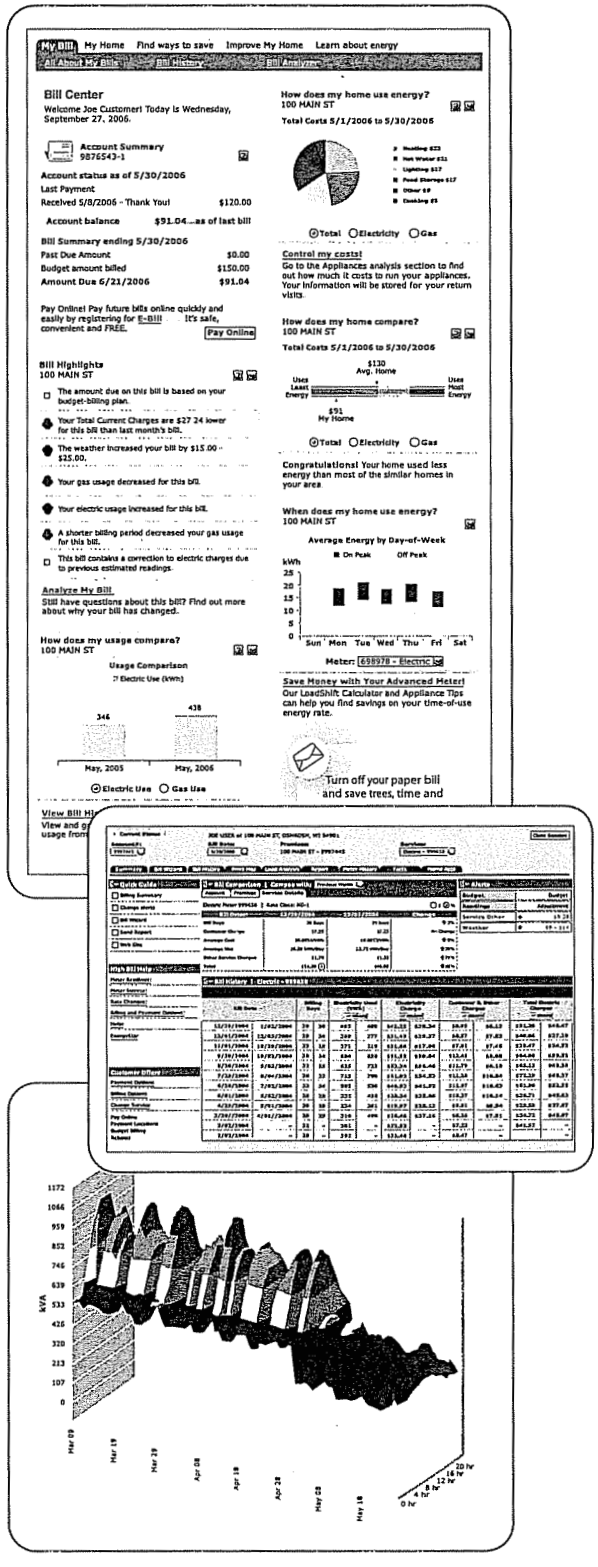
- Meter data and meter asset management
- Revenue management and protection
- Distribution asset planning and analysis
- Customer care
- Resource efficiency and demand management

Over 100 major energy and water organizations worldwide rely on Aclara Software to reduce capital and operating costs, increase customer satisfaction, and provide the foundation for efficiency and resource management programs.

Aclara Software's enterprise-wide approach creates the infrastructure necessary to manage AMI, meter data, and utility assets. A proven-at-scale solution, Aclara Software provides a data structure flexible enough to meet the needs of today and tomorrow. Our collection of powerful Operational Efficiency solutions helps our clients leverage critical data assets.

From an end-use customer perspective, Aclara Software does much more than simply present data. Our Customer Care solutions help utility customers understand their bills, utility rates, and efficiency options, delivering content and analytics that provide customers more control of their resource usage.



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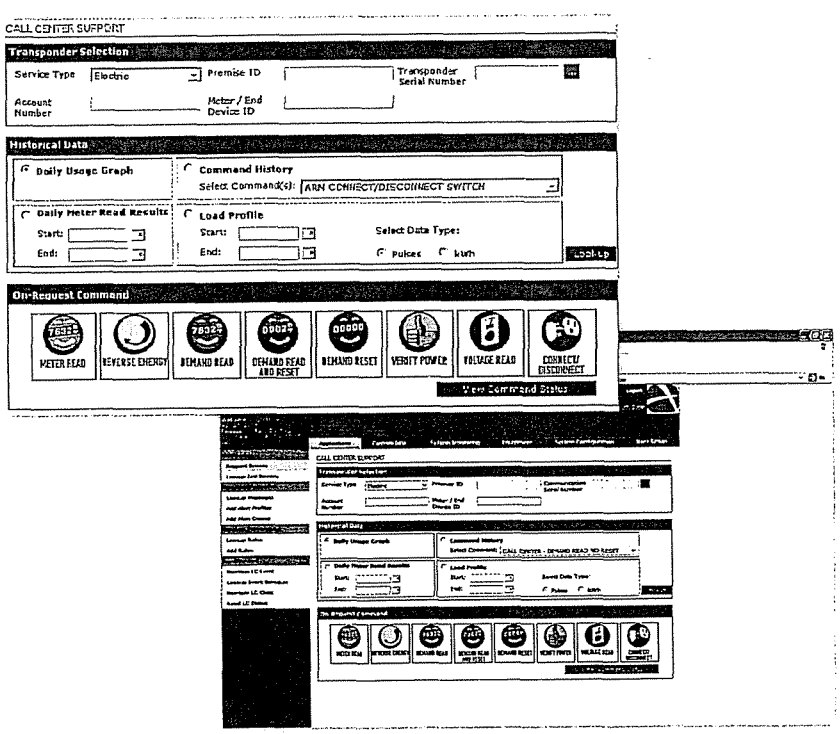
ACLARA™

TWACS® NG

NETWORK GATEWAY

The highly customizable TWACS NG software allows utilities to monitor, collect, communicate, and correlate usage data more effectively, for better outage, energy, and resource management.

The scalable system can process large volumes of data retrieved at frequent intervals from millions of meters. Access to this interval data enhances control over distribution planning and operations, ensures success of demand response and time-based pricing programs, and improves customer service.



TWACS NG delivers

Web user interface design
Reduces deployment costs, overhead, and maintenance

Scalable and efficient operation
Handles millions of endpoints without affecting network performance

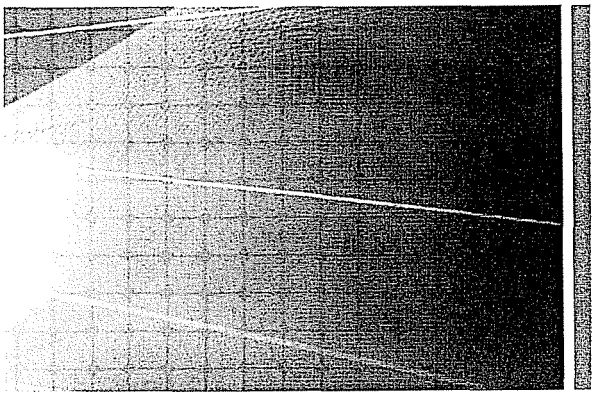
Open architecture
Interfaces with other utility software applications and works with emerging data exchange standards

Role-based security
Allows utility customers to assign access to system functions based on job title

User configurable priorities with flexible scheduling
Provides the data you want, when you need it

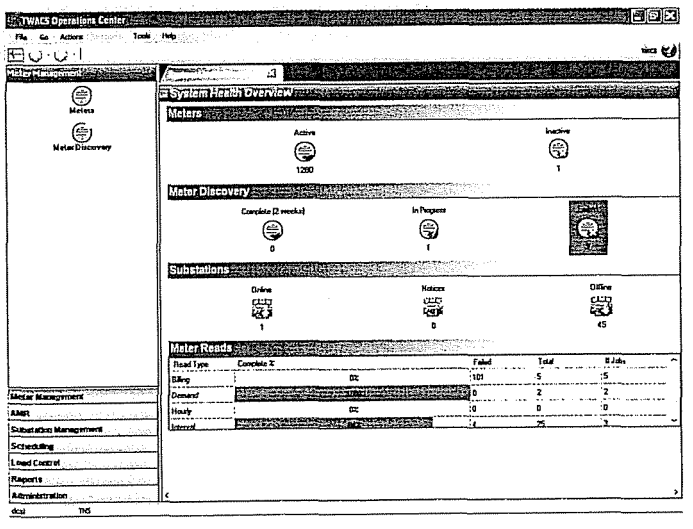
ACLARA™

TWACS® Net Server with TWACS OC Software



The heart of the TWACS system, with its easy-to-use graphical interface, provides fast access to AMI data, allowing utilities to promptly answer customer inquiries.

The TWACS Net Server (TNS) with TWACS OC (Operations Center) software manages the TWACS communications network and controls advanced metering data for utilities. The software employs a relational database and a Windows-based interface to manage the data generated by a utility's metering operations.



TNS with TWACS OC delivers

Server/client control
- Firewall compatible
- Flexible system accessibility
- Permissions-based data access
- Enhanced upgradeability

Network management
- Intuitive setup and configuration
- Simple updates and modifications
- Two-way addressing for communication
- Minimal substation maintenance

Automatic meter reading
- Commercial metering with demand reset
- On-request meter reads
- Tamper detection and diagnostics
- Billing file creation and integration

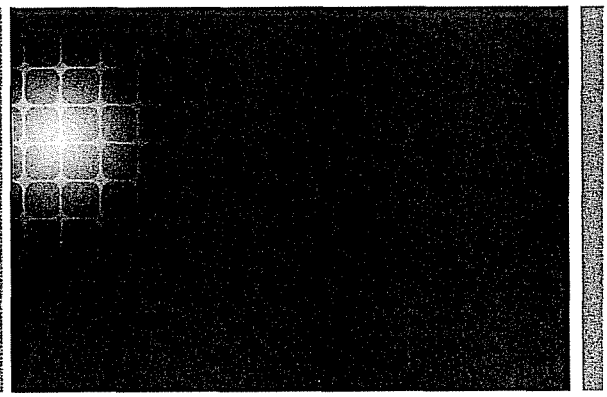
Third-party interfaces
- Customer information systems
- Billing programs
- Meter data management systems
- Load research software
- Outage management solutions

Optional TNS applications
- Power Reliability Outage Assessment System (PROASYS™)
- Prepaid UtiliSales™
- Demand response system
- Distribution automation solution

ACLARA

Aclara™ TWACS® Technology and Badger® ORION® RF

WATER AND GAS METERING SOLUTION



Customers with existing TWACS power-line communications system can extend their fixed network to gas and water meters by simply adding Badger ORION RF transmitters. Using this short-hop solution to collect total consumption data simplifies billing and allows better resource management.

The system employs a radio-frequency link to transmit data from the Badger ORION gas and water transmitters to an Aclara TWACS EMT (Electric Meter Transceiver) or a TWACS UMT (Universal Meter Transceiver). The TWACS EMT or TWACS UMT store the readings, transmitting them through the TWACS network to the master station on a user-defined schedule.

The Aclara TWACS and Badger ORION solution delivers

Total consumption data
Provides daily and on-request reads

Multi-application solution
Extends TWACS power-line communications system

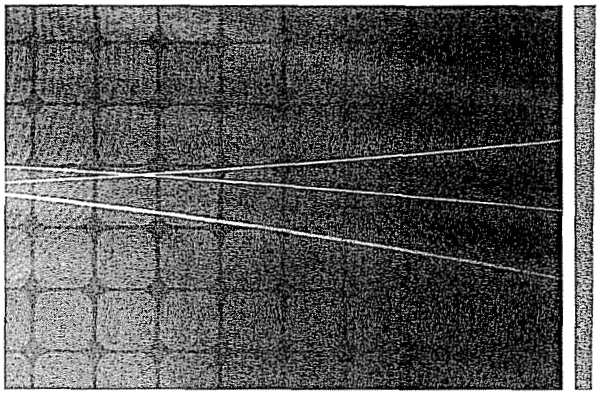
Frozen billing data
Maintains previous day's data for 23 hours

Scaleable operation
Meets the requirements of utilities of all sizes

ACLARA™

TWACS® IHD

IN-HOME DISPLAY



Improve customer service by communicating directly with your customers.

The TWACS IHD (In-Home Display) receives messages, alerts, billing, and account-status information directly to customers. When combined with the UtiliSales™ master system software, this simple plug-in demand response component keeps customers informed so they can make money- and energy-saving decisions.

The TWACS IHD delivers

Demand response notification
Provides time-of-use and critical peak pricing data, which allow customers to make informed usage decisions

Prepayment support
Offers a simple and straightforward means to keep prepayment customers aware of their balance and warn them before their power is interrupted

Standard billing
Informs customers of their bill balance and usage

Alert and notification services
Improves communications by providing custom messages that can assist in customer service or notification of pending service work

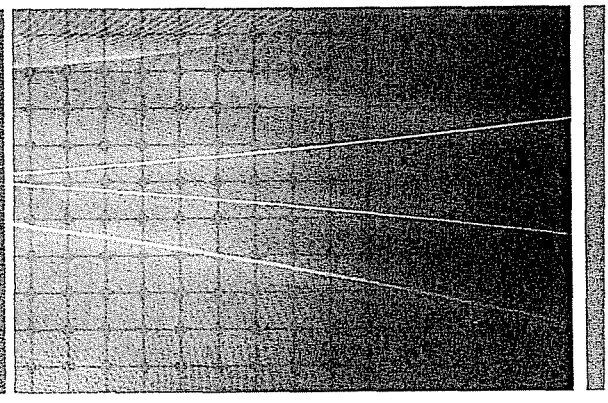
Multiple language support
Supports English, Spanish, and French, with both visual and audible alerts

Easy deployment
Plugs into standard electrical outlets

ACLARA™

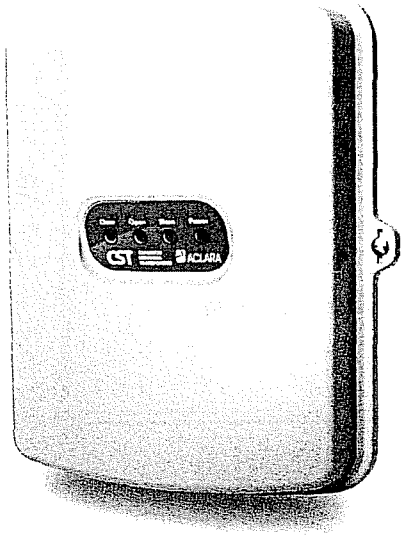
TWACS® CST

CAPACITOR CONTROL SOLUTION



Central administration of capacitor banks helps dispatchers make better distribution decisions and reduces costly on-site maintenance.

The TWACS CST (capacitor switching transponder), operating with TWACS Master Station software, allows utilities to actively manage grid reliability and efficiency. The two-way solution can monitor circuit voltage, neutral current, and contact closure of the capacitor bank, thereby allowing remote management of capacitance in the distribution network. Remote management helps utilities reduce losses due to reactive power flow and avoid power-purchase penalties.



The TWACS CST delivers

On-demand status information
Provides troubleshooting, alarms, voltage profiles, and bank status

Cost efficiencies
Reduces overhead related to capacitor bank patrols and line loss

System intelligence
Provides real-time voltage, status, and error reports, and synchronizes daily and seasonal requirements

Safety improvements
Eliminates manual switching

Problem notification
Monitors neutral currents to pinpoint partial bank failures and blown fuses

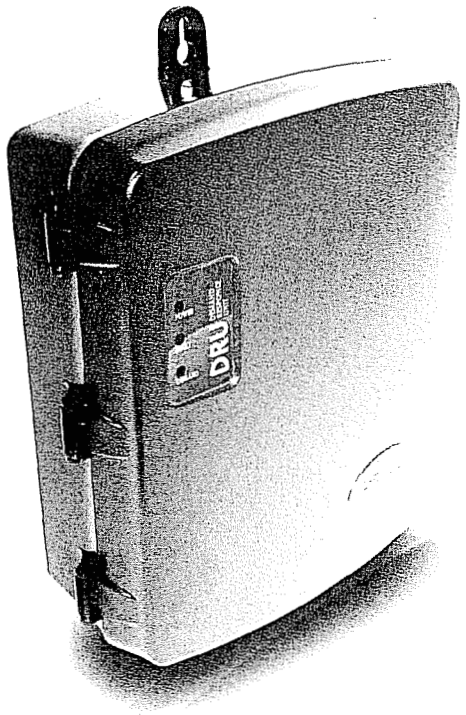
ACLARA™

Aclara™ DRU

DEMAND RESPONSE UNIT

When energy demand is high, the Aclara DRU reduces peak-power costs without impacting customer service.

The Aclara Demand Response Unit (DRU) is a one- or two-way device that curbs demand and safeguards against under-voltage or under-frequency conditions. At the heart of the DRU is the unique Intelligent Comfort™ system, which employs a patent-pending, adaptive load-control algorithm and a unique, 24-hour energy-use appliance profile to provide adaptive control while eliminating the need for complex system modeling.



The Aclara DRU delivers

Distributed load shedding
Cycles appliances on and off intelligently to maintain acceptable customer satisfaction

Power-interrupt protection
Maintains load-control strategies during momentary outages

Direct and autonomous load control
Ensures fair distribution of loads across network

Flexible load management
Adjusts for time and season

Tamper detection
Indicates potential bypass of the control relay

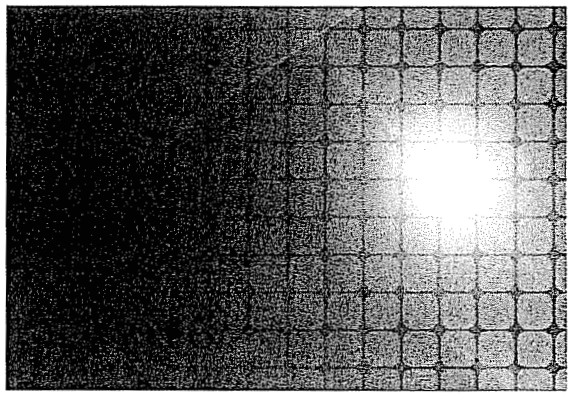
Two-way communications
Aids in troubleshooting

Adaptable design
Handles up to two residential appliances or commercial systems

ACLARA™

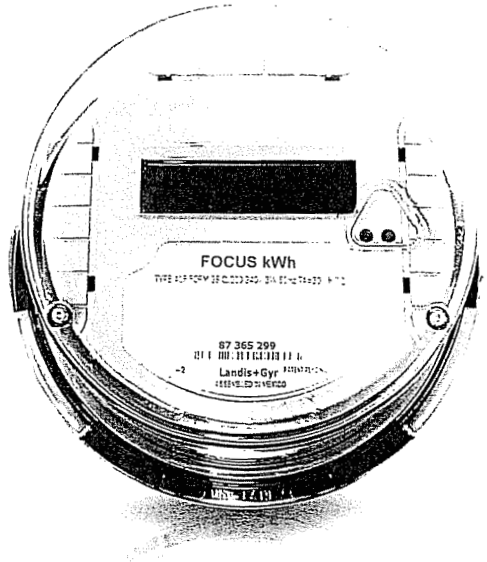
STAR® Network Electric MTU

METER TRANSMISSION UNIT



The STAR Network electric MTU provides the detailed usage profile needed to support modern customer services, advanced billing plans, and electric supplier choice programs.

The two-way, electric MTU broadcasts over secure, licensed 450- to 470-MHz radio frequencies, with a range of at least a mile. A backup battery ensures continual operation and receipt of critical data during outages. It transmits up to 288 meter readings per day, maintains clock accuracy, and performs on-demand reads, providing consistent and long-term performance.



Each STAR Network MTU delivers

Historic data storage
Stores up to 30 days of data for retrieval

Firmware upgrades over network
Uploads new functionality to uninstalled meters

C12.19 tables support
Supports ANSI/IC standard for meter data interchange

Outage and restoration management
Provides messaging to support comprehensive outage management

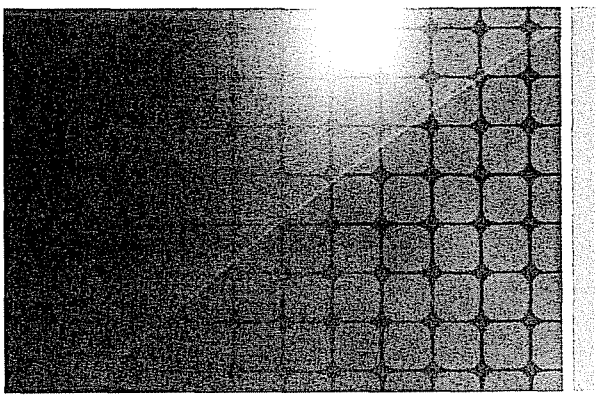
Supports modern tariffs
Offers accurate interval metering and supports time of use, real-time pricing, and critical peak pricing

Additional data
Reports account information, meter reading, battery condition, peak demand, tamper status, and outage information

ACLARA™

Aclara STAR® ZoneScan

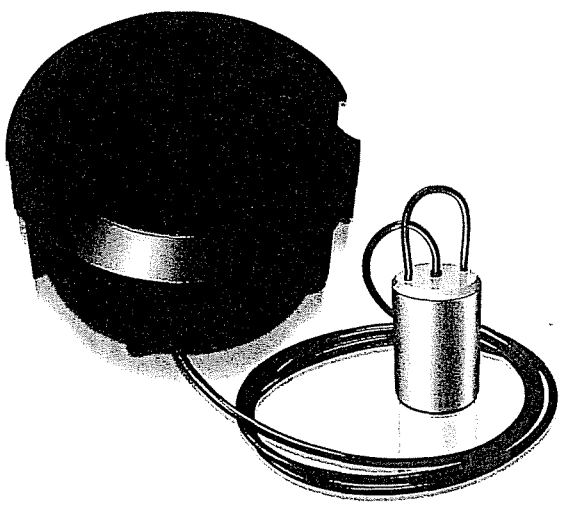
LEAK DETECTION SYSTEM



Find and fix leaks fast with the Aclara STAR ZoneScan leak detection system. The industry's only remotely correlated acoustic leak-detection system cost-effectively identifies small leaks before they become major problems.

The STAR ZoneScan solution combines the fixed STAR Network system with leak-detection technology from Gutermann International. The system checks and analyzes noise characteristics on water lines at regularly scheduled intervals.

Acoustic samples from each ZoneScan unit are collected by an Aclara meter transmitter, located in the pit lid, and then transferred to the utility via the network's 450- to 470-MHz radio-frequency signal. There, the STAR ZoneScan leak detection software correlates the data to pinpoint the location of leaks, enabling focused, efficient operation of water utility resources.



Each STAR ZoneScan system delivers

Hands-off approach
Performs automated data gathering with minimal attention by operators

Secure and reliable technology
Delivers accurate and reliable data through acoustic profiling

Installation options
Deploys permanently or temporarily, depending on the requirements of the utility

Conservation efforts
Assists in containing leaks and water loss in all areas

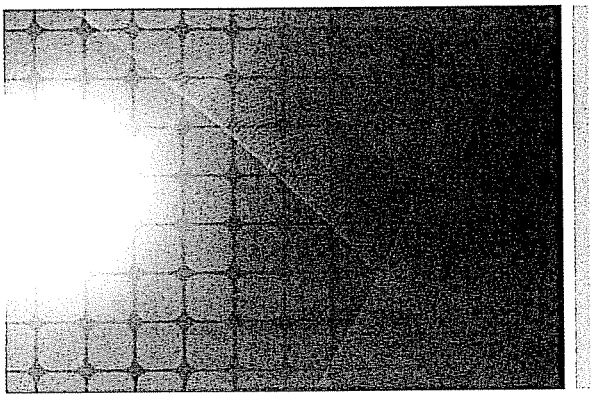
Environmentally sealed design
Prevents damage from elements such as snow and rain

Flexibility in pipe constructions
Works on metallic, plastic, concrete, and other non-metallic pipes

ACLARA™

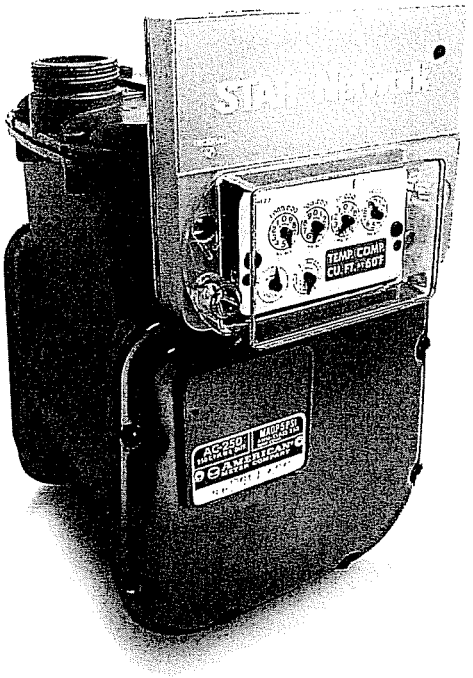
STAR® Network Gas MTU

METER TRANSMISSION UNIT



The STAR Network provides the largest number of direct-mount gas MTUs in the industry, ensuring accurate meter reads and supporting gas-conservation efforts.

The gas MTU contains a powerful narrow-band transmitter that sends meter readings over FCC-licensed, 450- to 470-MHz radio frequencies at regularly scheduled intervals. Compatible with almost all commercially available gas meters, the STAR Network gas MTU allows utilities to provide the benefits of the industry's most reliable AMI/AMR product to gas customers.



Each STAR Network MTU delivers

Long-lasting performance
Contains a 20-year lithium-ion battery

Ease of installation
Direct mounts in the field without interrupting a customer's gas service. Indirect-mount versions are also available

Secure and reliable technology
Ensures data and network security

Long-range power
Transmits meter data over a range of at least one mile

Hermetically sealed design
Stands up to harsh basement and outdoor installations

Theft detection and monitoring
Signals to alert of possible meter tampering with optional magnetic detection

Dual-port operation
Adapts to multiple-meter installations, including gas and water combinations

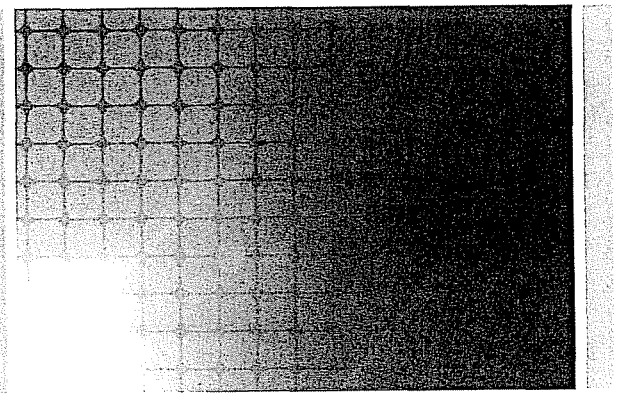
Safety in hazardous conditions
Delivers Factory Mutual approval as a non-incendiary device

Additional data
Reports account information, meter identification, meter reading, battery condition, and tamper status

ACLARA™

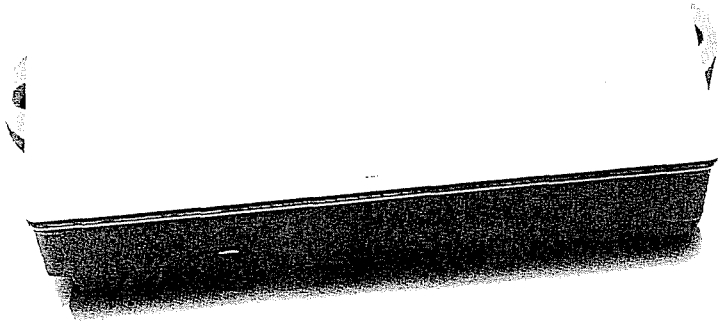
STAR® Network Water MTU

METER TRANSMISSION UNIT



The STAR Network water MTU makes meter reading more efficient and allows utilities to reduce costs, improve billing, and manage resources.

The MTU transmits accurate meter readings on utility-defined schedules. Its powerful, narrow-band transmitter broadcasts over FCC-licensed, 450- to 470-MHz radio frequencies. The STAR Network MTU works with all pulse- and encoder-register water meters that provide electronic output.



Each STAR Network MTU delivers

Long-lasting performance
Contains a 20-year permanent battery

Secure and reliable technology
Ensures data and system security

Long-range power
Transmits meter data over a range of at least one mile

Hermetically sealed design
Stands up to harsh basement and pit installations

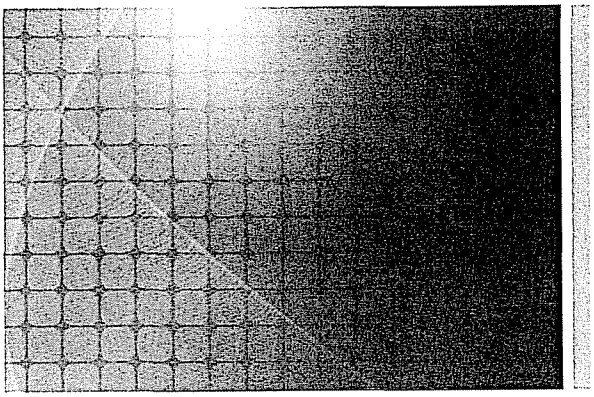
Dual-port operation
Handles compound meters or multiple-meter installations including gas and water combinations

Additional data
Reports data such as account information, battery condition, and tamper and error status in addition to meter readings

ACLARA™

STAR® Network DCU II

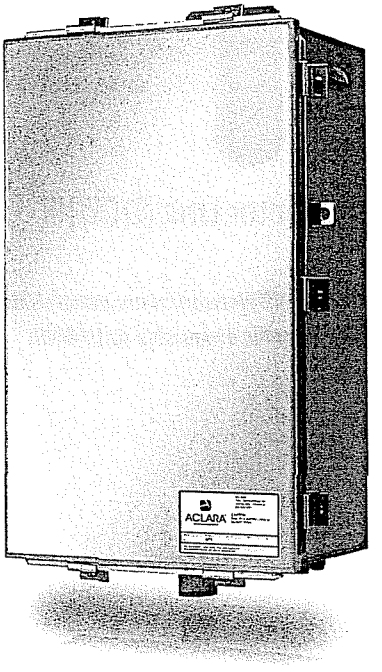
DATA COLLECTOR UNIT



The STAR Network DCU II enhances your AMI network by providing reliable and flexible two-way communication for electric, water, and gas meters.

Our proven, wide-area network (WAN) backhaul options support data-intense applications such as real-time pricing, demand response, remote leak detection, and always-on connections to the utility.

The DCU II transmits and receives data over individual 450- to 470-MHz radio frequencies. Powered by a battery that can be recharged by a solar panel or AC power supply, the DCU time stamps, processes, and stores diagnostic information and data collected from meter transmission units (MTUs). The DCU transmits the data for further processing to the utility's network control computer (NCC) and sends commands and alerts back to the MTUs.



Each STAR Network DCU II delivers

Reliable technology
Communicates with FCC-licensed, narrow-band transceivers

Safety and security
Initiates an immediate message transfer upon receipt of an event or alarm from an MTU

Robust operation
Delivers Part 90 radio technology to transmit commands to MTUs.

Rugged, weatherproof design
Mounts on buildings, utility poles, or towers

WAN compatibility
Communicates over cellular, fiber-optic, Ethernet, Wi-Fi, and WiMAX networks

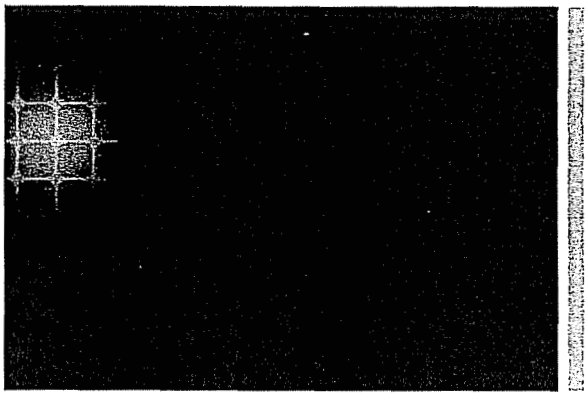
FCC compliance
Meets requirements under Part 15 and Part 90 for a Class A digital device

Backwards compatibility
Replaces older style models of the DCU

ACLARA™

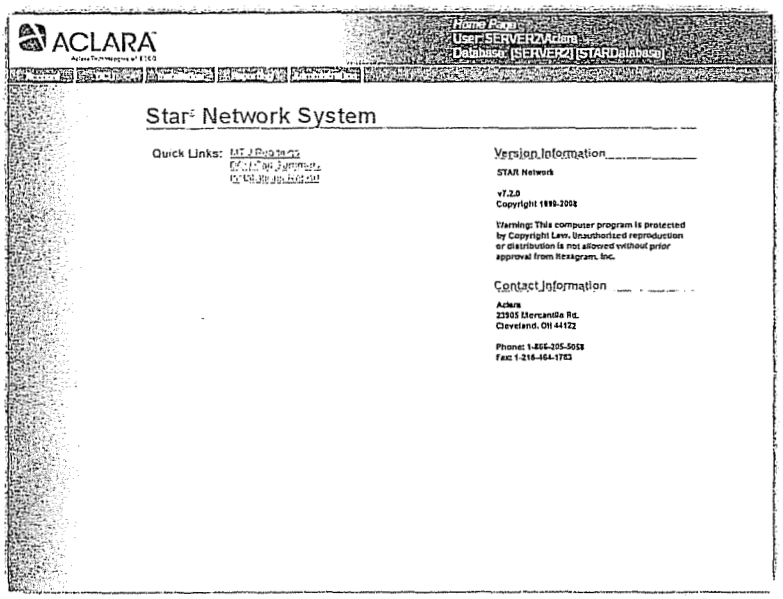
STAR® Network NCC

NETWORK CONTROL COMPUTER



The STAR Network NCC allows utilities to better manage information about customer accounts, meter transmitters, and data collectors. What's more, it makes it easy to transfer gas, water, and electric meter data to billing, customer service, accounting, and other utility applications.

The NCC database stores meter readings from the system data collectors. The data is displayed through a series of five tabs, creating a simple roadmap through the software and providing a variety of search and reporting options.



The STAR Network NCC delivers

Record processing
Synchronizes records established by hand-held field programmers with the NCC

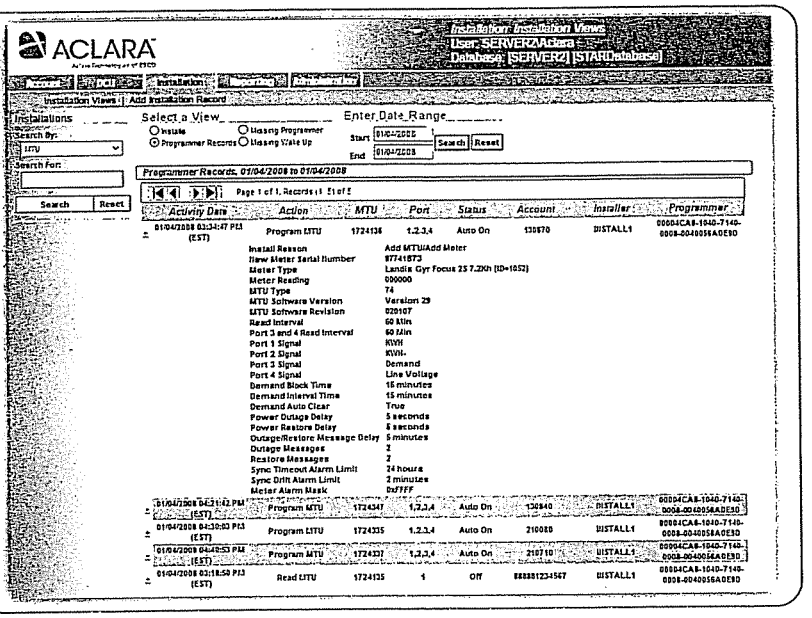
Alarm notification
Sends a message when an alarm is inserted in the database

Data capture
Maintains account number, meter type, meter transmission unit ID, meter serial number, and alarm parameters for all utility meters

Demand response
Supports demand parameters and interval reads for electric meters

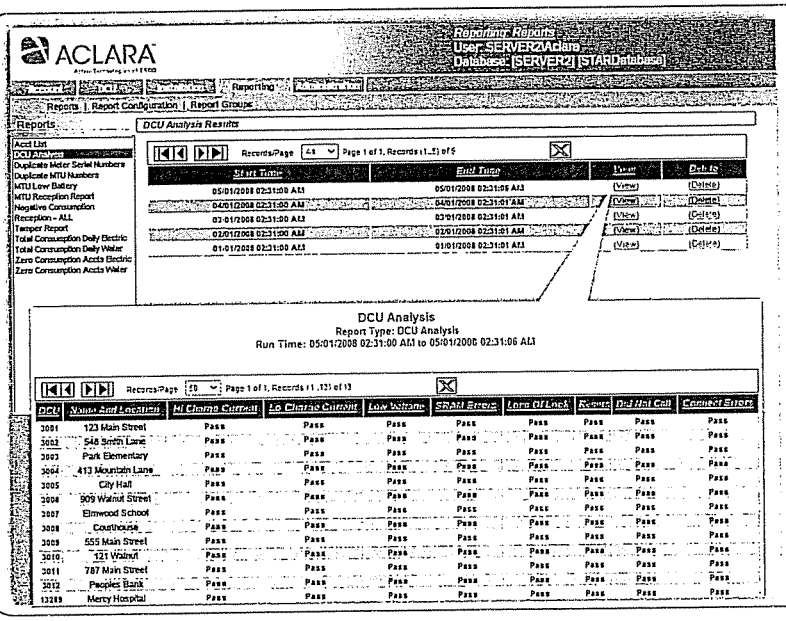
Track MTU Installations

- Track MTU installations and field programmer records
- Search database by MTU, account ID, installer, programmer, or keyword
- Run reports on installs, programmer records, missing records, and missing wake-up signals
- Create or edit wake-up and programmer records with the appropriate access rights



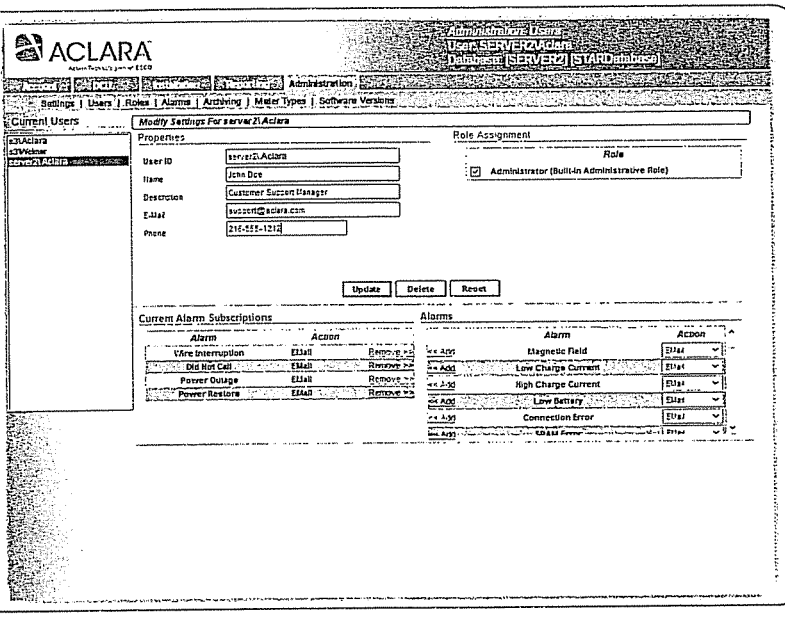
Create and View Reports

- View existing reports or configure new ones for a selected date range
- Monitor MTUs in logical groups or by individual account number
- Edit report groups by criteria or account number



Configure System Settings

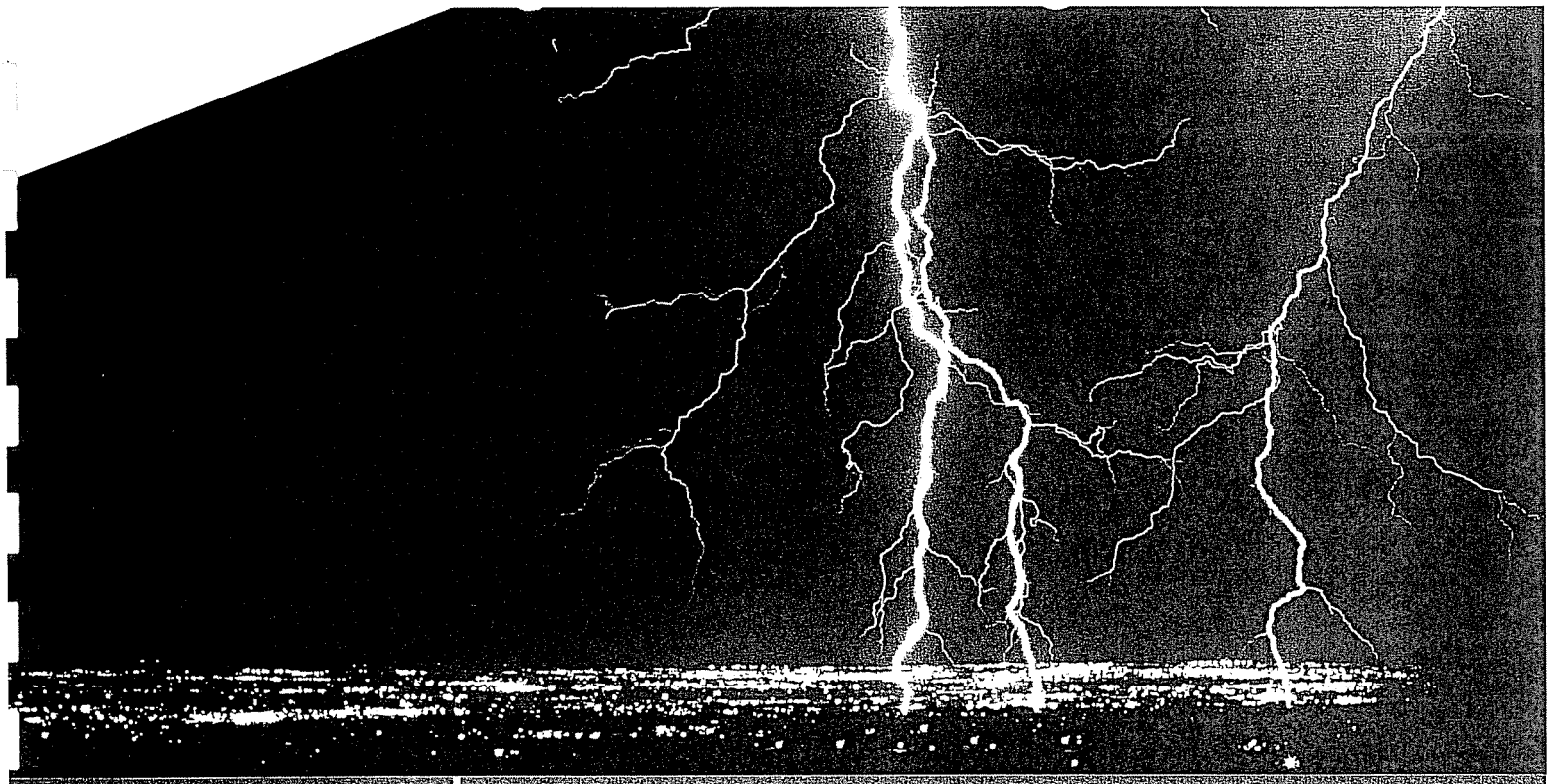
- Configure and manage system settings
- Define user roles, utilities, alarms, meters, and archiving parameters
- Open to only those with appropriate access rights



COOPER / CANNON

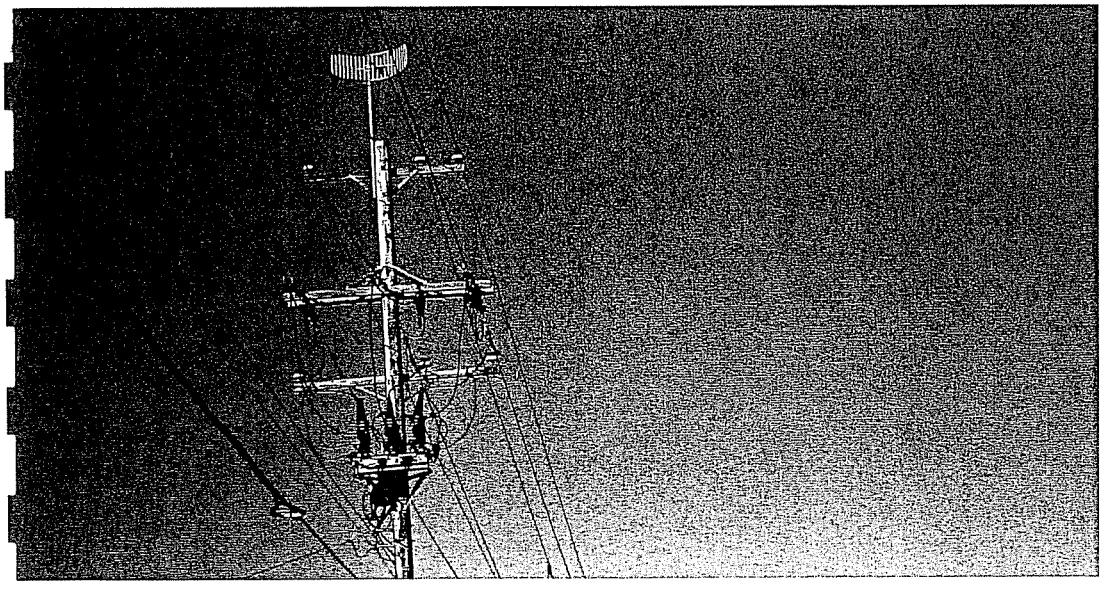
EXHIBIT D

CASE NO. 2009-00143



A Legacy of Innovation and Dedication to Service.

COOPER Power Systems

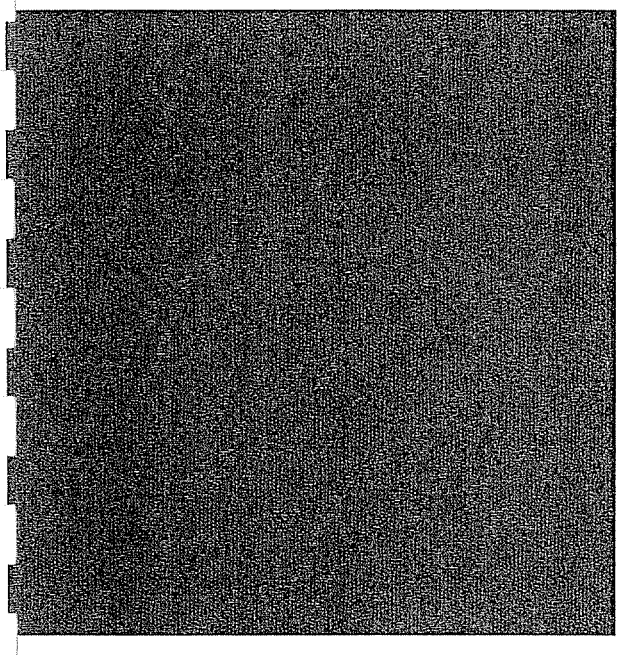


Products and Services

COOPER Power Systems

Smart solutions for the electric grid

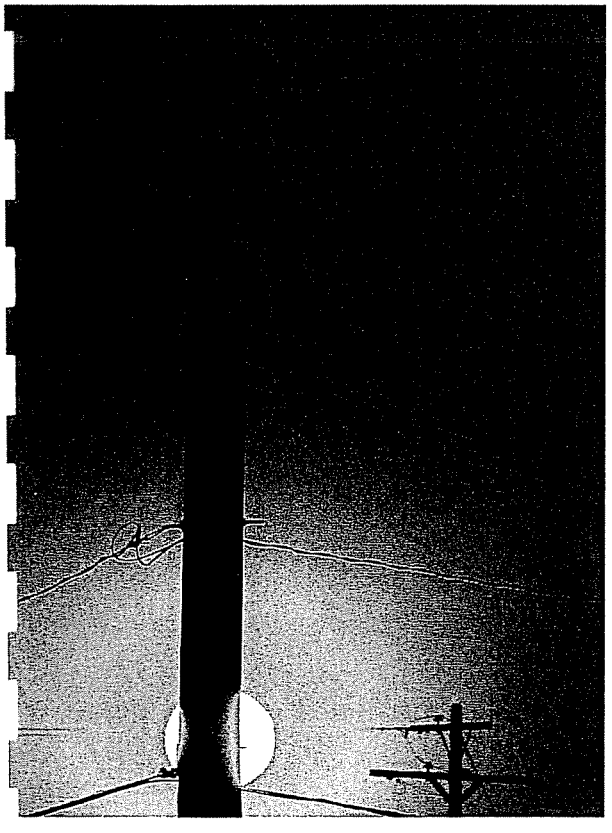
Cooper Power Systems manufactures a wide range of medium and high voltage electrical equipment and solutions for the utility and industrial markets.



The power industry is one of ongoing evolution. The only way for companies like Cooper to keep up to date is to constantly listen to our customers, responding to their needs. To that end, we continue to bring innovations forward and develop products that incorporate the latest materials, methods, and technologies. Our customers know that our portfolio includes products that can both meet and exceed their needs—from conventional electric products to innovative software and environment-friendly offerings that are more efficient than ever. We also bundle solutions to offer you a convenient and economical way to deliver and use reliable power.

Cooper Power Systems products are marketed under a number of brand names including McGraw-Edison, RTE, Kearney, Edison, Kyle, Envirotemp FR3 fluid, UltraSIL, NOVA, and Yukon. Through our Energy Automation Solutions group, Cooper Power Systems provides customers with comprehensive smartgrid solutions. By combining our traditional products with industry-leading automation solutions, Cooper Power Systems enables customers to improve power quality, reliability, and efficiency in their transmission and distribution networks.

In addition, Cooper Power Systems operates a unified research and development program that coordinates development efforts across all product lines. We are committed to constantly improving electrical distribution. Our extensive product offerings include:



- Substation Monitoring
- Substation Data Concentrator
- HMI / SCADA
- Substation Automation
- Fault Indicators
- Pad-Mounted Switchgear
- Power Quality Switches
- Cable Accessories
- Cutouts and Fuses
- Sectionalizers
- Dielectric Fluids
- Capacitors
- Fuse Links
- Arresters
- Compression Tools and Connectors
- Tools and Grounding Equipment
- Voltage Regulators
- Disconnect and Bypass Switches
- Protective Relays
- Transformer Components
- Controls
- Distribution Transformers
- Engineering Consulting Services
- Reclosers
- AMR/AMI
- Demand Reponse
- Critical Asset Security and Monitoring Services

Technology that makes life better for utilities and their customers

KEY ADVANTAGES

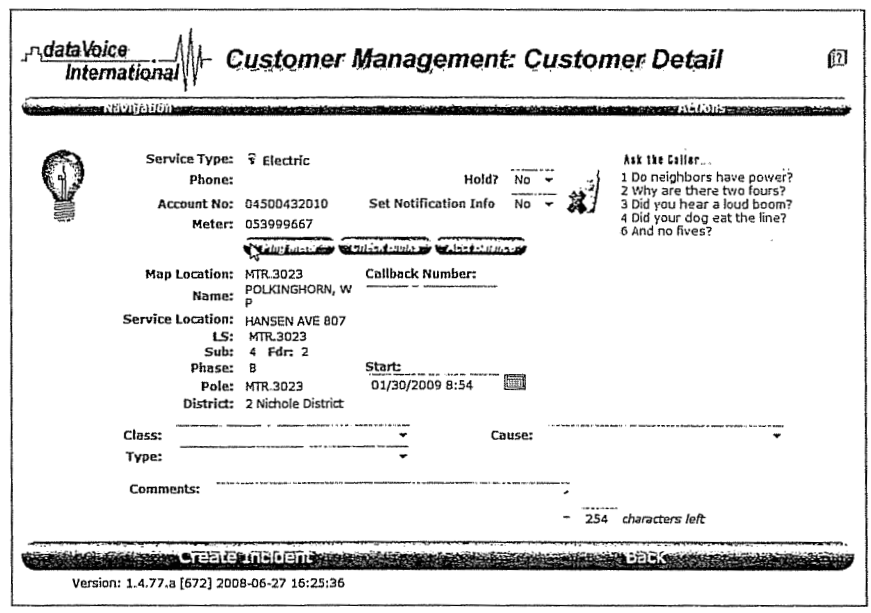
- Allows the utility to capitalize its investment by expanding these features to all departments, while eliminating the risk of having unqualified personnel accessing the AMI system.
- The system consolidates all needed information to one screen tailored for each department.
- Offers simple screens that consider the experience level of users.
- Improve customer service by responding quickly to their requests.
- Reduces unnecessary dispatching.
- After power has been restored, a simple click can check all downline meters to verify the power has been restored, many times in just minutes, while the crew is still onsite.

Voltage and Connectivity Pinging from the OMS

Using the dataVoice Outage System in concert with the Cannon/ Cooper AMI system, personnel from many different departments can now perform a variety of important and useful tasks. The application currently uses the Multispeak Integration. This allows each utility to perform all necessary tasks using their existing infrastructure, software and servers.

Individual Meter Polling

An individual status check can be requested of an individual meter prior to sending a repair crew onsite. This is extremely helpful after hours and can save considerable time and money in unnecessary dispatching. If the problem is on the consumer's side, the utility can immediately inform the customer that there is power to the meter, and that a service fee will be charged. These individual status checks can be performed from the screen used to enter outage reports into the OMS, or from the list of open incidents.



ESRI Technology
AUTHORIZED BUSINESS PARTNER

dataVoice International

Utility Solutions

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Advanced Metering Reading and Advanced Metering Infrastructure

- Monitor your infrastructure with the fastest and most robust power line carrier meter reading products in the world — Cooper Power Systems
- Cooper AMI products accurately measure and report electricity use, while consuming less operating energy than other power line carrier technologies
- Web-based demand response platform allows you to monitor and present individual connected loads

Wireless Communications

- Tait Radio Communications is a worldwide leader in providing technology for efficient voice, mobile data and workforce management solutions
- Talk to groups or individually addressable employees, roam seamlessly between coverage areas, and track field staff with TVD's built-in Automatic Vehicle Location

Security Solutions

- Protect valuable assets with Honeywell's industry-leading utility security solutions
- Secure everything from storage areas, substations, and even employee break rooms with scalable access control, intrusion alarms, and video surveillance

Mapping and Geographic Information Systems

- Navigate field staff to critical utility assets with GeoNav's convenient Garmin interfaces
- Improve productivity and reduce costs with real-time GPS mapping and AVL
- Eliminate costly and outdated paper maps
- Quality test and convert existing data into updated GIS functionality

Supervisory Control and Data Acquisition

- Survalent's SmartSCADA allows you to control and monitor substations easily with less capital investment than traditional SCADA systems
- Improve productivity, customer service and system reliability while reducing costs

Surge Protection

- Guard your customers' electronics from costly surge damage with TESCO surge protection
- TESCO's technology prevents surges from ever reaching the home, rendering traditional retail surge protection products unnecessary
- Lease surge protection equipment, and earn a return on your investment in just three years

Weather Decision Technologies

- Never be caught off guard by the weather again with Weather Decision Technologies
- Customize Weather Decision Technologies products with your GIS data, and monitor conditions at each of your sites in complete detail
- Monitor and recall 365 days of accurate lightning data for increased safety and reliability

Revenue Growth Opportunities from NRTC

TrueBand ISP Services	WildBlue	DIRECTV
Provide a full suite of Internet services to your subscribers, everything from e-mail to download accelerators	Bring affordable, two-way satellite Internet to customers in areas not served by cable, DSL or fiber	Bring innovative, all-digital satellite programming to your customers

NRTC – Your Cooperative Partner

Like you, NRTC is a cooperative, owned by our member utilities. As a member of the cooperative family, NTRC uses the collective bargaining power of more than 1,400 utilities across the country to evaluate and provide the products and services you need, at affordable rates. And because we're a cooperative, members that do business with us can earn a portion of their investments back through patronage capital. NRTC is driven by your commitment to improve life in rural America.

Contact your Regional Business Manager on the reverse side

Inter County Energy
Points of Interest
AMI Questionnaire

	YES	NO	DESCRIPTION
COMMUNICATIONS			
Power Line Carrier	X		Cooper/Cannon's Power Line Carrier system is a true two-way AMI network that can read any meter on Inter County's system in 3-6 seconds, has a very large bandwidth for data collection, and uses message prioritization to maximize performance for customer service, outage management, and engineering analysis. The Cooper/Cannon PLC system is an optimum fit for cooperatives as it can cost-effectively provide coverage and features needed to improve efficiency, productivity, and reliability over large, diverse service territories, without regard for terrain. This same network performs load management/demand response, centralized intelligent capacitor bank control, and distribution automation.
Mesh network			
Licensed Radio frequency			
Unlicensed Radio frequency			
Pager	X		Cooper/Cannon can utilize 900 MHz and VHF paging to communicate with load management and capacitor control devices, including thermostats.
Other	X		Cooper/Cannon also utilizes cellular communications for capacitor control, smart sensors, and distribution automation.
FUNCTIONALITY			
KWH	X		Cooper/Cannon provides extensive kWh Energy Usage information, including: Cumulative Consumption and Daily Usage (24 hr period) with 93 days of Daily Usage stored in the AMI module.
Demand	X		Cooper/Cannon provides substantial Demand information, including: Last Interval kW Demand (configurable to 5-, 15-, 30-, 60-minute intervals), Peak kW Demand (with time and datestamp), and Load Profile (configurable to 5-, 15-, 30-, 60-minute intervals). AMI Modules from Cooper/Cannon store up to 600 days of hourly interval data.
Real Time Pricing	X		Cooper/Cannon's system has a number of tools to support Real Time Pricing (RTP), Time-Of-Use (TOU), and Critical Peak Pricing (CPP). Price signals can be broadcast to all meters within seconds to notify consumers or shift meters to alternate energy rates.
Net-Metering	X		Cooper/Cannon's system supports net-metering activities, recording kWh and kW for both forward (delivered) and reverse (received) channels. This data can be kept separate, added together, or netted from each other.
Forward	X		
KWH	X		
KW	X		
Reverse	X		
KWH	X		
KW	X		
Both	X		
KWH	X		
KW	X		

Load Management	X		Cooper/Cannon truly offers the most advanced load management systems on the market, with advanced protocols and control algorithms to provide demand side relief while minimizing customer inconvenience. Cooper/Cannon provides more load management devices to North America every year than all other vendors combined. This is due to the technological superiority of the devices and easy-to-use software that provides proper control of loads ranging from water heaters and air conditioners to pool pumps and agricultural irrigation pivots. Cooper/Cannon's devices utilize our proprietary TrueCycle® technology to sense the duty-cycle of air conditioners, providing true load relief even on the over-sized air conditioning units being installed today–maximizing the utility's investment in Load Control tools. Results show that TrueCycle increases load reduction by 33% per point, creating incredible savings for the coop. Cooper/Cannon's devices also offer tools to the utility to provide dependable demand response and increased grid stability.
# of relays/points			Up to 3 relays per device.
Relay sizes available			5A and 30A relays are available to control Air Conditioning, Water Heaters, heat pumps, dual fuel units, pool pumps, spas, irrigation pivots, etc.
Prepay Capability	X		*Cooper/Cannon offers a variety of prepay options including partnerships* with software vendors such as Exceleron and display capabilities within the UtilityPro thermostat.
Substation Identification	X		The Cooper/Cannon system can identify which substation is serving any particular AMI module.
Feeder Identification	Possible		While not inherently designed into the system, the system may be able to determine which feeder is serving a particular meter by performing analysis on system data.
Phase Identification	X		The Cooper/Cannon system can identify which phase is serving a meter using an intelligent voltage algorithm and voltage regulators.
Multi-Utility			
Gas	Future		Cooper/Cannon is in development of solutions that would implement a wireless RF interface between electric meters and gas meters.
Water	X		Cooper/Cannon currently offers electric meters with hard wire interfaces to water meters and is also in development of wireless interfaces to the electric meter.
VENDER GENERAL INFORMATION			
# Of customers			Nearly 400 customers for Cooper/Cannon solutions (AMI, LM/DR, Cap Control, SCADA, DA, etc.)
# Of endpoints sold			Approximately 1.5 million.
Nearest Customer to Inter County			Jackson Purchase Energy and Owen Electric Cooperative are both deploying the system.
# of Support Staff			40 in Customer Service. The EAS Group that Cooper/Cannon is part of has 170 engineers dedicated to our solutions.
Years in business			Cannon: 22 years, Cooper Power Systems: 24 years, Cooper Industries: 176 years.
Hours of available support staff			24 x 7 x 365. Business hours are 8:00 am - 4:30 pm M-F, outside of those hours users leave a message which immediately pages the on-call technician. All calls are guaranteed to be returned within 1 hour, but the typical response time is less than 15 minutes. All on-call technicians have high-speed internet connections to allow remote access to user systems. Note that Cooper/Cannon has only one level of support for one price, GOLD, and issues are handled immediately on a first-come, first-served basis.

GE	In Dev.		Cooper/Cannon is in development of AMI modules for the GE I-210 1PH and GE kV2/kV2c 3PH meters. Both products are planned for release at the end of 2009.
ITRON	X		Cooper/Cannon offers interfaces for both the Itron CENTRON 1PH and SENTINEL 3PH meters.
LANDIS + GYR	X		Cooper/Cannon offers interfaces for both the Landis+Gyr FOCUS 1PH and S4/S4e 3PH meters.
SENSUS	X		Cooper/Cannon offers AMI modules for the Sensus iCon 1PH meter.
Cooper Power Systems' Disclaimer:			The material contained in this document represents proprietary, confidential information pertaining to Cooper/Cannon's processes & methods, product line features & functions or future product line features & functions. By accepting this document Inter County Energy hereby agrees that the information in this document shall not be disclosed outside of Inter County Energy. It will not be duplicated, used, or disclosed by Inter County Energy employees for any purpose other than to evaluate Cooper/Cannon's fit for a future project.

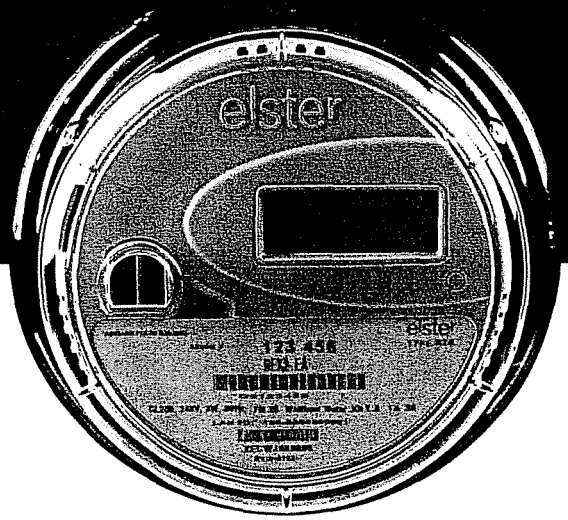
ELSTER

EXHIBIT D

CASE NO. 2009-00143

Pat Corrigan

EnergyAxis® REX2-EA™ meter



The robust features and flexible architecture of the REX2-EA meter provides a solid foundation for implementing the smart grid of the future.

Pilot Program - Available - 3rd party hosting

REX2-EA meters bring to the REX meter family many enhancements designed to support emerging needs of smart grid initiatives. REX2 meters include enhanced memory, greater security, remote upgradeability, and additional capabilities to support smart grid needs such as outage and voltage monitoring.

Developed with technology and communications flexibility in mind, the REX2 platform is both a smart metering endpoint and gateway into the home supporting both 900 MHz and 2.4 GHz ZigBee communications. It also provides an open architecture framework for third party technology innovation supporting the Advanced Grid Infrastructure Initiative.

Optimal functionality

- Proven 2-way communications using EnergyAxis 900 MHz FHSS RF technology, providing the ideal combination of speed, penetration, and RF power
- On request energy, demand, status, and instrumentation data read support
- 2 configurable metered quantities supporting bidirectional metering, ideal for net metering and co-generation applications
- 3 demand quantities with 5-, 15-, 30-, or 60-minute block demand, including remote demand reset and demand limiting
- Support for up to 4-tier, 4-season time-of-use energy and demand with critical tier pricing
- 2 channel interval data collection with EOI energy snapshot for improved data validation
- Flexible water, gas, and third party device support through integrated or add-on communication modules
- Advanced energy theft and meter tampering detection technology
- Wide array of status, warning, and error conditions reportable through the network
- Future upgradeability for reactive metering, rolling demand, and other feature enhancements
- Advanced security with full 128-bit AES encryption
- Support for ANSI C12.19 and C12.22
- Nonvolatile memory rated for 1,000,000 write cycles, ensuring data integrity for the life of the meter
- Optimized for very low burden on utility distribution system

Connect or disconnect ✓ 200 Amp internal

Collectors 20K

TOU - 4 TIERS

VOLTAGE - ✓

Outage - ✓

Demand - ✓

Theft Det - ✓ tilt sensor

1φ + 3φ ✓

WAN - Either / Fiber / Cable to/at collector

Set Priorities

Capacitor to do a last gap

Must schedule endpoints

Meter reads every hour

Collectors are scheduled

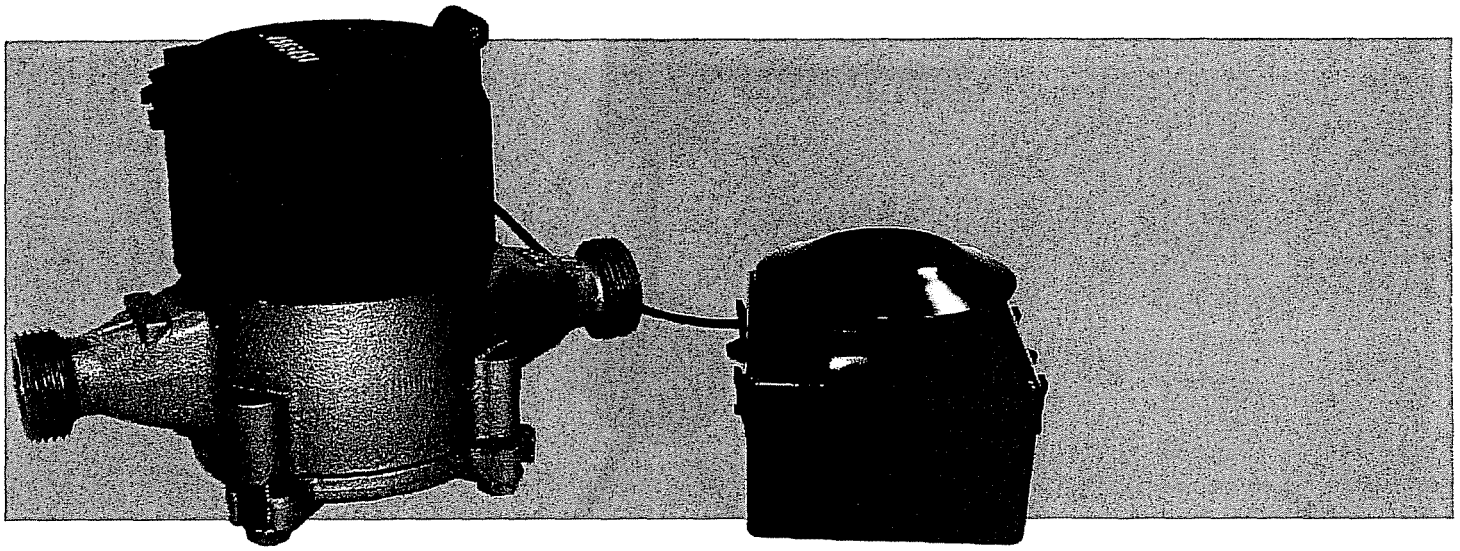
Read in's + Read outs ✓

use with google / Esri / etc.

elster

www.elster.com

EnergyAxis® V. ıter Module



The Elster Electricity EnergyAxis System, used to collect electricity meter reads and usage data, also includes the remote collection of register readings and usage data from water meters. The water meter module is provided in a molded enclosure that connects to either digital (pulse) or encoded registers used with water meters. Modules can be used in pit applications, remote mounting applications, and direct mounted to the water meter.

Modules transmit meter readings, usage data, and local status and warnings over the Elster 900 MHz RF network used for metering communications. This frequency hopping, spread spectrum RF network provides a very secure and robust communication network to retrieve the desired information concerning water usage. Transmissions from the water meter enter into the 900 MHz mesh network used in Elster's electricity metering communication system. The water meter data is directed through the mesh network to an area collector, where the data is stored for retrieval by the EnergyAxis Metering Automation Server (MAS). Use of the Elster mesh network provides the greatest assurance that meter readings will be received at the collector and available for retrieval by MAS.

Application

The communication module may be ordered for use with water meter registers that have a digital output or those that have an encoded output. Modules may be connected to the water meter register at the water meter factory or added at the meter shop location.

Modules may be ordered for water meter pit settings or above grade remote or direct connect applications. Modules used in the pit setting may be fitted to the metal lid cover through a hole in the cover or they can be used with a composite cover using a molded bracket in the cover to support the module.

A unique LAN identification number exists for each module. This number is printed on the module and also shown in bar code format. Modules attached to water meters at the factory will come with a file identifying the module and meter combination.

The modules support the unit of measure as provided by the water meter register and no on-site programming is required.

Operation

Periodically throughout the day, the module reports the water usage reading, status and warning messages, and interval data. The local EnergyAxis collector will store this data for retrieval by MAS. If the collector is not nearby, a nearby electricity meter receives the module transmission and will forward this information to the collector through the Elster 900 MHz mesh network. Water meter data is stored within the electricity meter until the collector acknowledges receipt of the data. With multiple paths for the water module's data through the mesh network, there is the same robust communications performance and data collection reliability as exists with the electricity meters in the EnergyAxis System.

The EnergyAxis MAS manages the retrieval of the metering information and provides initial reporting of the water usage data and exports the water meter reads and other information to the appropriate system for billing or other processing.

Power for communications is provided using a battery. The battery life is rated for 20 years of operational life.

Technology to Empower Utilities

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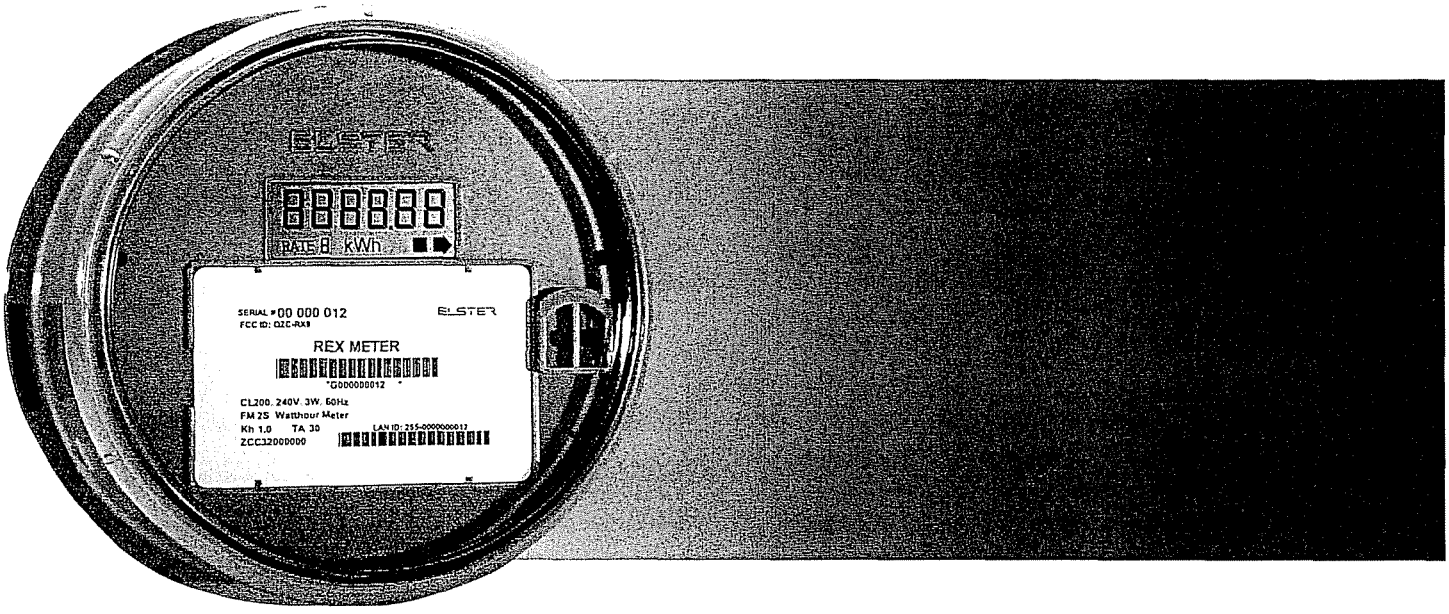
REX® Meter



Residential Excellence, the New REX Meter

Elster Electricity's REX meter is a totally electronic electricity meter designed to meet residential metering requirements and provide remote communications. The REX meter is designed to be a component of the Elster Electricity EnergyAxis® System which provides two-way communications to utility meters for selecting metering functionality, collecting meter readings, performing voltage monitoring, and controlling an optional internally mounted control switch. The REX meter offers demand, time-of-use (TOU), load profile recording, bidirectional metering, and critical tier pricing capabilities in addition to kWh consumption measurement. A REX meter, operating in the EnergyAxis System's mesh network, can lower meter reading costs, provide more accurate readings, and improve customer satisfaction by reducing the likelihood of billing questions due to incorrect readings.

The EnergyAxis System

Elster Electricity has developed an advanced, intelligent two-way, unlicensed 900 MHz radio frequency (RF) network for metering communications. The Elster Electricity EnergyAxis System consists of the EnergyAxis Metering Automation Server (MAS), REX meters, A3 ALPHA® meters, and A3 ALPHA meters that act as local data collectors. The EnergyAxis server communicates via a public wide area network (WAN) with the A3 ALPHA meter/collectors. The A3 ALPHA meter/collectors communicate with and manage up to 1,024 REX or A3 ALPHA meters within the two-way Elster Electricity RF local area network (LAN).

Since the field components of the EnergyAxis System consist of REX and A3 ALPHA meters, system deployment is as simple as installing a meter. The optimal communication path is selected as the meter automatically registers with the local A3 ALPHA meter/collector. No special equipment is necessary to mount and install either the REX meters or the A3 ALPHA meter/collectors. If network conditions change, the REX meter automatically discovers the best new communications pathway.

To optimize communications, each REX meter may serve as a repeater. This creates a robust, mesh communication network while maximizing the communication range of each collector.

The REX Meter

The REX meter is a residential, electronic meter available in Forms 1S, 2S, 3S, 4S, and 12S socket-type bases. The accuracy class, as defined by ANSI, is 0.5.

The metered quantity of the REX meter is selectable from the following:

- kWh delivered
- kWh received
- kWh sum (delivered + received)
- kWh net (delivered - received)

Regardless of the metered quantity selected, kWh received is also measured and available for retrieval along with the primary metered quantity.

Load Profile Recording

Load profile recording is available using the REX meter. The interval length may be selected as 15, 30, or 60 minutes. The REX meter load profile record is periodically transferred to the local collector. This newly retrieved record is appended to previously collected data within the A3 ALPHA meter/collector, where it is stored for transfer to the server via the WAN connection.

Technology to Empower Utilities

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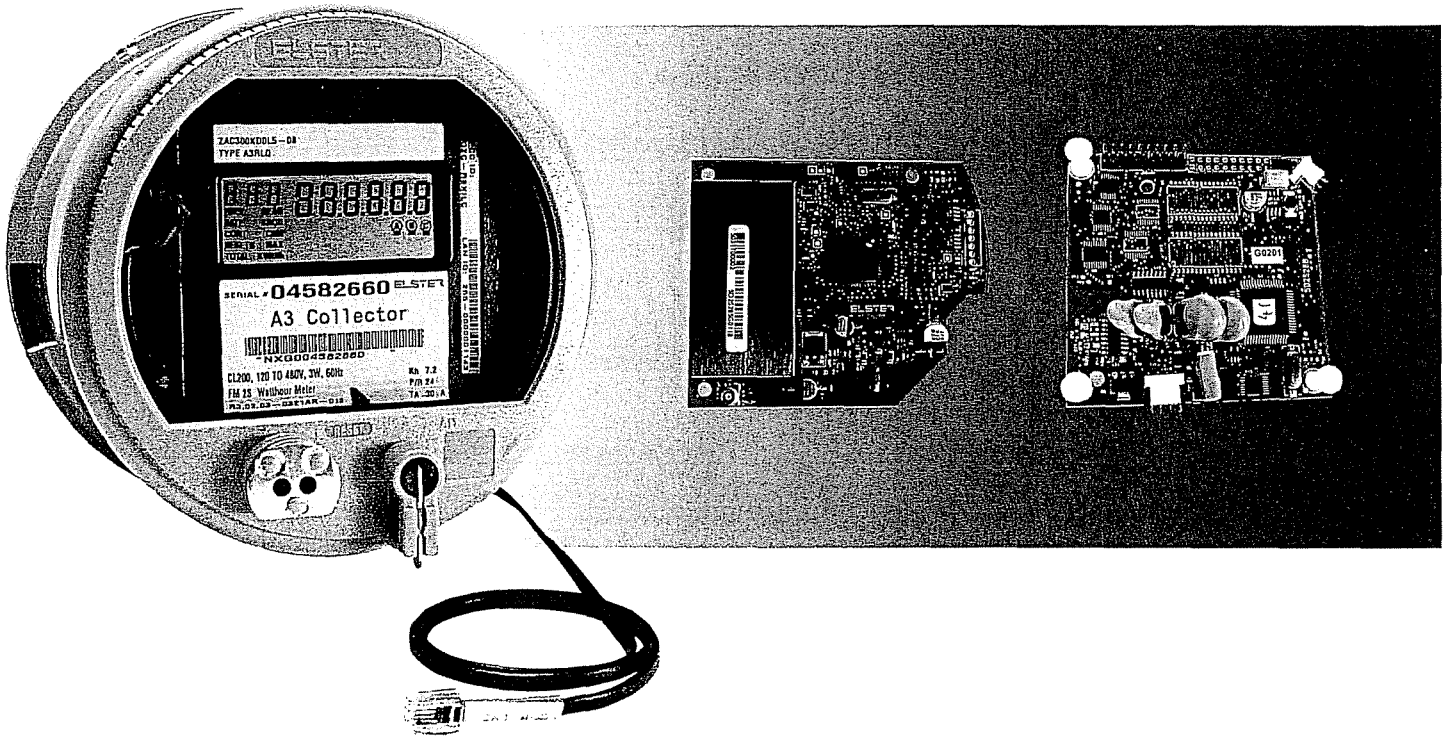
A3 ALPHA® Meter/Collector



Meter and Collector Functionality

Elster Electricity's EnergyAxis® System is a family of data management, data collection, metering, and communications products that provide remote communication to utility meters. Each A3 ALPHA meter/collector (or collector) contains an internal telephone modem (ITM3) and a local area network (LAN) option board (ILC1) with two-way 900 MHz transmit and receive capability. The collector is the interface between the EnergyAxis Metering Automation Server (MAS) and the 900 MHz radio frequency (RF) network composed of Elster Electricity's REX® meters and A3 ALPHA meter/nodes with ILN1 (internal LAN node option board). Collectors can be either single phase or polyphase A3 ALPHA meters for installation on a variety of residential or commercial meter locations. Thus each collector performs a dual function in the network: acting as a meter and as a data collector for a group of other meters.

Managing the Network

The A3 ALPHA meter's ILC1 option board manages the 900 MHz RF local area network of REX and A3 ALPHA meters, collects and stores data from the meters, and handles a variety of other system functions. These functions include storing and downloading time-of-use (TOU) schedules to REX meters, transmitting time synchronization signals, scheduling demand resets, collecting load profile interval data, and returning meter data to MAS. Data available to MAS include energy, TOU, demand, load profile, statuses, outage counts, and voltage. The data collected is available to MAS via a single telephone call made on a scheduled or on-request basis.

Intelligent Two-Way Communications

Each collector can manage a network of up to 1,024 meters. The ILC1 option board supports automatic RF registration of meters, designates certain meters as RF repeaters, and selects optimized communications routes to each meter based on signal strength and other factors. If the ITM3 in the collector is equipped with an optional outage reporting battery, the collector can also provide both power outage and restoration data to MAS.

Easy to Install, Highly Accurate, and Low Cost

Like its predecessors, the A3 ALPHA meter/collector uses Elster Electricity's patented digital measurement techniques that offer high accuracy, repeatability, and low ownership costs. The A3 ALPHA meter's architecture supports a wide variety of metering functions and software programming. In support of open architecture standards, the A3 ALPHA meter/collector fully supports ANSI communications standards C12.18, C12.19, and C12.21. Because the A3 ALPHA meter/collector is a meter, the installation is as simple as inserting the meter into its socket and connecting it to a telephone line.

Technology to Empower Utilities

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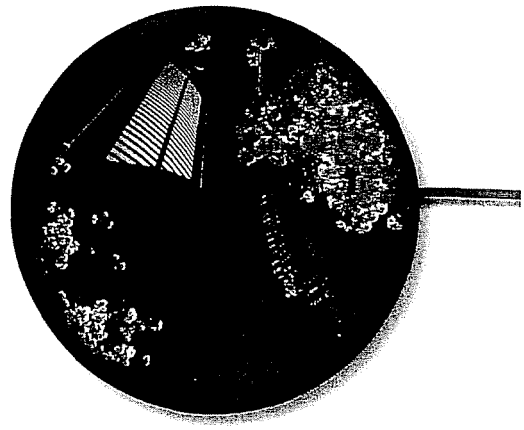
EnergyAxis® System
Technology to Empower Utilities
ELSTER
888888
RATE 8 kWh
REX METER
ELSTER

EnergyAxis® System Architecture

- 900 MHz unlicensed communications
- Controlled mesh network
- Peer-to-peer hopping technology
- Multiple repeater levels



Utility Company

How the EnergyAxis® System Works

EnergyAxis System's advanced architecture uses Elster's A3 ALPHA® meter as the host for local data collection from the REX meter network. Collectors are equipped with both WAN and RF LAN option boards and manage sub-networks of up to 1,024 REX meters. The A3 ALPHA meter collectors store the data from network meters and upload it periodically to Elster's Metering Automation Server (MAS) via a public network WAN. Because collectors are also system meters, capital expenses, installation, and maintenance costs are reduced.

The system's communications network uses two-way spread spectrum frequency-hopping technology to provide secure, reliable communications between meters and collectors. This technology enables individual meters to be designated as repeaters, creating a dynamic path that optimizes signal reliability. Communications distances between meters and collectors are thus increased, and the number of collectors required is dramatically reduced, improving system economics.

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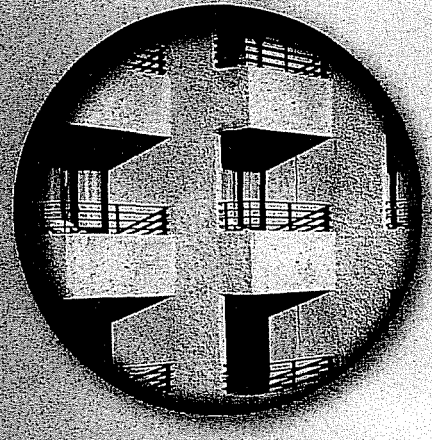


Apartments

Customer Focused Innovation

Elster Electricity, LLC, formerly ABB Electricity Metering, is a world-class provider of electricity metering products, communications solutions, and metering automation systems. The diamond in our logo symbolizes quality, strength, trust and service. Our strength is derived from a superior understanding of the changing needs of the marketplace, and the ability to respond with multi-faceted solutions that provide a valuable return on our clients' investments.

Our EnergyAxis System with new, intelligent two-way communications reflects a wealth of knowledge and experience gained by more than a century of dedication to the electricity metering industry. It is a system that is certain to redefine automated meter reading, and prove its value as a powerful, cost-effective tool for increasing productivity, reducing costs, and improving a utility's bottom line.

Contact us today, or visit **www.elsterelectricity.com** for more information.

Flexible Metering

- On-request data access
- Remote selection of meter function
- Daily/weekly/monthly collection of meter data
- Multiple metering options
  - Energy measurement—delivered, received, sum, or net
  - Critical tier pricing
  - TOU energy—4 tier energy, 2 tier demand, 4 se
  - Demand metering—total and 1 tier or 2 tiers
  - Load profile data
- 200A remote disconnect option

Meter Readings When You Need Them

Locked gates, unleashed pets, and indoor meters reduce operational efficiencies, increase metering costs, and reduce utility revenues. The EnergyAxis System eliminates these barriers along with the associated problems of estimated bills or rescheduled meter reads.

High turnover areas like apartment complexes, universities, and military housing are costly to serve, requiring repeated trips to obtain move-in and move-out meter reads, install meters, or to disconnect and reconnect services. The on-request reading function and remote operation of the REX meter's optional disconnect switch can improve customer service and reduce operational costs.

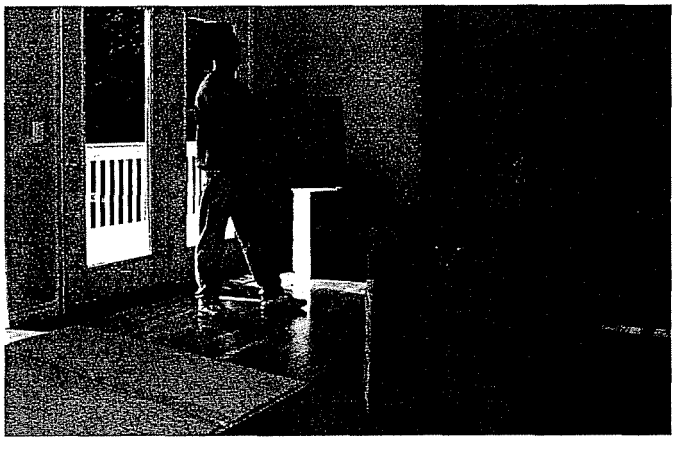
Rapid Change Requires Intelligent Meter Products

With the utility industry experiencing unprecedented change, market pressures have made sophisticated pricing methods for electricity a growing necessity. The EnergyAxis System's advanced features offer optimum metering and billing flexibility.

At the heart of the system is Elster's new single phase, residential electronic REX meter with built-in EnergyAxis System communications. Innovative in design and multi-tasking in function, the REX meter provides highly accurate kWh consumption, kW demand, time-of-use metering, critical tier pricing, and load profile interval data—all on command. These features reduce costly site visits and eliminate the need for new metering hardware. Utilities can adjust prices daily, a distinct advantage during peak energy demand periods.

The unique design of the REX meter and the system's intelligent two-way network architecture enables automatic meter self-registration within the network for true "plug and go" capability. This eliminates the need for on-site programming, making installation and operation both easy and economical. Should local conditions change, meters will reregister via alternate network paths.

Elster's A3 ALPHA® Meter Collector and REX™ Meter



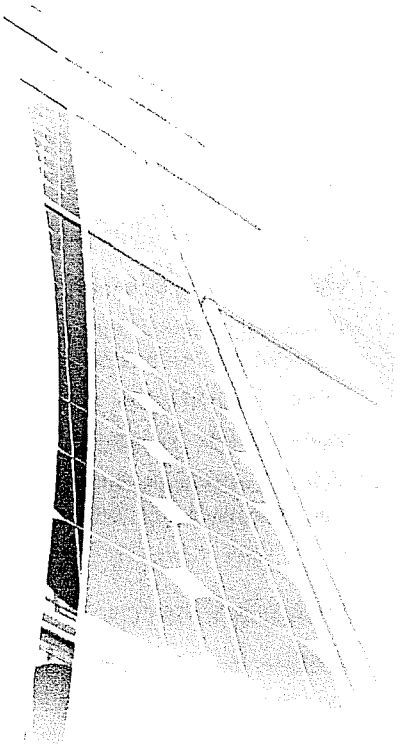
Improving Customer Service

With the EnergyAxis System, the utility company isn't the only winner. Flexible meter reading allows utilities to offer each customer a choice of billing dates. The system's advanced two-way communications enables customer-billing questions to be resolved quickly, because service representatives can initiate on-request meter reads while taking the call. Service connects and disconnects, as well as final billing, will go more smoothly and your customers will appreciate the fast response. If the system's full disconnect feature is not required, remote meters can be "virtually" disconnected, and the meter can be monitored by the utility for unusual energy consumption.

Elster... delivering a proven Smart Grid platform

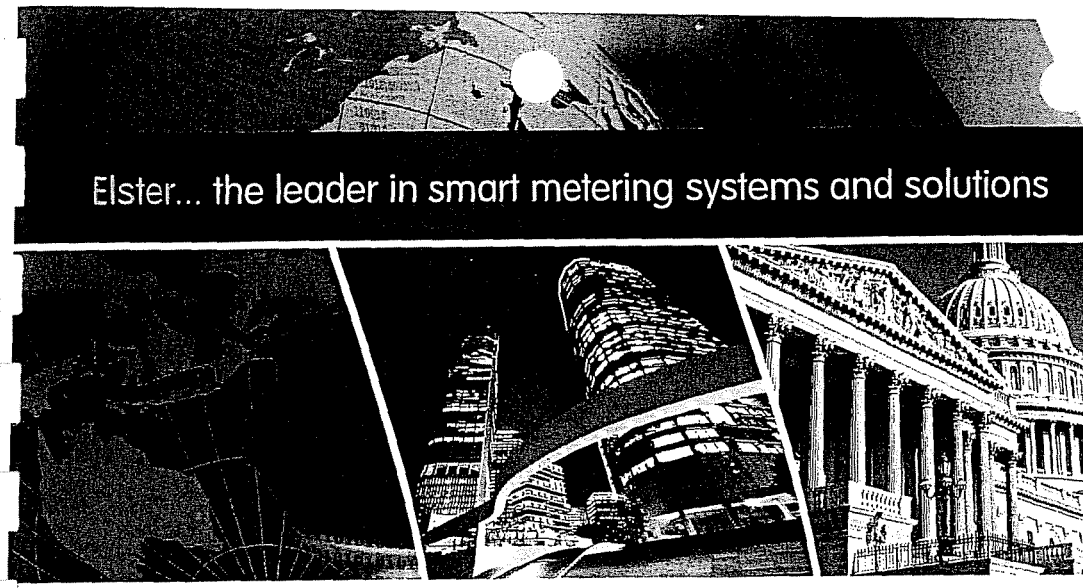
Accelerating the grid of the future

- Today's regulatory concerns have a common solution: smart metering. It serves as the foundation for both Smart Grid initiatives and demand response rates that will cut peak load and defer generation investment.
- Smart metering offers utilities a way out of the morass of rising demand, an overtaxed grid system, increasing costs for new generation and environmental pressures.
- Smart metering provides remarkable benefits:
  - Delivers a proven Smart Grid platform
  - Optimizes efficiency across the grid
  - Streamlines utility processes
  - Maximizes grid reliability
  - Reduces operational costs
  - Enhances monitoring and managing of field assets
  - Provides measurement and verification of results
  - Supports expanded customer services
  - Reduces call volumes
  - Enhances customer satisfaction
  - Supports green initiatives
  - Provides customer choices for managing energy
  - Enables demand response for residential and small commercial customers
  - Accelerates outage response time



Defining the Smart Grid in terms of functionality

- Increased digital information and control technology
- Dynamic optimization of grid operations and resources
- Deployment and integration of distributed resources
- Deployment and incorporation of demand response, demand-side resources, and energy efficiency
- Deployment of smart technologies for metering, grid communications, and distribution automation
- Integration of smart appliances and smart devices
- Deployment and integration of energy storage and peak shaving technologies, including plug-in electric hybrid vehicles
- Providing timely information and control options to customers
- Development of communications and interoperability standards for grid infrastructure and appliances
- Lowering barriers to adoption of Smart Grid technology options



Elster... the leader in smart metering systems and solutions

elster

Committed to leadership in the global marketplace

- The largest utility metering company in the world with more than $2 billion in annual revenues
- A pioneer and world leader in intelligent two-way, RF mesh AMI technology
- More than 2 million smart metering endpoints deployed and delivering time-of-use readings in the U.S. and Canada
- More 'time-based' customers than any other AMI provider in North America
- Nearly 2 million additional smart metering endpoints under contract
- A global smart metering systems and solutions provider with AMI customers across the U.S. and in Canada, Mexico, El Salvador, Costa Rica, St. Lucia, Dubai and New Zealand

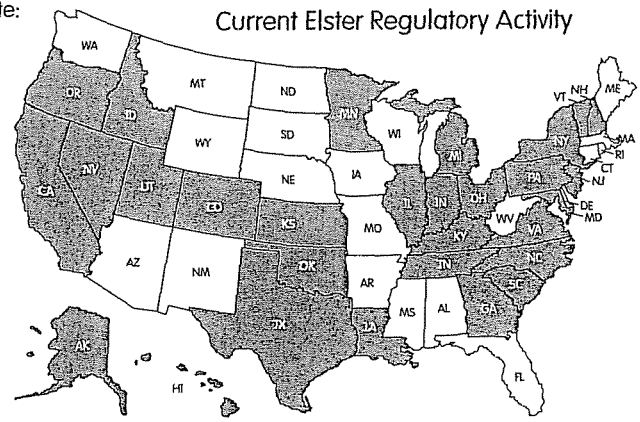
An AMI strategy dedicated to innovation

- Elster is committed to continuous product development and innovation to:
  - Identify, develop and bring to market forward-thinking solutions for electric, water and gas utilities
  - Deliver open, interoperable, standards-based architecture
  - Remain compliant to industry communication standards
- Influence and lead market decisions and direction:
  - Vigorously participate in the development of standards
  - Actively participate in key trade associations
  - Fully engage with state and federal legislative and regulatory bodies

A customer centered regulatory strategy

- Elster partners with trade associations and utilities nationwide to actively promote:
  - Unbiased choice
  - Widespread competition
  - Appropriate social and economic benefits for customers
- Our regulatory strategy promotes:
  - Accurate and recoverable data
  - Provision of operational efficiencies
  - Benefits for the consumer
  - Systems defined by functionality requirements, not methodology
- Elster's regulatory activities (Represented on map in Light Blue)

Current Elster Regulatory Activity



EnergyAxis® System

Open architecture and technological flexibility in a proven platform deliver the highest return on investment for your advanced metering infrastructure.

Rapid payback

Elster is committed to delivering the greatest return on a utility's investment through high quality advanced metering infrastructure (AMI) systems and products.

By supporting open interfaces, industry standards, and a wide range of component choices, Elster's EnergyAxis AMI solution can easily integrate with a utility's existing or planned system. These flexibilities help reduce the overall deployment and operation costs and mitigate risk of technical obsolescence by ensuring system compatibility with future technology.

Sophisticated functionality

EnergyAxis offers comprehensive two-way meter system management functionality that:

- improves operational efficiency and productivity
- increases revenue by minimizing uncollectables and theft
- enhances customer service

EnergyAxis enables sophisticated billing and systems data collection as well as automated account management. EnergyAxis also provides alerts for events such as outages, tamper indicators, and other system anomalies.

With an open architecture designed for flexibility, EnergyAxis can:

- integrate with other utility systems, such as CIS, billing, meter data management, work order, and outage management
- enable communications choices to ensure reliable performance and O&M cost effectiveness
- support energy conservation and demand response initiatives through in-home displays, critical peak pricing, programmable thermostats, and load control

Experience and excellence

EnergyAxis became commercially available in 2003. Since then, it has proven its quality and reliability in urban and suburban neighborhoods, in rural

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EnergyAxis® REX2-EA™ meter

The robust feature set and flexible architecture of the REX2-EA meter provides a solid foundation for implementing the smart grid of the future.

REX2-EA meters bring to the REX meter family many enhancements designed to support emerging needs of smart grid initiatives. REX2 meters include enhanced memory, greater security, remote upgradeability, and additional capabilities to support smart grid needs such as outage and voltage monitoring.

Developed with technology and communications flexibility in mind, the REX2 platform is both a smart metering endpoint and gateway into the home supporting both 900 MHz and 2.4 GHz ZigBee communications. It also provides an open architecture framework for third party technology innovation supporting the Advanced Grid Infrastructure Initiative.

Optimal functionality

- Proven 2-way communications using EnergyAxis 900 MHz FHSS RF technology, providing the ideal combination of speed, penetration, and RF power
- On request energy, demand, status, and instrumentation data read support
- 2 configurable metered quantities supporting bidirectional metering, ideal for net metering and co-generation applications
- 3 demand quantities with 5, 15, 30, or 60 minute block demand, including remote demand reset and demand limiting
- Support for up to 4-tier, 4-season time-of-use energy and demand with critical tier pricing
- 2 channel interval data collection with EOI energy snapshot for improved data validation
- Flexible water, gas, and third party device support through integrated or add-in communication modules
- Advanced energy theft and meter tampering detection technology
- Wide array of status, warning, and error conditions reportable through the network
- Future upgradeability for reactive metering, rolling demand, and other feature enhancements
- Advanced security with full 128-bit AES encryption
- Support for metering and network communication standards including ANSI C12.19 and C12.22
- Nonvolatile memory rated for 1,000,000 write cycles, ensuring data integrity for the life of the meter

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EnergyAxis® Metering Automation Server AMI software for the Smart Grid

Designed for security, scalability, and interoperability and proven by years of exceptional field performance, MAS is the ideal AMI network management system for smart grid applications.

With well over 200 million meter data reads successfully accomplished, and with typical daily meter read success rates of 99% or greater, MAS today manages numerous highly complex AMI networks with a wide variety of business processes implemented. It is built upon a robust, flexible architecture with key AMI needs in mind and provides enterprise level security, scalability, and interoperability.

As the back office server component of Elster's field proven EnergyAxis System, MAS automates traditional AMI business processes for meter data collection and meter asset management as well as smart grid applications for distribution automation, demand response and load management. MAS provides a complete AMI system management solution for multi-utility (electric, water and gas) residential and C&I applications and support for a wide variety of standards based public and private WAN technologies.

Enterprise Integration

With its sophisticated AMI network management capabilities, reporting and GIS, MAS is the utility's command console for rapid, reliable deployment and operation of the EnergyAxis AMI network.

Serving as the interface between the AMI network and utility enterprise applications, MAS enables automation of a wide array of business processes including billing, prepay, revenue protection, outage management, customer service, asset management, workflow management, distribution automation, demand response and load management. Web service (SOAP) and XML based interfaces provide maximum flexibility and interoperability for utilities to implement their AMI integration strategy.

Robust Security

Designed from the ground up with security in mind, MAS provides comprehensive security within the AMI system with features such as user authentication, flexible user role based access control, and support for 128 bit AES EnergyAxis LAN encryption. The system supports web service interface authentication using industry standard SSL and WS-Security protocols. The system also enables utilization of enterprise-wide authentication and security management through integration with LDAP compliant technologies thereby allowing utilities to apply SOX compliant cyber-security policies to their AMI system and AMI network.

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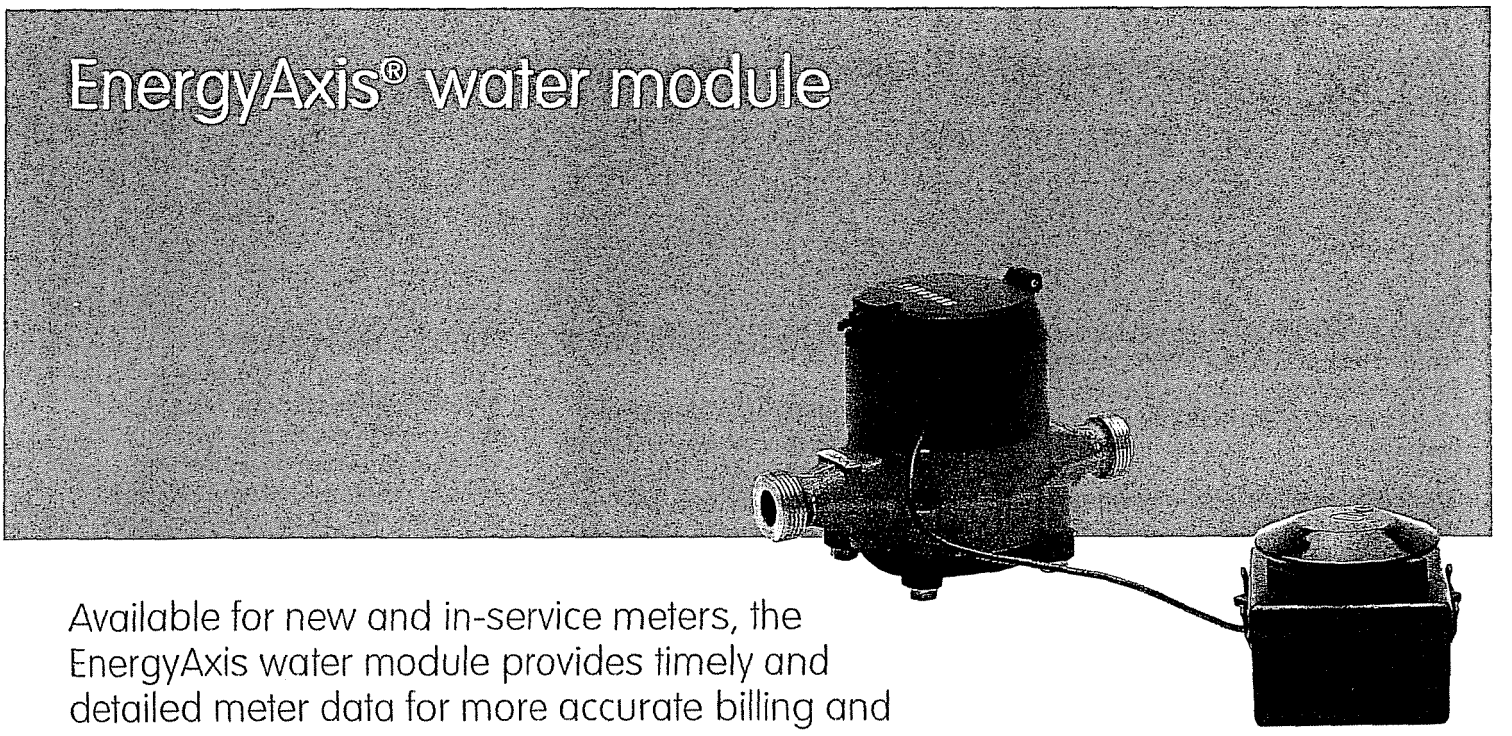
EnergyAxis® water module



Available for new and in-service meters, the EnergyAxis water module provides timely and detailed meter data for more accurate billing and improved customer service.

Solutions for water AMI

Built with an open architecture, EnergyAxis provides application integration across multiple utility systems, opening the path for seamless business information transactions. Installing EnergyAxis electricity meters builds the infrastructure that allows water AMI metering to be added at an incremental cost, which can result in tremendous savings. Expanding the EnergyAxis network to cover water metering requires little more than the installation of a communication module to the water meter.

The EnergyAxis water module is compatible with a wide variety of water meters, and it can connect to either digital (pulse) or encoded registers. In addition, the modules can be used in pit applications, remote mount applications, or direct mount to the meter itself.

Modules support the unit of measure as provided by the water meter register, and no on-site programming is required.

The data you need

Periodically, the water module reports the water usage reading, status, warning messages, and interval data. The water meter data is directed through the mesh network to the local collector, where the data is stored for retrieval by the EnergyAxis Metering Automation Server (MAS). The water module data has multiple paths through the EnergyAxis mesh network. This robust, mesh network communications performance gives the greatest assurance that meter readings will be received at the collector and available for retrieval by MAS and other utility systems connected through MAS.

In addition, all water meter data is available to the utility on-request, allowing the highest level of customer support and billing accuracy.

All endpoint components of the EnergyAxis System (including water modules) are uniquely identified by a factory programmed ID. The module ID links the meter data to a specific consumer account for more accurate

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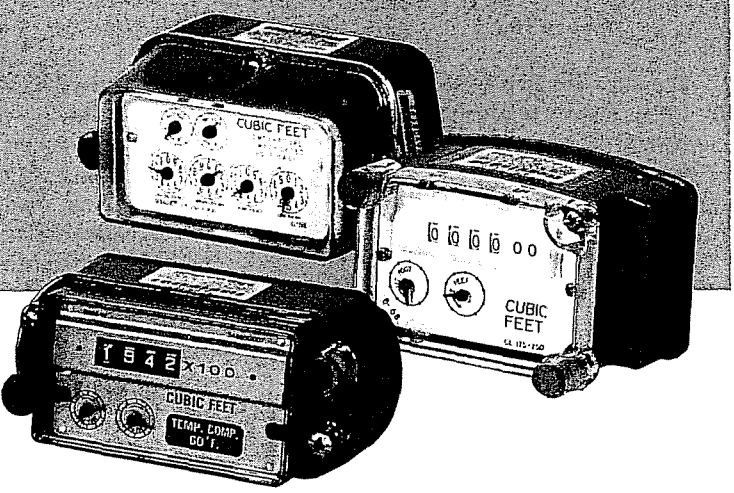
EnergyAxis® gas module



Available for new and in-service meters, the EnergyAxis gas module provides timely and detailed meter data for more accurate billing and improved customer service.

Solutions for gas AMI

Built with an open architecture, EnergyAxis provides application integration across multiple utility systems, opening the path for seamless business information transactions. Installing EnergyAxis electricity meters builds the infrastructure that allows gas AMI metering to be added at an incremental cost, which can result in tremendous savings. Expanding the EnergyAxis network to cover gas metering requires little more than the installation of a communication module to the gas meter.

The EnergyAxis gas module is compatible with Elster American Meter and all major gas meter types. The module mounts directly on the meter, incorporating the mechanical index and index cover supplied as part of the meter. In addition, it can be easily programmed to work with a fixed factor, pressure-compensating index.

The data you need

In every meter reading transmission, gas modules send total consumption data as well as interval consumption data for each of the last 24 hours. The data are stored in the EnergyAxis collector as well as the module's nonvolatile memory, protecting the data against loss. All the data are available for on-request reading.

Every reading also includes tilt and tamper indications to help identify potential theft of services. Additional monitoring capabilities can help identify irregularities such as meters that have the following:

- failed to report data after a specified time
- zero consumption
- out-of-bound (high/low) threshold flags

To help prevent false flags, EnergyAxis provides seasonal treatment of accounts.

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EnergyAxis® A3 ALPHA® Meter Collector

Designed to work with a wide variety of public communications networks, the A3 ALPHA meter collector is an ideal meter-based data collection solution for commercial, industrial, and residential AMI metering.

Solutions for AMI

Built with an open architecture, EnergyAxis provides application integration across multiple utility systems, opening the path for seamless business information transactions. Installing residential and commercial endpoint electricity devices along with the A3 ALPHA meter collector builds the advanced metering infrastructure for the EnergyAxis controlled mesh network.

Within EnergyAxis, the collector is the interface between the EnergyAxis Metering Automation Server (MAS) and the metering endpoints (electricity, water, and/or gas) within the mesh network. To function as a collector, the A3 ALPHA meter is supplied with an internal LAN controller option board with two-way 900 MHz communications capability as well as a communication board for connection to a WAN. These option boards mount under the cover of the A3 ALPHA meter, allowing deployment of network communications to be as simple as installing a meter. No special equipment is necessary.

Once installed, each collector manages a network of meters. The collector performs the following:

- acts as the interface between the WAN and the LAN
- supports automatic RF registration of meters
- designates certain meters as repeaters
- selects optimized communication routes to each meter based on communication performance and other factors
- stores and downloads TOU schedules to meters
- transmits time synchronization signals
- schedules demand resets
- collects interval data
- provides meter data to MAS

The collectors also enable the EnergyAxis System to transmit commands to the meter endpoints and return confirmation that the commands have been performed. For example, the EnergyAxis user is able to remotely disconnect or reconnect accounts, perform on-request reads, and diagnose meters for possible tampering.

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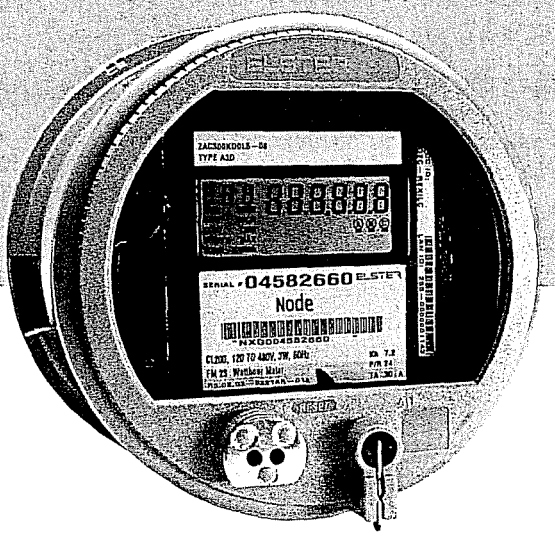
EnergyAxis® A3 ALPHA® Meter Node



Available in single phase and polyphase meter forms, the A3 ALPHA meter node is an ideal solution for commercial, industrial, and high-end residential AMI metering.

Advanced electricity metering

As a component of the EnergyAxis System, the A3 ALPHA meter node brings advanced metering infrastructure capabilities to commercial and industrial metering applications and high end residential applications where real and reactive energy measurements are desired. Utilities can obtain interval data, real and reactive energy metering, critical tier, and time-of-use (TOU) data through the EnergyAxis network.

To function as an EnergyAxis System component, the A3 ALPHA meter is supplied with an internal LAN option board with two-way 900 MHz communications capability. This option board mounts under the cover of the A3 ALPHA meter, allowing network deployment to be as simple as installing a meter. No special equipment is necessary because the meter automatically determines the optimal communication path to the collector. If network conditions change, the installed meter automatically finds a new communication pathway to a collector.

The data you need

The A3 ALPHA meter is a highly accurate revenue meter with an ANSI C12.20 accuracy Class of 0.2. Current ALPHA meter users will find the basic A3 ALPHA meter types familiar. The A3D delivers basic real energy and demand, and the A3T provides real energy and demand where TOU rates are implemented. The A3R, A3K, and A3Q are used where real and reactive or bidirectional metering is required. Each measured quantity is stored in nonvolatile memory and includes energy, demand, TOU data, and interval recording.

As a node in the EnergyAxis network, the A3 ALPHA meter reports meter readings, statuses, warning messages, and interval data to the collector that is then read by the EnergyAxis Metering Automation Server (MAS).

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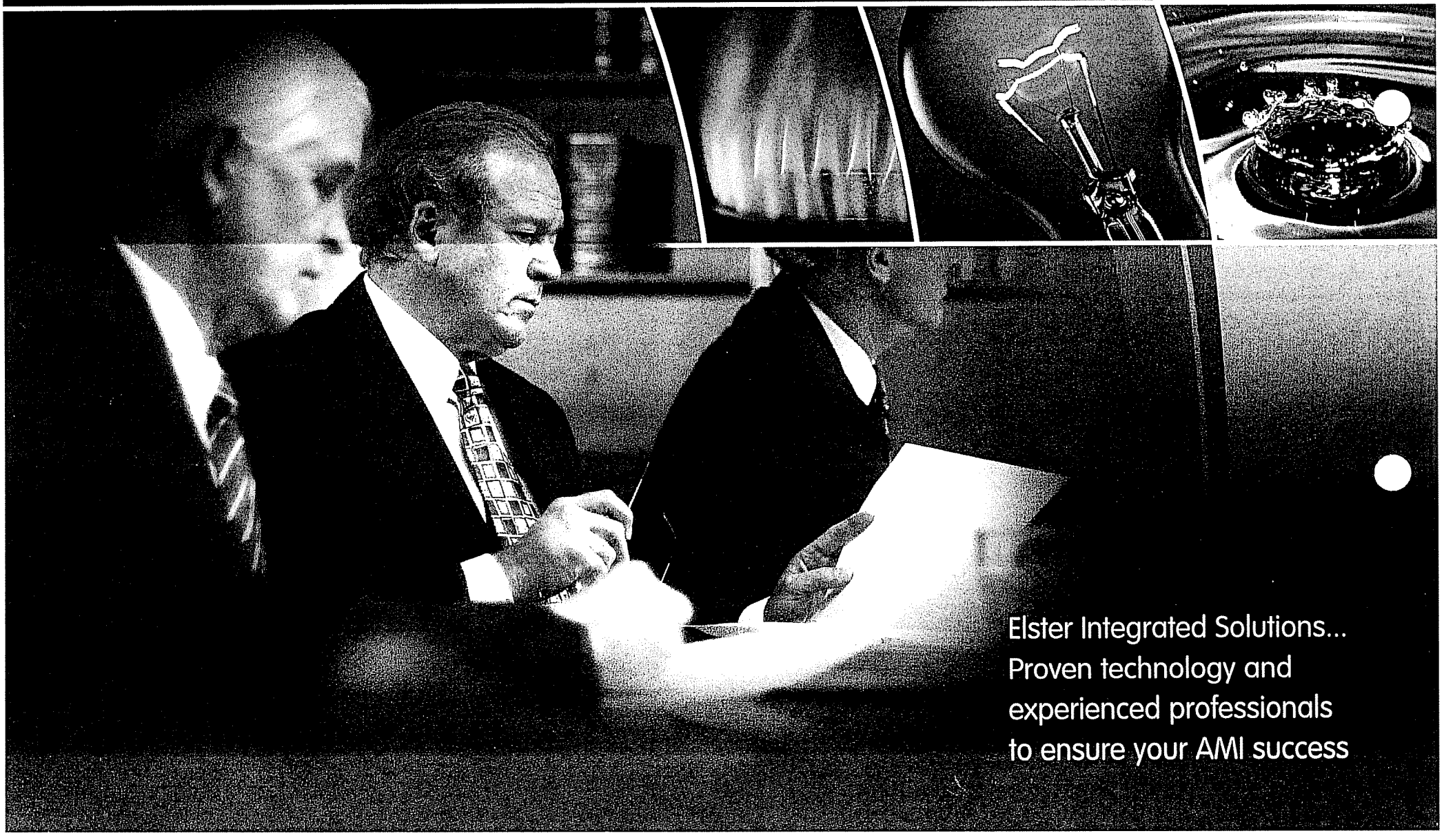
Always a step ahead



Elster Integrated Solutions...
Proven technology and
experienced professionals
to ensure your AMI success

Addressing the industry's unique set of challenges

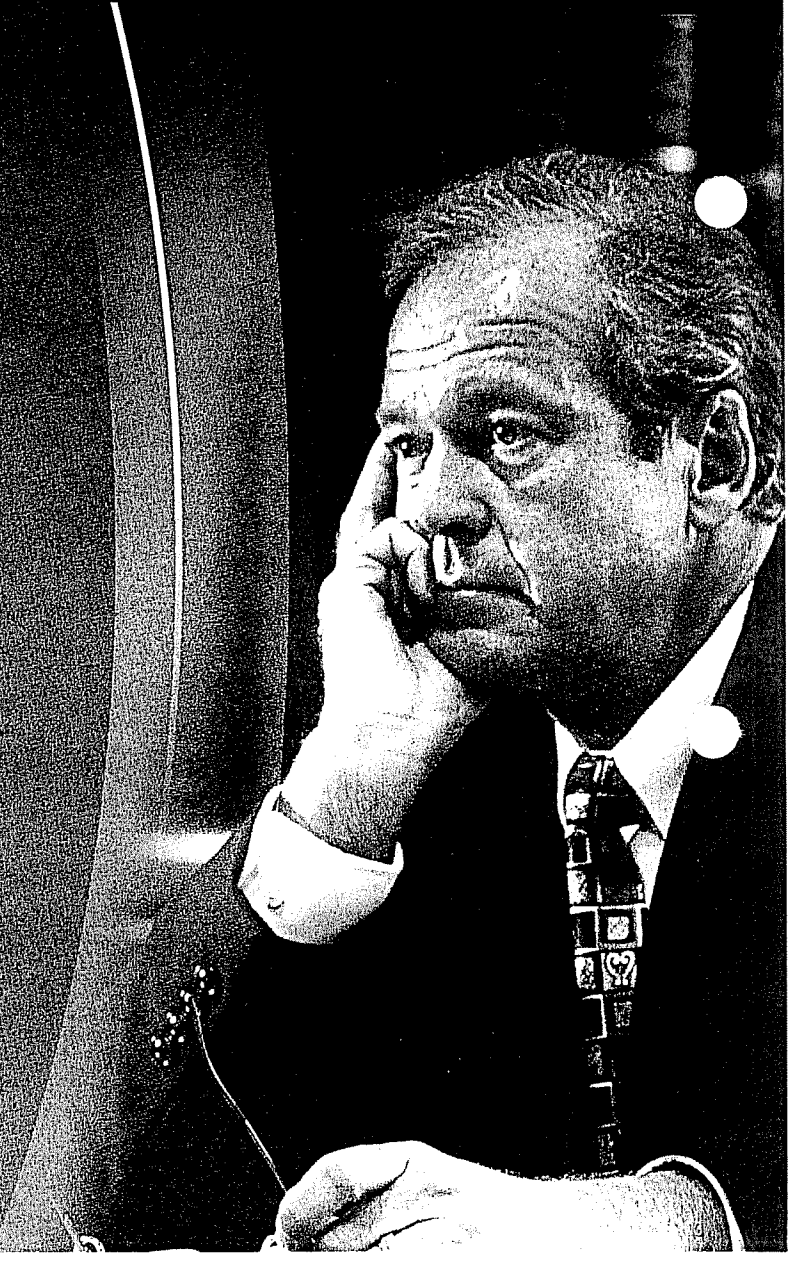
Your premier integrated solutions provider

Selecting the right AMI or AMR provider is one of the most important decisions you will make. The partner you choose and the technologies they bring must deliver immediate as well as long-term business operational benefits. Their solutions must mitigate risks and help you to effectively address critical areas such as asset management, regulatory compliance, operational efficiency, customer service, energy conservation, profitability and more.

At EIS, we believe the ideal partner is one that is trustworthy, innovative, and singularly focused on exceeding your needs and expectations. The Elster solution is complete and proven to deliver exceptional performance and reliability as well as a rapid return on investment. Elster Integrated Solutions is the ideal partner for you.

Elster is far more than just the innovator of the most advanced, intelligent two-way, RF mesh AMI technologies available today. We are an industry-leading metering systems and solutions provider. Your total solution resource, EIS functions as a single point of contact for the analysis, design, engineering, deployment, integration and support of your entire AMI system.

EIS delivers what you need—a comprehensive, fully integrated AMI solution that drives efficiency at every level of your operation. Our solutions integrate seamlessly with your back-office systems including prepay, outage management, workforce management, demand response, customer service, meter data management, distribution planning, distribution operations and billing. Elster's proven RF mesh AMI technologies efficiently and effectively integrate with your existing enterprise business systems to minimize implementation costs and to accelerate your return on investment.



Maximizing your utility's ROI

To remain competitive and profitable in today's deregulated environment, you must manage your assets, operations, people and information with ever increasing efficiency and cost effectiveness. At EIS, we dedicate the time, manpower and resources necessary to deliver the most powerful and advanced AMI or AMR solution possible. We have the knowledge, technologies and experts to research, develop, configure, customize and implement the right solution to help you achieve your goals.

From complex time-variant rates, demand response and load control, to outage and restoration management and distribution automation, the system and solutions we deliver empower you to improve revenues, customer service and implement effective conservation and consumer-choice initiatives.

EIS is also dedicated to helping you increase profitability and protect your valuable assets. Engineered to deliver secure, accurate and timely usage and meter data from the field, our AMI and AMR systems and solutions help you pinpoint and diagnose potential losses. You can also realize immediate cost benefits through the proven tamper, theft, and leak-detection reports and alerts available with our systems. With the actionable intelligence gained through your EIS solution, your utility will be equipped to drive efficiency at every level of your organization and deliver services that positively impact your bottom line.

Complete support before, during and after contract

Program Management
Total project responsibility. Comprehensive analysis, design and delivery to ensure your project's success

Project Management
Superior scheduling, execution and oversight of all activities outlined within the contracted Statement of Work (SOW)

Site and Network Planning
Close approximation and geo-spatial relationship planning for rollout of a large-scale AMI RF mesh network

Installation Management
Complete management of field services including oversight of installation crews, field facilities, warehousing, communications, work orders and trouble-shooting

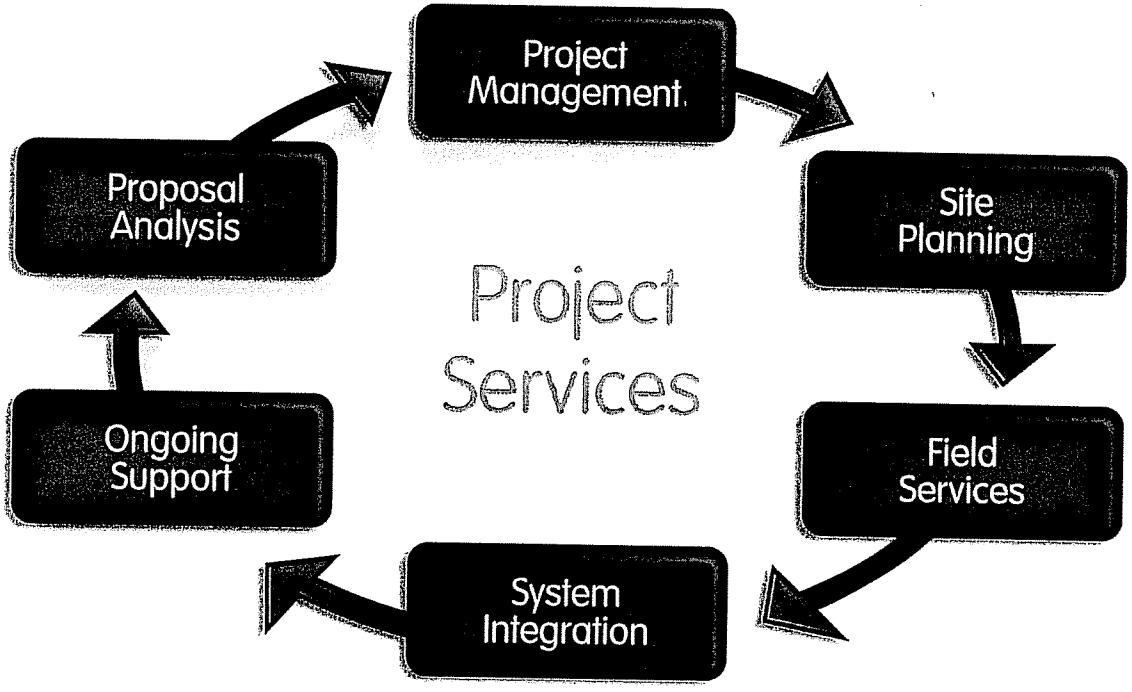
Systems Integration
Support for integration with your enterprise systems including MDM, outage management, customer care, billing, prepay and demand response

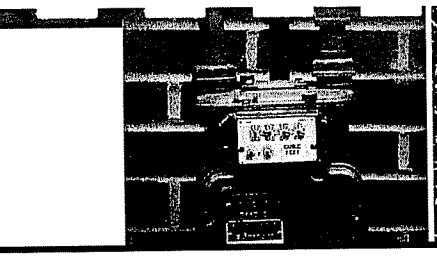
Training
Practical and comprehensive training on system operations and customization for your IT, field, back-office and management teams

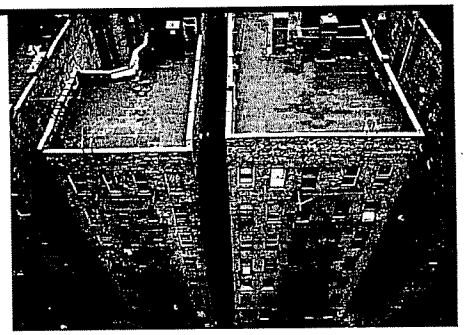
Turnkey Solution Provision
A complete design-to-delivery with prime contractor taking total responsibility for the design, construction, and operation of your AMI solution

Performance Guarantees
Product and service level guarantees for all elements of solution delivery, up to and including total service life of the solution

Technical Support
Complete and ongoing system support, available 24/7







Gas metering solution

Elster's EnergyAxis® AMI gas module empowers your utility to deploy a single AMI solution for both electricity and gas metering. The true two-way communications capability of the gas module ensures the accurate and timely measurement of interval data. Easily and remotely configurable to work with a fixed factor, as well as temperature and pressure-compensating indexes, the EnergyAxis AMI gas module is compatible with all major commercial gas meter types and sizes.

Water metering solution

Utilities that employ our EnergyAxis System for electricity metering can use the EnergyAxis AMI water module to remotely collect register readings and usage data from water meters. Compatible with all major water meter types, our AMI water module can be used in pit, remote or direct-mounting applications. Water profiling and leak detection are also available.

Total coverage and access

- Urban, suburban, and rural areas
- Remote locations
- Extreme climates
- High-rise and/or multi-tenant buildings
- Metal enclosures and basements
- Electricity, gas, and water applications
- In-home communications
- Demand response
- Load control devices
- Consumer displays
- Smart thermostats
- Distribution planning and automation

Delivering a total end-to-end solution

Expect the exceptional from Elster Integrated Solutions

Elster Integrated Solutions is dedicated to delivering the most innovative and cost effective AMI and AMR systems and solutions available today. We want you to have peace of mind with your decision to partner with us through turnkey solution delivery and performance guarantees. Part of the world's largest electricity, gas and water metering, systems and solutions company, EIS offers stability that's built on the strength of 7,500 global employees and over 170 years of industry experience.

We bring together the industry's best people, leading-edge technologies and best-in-class partners to deliver an exceptional, enterprise-wide solution that exceeds your requirements, accelerates return on investment and mitigates risk to your utility at every level. Your turnkey solutions resource, we offer a single point of contact for the entire development and deployment process to ensure exceptional project results. Engineered to open standards, our products and systems facilitate integration from network communication protocols and Smart Home solutions to back-office software platforms, providing you with a complete end-to-end solution for both today and tomorrow.

Why choose Elster Integrated Solutions?

- Our people are among the best and brightest in the industry. This combined with our depth of industry experience positions us to lead from a position of unparalleled strength.
- Our turnkey solutions focus on your needs and apply the right technology for your utility. We are constantly innovating which is why we have been in this industry for over 170 years.
- The philosophy that we are 'better together' fuels our partnerships and drives us to deliver solutions that are best for you as opposed to a single-vendor lock-in.

Contact us today to learn why utilities around the world have come to expect the exceptional from Elster Integrated Solutions.

What makes us different?

Our experience
- 170 year history of leadership and innovation
- World's largest proven RF mesh deployments

Our end-to-end, turnkey solutions
- Complete single or multi-utility solutions
- Partnerships with best-in-class providers
- Proven performance
- Prime contractor, single point of contact for your utility
- Custom-configured to your requirements
- Product and performance guarantees

Our industry leading technology
- Standards-based AMI and AMR solutions
- Interoperable, open architecture

Business benefits
- Accelerated return on investment
- Future-proof strategies
- Solid business case and regulatory support

CustomerLink

A WESCO PUBLICATION

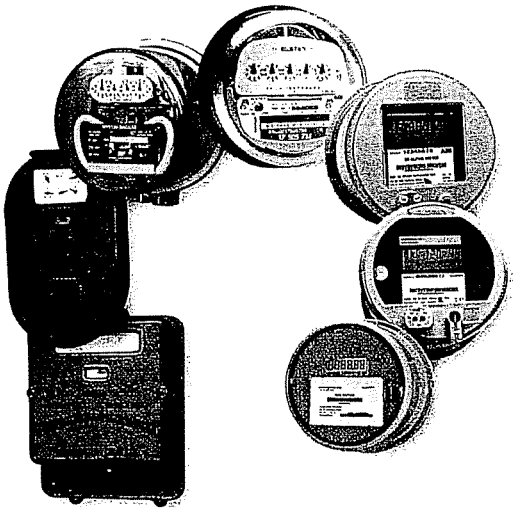
FEATURING ELSTER

In this issue of *CustomerLink*, we are pleased to partner with Elster Electricity to bring you the latest advances in metering technology for investor-owned utilities, municipal utilities, and co-ops alike.

For more information about Elster's full line of metering products, please contact your local WESCO Branch. To find the Branch nearest you, visit **www.wescodist.com.**

In this issue:

100 Years of Metering Experience



The energy industry is evolving rapidly. As utilities face deregulation and privatization, they, together with their consumers, are re-evaluating the way electricity is marketed, measured, and purchased.

At WESCO, we recognize these concerns and have partnered with industry-leading suppliers to find solutions. One of these key partnerships is with Elster Electricity, a world-class provider of advanced electricity metering products, communication solutions, and metering automation systems for electric, water, and gas utilities. With more than 100 years of metering experience, Elster understands what you value most—high quality, dependable products, profitability, and lower operating costs.

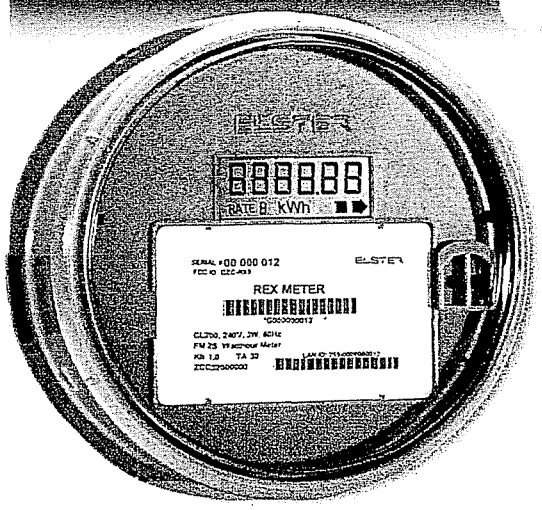
Through our partnership with Elster, we offer integrated metering solutions for advanced, high-accuracy ANSI and IEC meters, including electromechanical meters, ALPHA® electronic meters, communications software, and metering automation systems.

Meters fall into two main groups: **standalone without communications** and **advanced with communications**. As equipment ages, many customers who have electromechanical meters without communications are electing to upgrade to electronic meters equipped with Automated Meter Reading (AMR) technology. Elster offers a complete solution for both types of meters.

WESCO and Elster will work with you to analyze your business and identify the best long-term value decision for each sector you supply. Contact your local WESCO sales representative today to get started.

Look inside...

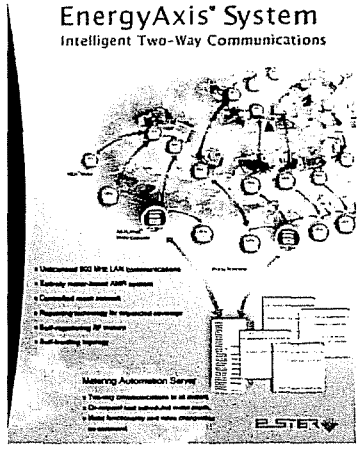
WESCO DISTRIBUTION℠



EnergyAxis® System

Two-way Communication

The EnergyAxis® System's new fully automated, intelligent two-way communication capabilities make on-request meter reads and server-initiated commands a reality. Its powerful two-way communications, coupled with Elster's new electronic single phase REX™ meter, enables utilities to obtain data without making a site visit.



EnergyAxis® Eliminates Site Visits

- Read meters using true two-way communication
- Change energy, demand, or time-of-use rates as needed
- Start or stop load profile interval recording
- Initiate a service disconnect
- Reduce costly site visits
- Automatically receive neighborhood power outage or restoration data, local voltage conditions, outage counts, and other information
- Eliminate the need for new metering hardware
- Adjust prices daily (a distinct advantage during peak energy demand periods)

Electronic Meters

Elster has been manufacturing advanced meters since the early 1980s. An advanced meter is capable of collecting much more meter data than total energy consumption (kWh).

Elster has used integrated communication solutions to reduce costs and make these features available for small commercial and residential customers.

One-way Communication

Most meters with communications provide only one-way communication. This limits the capabilities to basic functions such as scheduled meter reads. To truly implement the capabilities of a communications system, and maximize the financial benefits and customer service opportunities, a true two-way system is required.

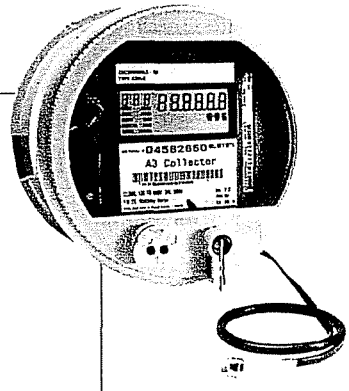
At the heart of the system is Elster's new single-phase, residential electronic REX meter with built-in EnergyAxis System communications. The REX meter provides the following on command:

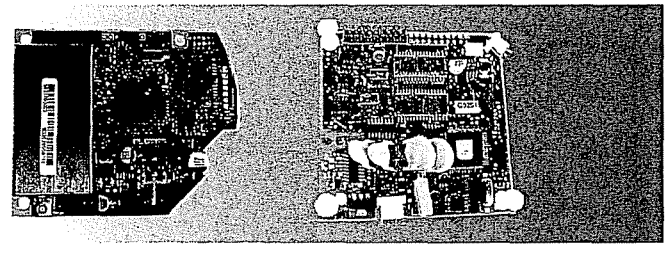
- *Highly accurate kWh consumption*
- *kW demand*
- *TOU metering*
- *Critical tier pricing*
- *Load profile interval data*

The unique design of the REX meter and the intelligent two-way network enables meter self-registration. Once installed, each meter automatically registers with the network. This feature eliminates the need for on-site programming, making installation and operation both easy and economical. Should local conditions change, meters register via alternate paths.

Features of Electronic Meters

- Interval-by-interval recording, primarily for large commercial and industrial customers
- Time-of-use (TOU)
- Dynamic TOU
- Critical tier pricing (CTP)
- Load profile
- Voltage measurements
- Outage counts
- Other power quality measurements



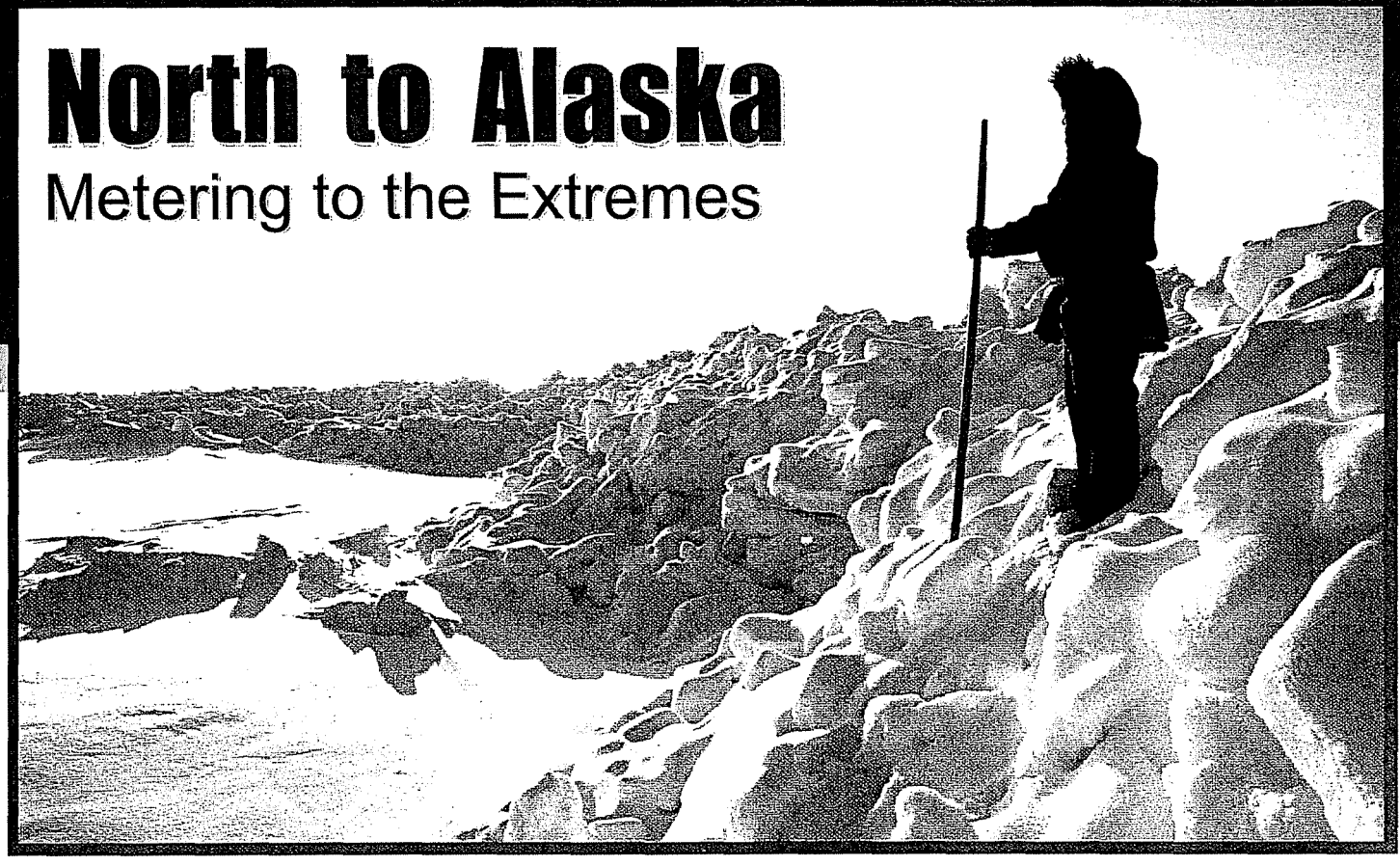


The EnergyAxis System communications network uses a mesh or spread spectrum frequency-hopping technology for secure, reliable communications between meters and data collectors. Individual meters can be designated as repeaters, creating a dynamic path that optimizes signal strength and maximizes communication distances. Communication distances between meters and data collectors are increased, and the number of data collectors required is dramatically reduced, improving system economics. Elster's A3 ALPHA® meter/collector is the host for local data collection from the REX meter, making data collector installations simple and reducing costs.

product information or to place an order!

North to Alaska

Metering to the Extremes



Alaska Village Electric Cooperative deploys Elster Electricity's smart metering system in remote Alaskan villages

By Ronald B. Via

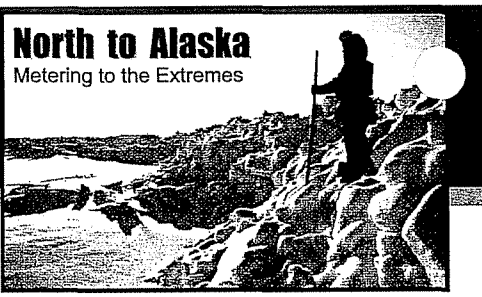
Even with the possibility of deregulation looming in the future for many utilities and with today's uncertain energy markets, most utility companies still build their business cases for AMR based simply on automating the meter reading process for monthly billing. It is not very often that an electric utility builds a business case for metering automation that goes beyond the capabilities of conventional automated meter reading (AMR) systems available on the market today. Most utilities in North America, and in the United States in particular, have the luxury of an expansive infrastructure that is already in place, and it is this infrastructure that allows them to choose from a variety of AMR systems. The power distribution grid covers the vast majority of the nation. There is extensive landline and wireless communications systems in place, and most areas are accessible by road.

It might surprise you that some utilities in North America don't have access to the distribution grid and do not have the expansive roadway infrastructure that most other utility companies do. Alaska Village Electric Cooperative Incorporated (AVEC) is one such utility company. AVEC covers the largest geographical area of any electric cooperative in the world. It has 52 member villages that span from Kivalina in the far north to Old Harbor on Kodiak Island in the approximately 80 miles west of Fairbanks. Of the 52 member villages only Minto is accessible by road. All other AVEC communities are accessible only by airplane or cargo marine vessel during certain times of the year.

Because of the extreme conditions in AVEC's service area, it was obvious to them when they began looking at metering automation that conventional AMR technology such as walk-by/drive-by fixed network and power line carrier (PLC) would not meet their needs. The villages in AVEC's service area are 500 to 600 miles from their home office in Anchorage. Each village in their service area has a local power plant and there are no tie lines between most villages. To provide electrical power to their customers (approximately 7,000 meter points serving 21,000 customers), AVEC has over 144 diesel generators that run a cumulative total of more than 410,000 hours per year.

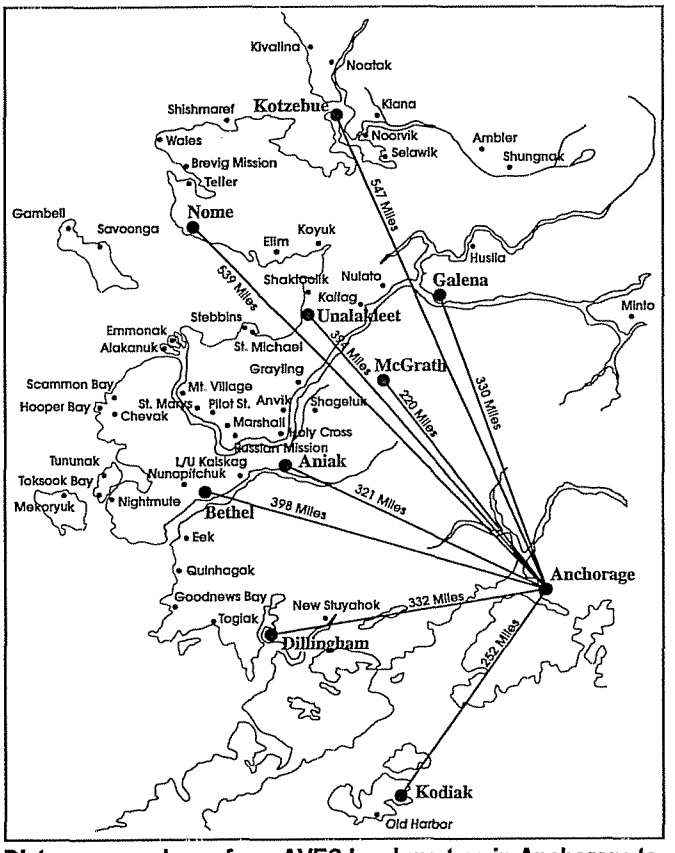
"The dynamics of the EnergyAxis System's controlled mesh network at this installation is absolutely awesome..."

In the summer of 2005, AVEC began deploying Elster Electricity's EnergyAxis® System to enhance their business operations and provide better customer service. It was clear to AVEC that the EnergyAxis System's state-of-the-art smart metering technology was the most cost-effective metering solution that would meet their needs. The EnergyAxis System uses smart electronic REX® meters (residential meters) within a controlled mesh network with two-way communications that



test of the system's robustness. The villages of Kasigluk and Nunapitchuk have a tieline between their locations and were chosen to test the new system in inter-tied communities, especially since the community without the primary generation source has a back-up generator that will alter the power flow source during an outage."

AVEC found additional value in the EnergyAxis System because REX meters with the remote connect/disconnect feature have the disconnect switch installed inside the meter; thus they have the same outward appearance as meters without the disconnect switch. This feature was important to AVEC because of rural Alaska's culture. With the remote connect/disconnect switch out of view, it protects the privacy of utility customers. While this might seem trivial in the lower 48 states, it is very important in rural Alaska because of the social impact within the cultures of these small villages.



Distances are shown from AVEC headquarters in Anchorage to remote villages

Meera Kohler, President and CEO of AVEC, comments, "Life in an Alaskan village is about as rustic and remote as it gets. But that does not mean that our members do not expect and enjoy the same technology that is emerging in the lower 48 states. Every rural school has broadband Internet access and students learn from teachers hundreds and even thousands of miles away. Small local medical clinics are connected via the

is only logical that we should be able to access electric meters instantaneously from our office in Anchorage to diagnose outages (individual, neighbors or entire feeders) and to be more responsive to our members' needs. Going to AMR means being able to automate our billing system and allow members access through the Internet to view and pay their bills. Being able to remotely connect and disconnect meters was also a major draw."

View of Teller from the airport

Even though electricity is expensive in rural Alaska, at an average cost of 40 cents per kWh, the introduction of stable electricity has brought about many changes in these villages. They have better health care, improved housing, schools, water and sewer systems, improved communications and new businesses. At Elster Electricity, our vision is to develop products that our customers value and that enable them to improve their business operations and deliver better service to their customers. I believe that AVEC is just the beginning of a trend now starting within the utility industry. You might say, utilities are beginning to redefine AMR and what features and functionality they expect from their metering systems. As we move forward into the future, I expect to see more utilities discover how they can use and leverage the state-of-the-art smart metering technology that the EnergyAxis System offers.

About the Author

Ronald B. Via is a Vice President of electricity metering, Elster Electricity, LLC, Raleigh, North Carolina. Via's responsibilities include strategic market planning, bottom line financial performance, sales objectives and long term growth projections.

ron.b.via@us.elster.com

About the Company

Elster Electricity, LLC offers integrated, cost-effective solutions including advanced electricity meters, communication solutions and metering automation systems for residential and C&I applications, designed to meet the diverse metering requirements of a global

Issue 1 2008

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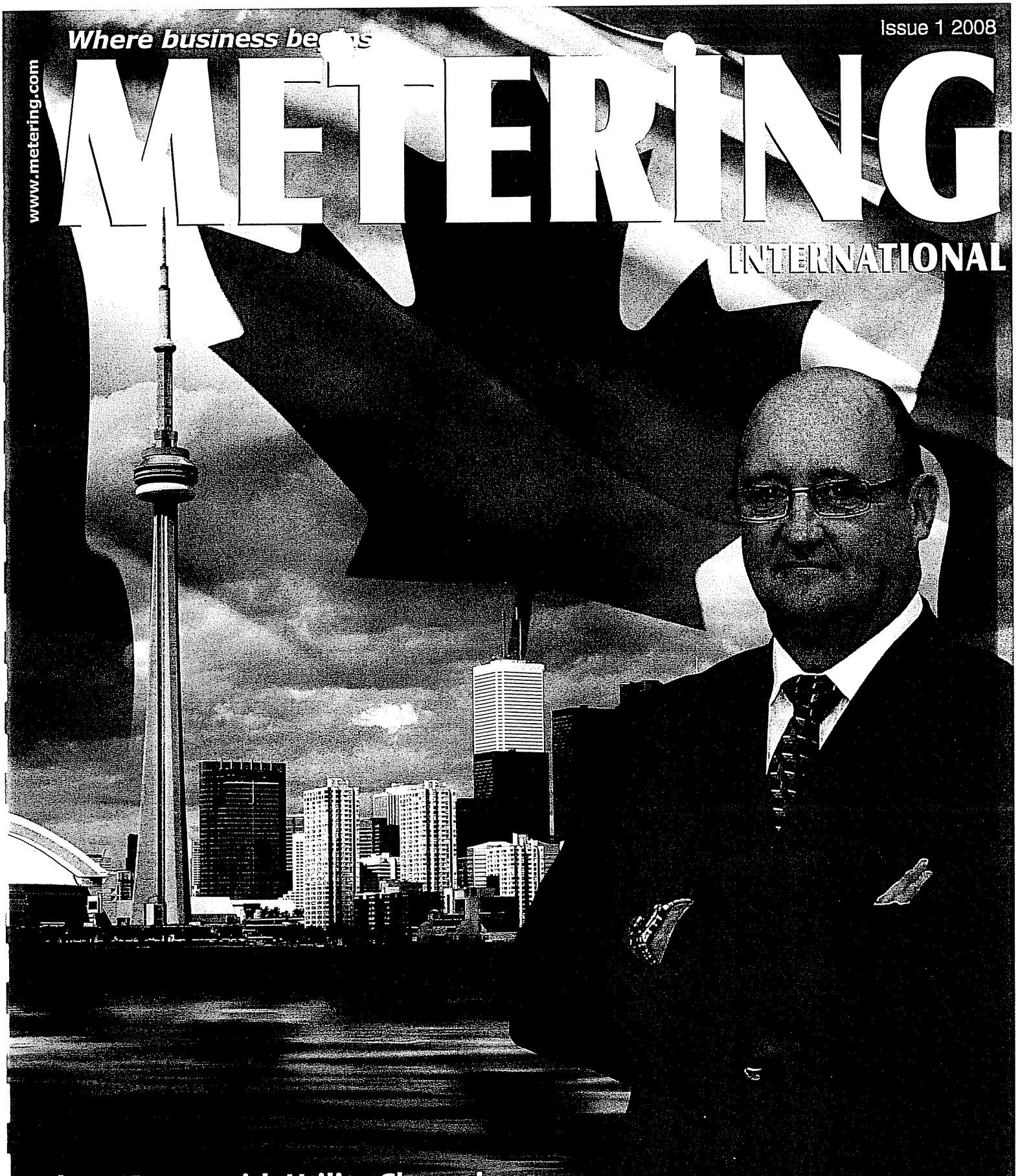
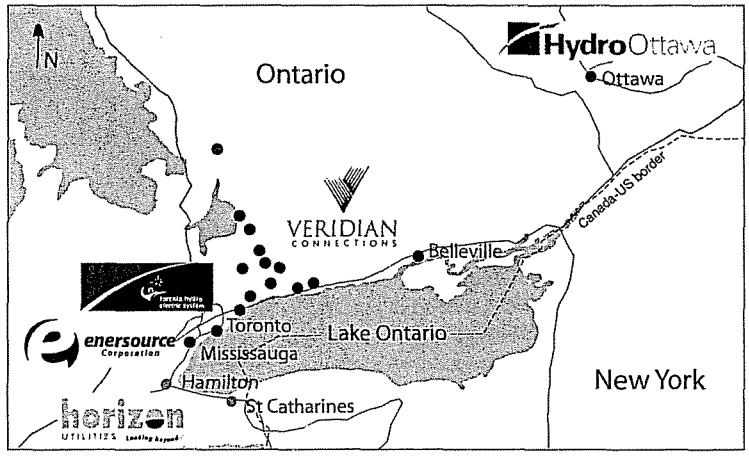


Elster Teams with Utility Champions to Meet Ontario's Smart Metering Energy Conservation Goals

By Jack Robertson, Vice President, Elster Metering Canada

Elster, previously accredited by Measurement Canada as an Authorised Service Provider to inspect and seal electricity meters at its Raleigh, North Carolina manufacturing facility, was prepared to meet the requirements of the project by offering the option of factory-sealed meters. Elster, working closely with each utility, put in place a robust, customer specific supply chain process to deliver more than 10,000 sealed meters a week to ensure no time was lost due to installers waiting for meters.

"We chose Elster based on the technical capability and robustness of the EnergyAxis System, the competitive pricing and Elster's long-standing commitment to and support of our customer relationship and metering in Ontario," said Owen Mahaffy, programme manager, Hydro Ottawa.



Some of the utilities utilising Elster's EnergyAxis system for Ontario's Smart Metering Initiative

Working collectively, the five utilities were able to aggregate their meter requirements and maximise buying power to minimise cost to the consumer. Individual contracts with Elster were negotiated and other utilities were encouraged to piggyback on their buying power to ensure the province easily met its target at the lowest cost. By the time contract negotiations were completed, there remained little over 12 months to install meters in the field and implement the AMI systems.

To better manage the installation and integration of a large number of meters, each utility worked to develop and use new automated field installation tools and systems. Additionally, internal processes and other systems such as billing and Customer Information System had to be modified. New positions were created, personnel trained and contractors hired.

WELL POSITIONED TO MEET THE CHALLENGE

Elster's EnergyAxis System was launched in 2003, with the vision of serving an emerging AMI market such as that in Ontario. With more than 50 projects and more than 1.3 smart meters deployed around the world, Elster's EnergyAxis System continues to lead with the addition of innovative smart grid and demand response initiatives.

ONTARIO'S CHAMPIONS

Toronto Hydro-Electric System


Steve MacDonald, Manager, Meter Technologies, Toronto Hydro

Toronto Hydro-Electric System delivers electricity through a complex distribution infrastructure of poles, wires and underground network to approximately 678,000 customers and distributes approximately 18 percent of the electricity in the province of Ontario.

"Toronto Hydro's initial priority was to install high volumes of meters at residential and small commercial accounts," said Steve MacDonald, manager, meter technologies. The utility targeted the suburban part of the city first and is now shifting the installers to the more densely populated downtown core. Over the next few months, the focus will move to medium and large commercial accounts.

"The most pleasant surprises in implementing the system have been the ability of the staff to consistently deliver high volumes of meter changes and the outstanding supply chain processes put in place with Elster that have provided reliable and effective stock levels and product delivery," he said.

Toronto Hydro has maintained a torrid pace, deploying 5,000 meters a week for two years, utilising only its own staff, which rallied to the challenge. To date, Toronto Hydro has used land-lines to achieve its targeted reading cycle of three hours, but plans to investigate other WAN options moving forward.

Veridian Connections Inc.

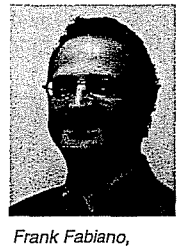

Terry Robertson, Manager of Metering, Veridian Connections

Veridian has 110,000 customers covering separated suburban, urban and semi rural services areas. Veridian's plan was to roll out 20,000 meters by December 2007, but have doubled its initial target by installing 40,000 smart meters, using a combination of in-house personnel and contractors for the installation.

Terry Robertson, manager of metering, said, "As the AMI system is deployed, Veridian plans to leverage the system to handle operations in outage and restoration reporting, and voltage monitoring initially with our sights on leveraging our AMI investment with smart grid technology."

Veridian elected to use a third-party service provider to provide daily interval reading and has contracted with Olameter, Ontario's leading meter services company. Levering its own EnergyAxis System, Olameter is able to provide AMI and other complementary services to customers not wanting to make the investment in the software and integration themselves.

Horizon Utilities Corp.


Frank Fabiano, Director, Customer Connection, Horizon Utilities

Horizon is the third largest municipally owned electricity distribution company in Ontario and provides electricity and related utility services to more than 231,000 residential and commercial customers in Hamilton and St. Catharines.

Frank Fabiano, director, customer connection, stated, "Horizon's approach was to install 50,000 outside meters by area. The deployment included the installation of approximately 1,800 C&I meters because Horizon wants to leverage the AMI infrastructure for the backhaul of C&I meter data."

Horizon outsourced the majority of the smart meter installation work, but used staff to install all data collectors and board to access meters. After investigating and testing

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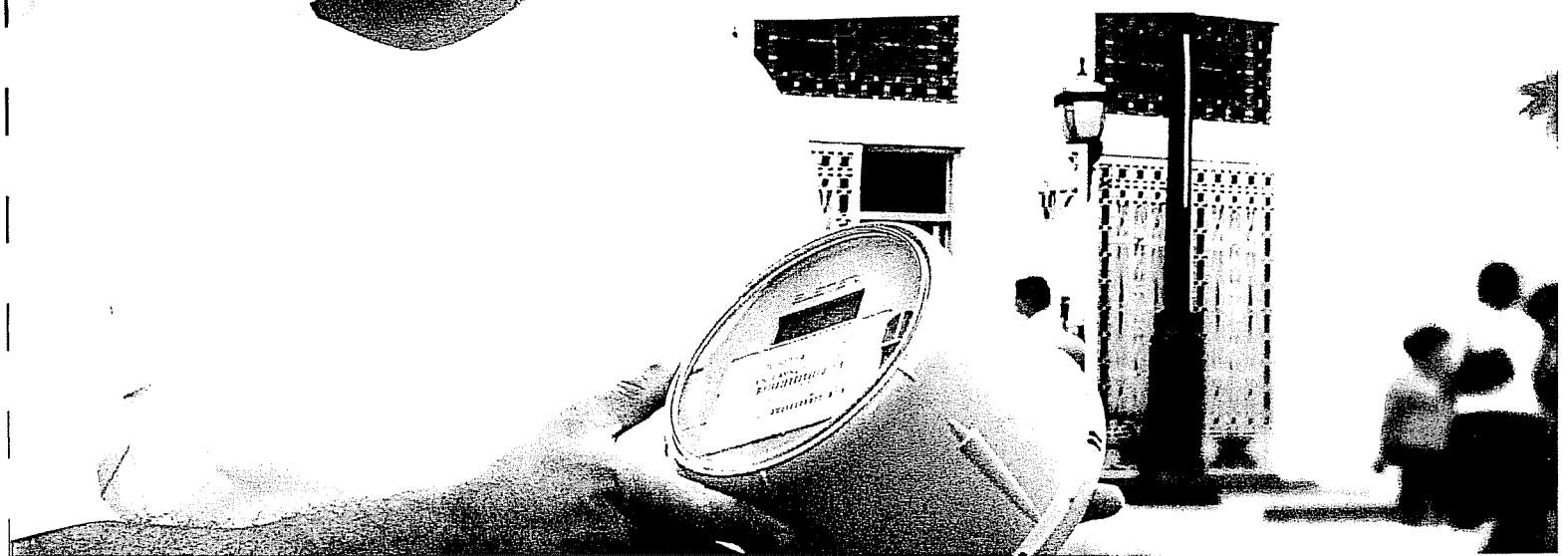

to raise rates, or reduce non-technical losses. ENEE felt the only fair and viable solution to recovering revenue was to reduce non-technical losses rather than pass higher rates on to paying customers.

ELIMINATION OF NON-TECHNICAL LOSSES

When Manuel Zelaya was elected president of Honduras and took office in 2006, he began taking aggressive measures against corruption in both the government and private sectors, and he delegated responsibilities to leaders within ENEE who could bring about change. ENEE began moving forward with plans and with the government's agreement and approval, began taking steps to deploy an advanced metering infrastructure (AMI) that could help detect and eliminate non-technical losses. Additionally, in 2007 President Zelaya initiated and led a programme named Operation "Tijera" ("Scissors") to recover revenue in parallel with the deployment of the AMI system.

ENEE began accepting proposals in 2006 to find an AMI system that would be easy to install with minimal infrastructure investment. An integral part of ENEE's request for an AMI system was the capability to detect and report events that would indicate the possibility of energy theft or meter tampering, including reverse energy, outages, load profile, demand, energy loss while service was disconnected, and by-passing of energy. ENEE also specified that the AMI system should have no ancillary equipment such as antennas or repeaters that could become the targets of tampering.

To further improve cash flow, ENEE required the system to accommodate a residential time-of-use (TOU) tariff structure as well as the option of initiating a prepay programme. The prepay programme would be based on customers buying energy at a sales point which in turn would send the information to the AMI system that would control connection and disconnection of services.

After evaluating available AMI technologies, ENEE selected Elster's EnergyAxis® System, which uses a two-way controlled mesh network to communicate with residential meters that have a service control switch inside the meter cover. The system allows the collection of load profile data and other metering data to help in the detection of potential non-technical losses in the system. When energy theft is detected, ENEE can disconnect the service from a remote location using the service control switch. When payment is made, ENEE can also reconnect the service without a visit to the meter. ENEE also uses the system to perform energy audits and network balancing of the entire distribution system by using the load profile and voltage information that is provided.

ENEE began installing the AMI system in December 2006 with the expectation to complete the deployment of 35,000 smart meters for residential, commercial and industrial applications in six months. The first and largest part of the deployment of approximately 21,000 residential meters with the service control switch was in the urban area of San Pedro Sula in northwest Honduras. Smaller sites were deployed in the urban areas of Tegucigalpa in the south and La Ceiba in the Atlantic region.

OPERATION TIJERA

In February 2007, President Zelaya launched Operation Tijera to begin recovering lost revenue while installation of the AMI system was ongoing. The operation was a coordinated action from ministries and government agencies with the objective of visiting 14,000 to 18,000 high consumption customers to check their meters and service connections, and to disconnect service to delinquent clients and users with irregular service connections or tampered meters.

"ENEE expects to recover approximately US$24 million during the first full year of operation."

During Operation Tijera, named for this "cutting" of power, groups of ENEE electricians travelled to 36 Honduran towns to search for meter tampering and illegal connections. Military personnel, police, and a prosecutor accompanied the groups to ensure that utility customers would not interfere with the operation. The operation had immediate success and revenue collections increased from the start, with recovery of US$1.2 million in the first four days. Over the entire three week operation ENEE recovered a total of US$5.3 million.

On 11 May 2007, ENEE officially launched the AMI system in San Pedro Sula with the opening of a dedicated facility where ENEE uses the system to analyse meter data and actively pursue reductions in non-technical losses. After the system launch, ENEE recovered about US$1.2 million in revenue in the first few days, US$13 million after three months, US$21 million after 7 months, and expects to recover approximately US$24 million during the first full year of operation. Reductions in non-technical losses nationwide account for US$12 million of the total savings. Another US$1.2 million has been saved on site checks done previous to meter deployments. ENEE also collected US$368,000 from customers who were tampering with meters and the tampering activity was detected through the system automation server alarms. ENEE has performed more than 3,000 service disconnections and reconnections remotely from its facility in San Pedro Sula, accounting for approximately US$1 million in operational savings, collections, and connection fees.

Even though ENEE will continue to face challenges in the future, it is taking bold steps to becoming financially viable. Honduras is showing how any utility or country with an effective plan and a commitment to carry out that strategy can significantly reduce its non-technical losses. In Honduras, the two-pronged approach of political change by enforcing payment of delinquent accounts and deployment of readily available and affordable high technology to detect potential energy theft is proving to be a winning strategy in saving ENEE. MI

ABOUT THE AUTHOR: Jacobo Da Costa Gomez is General Manager for the Northwest region of ENEE, based in San Pedro Sula, with responsibility for managing and directing efforts within ENEE to reduce electrical losses throughout the distribution system. He has worked for ENEE since 1982 in a number of different positions, and he also acts as a technical advisor to the president of Honduras. He holds a Bachelor's degree from the Universidad Nacional Autonoma de Guadalajara in Mexico and a Master's in Power Systems from the University of Sao Paulo in Brazil.

LANDIS+ GYR

EXHIBIT D

CASE NO. 2009-00143

CONFIDENTIAL

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Date: July 31, 2009
Quote Number: 002617-20090731

Company Name	**Inter-County Energy**
Contact	**David Phelps**
Address	**1009 Hustonville Road**
City, State, Zip	**Danville, KY. 40423-0087**
Phone Number	**1-859-236-4561**
Email	davidp@intercountyenergy.net

Pricing Quotation
TS2 BUDGETARY

Description	Part Number
Substation Hardware	
Substation Processing Unit (SPU3000), includes (1) blade with fiber optic output	FASY-0632-0006
Blade Assy, w/o Fiber Optic Output	FASY-0632-0003
Blade Assy, Blank	FASY-0632-0004
Transformer Coupler Unit, 1X (Single Configuration) Less than 12 MVA	FASY-0532-0003/0004
Transformer Coupler Unit, 2X (Single Configuration) Greater than 12 MVA	FASY-0631-0001
Meter Hardware	
L+G FOCUS® Type 'AL' - meter class 20-200-320	
L+G FOCUS® Endpoint (Solid State) - Integrated, (specify 120v or 240v)	FASY-0694-0001/0002
L+G FOCUS® Endpoint (Solid State) - Non-Integrated, (specify 120v or 240v)	FASY-0624-0003/0004
L+G FOCUS® Type 'AX, AX-SD' with Zigbee - meter class 20-200-320	
L+G FOCUS® Endpoint (Solid State) - Non-Integrated, (specify 120v or 240v)	26-1240/26-1241
L+G FOCUS® Type 'AX, AX-SD' without Zigbee - meter class 20-200-320	
L+G FOCUS® Endpoint (Solid State) - Non-Integrated, (specify 120v or 240v)	26-1238/26-1239
Itron CENTRON® - meter class 20-200-320	
Itron CENTRON® Endpoint (Solid State) (specify 120v or 240v)	FASY-0539-0003/0004
Electromechanical Residential Meters - meter class 200-320	
Modules for GE-I70, Landis+Gyr, Elster	0580-AAD
L+G S4 Polyphase - meter class 20-200-320	
L+G S4 Underglass Polyphase Endpoint	FASY-0636-0002
GE kV2/kV2c® Polyphase - meter class 20-200-320	
GE kV2/kV2c® Underglass Polyphase Endpoint	FASY-0538-0002
Itron SENTINEL® Polyphase - meter class 20-200-320 w/RTP	
Itron Sentinel® underglass endpoint (120-277)	FASY-0724-0003/0006
Itron SENTINEL® Polyphase - meter class 20-200-320 w/RTP and LC	
Itron Sentinel® underglass endpoint (120-277)	FASY-0724-0004/0007
Other Hardware	
Load Control Switch - 2 relays with validation	FASY-0530-0001
Remote Service Switch (RSS) - Adapter, Single Phase 200 ampere-max	FASY-0528-0001
Training and Implementation Services	
TS2 Project Management Services (See Terms/Conditions)	SERV-00035
Orientation and First Substation Commissioning with Hunt Field Service Rep	SERV-00034
Substation Optimization and Commissioning by Hunt Personnel (Per Sub) OPTIONAL	SERV-00024
On-site Training with Hunt Training Personnel for 3 days OPTIONAL	TRAIN-ONSITE
Training Credits (Number Based on WebEx Classes or Classroom) REQUIRED	TRAIN-00039
Software	
TS2 Command Center Software with MDM (based on 25,450 endpoints)	FASY-0507-0007
Remote Service Switch Functionality within Command Center (one time fee)	LICN-00013
Load Control Switch Functionality within Command Center (one time fee)	LICN-00016
Estimated 2011 Annual Support & Software Agreements	CONTRACT BILLING
Based on 25,450 TS2 deployed endpoints. Pricing is based on 2009 rates and is subject to change in 2011	
Total Extended Price	

1. *Substation equipment quantities and pricing may vary depending on actual substation configurations, feeds, requirements and an*
2. *Customer will be responsible to place PO with Rep for meters (meters are not included in quote).*
3. *FOCUS Integrated endpoint must be factory installed and can not be retrofitted in the field. When placing the meter order with I use catalog number EA1100"UA"-0000.*
4. *Please contact your Project Manager or Sales Coordinator for more details regarding training requirements and options.*

Account Executive: Joe Thomas at 218-562-3841
Sales Coordinator: Kim Pohl at 800-926-6254
Quote Coordinator: Lisa Hanson at 218-562-5175
Rep Firm: Brownstown Electric Supply, Mark Monroe at 800-742-8492

Specifications (See Compatibility Chart below for Product Part Number)

Operating Temperature	-40° to +75°C, (ambient temperature)
Operating Voltage	240 VAC ±20%
Power Consumption	1 watt, 45 VA typical
Setup Method	Laptop, handheld or remote

Compatibility

CENTRON

Form	Voltage	Part#
1S	CL100, 120V	FASY-0539-0003
2S	CL100, 240V	FASY-0539-0004
2S	CL320, 240V	FASY-0539-0004
3S	CL20, 120V	FASY-0539-0003
3S	CL20, 240V	FASY-0539-0004
4S	CL20, 240V	FASY-0539-0004
12S	CL200, 120V	FASY-0539-0003
25S	CL200, 120V	FASY-0539-0003

FOCUS AL

Form	Voltage	Part#
1S	120V	FASY-0624-0001
2S	240V	FASY-0624-0002
2SE	240V	FASY-0624-0002
3S	120V, 240V	FASY-0624-0001/2
4S	240V	FASY-0624-0002
12S	120V	FASY-0624-0001
25S	120V, 240V	FASY-0624-0001/2

Electromechanical

	Meter Brand			
	ABB	General Electric	Siemens/Landis+Gyr	Schlumberger
Meter Type	D5S, AB1	I-70-S	MS, MX	J5S
TS2 Transmitter Part #	0580-AAD-2	0580-AAD-2	0580-AAD-2	0333-AAF-2

Standards Compliance

Standard	Description
ANSI/IPC-A-610	Acceptability of Electronic Assemblies
FCC CFR Title 47 (Part 15, subpart B)	Radiated and Conducted Emissions
IEC 61000-4-2, IEEE C62.38-1994	Electrostatic Discharge
IEC 61000-4-3	Radiated and EMF Field Immunity
IEC 61000-4-4	Electrical Fast Transient
IEC 61000-4-5	Surge (combination wave)
IEC 61000-4-8	Power Frequency Magnetic Field
IEC 61000-4-9	Pulsed Magnetic Field
IEC 61000-4-11	Voltage Dips and Interrupts
IEC 61000-4-12	Surge (100 kHz Ring Wave)
ANSI C12.7-1987	Code for Electricity Metering
ANSI C12.1-1995	American National Standard Requirements for Watt-hour Meter Sockets

6436 County Road 11
Pequot Lakes, MN 56472 U.S.A
Phone: **800.828.4055** • FAX: **218.562.4878**
www.landisgyr.com

Landis Gyr

Specifications

Size	5.0 H x 4.3 W x 1.0 D(inches)
Weight	0.18 (pounds, typical)
Operating Temperature	-40° to +85°C (under Meter Glass)
Operating Voltage	120/240 +/-20% (277 +/-10%) @ 60 +/-5% Hz
Power Consumption	120v: 2.6 watts / 40.2 VA typical 240v: 1.6 watts / 54.8 VA typical
Setup Method	Laptop, handheld PC or remote for TS2

Compatibility

Voltage	Meter Type								Sentinel			
	1S	2S	3S	4S	8/9S	12S	15/16S	6/26S	5/45S	46S	56S	66S
120 (2-wire)	●											
120 (3-wire)			●		●	●			●			
120 (3-wire Delta)						●			●		●	●
120 (3-wire Network)						●			●			●
120 (4-wire Delta)					●		●		●	●		●
120 (4-wire Wye)					●		●	●		●		●
240 (3-wire)		●	●	●		●			●			●
240 (3-wire Delta)						●			●			●
277 (3-wire)						●						
240/277 (4-wire Delta)					●		●	●	●			●
240/277 (4-wire Wye)					●		●	●	●	●		●

Standards Compliance

Standard	Description
ANSI/IPC-A-610	Acceptability of Electronic Assemblies
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IEC 61000-4-2, IEEE C62.38-1994	Electrostatic Discharge
IEC 61000-4-3	Radiated and EMF Field Immunity
IEC 61000-4-4	Electrical Fast Transient
IEC 61000-4-5	Surge (combination wave)
IEC 61000-4-8	Power Frequency Magnetic Field
IEC 61000-4-9	Pulsed Magnetic Field
IEC 61000-4-11	Voltage Dips and Interrupts
IEC 61000-4-12	Surge (100 kHz Ring Wave)
ANSI C12.1-2001	Code for Electricity Metering

Product Part Numbers:

Landis+Gyr S4e
FASY-0636-0002

GE kV2c
FASY-0538-0002

Itron Sentinel
120V (w/RTP): FASY-0724-0003
240V (w/RTP): FASY-0724-0004
120V (with KYZ Output): FASY-0724-0006
240V (with KYZ Output): FASY-0724-0007

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Landis Gyr

Specifications

General Specifications	Active Energy "kWh-only" meter	
	Digital Multiplication Measurement Technique	
	Non-Volatile Memory	
	Designed for 20+ years life	
	Meets ANSI standards for performance	
	Utilizes ANSI protocol (between meter and AMI device)	
	8-Digit LCD	
	Display scroll sequence programmable (factory or end user)	
	Configuration Port – cover does not have to be removed	
Operating Temperature	-40C to +85C under cover	
Nominal Voltage	120V or 240V	
Operating Voltage	80% to 115% of Vn	
Frequency	60Hz +/- 5%	
Humidity	5% to 95% relative humidity, non condensing	
Starting Load (Watts)	Class 20	0.005 Amp (0.6W)
	Class 100	0.030 Amp (3.6W)
	Class 200	0.050 Amp (12W)
	Class 320	0.080 Amp (19.2W)
	Class 480	0.120 Amp (28.8W)
Voltage Burden	≤ 1.8W Max	
Load Performance Accuracy	Accuracy Class 0.5% – typical accuracy 0.2%	
Available Forms	Self-Contained	1S, 2S, 2SE, 12S, 25S
	Transformer Rated	3S, 4S
	K-Base	2K
Display Options	Energy Metrics: -+kWh, -kWh, Net kWh, and added kWh (Security)	
	Metric Energy Display Format – 4x1, 4x10, 5x1, 5x10, 6x1 or 6x10	
AMI Platform	Modular or Integrated	
Selectable Meter Multiplier	Up to 240 as result of PT ratio CT ratio	
Applicable Standards	ANSI C12.1 for electric meters	
	ANSI C12.10 for physical aspects of watt hour meters	
	ANSI C12.19 Utility Industry End Device Data Tables	
	ANSI C12.20 for electricity meters, 0.2 and 0.5 accuracy classes	
	CAN3-C17-M84 Canadian specifications for approval of type of electricity meters	

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FAX: **765.429.0936**
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Landis+Gyr
manage energy better

Specifications

General Specifications	Active Energy "kWh-kW" meter	
	Digital Multiplication Measurement Technique	
	Non-Volatile Memory	
	Designed for 20+ years life	
	Meets ANSI standards for performance	
	Utilizes ANSI protocol (between meter and AMI device)	
	9-Digit LCD	
	Display scroll sequence programmable (factory or end user)	
	Configuration Port – cover does not have to be removed or optional ANSI C12.18 optical port available	
Operating Temperature	-40C to +85C under cover	
Nominal Voltage	120V or 240V	
Operating Voltage	80% to 115% of Vn	
Frequency	60Hz +/- 5%	
Humidity	5% to 95% relative humidity, non condensing	
Starting Load (Watts)	Class 20	0.005 Amp (0.6W)
	Class 100	0.030 Amp (3.6W)
	Class 200	0.050 Amp (12W)
	Class 320	0.080 Amp (19.2W)
	Class 480	0.120 Amp (28.8W)
Voltage Burden	≤ 1.9W Max	
Load Performance Accuracy	Accuracy Class 0.2%	
Available Forms	Self-Contained	1S, 2S, 2SE, 12S, 25S
	Transformer Rated	3S, 4S
	K-Base	2K
Display Options	Energy Metrics: -+kWh, -kWh, Net kWh, and added kWh (Security)	
	Metric Energy Display Format – 4x1, 4x10, 5x1, 5x10, 6x1 or 6x10	
	Time of Use and Demand Billing	
AMI Platform	Modular or Integrated	
Selectable Meter Multiplier	Up to 4096 as result of PT ratio CT ratio	
Applicable Standards	ANSI C12.1 for electric meters	
	ANSI C12.10 for physical aspects of watt hour meters	
	ANSI C12.18 Protocol specifications for ANSI Type 2 Optical Port	
	ANSI C12.19 Utility Industry End Device Data Tables	
	ANSI C12.20 for electricity meters, 0.2 and 0.5 accuracy classes	
	CAN3-C17-M84 Canadian specifications for approval of type of electricity meters	
Service Disconnect	10,000 operations at full rated current (disconnect/connect) Available forms: 1S, 2S, 12S, 25S	

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Gridstream

Distribution Automation

Landis+Gyr

manage energy better

With geographic addresses in each radio's nodes table, a message is forwarded as efficiently as possible to its ultimate destination. Should a message ever be blocked by interference on a given frequency, the radio automatically hops to a different frequency and tries again.

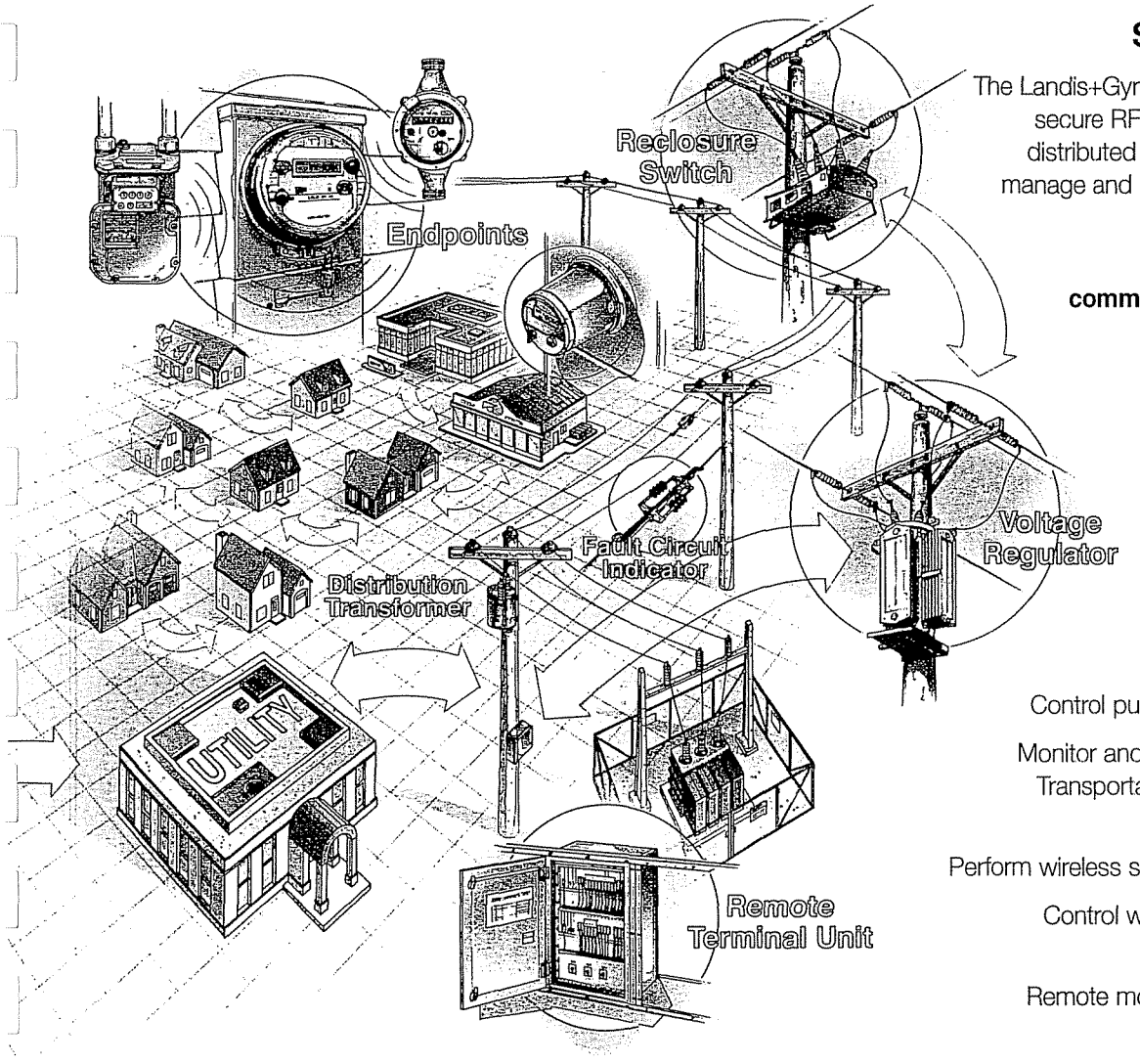
Interoperable Today, Adaptable Tomorrow

DA network radios have a built-in application programming interface (API) that enables the radios to send, receive and process data from other radios and/or the end device connected to the radio. The utility can create, download, and run programs at the end-device level for advanced functions and features such as metering, distribution automation and load control. Since the APIs are unique to each radio, every device within the Gridstream network can be programmed to perform multiple functions such as monitoring key elements, controlling additional products, or triggering an alarm on a change of state. The solution is engineered to offer backward-compatibility, as well as future upgrade capabilities.

DA End-Device Integration

Through the deployment of several radio types, integration of the DA radios into new or existing equipment is accomplished at the utility site or through special OEM contractors that pre-install and test the radio in their equipment. The programmable logic allows the radio to talk to devices in its native language, while communicating back to the host in a different language, if required. Landis+Gyr has secured strategic alliances with third-party DA end-device manufacturers to ensure compatibility with commonly used distribution system components. Some of these partners include:

- Cooper Power Systems
- Power Delivery Products
- Corporate Systems Engineering
- S&C Electric
- DC Systems



Solution Applications

The Landis+Gyr Gridstream DA network forms a secure RF mesh network that provides the distributed intelligence needed to effectively manage and control field devices locally or via a centralized point.

The network provides unique command and control functions for many utility types, such as:

Remote command and control functionality for DA and SCADA equipment such as switches and cap controllers, FCIs, distribution transformers, RTUs, and reclosers

Monitor and control tank levels in liquid or solid storage facilities in real-time

Control pumps for municipal water districts

Monitor and control equipment for Intelligent Transportation Systems such as electronic signs and billboards

Perform wireless street light control and monitoring

Control wells and compressor stations for gas production companies

Remote monitoring of critical metering sites for power quality issues

Cellnet+Hunt

AMI · Software Solutions

6-11-08

Phone direct: (218) 562-3841
Mobile: (765) 412-0540
joe.thomas@cellnethunt.com

Joe E Thomas

Account Executive
East Region

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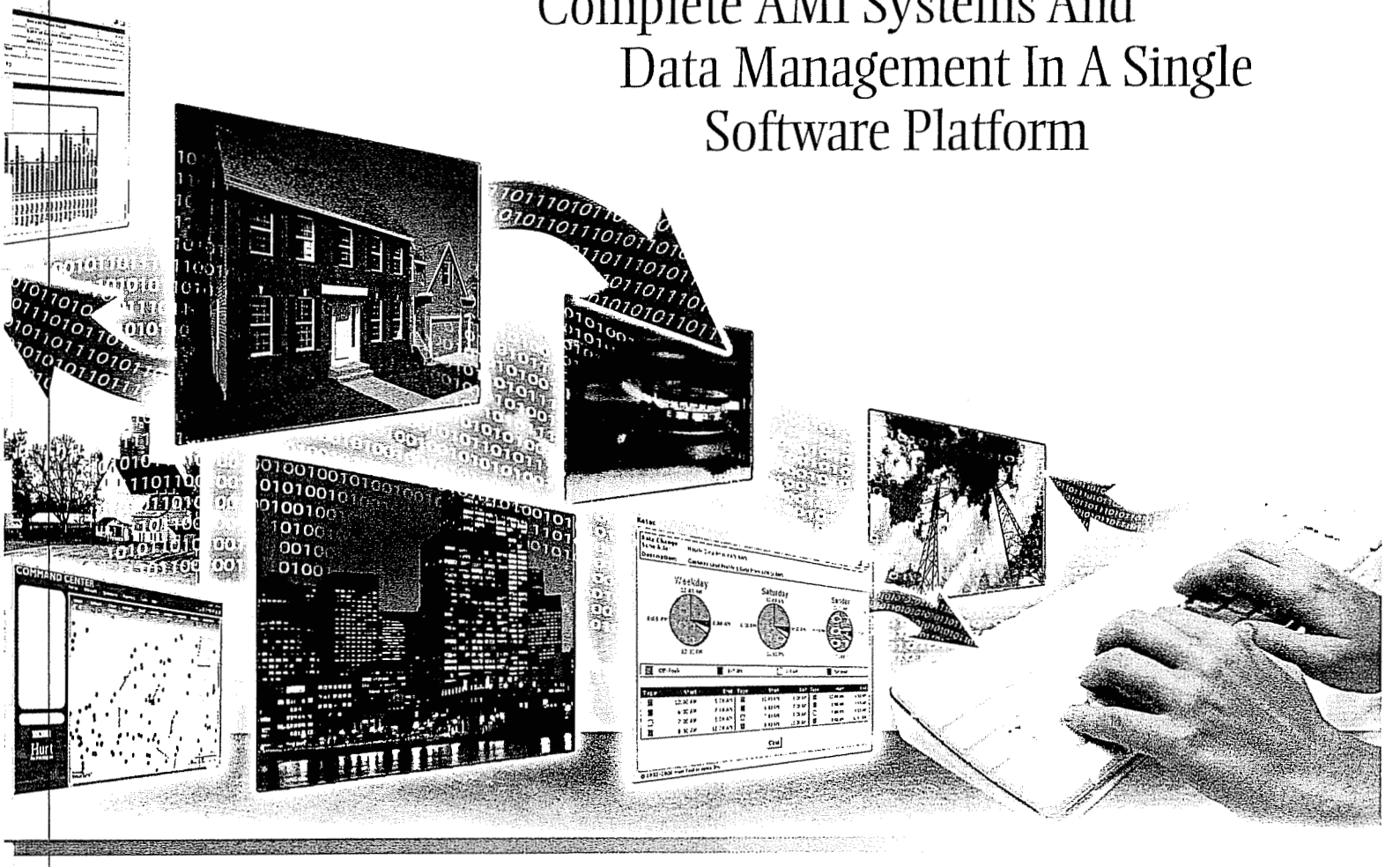
6436 County Rd 11
Pequot Lakes, MN 56472
Main: (800) 926-6254
Main Fax: (218) 562-5133
www.cellnethunt.com

Center™

Complete AMI Systems And Data Management In A Single Software Platform



One-Way | Two-Way | PLC | RF | In-Home Display | IOUs | Municipalities | RECs

The Possibilities Are Endless™

Hunt Technologies

Acquiring And Managing Meter Data For Any Utility Need

No two utilities have identical meter data management needs and requirements. And after 20 years of outfitting investor-owned, public and cooperative utilities around the world with PLC, RF Mesh and ERT-compatible systems, **only Hunt has the 360-degree perspective necessary to build the software platform for the future.**

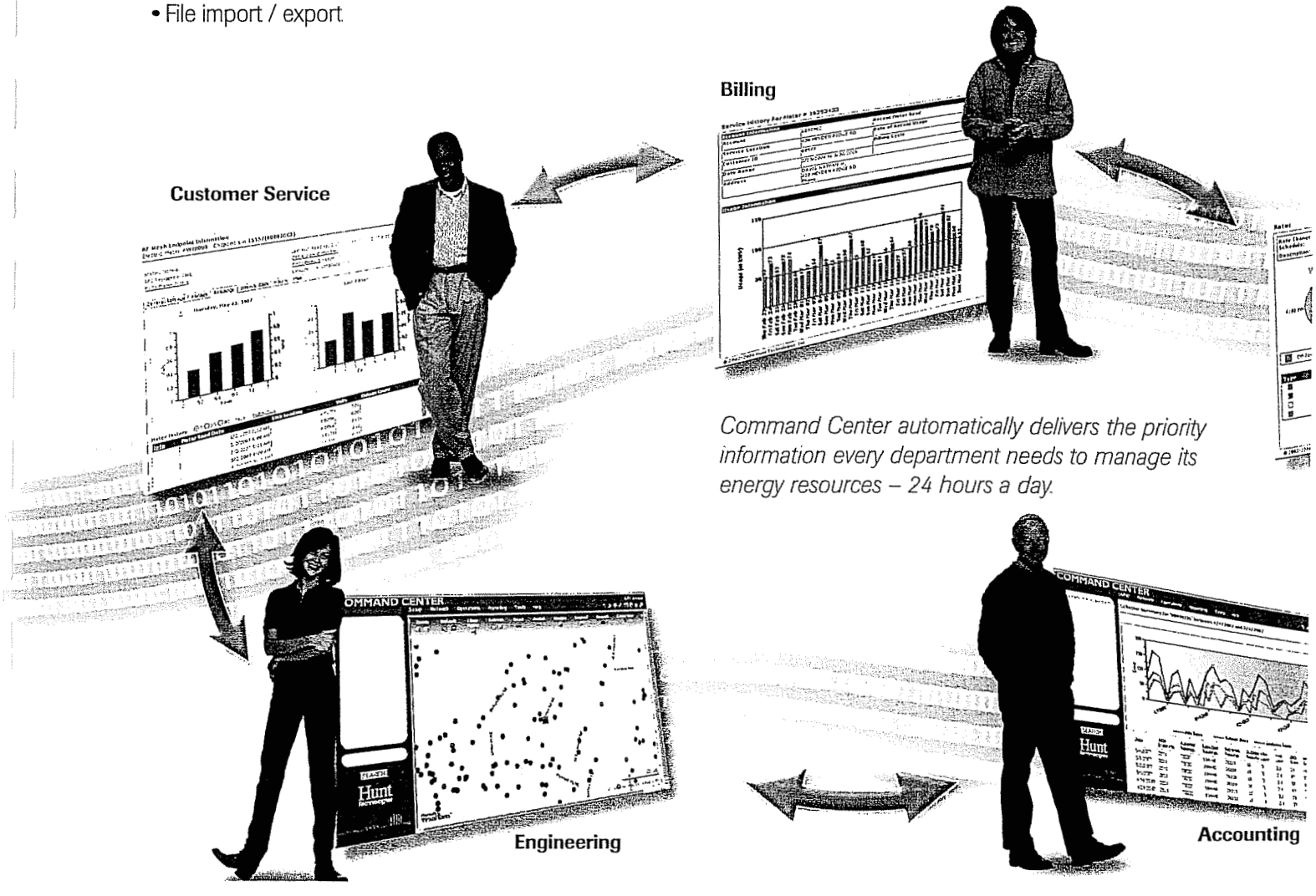
With Command Center, Hunt is able to utilize this unique experience and deliver the industry's **most flexible and intelligent software platform** that can easily be tailored to acquire and manage meter data that satisfies your utility's specifications, no matter how detailed.

The standard features you need:

- Intuitive dashboard
- Service history reports
- Real-time Web Service integration
- Interval data collection
- Data warehousing
- Remote connect / disconnect
- Outage / restoration notifications
- Load control
- On-demand readings
- Time-of-use scheduling
- Multiple billing cycles
- Critical peak pricing support
- File import / export

The advanced features you want:

- Service history reports with temperature and interval data
- Validation groups threshold with reporting
- Interruption validation
- High usage / demand reporting
- Usage by substation
- Voltage reporting
- Tamper detection analysis reporting
- Software integration toolkit
- System map based on GPS coordinates
- In-home display support



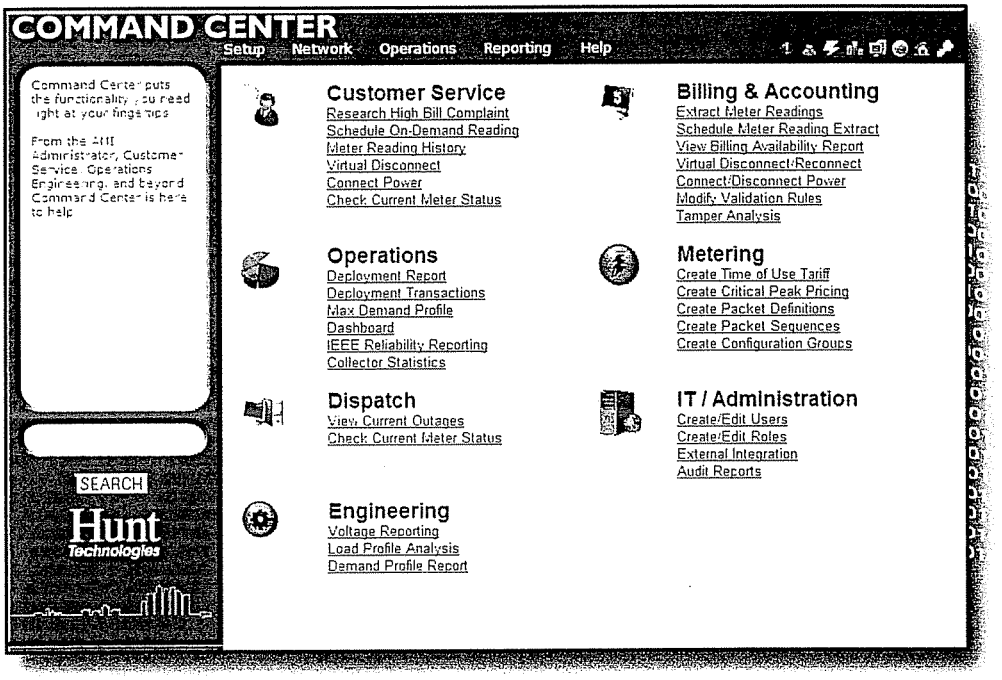
Command Center automatically delivers the priority information every department needs to manage its energy resources – 24 hours a day.

Command Center™ Software:
Delivering The Promise Of True AMI Capability To Every Utility

No matter what your utility type, what customer base you serve, or what topographies you cover, Command Center is the AMI software platform that provides utilities with complete, active control of their AMI system, while simultaneously managing all the meter data it generates.

Engineered to comprehensively and intuitively manage PLC and RF Mesh communications systems right from the desktop, Command Center automatically turns raw data into the analytics-based information you need to manage your energy resources and overall departmental productivity—better and faster than ever before.

Unlike other system-specific software applications that are cumbersome to install, Command Center deploys easily. Scalable, flexible and uniquely interoperable, it automatically routes information to all critical departmental software applications, enabling true collaboration and management.



System Requirements And Communications Protocols

- Windows Server 2003
  - IIS
  - MSMQ
- SQL Server 2005
- Built in Microsoft.NET
- XML messages sent via HTTP or HTTPS
- Web Service protocol optimized to increase overall bandwidth and scalability
- MultiSpeak 3.0 compliant

Landis+Gyr

INTER COUNTY ENERGY COOPERATIVE
A Touchstone Energy® Cooperative

Landis+Gyr EMS

Gridstream™ AMI Solutions

June 18, 2009

Joe E. Thomas
joe.thomas@landisgyr.com
765-412-0540

Landis+Gyr
manage energy better

January 2009

Gridstream TS-2 Two-Way PLC

- *Command Center Operating Software*
  - *Dashboard view*
  - *Optional MDM*

- *Substation Equipment*
  - *SPU-3000 (46,000 meters or channels per substation)*
    - *Optimum system performance - connected to each feed or circuit*
    - *Does not require additional equipment for performance*
    - *Supports 'hourly endpoint data'*
    - *Stores all billing data for each meter – redundant data storage*
    - *Supports TS-1 endpoints*
    - *'IP' based communications*

- *Residential Endpoints*
  - *Electromechanical or Solid State*
    - *Does not require new meters or meter manufacturer configuration or mapping.*
    - *Centron and Focus*

- *Commercial or 3-phase*
  - *Direct register read for solid state demand meters*
    - *Does not require new meters or meter manufacturer configuration or mapping.*
    - *Landis+Gyr S-4 meter family*
    - *GE KV2c meter family*
    - *Itron Sentinel meter family*

- *Daily 'unsolicited' information from every meter every day (no pinging)*
  - *Energy*
  - *Demand (peak)*
  - *Phase Identification*
  - *Blink Count (momentary)*
  - *Endpoint PLC Signal Quality*
  - *Reactive, Power factor, Diagnostics, Power Quality*
  - *Voltage (only with solid state meters)*
  - *Hourly data (optional)*

1-meg to 5 meg 128 Kbps June 15, 2009
↳ daily data ↳ hourly data

Let Landis+Gyr lead you...
...into the smart grid future

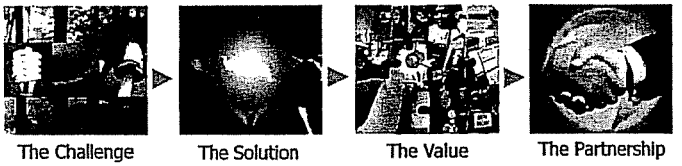
Landis+Gyr

Introduction

Presenters

Joe Thomas, Account Executive
Lisa Fennell, Solutions Director

Agenda



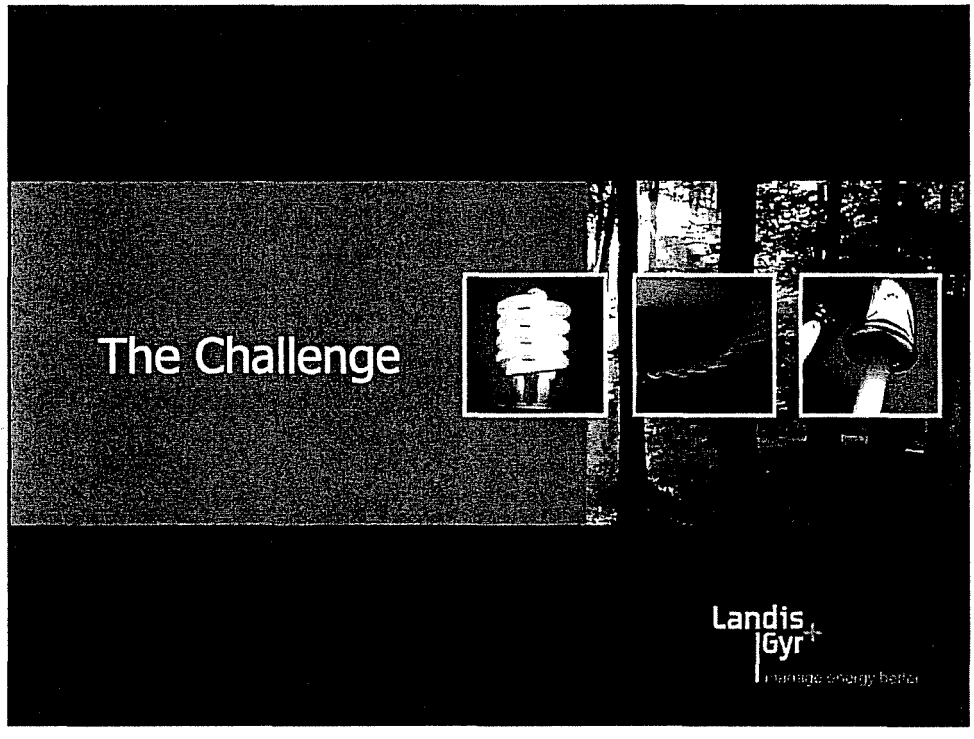
The Challenge | The Solution | The Value | The Partnership

2

Landis+Gyr Quick Facts

- Committed to improving energy efficiency and environmental conservation
- Broadest portfolio of products and services in the industry
- Operations in more than 30 countries on all five continents
- 25 years of smart metering innovation
- 60 years of direct load management expertise
- Over 15 million endpoints actively managed in long-term contracts
- ISO certified for quality and environmental processes
- 5,000 employees worldwide
- A worldwide team of more than 700 engineers and research professionals
- World leader in integrated energy management solutions
- Solid and established partnership network

5



US Department of Energy "Smart Grid" Characteristics...

- Self healing from power disturbance events
- Enabling active participation by consumers in demand response
- Operating resiliently against physical and cyber attack
- Providing power quality for 21st century needs
- Accommodating all generation and storage options
- Enabling new products, services and markets; and
- Optimizing assets and operating efficiently

9

Anticipating future demands and managing risk

- Significant challenges exist to implementing a high-performing, fully integrated smart grid
- To address these challenges requires
  - flexible solutions
  - broad technology and implementation expertise
  - proven combination of technologies that fit your organization, geographic & regulatory needs

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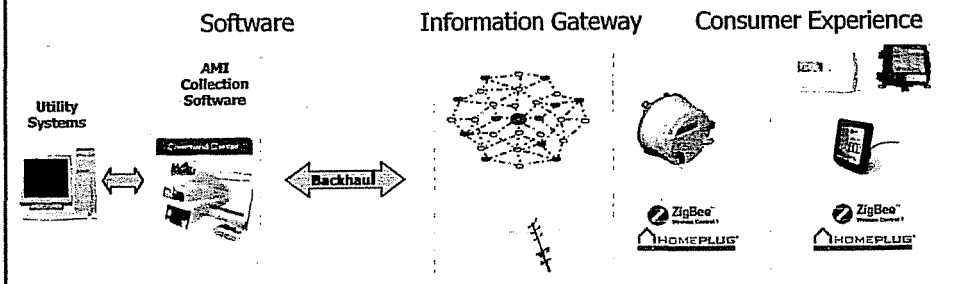
Gridstream Network Overview



AMI Collection System
- Network Monitoring & Control
- Interface to other utility systems
- Data Management
- Value-add applications

WAN
(Host to Collector)
- Public or Private Networks
- UtiliNet
- Fiber
- CDMA 2000 / GPRS
- IDEN / Ethernet
- TCP/IP or UDP

LAN
(Collector to Endpoints)
- 2-Way RF Mesh
- 2-Way PLC

Utility Endpoint Gateway
- Electric Meter/Module
- Gas Module
- Water Module
- Meter w/ Service Disconnect

In-home Devices
- ecoMeter
- Direct Load Control
- Setback Thermostat

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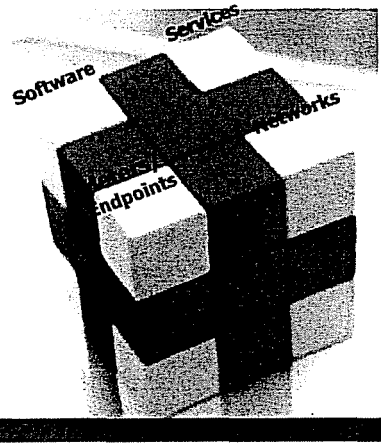
Choice: Solution tailored for your needs...

The breadth and flexibility of our tailored solutions allows you to select the most appropriate application for YOUR business needs, geography and regulatory environment.



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Gridstream™ PLC Advanced Metering

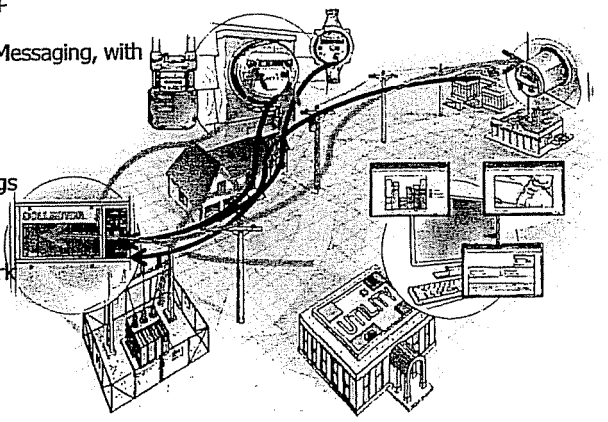
Continuous flow of data +

Simultaneous Broadcast Messaging, with

No management of or waiting for a polling sequence and

No interruption of readings collection for special requests

= a multi purpose network with...



Greatly reduced system administration time and energy when compared to a "polling" system!

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Gridstream PLC Basics

Customer Service/Billing	Operations	Engineering
Electric, water, gas meter readings	Unsolicited Outage Detection & Restoration*	Coincident Demand Data*
Time of Use & Real Time Pricing Billing Determinants	Direct Load Control	Voltage Data
Remote Connect/Disconnect & Prepaid Metering	Support for DG/Net Metering	Power Quality Metrics
Home Area Network/In Home Display	Remote Reconfiguration	Additional Intelligence gleaned via connection to power line...*

*Only from Gridstream PLC

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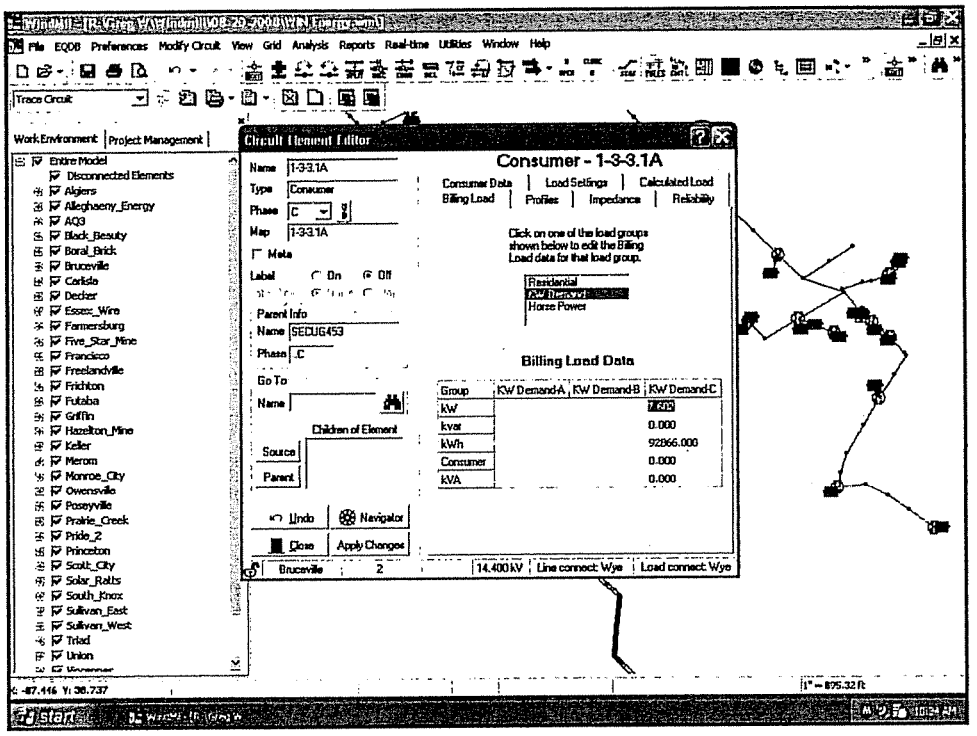
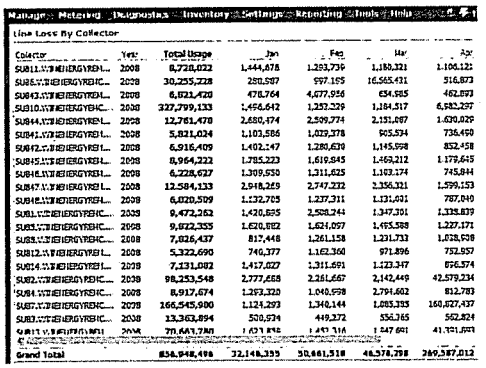


Even More Intelligence

Understand system Line Losses...by delivery point

- Aggregating system losses mask issues (or opportunities)
- Daily energy readings allow both cycle billing and the ability to read ALL meters at the time of supplier billing
- Review losses by substation, feeder for efficient identification of opportunities for improvement



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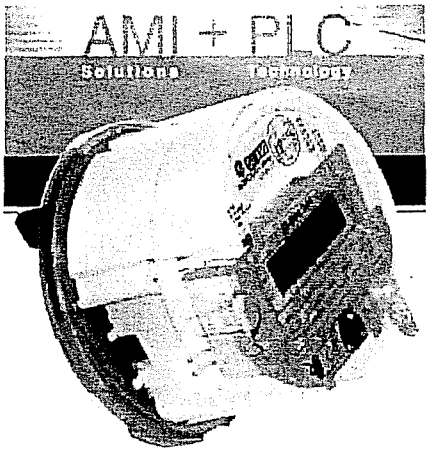
GE kV2c



- +Direct register read
- +Energy, peak demand and reactive data daily
- +Hourly energy or reactive data, including instantaneous kW, pF and voltage
- +Net Metering
- +Configurable via power line

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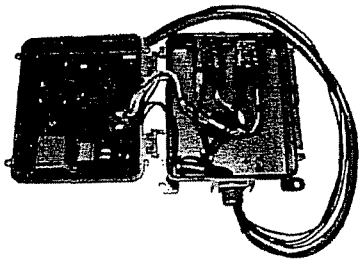
Load Control Switch



- +2 independent relays, 5A and 35A
- +Supports unique weekday, Saturday and Sunday schedules as well as holiday overrides
- +Supports both set and dynamic programs via cycling, trigger, temporary schedule and override commands
- +User definable cold load pick-up
- +Remote status verification and confirmation
- +AS&E meter socket solution

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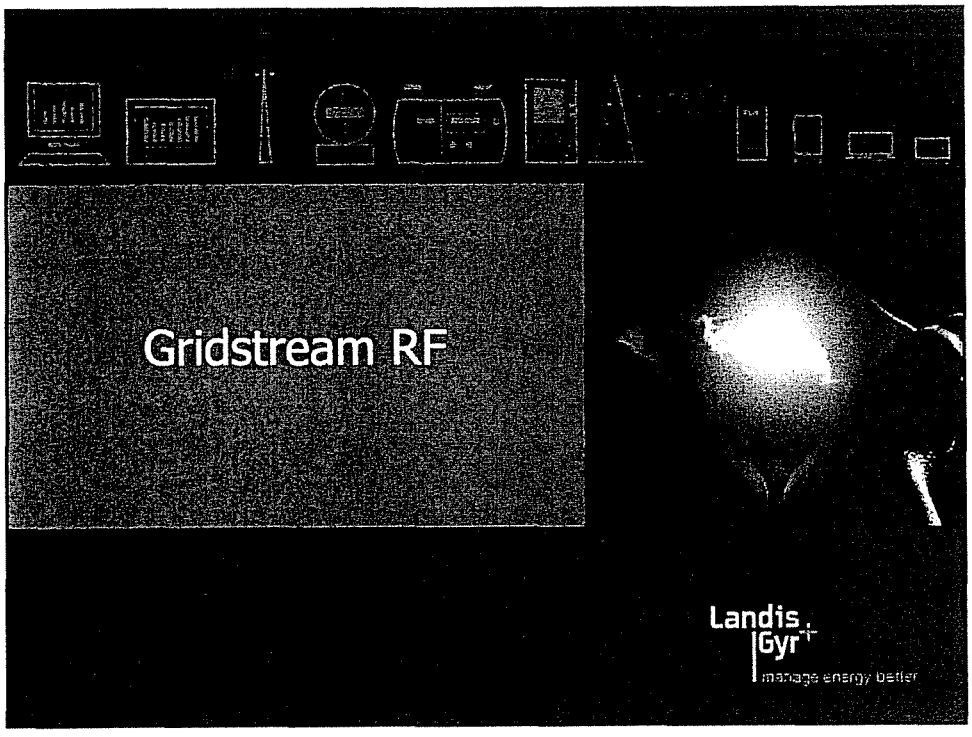

Gridstream RF

- Oncor
  - Deployed 225,000 residential advanced meters in the Dallas area to date
    - equipped with integrated connect/disconnect switch and
    - ZigBee Smart Energy Profile 1.0 HAN capability
  - On schedule to deploy 550,000 AMI advanced meters by the end of 2009
- Austin Energy
  - August 2009 completion of 280,000 meter deployment
- United Illuminating
  - Have begun network refresh to two way RF Mesh this year
- AEP Texas announcement June 1, 2009
  - Will deploy Gridstream RF to 700,000 consumers

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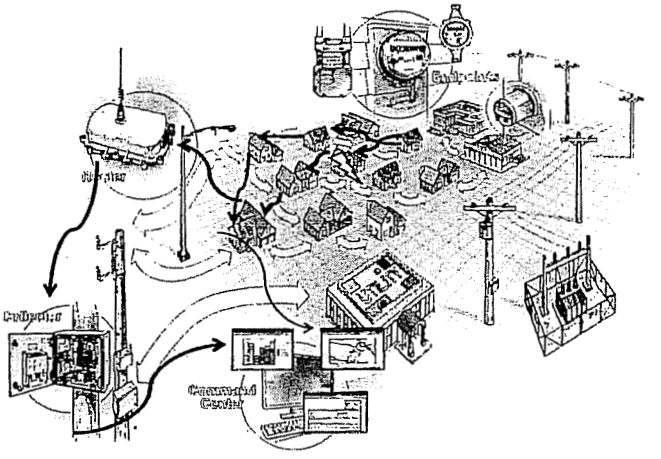
Adaptive Learning/Routing



Dynamic Routing based on:

Fewest Hops/Shortest Path to destination

Automatic route changes based on:

New Construction, Seasonal Changes, Better RF Link, Accommodation of other Network traffic

Ensures a Self-Forming, Self-Healing, Lower Maintenance Network

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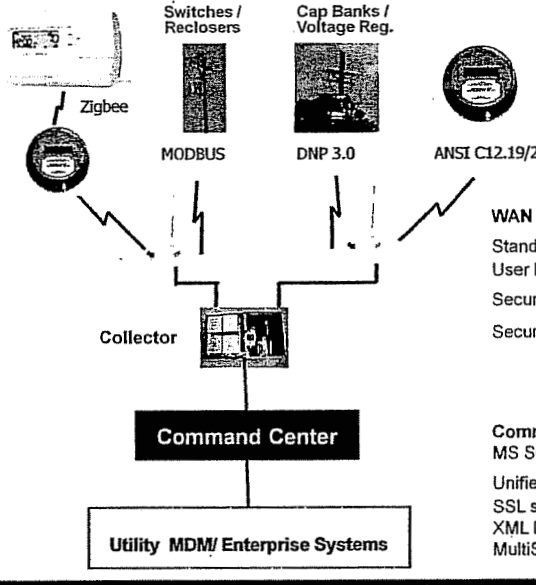
Support Industry Recognized Standards



RF Mesh Network
Payload protocol intact
Advanced Encryption Standard (AES 256)

WAN Public Domain
Standard Transmission Control Protocol TCP/IP
User Datagram Protocol UDP/IP
Secure Shell SSH Authentication and Encryption
Secure Sockets Layer SSL– key encryption

Command Center
MS SQL or Oracle Database
Unified Modeling Language Design
SSL security
XML Interfaces, Web Services, ASCII files
MultiSpeak/CIM

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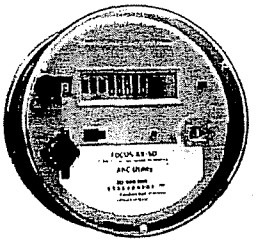
Landis+Gyr FOCUS AX Features



+ ANSI C12.19-22 Table Support
+ kWh, TOU and kW demand
+ Self-reads at midnight for billing metrics
+ Forward, Reverse, Net, Total Energy
+ Voltage/Power Quality
+ Up to 8-channels of bi-directional load profile
  - 1, 5, 15, 30 or 60 minutes (RF only)
+ 45 days of 2-channel 5-minute interval data storage (RF only)
+ Detect, log and report memory failure
+ Firmware upgrades accepted remotely (RF only)
  - or locally via optical port (RF & PLC)
+ Integrated Disconnect/HAN interface – SD version

1,000,000th meter manufactured this week!

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Landis+Gyr FOCUS™ AX-SD

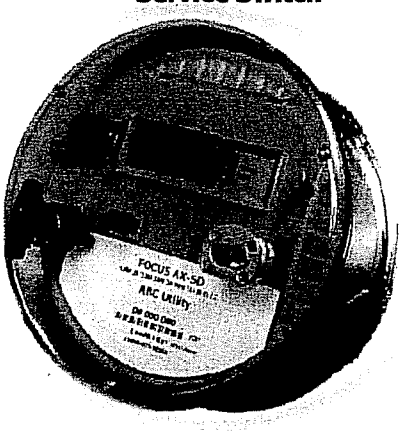
Proven Landis+Gyr Design

+ Industry's Most Advanced Service Switch
+ 200 Amp Service Switch on Forms 1S, 2S, and 12S
+ Configurable service limiting
+ Load-side voltage detection
+ Rated for minimum 10,000 cycles at 200 Amps

Service Switch designed, manufactured and warranted by Landis+Gyr

Over 700,000 FOCUS AX-SD shipped

Advanced Function Meter with Integrated Service Switch



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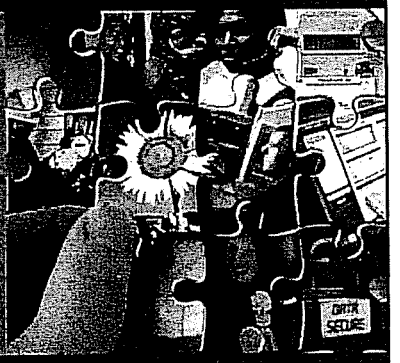
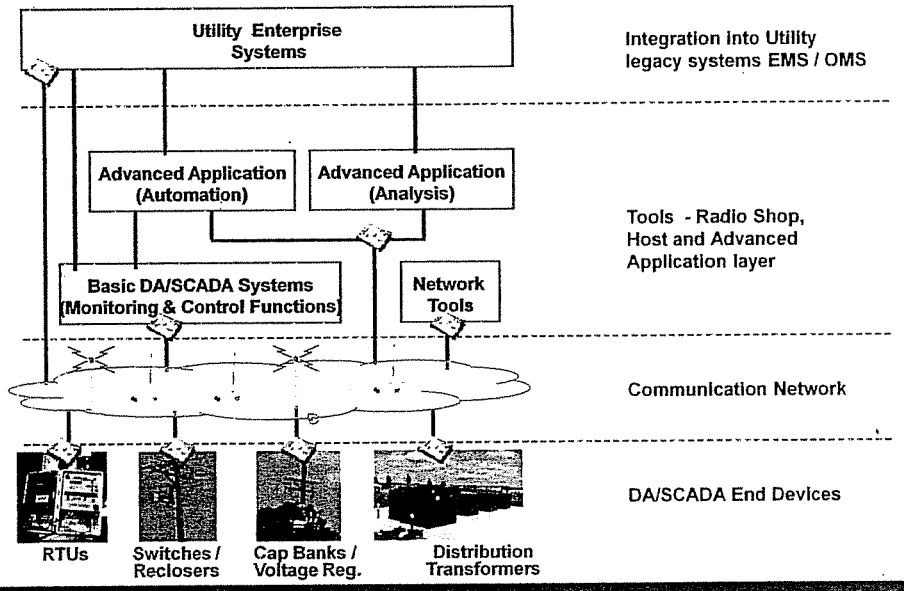
DA/SCADA Platform Overview

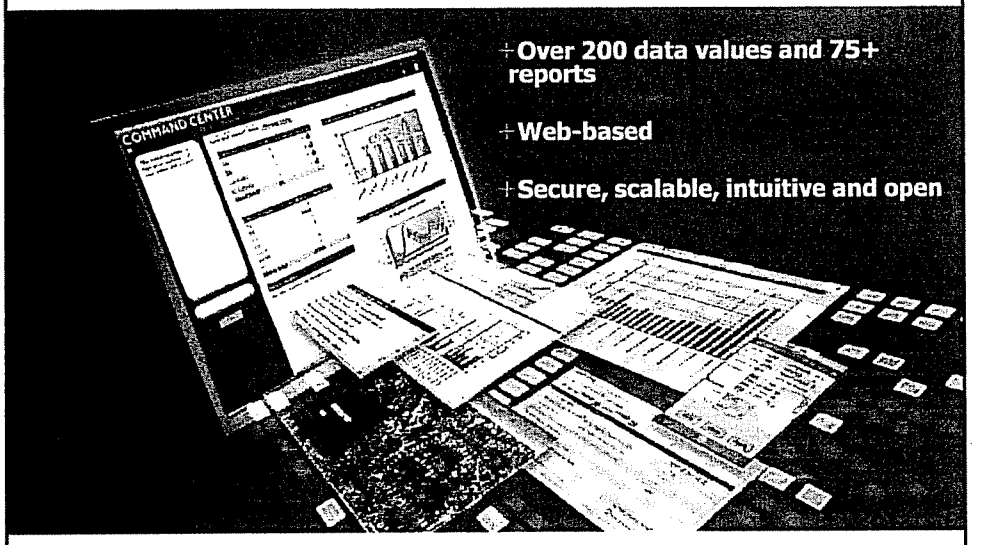


Landis+Gyr
manage energy better

DA/SCADA Basic System Overview



The Value – Intelligence



- Over 200 data values and 75+ reports
- Web-based
- Secure, scalable, intuitive and open

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Command Center Software Modules

MSP Managed Services Package	**Consumer Portal** Online Access	**MAS** Mobile Administration Software
EAS Endpoint Administration Software	**CAS** Collector Administration Software	**IT** Integration Toolkit

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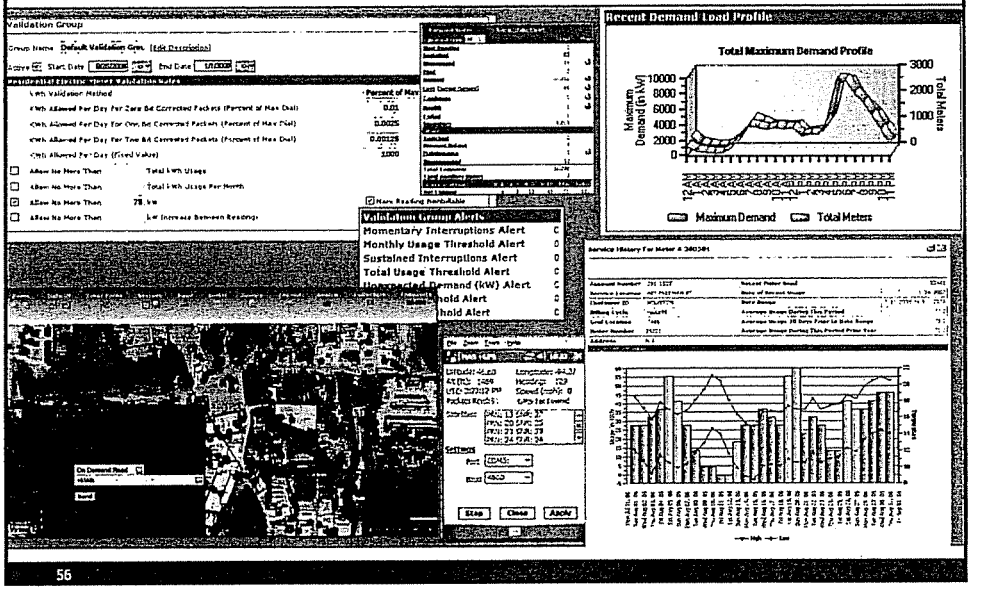
Advanced, Feature-Rich, Browser-Based Interface



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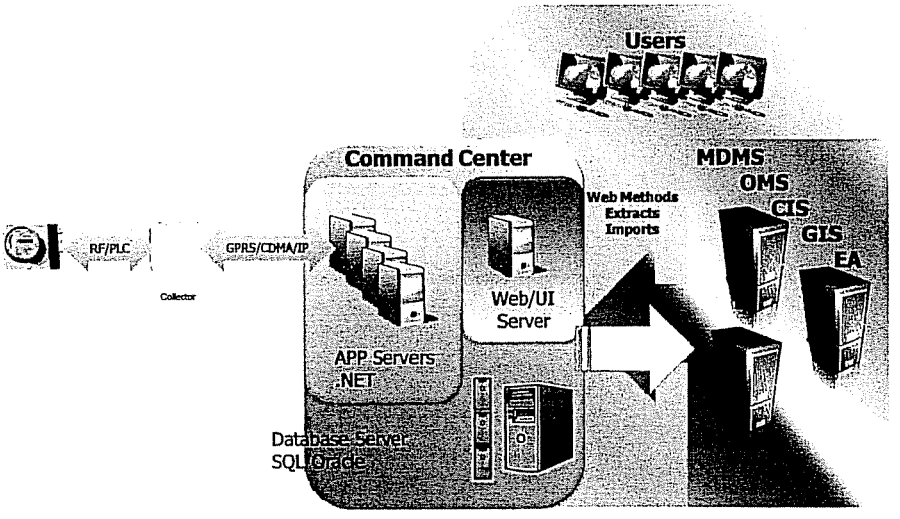
Command Center Overview



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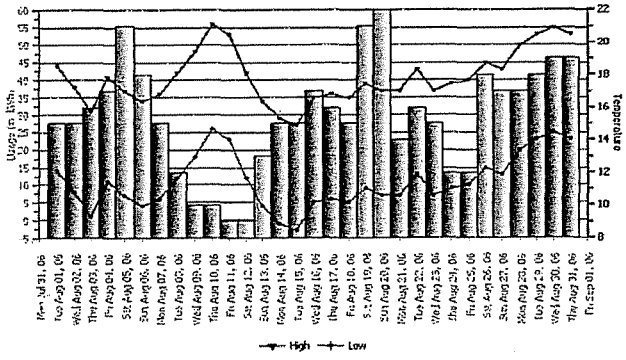
Reporting

Service History For Meter # 200504

Account Number		Recent Meter Read	1812
Service Location	3019404	Date of Recent Usage	10/31/2006
Customer ID		Billing Cycle	07
Date Range	8/1/2006 to 8/31/2006	Average Usage (Last 30 days)	15.4
Grid Location		Average Usage (Last 60 days)	16.0
Meter Number	200504	Average Usage (Last 90 days)	16.0
Address	N/A		

Usage Information



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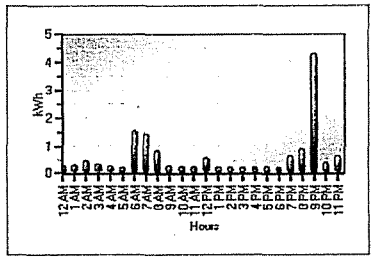
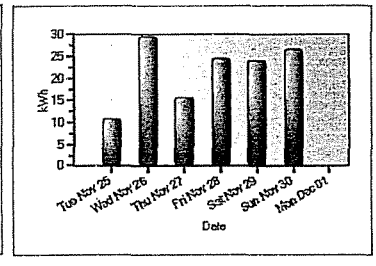
Hourly Interval Data

General Settings | Manage | Readings | Interval Data | History | Map

Thursday, November 27, 2008

Last 7 Days





Meter History ⊙7 ○30 days Full History Service History

Selecting more than 7 days of data for RF Meters will result in slow application performance.

Info	Collector	Meter Read Date	TOU4	TOU3	TOU2	TOU1	kWh Reading	TOU5	kW3Time	kW3	Received kWh
	TownEast	12/1/2008 12:00 AM	0.0000	0.0000	0.0000	139.8970	139.9040	0.0000	0.0000	8.5680	0.0000
	TownEast	11/30/2008 12:00 AM	0.0000	0.0000	0.0000	113.1600	113.1670	0.0000	0.0000	8.5680	0.0000
	TownEast	11/29/2008 12:00 AM	0.0000	0.0000	0.0000	88.9920	88.9990	0.0000	0.0000	8.5680	0.0000
	TownEast	11/28/2008 12:00 AM	0.0000	0.0000	0.0000	64.3300	64.3370	0.0000	0.0000	8.5680	0.0000
	TownEast	11/27/2008 12:00 AM	0.0000	0.0000	0.0000	48.6970	48.7040	0.0000	0.0000	8.5680	0.0000
	TownEast	11/26/2008 12:00 AM	0.0000	0.0000	0.0000	19.0630	19.0700	0.0000	0.0000	6.0190	0.0000
	TownEast	11/25/2008 12:00 AM	0.0000	0.0000	0.0000	8.2070	8.2140	0.0000	0.0000	6.0190	0.0000

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Custom Demand Validations

Demand Threshold Alert

Meter #	Map Loc	Alert Threshold	Issued Date
946898	58-815-2 AVE-VAUXHALL	Residential High Demand (kW) of 24	19/02/2008
947220	08-SW-5-18-14-4	Residential High Demand (kW) of 24	23/02/2008
947804	08-NW-9-15-15-4	Residential High Demand (kW) of 24	17/01/2008
948104	08-104-1009-3 AVE E-BROOKS	Residential High Demand (kW) of 24	20/01/2008
948155	08-302-1009-3 AVE-BROOKS	Residential High Demand (kW) of 24	28/01/2008
949186	08-SW-2-19-14-4	Residential High Demand (kW) of 24	08/02/2008
949662	08-SW-19-15-15-4	Residential High Demand (kW) of 24	14/01/2008
950315	08-SW-13-19-14-4	Residential High Demand (kW) of 24	24/12/2007
952202	08-504-1A AVE-BROOKS	Residential High Demand (kW) of 24	21/02/2008
952425	08-NW-13-17-14-4	Residential High Demand (kW) of 24	11/02/2008
952521	08-NW-9-18-14-4	Residential High Demand (kW) of 24	29/01/2008
970914	08-312-204-17 ST-BROOKS	Residential High Demand (kW) of 24	17/01/2008
975412	58-NW-19-14-15-4	Commercial High Demand (kW) of 166	22/02/2008
975453	58-SE-24-14-17-4	Commercial High Demand (kW) of 166	25/01/2008
975527	58-SE-12-13-17-4	Commercial High Demand (kW) of 166	16/01/2008
975828	58-NE-7-14-15-4	Commercial High Demand (kW) of 166	06/02/2008
975869	08-SE-22-16-13-4	Commercial High Demand (kW) of 166	28/01/2008
975894	08-NW-4-20-14-4	Commercial High Demand (kW) of 166	19/02/2008
975984	58-SE-13-14-17-4	Commercial High Demand (kW) of 166	25/01/2008
975985	58-NW-12-14-17-4	Commercial High Demand (kW) of 166	10/01/2008
976013	58-NE-8-14-17-4	Commercial High Demand (kW) of 166	22/01/2008

66

High Usage/High Demand Report

High Usage / High Demand

Selection Criteria

○ All
⊙ Collector Cedar - 4th (RFS)

Report Type

⊙ Usage ○ Demand

1 Show top x % of meters

☐ Apply Multiplier (Demand and Usage)

Date Range

⊙ Quick Select Past 30 Days
○ Start Date End Dat

OK

Top 1% of meters with high usage between 4/27/2009 and 5/27/2009 on

Meter #	Type	Total Usage (in kWh)	Service Location
98224079	RFS	3226	11107
98222592	RFS	2994	23060
98223784	RFS	2304	23204
98222144	RFS	2212	12068
98222459	RFS	2209	13611
98222030	RFS	2123	15397
98222372	RFS	2065	24718
98222093	RFS	1996	24918
98222002	RFS	1952	13145
98223482	RFS	1903	13223
98222468	RFS	1862	15117
98222614	RFS	1852	24123
98984757	RFS	1764	29012
98224431	RFS	1746	15437
98222135	RFS	1718	17171
98223143	RFS	1691	19347
98222600	RFS	1690	20793
98222584	RFS	1680	23624
98222106	RFS	1654	22793
98222060	RFS	1639	11232
98223197	RFS	1618	22961

67

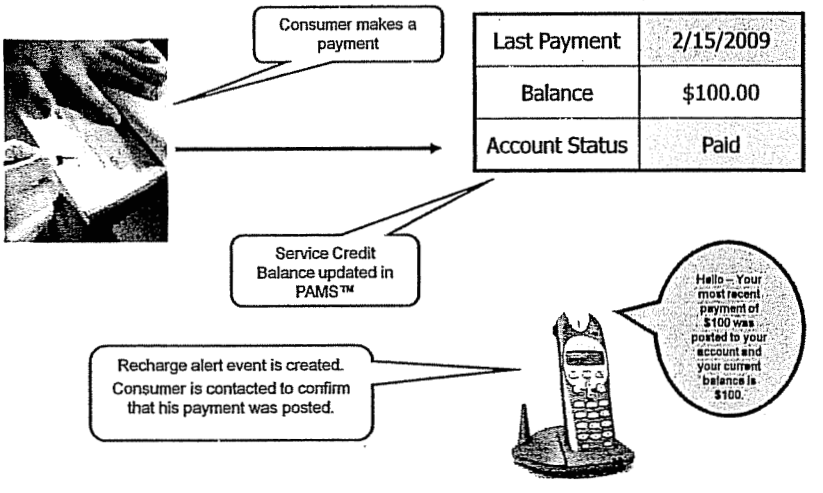
Prepaid Metering with Exceleron

- Software/web based application
- No unique meters required
- No expensive hardware to add/maintain
- Supports existing payment methods
- Powerful alert/communication platform
- Provides support for remote disconnect capability
- Integrates easily with existing CIS system

exceleron software

72

Process a Payment



exceleron software

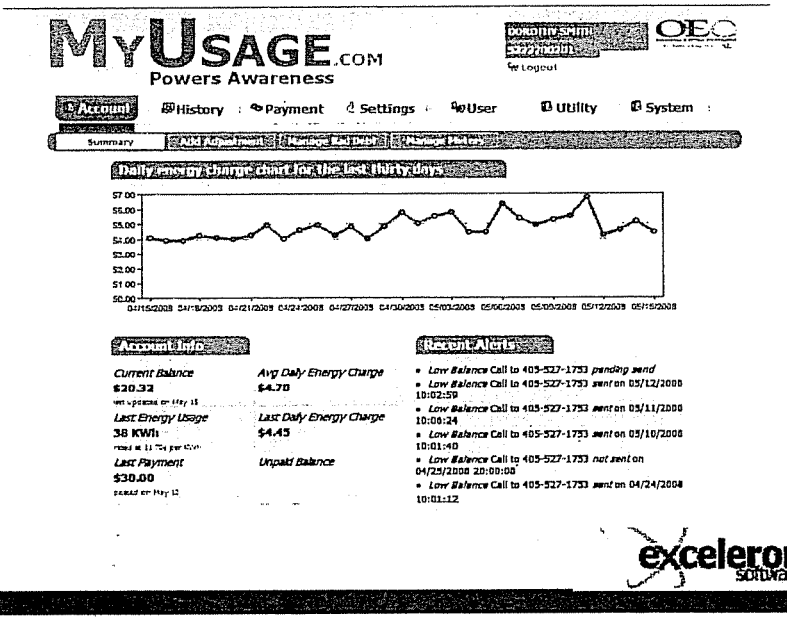
73

Disconnect/Reconnect

- Disconnects are processed daily at predetermined time
- Meter status verified after disconnect
- Reconnect is initiated immediately once credit balance is re-established
- Email notification sent for meters without remote Disconnect/reconnect capability

76

Customer Summary



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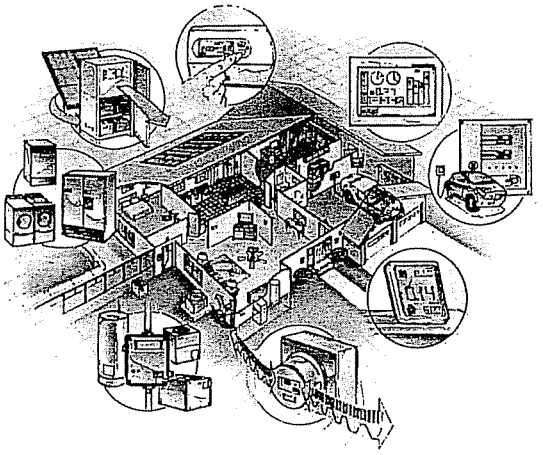
Energy Management via the Home Area Network



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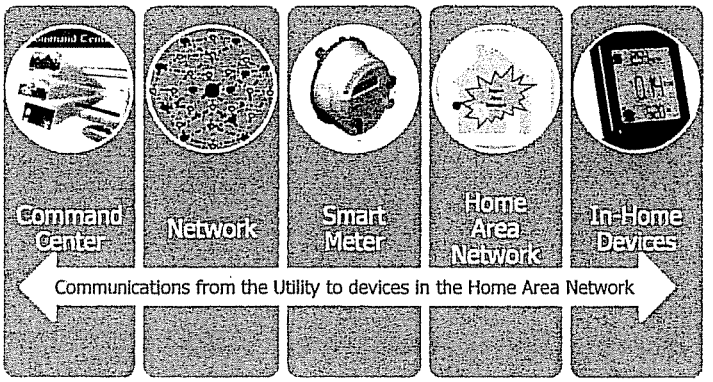
Utility-to-Customer Communication via Gridstream

Gridstream Personal Energy Management supports the utility in sharing information, such as pricing signals, with their customers...



81

Key Features

Real Time Updates	Synchronizes with smart energy device every 7.5 seconds, allowing for real-time awareness of usage cost and amount.
Data Security	ECC key registration process compliant in conjunction with Smart Energy Profile
Automated Usage Info	Usage available in both kWh's and cost in $'s Changes to rate settings can be automatic, with over the air updates, requiring no inconvenience on customer side.
Historical Data	Cumulative usage available in rolling increments for "today", "yesterday", last 7 days, and last 28 days.
Visual Alerts	Red, yellow, green LED backlights indicate when demand is significantly higher than normal, above average and normal, respectively.
Multi-Program Support	Display support flat rate and TOU programs. (TOU allows for up to 4 rate periods.)
Over-the-Air Updates	For registered devices, adjust rate or pricing plan over-the-air without customer involvement.
Accessibility	Large numbers for consumption allow for visually impaired users.
Other Metrics	Both carbon footprint and tindoor emperature are also available.

85

Technical Specifications

Size	4.5"L x 4.5"W x 1"D
Display Size	3in x 3in
Range	Approx. 100 feet
Meter Compatibility	Standard kWh electromechanical & solid-state ZigBee-enabled meters certified with the Smart Energy Profile
Open Communication Standard	Certified against the wireless ZigBee Smart Energy Profile.
AC Powered	AC Power guarantees device is always on. In case of outage, device can recover historical data up to 24 hours to maintain an accurate log of cumulative usage.

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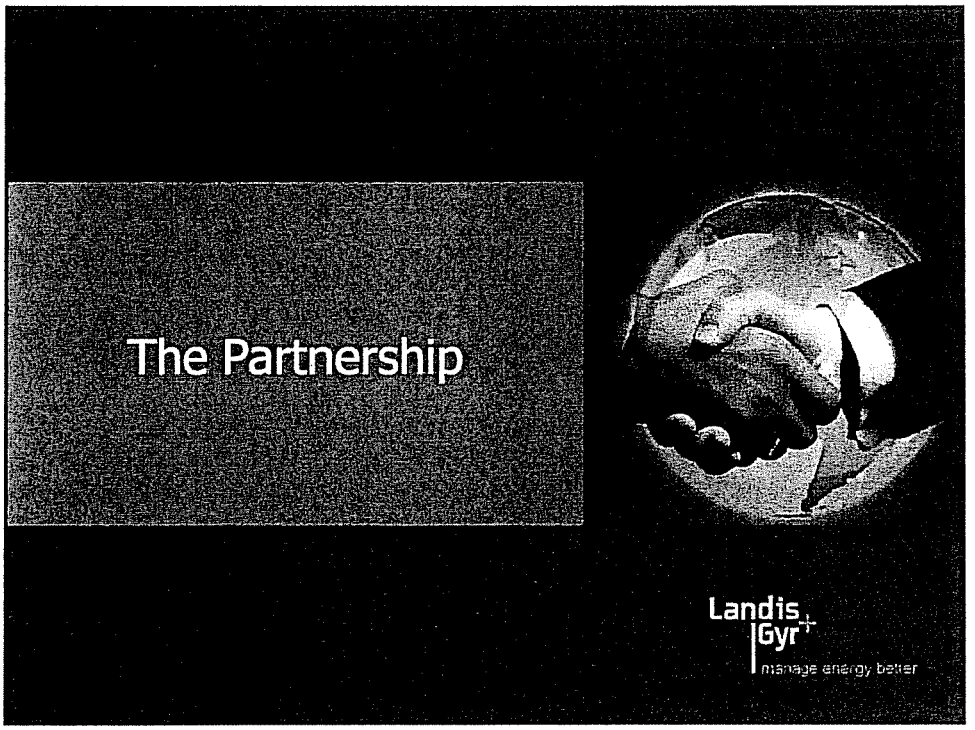
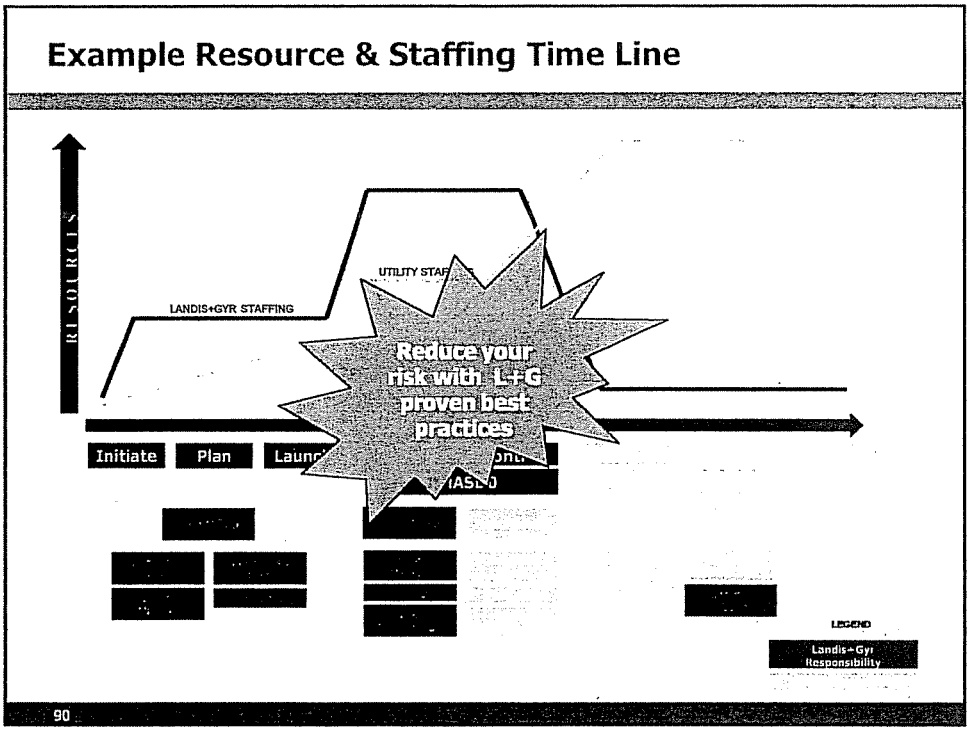


Example Resource & Staffing Time Line



Summary

- Landis+Gyr offers a Comprehensive Portfolio of Industry Leading Products and Solutions
- Gridstream is our Smart Grid Solution utilizing PLC & RF communication networks
- Gridstream RF Mesh & Gridstream TS2 separately or in combination offer Flexible, Future-Proof Technology and Systems

"Their market leadership is evident in ... (their) ability to deliver every day for some of the largest utilities in the country."

Ray Gogel, VP, Xcel Energy

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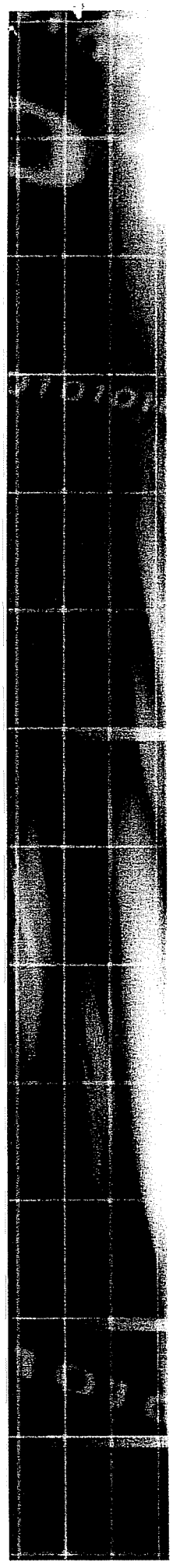
Thank you

Landis+Gyr

manage energy better

96



FAQ's

Meter Forms	Class 20: 3S, 4S Class 100: 1S Class 200: 2S, 12S, 25S Class 320: 2SE
Communication Type	PLC
P.O. Details	1 Itron Purchase Order
Itron Factory Integration	Yes
Meter Warranty & Meter Repair	CENTRON Meter 3 Years

Itron Inc.

Itron is a leading technology provider and critical source of knowledge to the global energy and water industries. Itron operates in two divisions; as Itron in North America and as Actaris outside of North America. Our combined company is the world's leading provider of metering, data collection and software solutions, with nearly 8,000 utilities worldwide relying on our technology to optimize the delivery and use of energy and water. Itron delivers industry leading solutions for electricity, gas and water meters; data collection and communication systems, including automated meter reading (AMR) and advanced metering infrastructure (AMI); meter data management and utility software applications; as well as comprehensive project management, installation, and consulting services.

To know more, start here: www.itron.com

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Publication 100860CC-01
02/08

Hunt FOCUS

Technical Specifications

Meter Compatibility

FORM	CLASS	VOLTAGE
1S	100	120
2S	200	240
2SE	320	240
2K	480	240
3S	10/20	120
3S	10/20	240
4S	10/20	240
12S	200	120/208
25S	200	120/208

Functional Specifications

Tamper Detection:	Power outage detection
Meter/Module Interface:	Direct register read
Application:	Two-way power line carrier

Operational Specifications

Transmit Frequency:	Ultra narrow bandwidth PLC

Environmental Specifications

Operating Temperature:	-40°C to +85°C
Operational Relative Humidity:	5% to 95% (non-condensing)

Surge Withstand Specifications

ANSI C37.90.1 - 1989 Surge withstand capability

ANSI C12.20 - 2002 Electrical Fast Transient/Burst

ANSI C12.20 - 2002 Effect of High-Voltage Line Surges

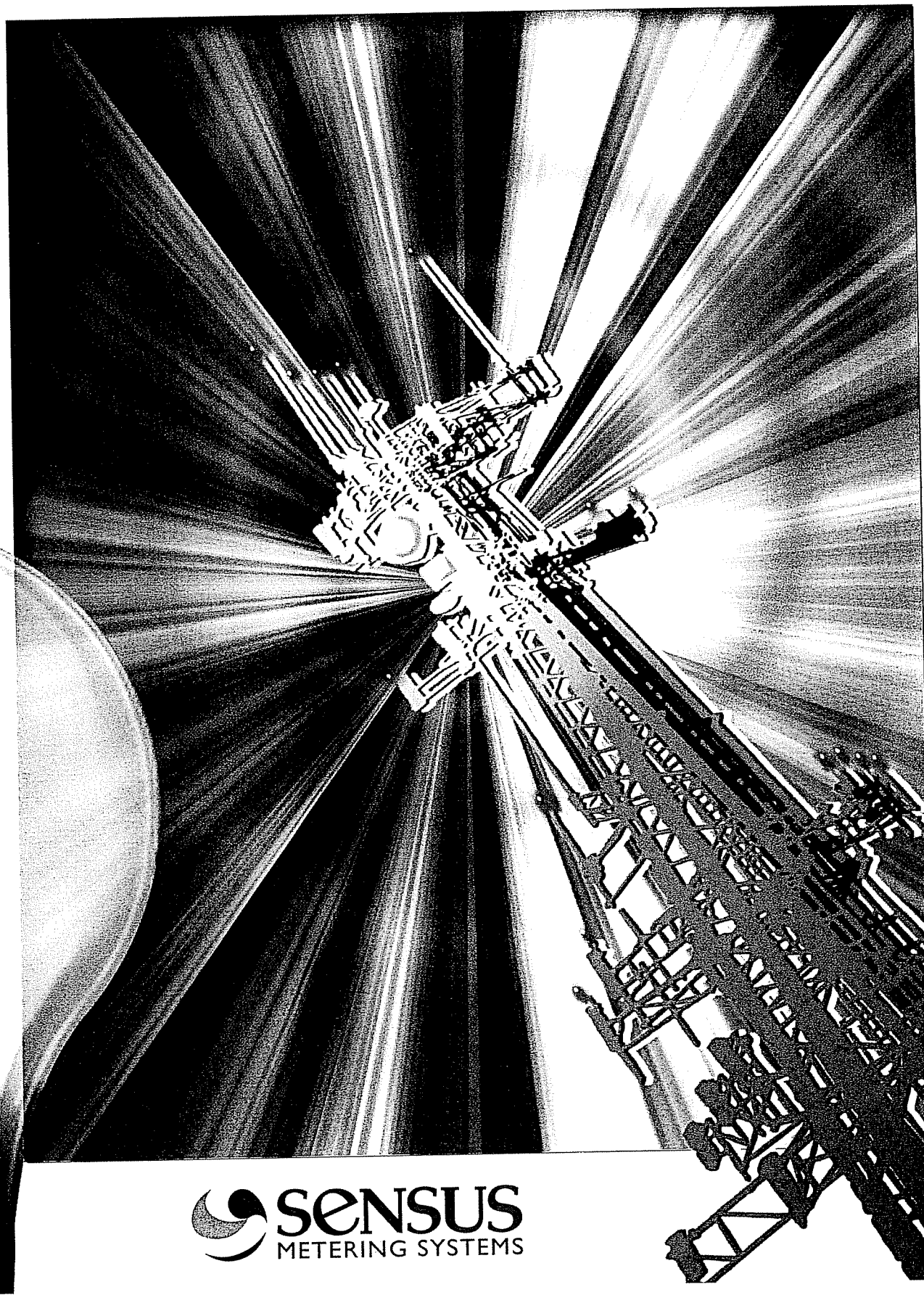
SENSUS

EXHIBIT D

CASE NO. 2009-00143

FlexNet® AMI SYSTEM

TECHNICAL REPORT



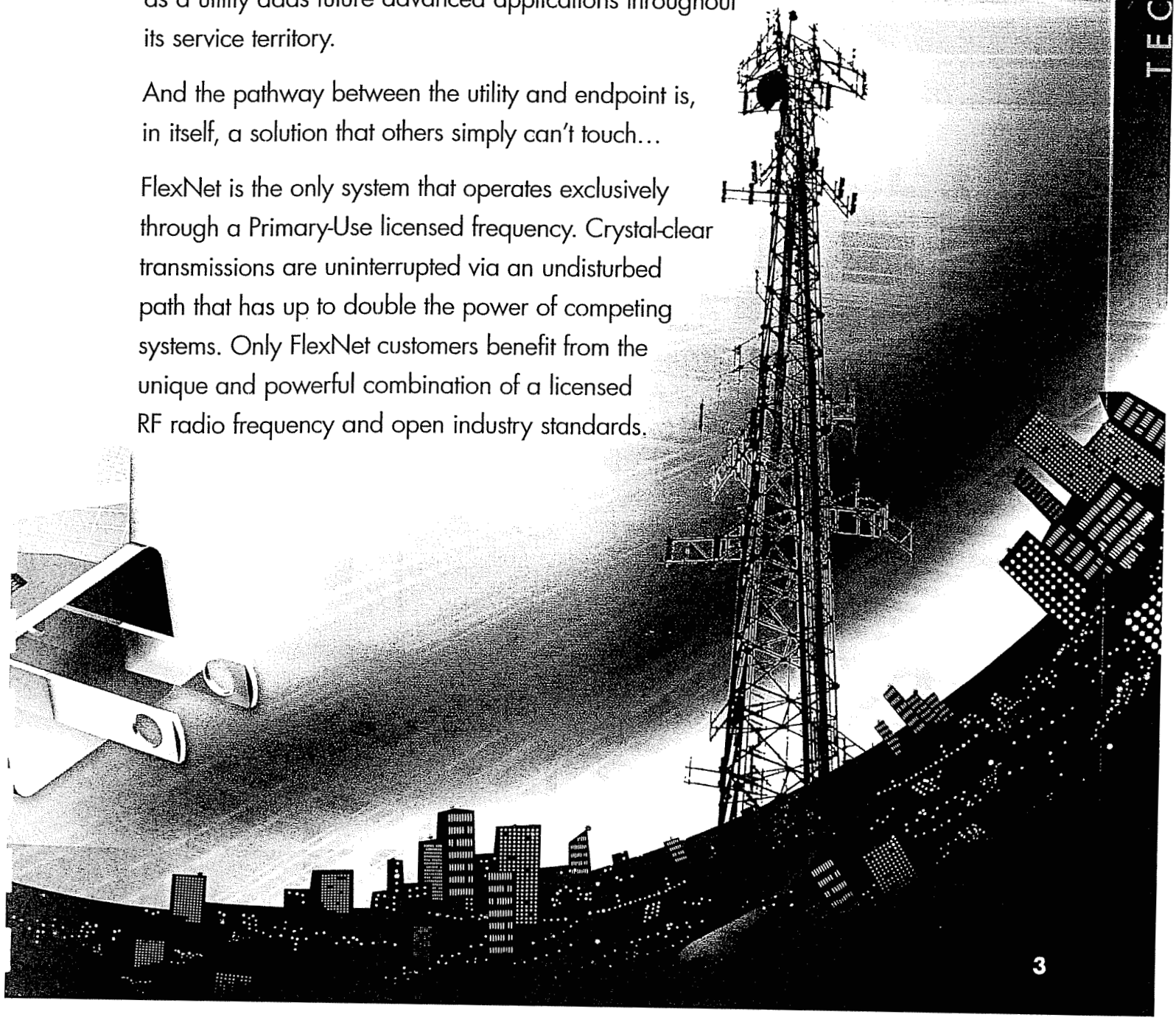
SENSUS METERING SYSTEMS

Why FlexNet Excels Above the Rest:

FlexNet offers reliability and flexibility in an incredibly simple design. FlexNet maximizes smart metering technology through its two-way, radio-frequency (RF), fixed-network AMI solution. Through the unmatched range of a tower-based system, FlexNet enables utilities to communicate with meters in both urban and rural environments to provide increased meter reading efficiency, reduced overhead costs and enhanced customer services. FlexNet is also scalable to accommodate growth as a utility adds future advanced applications throughout its service territory.

And the pathway between the utility and endpoint is, in itself, a solution that others simply can't touch...

FlexNet is the only system that operates exclusively through a Primary-Use licensed frequency. Crystal-clear transmissions are uninterrupted via an undisturbed path that has up to double the power of competing systems. Only FlexNet customers benefit from the unique and powerful combination of a licensed RF radio frequency and open industry standards.



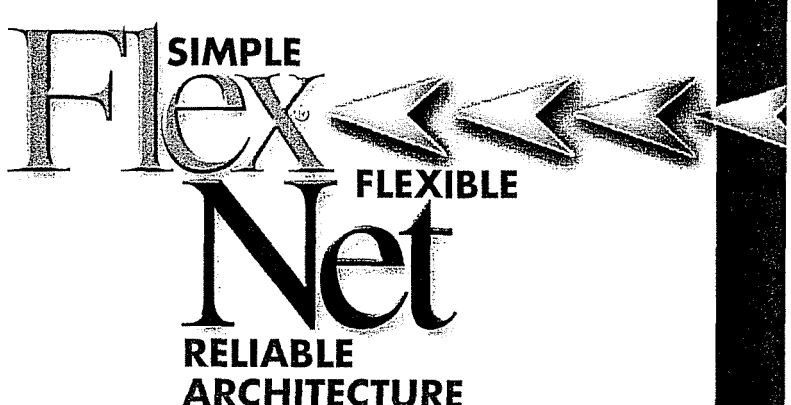
How FlexNet Excels

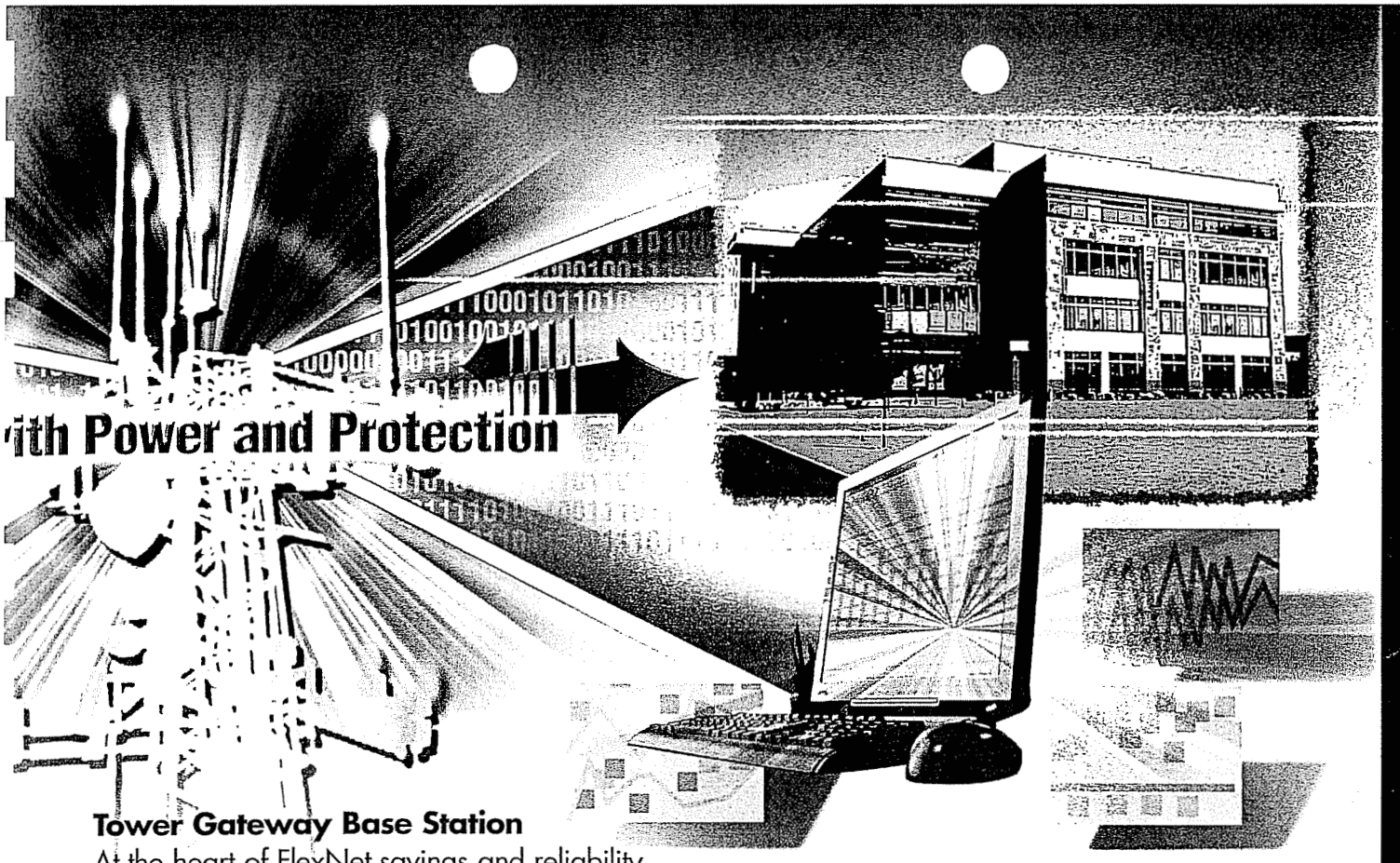
FlexNet's communication options open a technology door to a wealth of information that improves billing accuracy and efficiency, customer satisfaction and overall network effectiveness for the FlexNet electric utility customer. For combination utilities serving multiple meter types, FlexNet reads gas, water and electric services on the same system with the same advanced architecture.

The FlexNet communications network reads meters wirelessly and sends demand response messages to the meter. The FlexNet two-way communications network provides electric utilities with enhanced capabilities such as on-demand reads, remote demand register reset and remote shut-off, open system home area network options and smart grid applications like monitoring energy distribution.

FlexNet overlaps receiver coverage of meters, provides data/message redundancy and failover backup provisions. The tower-based system allows for a turn-key deployment not reliant on public vendors. Massively redundant parallel paths guarantee data delivery.

FlexNet's advanced RF system design translates into huge cost savings and reliability. Capital costs are reduced and recurring costs lowered due to breakthrough reductions in the number of data collection points. And FlexNet has demonstrated incredible range and reliability in the toughest combinations of urban and rural geographies. Maybe that's why utilities large and small trust their AMI deployments to Sensus at an ever-increasing pace.





Tower Gateway Base Station

At the heart of FlexNet savings and reliability is the Sensus Tower Gateway Base Station (TGB). Indoor and outdoor versions support both conditioned and harsh operating environments and support up to 70,000 SmartPoint endpoints over a wide 15-mile range. TGBs are typically deployed to provide overlapping coverage to endpoints. TGBs offer 8-hour back up and recovery of all meter data should you lose power, and a wealth of online diagnostics to monitor the health of the overall FlexNet Network. TGBs report to the head end system using redundant SSL tunneling on open industry standard TCP/IP links.

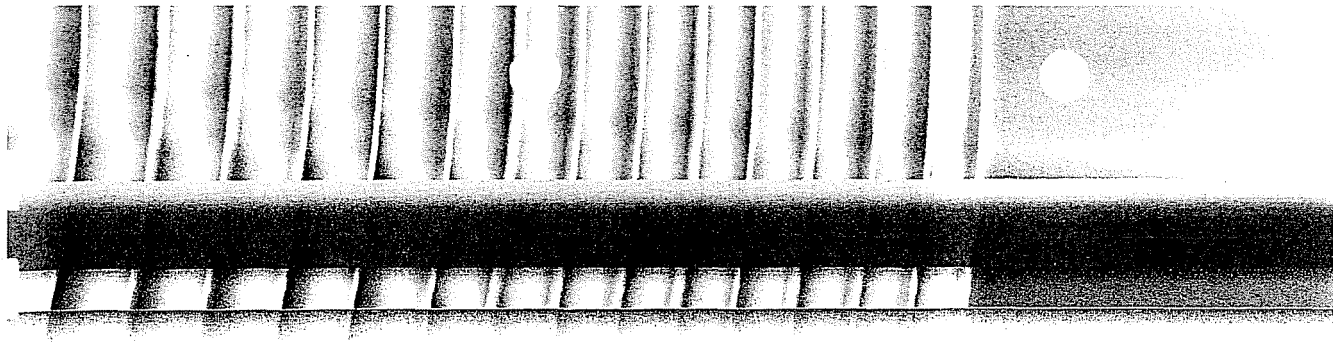
Regional Network Interface

The Sensus Regional Network Interface (RNI) uses multiple, industry standard blade servers to deliver a highly integrated data collection engine with powerful applications for storing, viewing, transporting, integrating and reporting AMI data. The RNI is built entirely on open standards for operating systems, web services, and databases from Microsoft, Linux, Oracle,and Sun. It also uses the latest APIs for batch, query, and real-time messaging. These attributes make the RNI a powerhouse that scales to meet even the largest utility demands.

FlexWare Software

FlexWare is the software system used in conjunction with the FlexNet RNI. Take advantage of its remote firmware upgrades to support dynamic rate programs, advanced calendaring, and clock functions to support time-of-use pricing, net metering, HAN integration, outage and restore functions, and power-quality monitoring. The system uses industry standard TCP/IP backhaul, network diagnostics and industry standard batch and real-time head end IT integration on a single technology platform.

FlexWare has the most extensive and flexible suite of diagnostic utilities in the industry. Diagnostics, including outage management programs, allow an entire city to be viewed down to the individual meter, or any individual transmission over the last 60 days.



Project Management Expertise

Sensus is responsible for millions of worldwide endpoints in North America, using operations and deployment plans based on proven best practices. Our customized project plan includes an installation plan and schedule, project deliverables, and accountabilities. Empowered cross-functional teams are composed of

- Program Management
- Project Management
- Engineering
- Manufacturing
- Testing
- Implementation
- Logistics
- Procurement
- Contracts and Financial Management

Automated tools for resource management and daily communication are web enabled. Utility management and team members will have daily access to information via the web regarding the status of the project from a schedule and area of activity point of view.

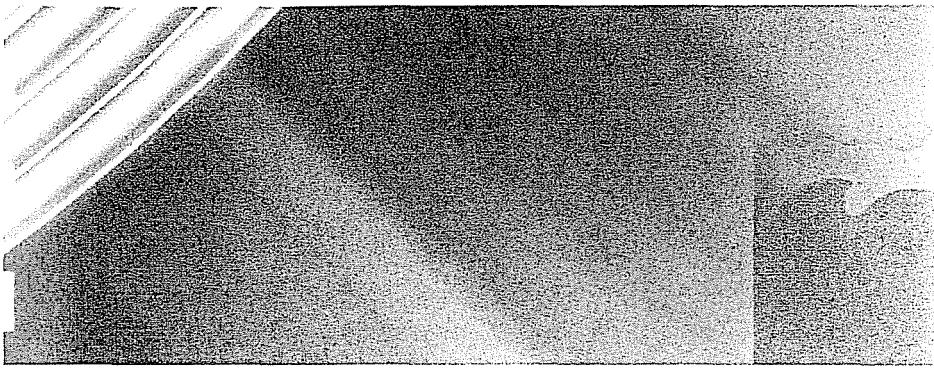
AMI Customer & Technical Services

Sensus is committed to providing the best customer service to our customers. AMI Technical Services is staffed to provide 24/7 technical support for the FlexNet system through the warranty period and on an annual maintenance contract basis. Customer support inquiries are logged and tracked to ensure final resolution.

Our Customer Services staff acts as a single point-of-contact and provides standard service support. Support is available via a toll-free number and on-site support is available as required. For customers who require additional support, Sensus offers custom support services under an extended service contract.

Part of providing the best customer service is providing the best training. Sensus University is a dedicated AMI training facility in our headquarters in Raleigh, NC. The Center includes a 20-person training room and has hands-on operating TGB's and endpoints.

Capture the future of electric utility data communications with FlexNet technology by Sensus Metering Systems.

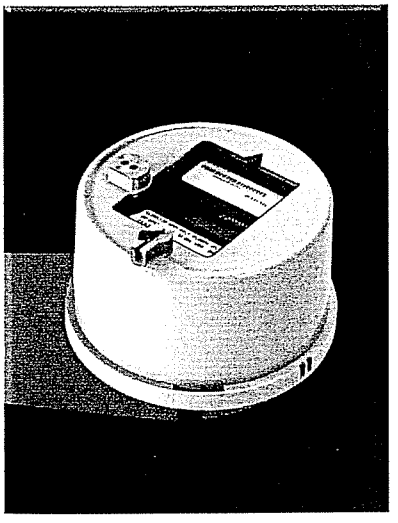


iCon Residential Meter with the SmartPoint integrated display is one of the most efficient and reliable AMI-integrated electric meters available. The meter combines AMI communications and meter display on one board, making the meter much more reliable and efficient than AMR meters with expansion boards. An optional remote disconnect allows commands from a Tower Gateway Base Station (TGB) to disconnect and connect customer service.

Features

- Integrated FlexNet AMI on display board
- Internal resolution to 10 Watt-hours
- Power outage and restoral notification
- Power quality reporting
- kWh and kVAh energy measurements
- Simple net metering and full net metering
- Demand, including block, sliding, peak and cumulative demand
- Load profile
- Time-of-use
- Remote disconnect
- Remote meter firmware downloads
- Accuracy exceeds ANSI C12.20 (Class 0.2)

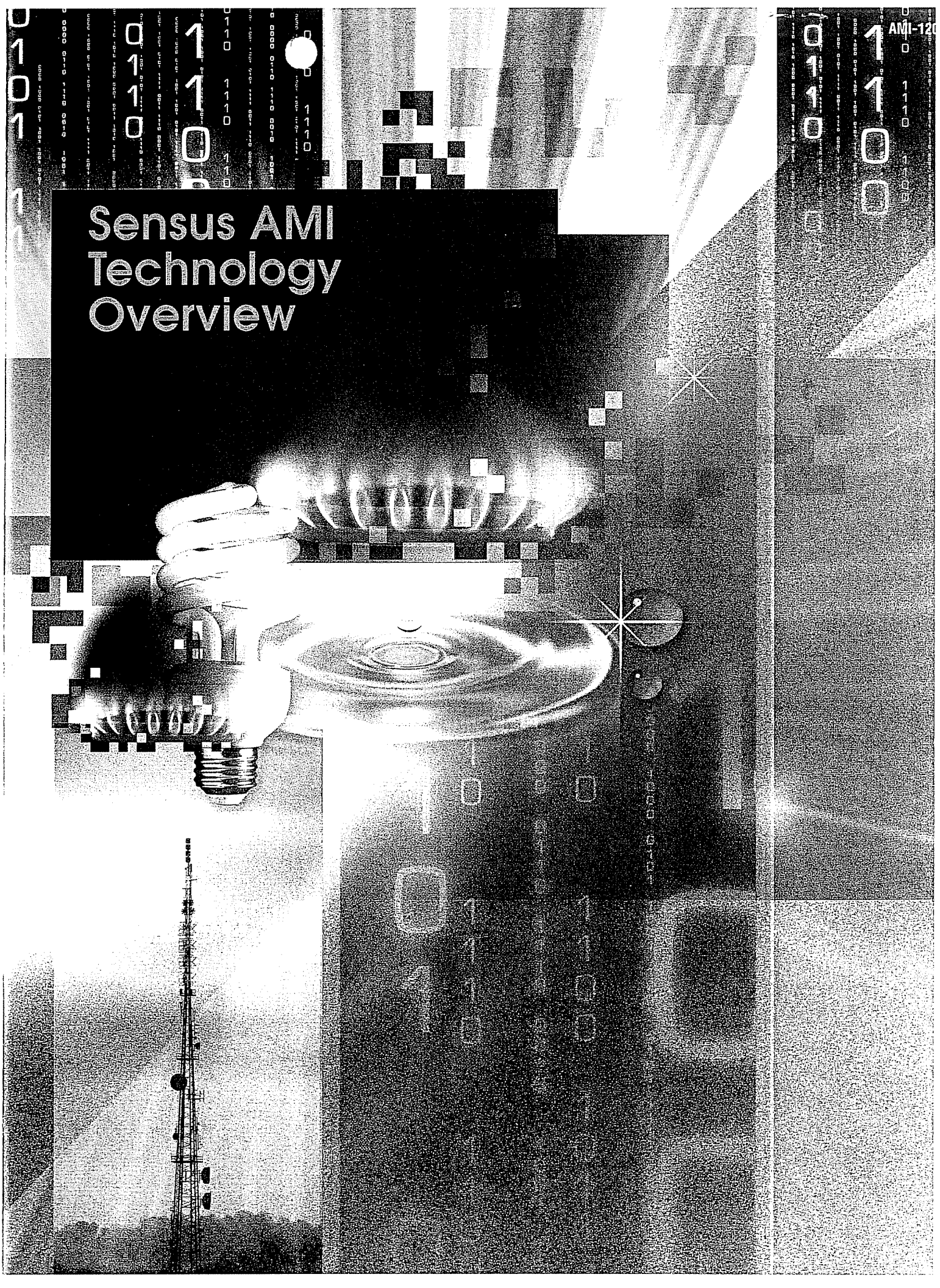
iCon APX C&I Meter with an unsurpassed accuracy exceeding ANSI C12.20 (Class 0.2), is built with a backbone of reliability and precision. The APX utilizes the same field-proven Sentec sensor technology as that of the iCon meter, and as such was designed to have the highest accuracy in the industry. The iCon APX meter utilizes a simple, unique modular design that meets the most stringent performance requirements for revenue billing applications. Like the iCon meter, the APX meter employs an open architecture design that provides for easy and cost-effective AMI integration.



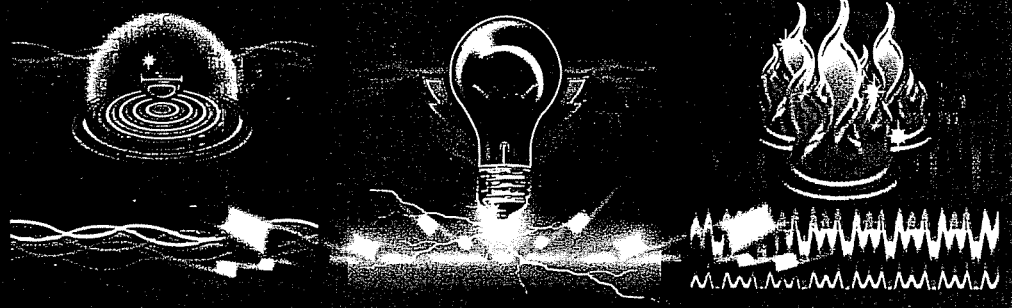
Features

- Accuracy exceeds ANSI C12.20 (Class 0.2)
- Patented auto-ranging power supply
- ANSI Standard Tables C12.18, C12.19, and C12.21
- Universal base assembly
- Inversion-proof
- Easily upgradeable for AMI
- Open architecture
- Advanced, user-friendly configuration software – iConFig™

Sensus AMI Technology Overview



RELIABILITY...FLEXIBILITY...
DELIVER ALL THREE



One-way FlexNet Features for Water Utilities:

- 2 watts of 900 MHz licensed power output
- Hourly or daily reporting options
- Flexible programming options
- CRC-32 protected, redundant data messages
- TouchCoupler installation option
- 20 year battery life
- Meter tamper reporting
- Leak detection
- Field replaceable battery
- Low battery warning
- Dual port application

Two-way FlexNet Features for Electric Utilities

- 2 watts of 900 MHz licensed power output
- Daily, hourly, and minute data intervals
- Time-of-use billing
- Remote Disconnect/Reconnect
- AC Load Shed Transition
- CRC-32 protected, redundant data messages
- Tamper and energy theft detection
- Compliant with all existing industry standards
- Power Fail notification
- Hot Socket Detection
- Meter location using poll command
- Demand reads and demand register reset commands
- Simple residential and advanced C&I applications with a single network
- Downloadable metrology and radio firmware upgrades

One-way FlexNet Features for Gas Utilities:

- 2 watts of 900 MHz licensed power output
- Hourly or daily reporting options
- Flexible programming options
- CRC-32 protected, redundant data messages
- 20 year battery life
- Both residential and C&I Meters
- Provides Move-in Move-out reads
- Low battery warning
- Tamper detection

Press Release

SENSUS
The Measure of the Future

Sensus FlexNet AMI Solution Selected to Provide Efficiency & Enhanced Customer Service to Prominent Electricity Co-op

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Raleigh, NC (January 26, 2009) – Jackson Electric Membership Corporation (EMC) and Sensus announce an agreement to deploy nearly a quarter-million iCon smart meters and the Sensus FlexNet AMI solution for the co-op's residential and commercial customer base.

As one of the largest cooperatives in the United States, Jackson EMC provides services to both rural and urban customers across a ten-county, 1,077 square-mile territory north and east of Atlanta.

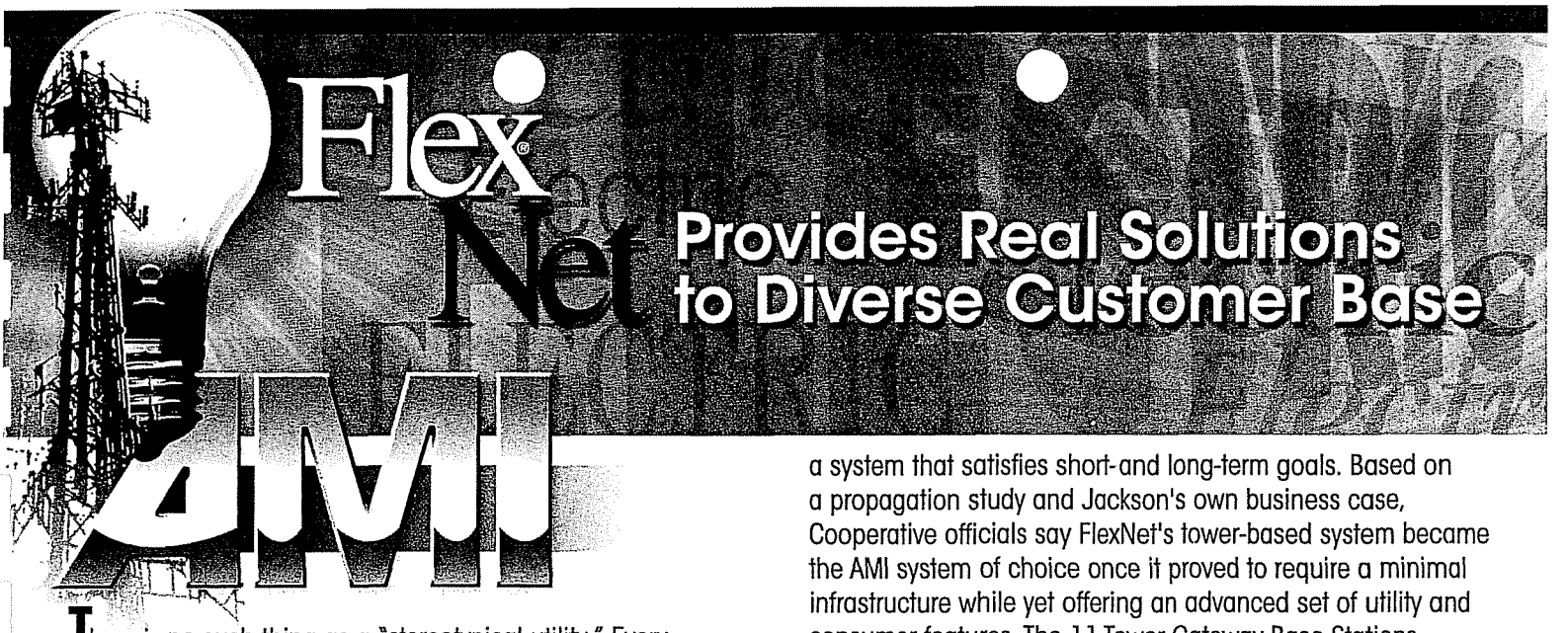
Cooperative officials say FlexNet's tower-based system became the AMI system of choice once it proved to require a minimal infrastructure while yet offering an advanced set of utility and consumer features. The 11 Tower Gateway Base Stations needed to run the FlexNet system for Jackson EMC will all be housed on existing, utility-owned infrastructure.

"Once evaluated, it became obvious to us that FlexNet would be the most efficient system for our expansive territory, and it would provide enhanced services to both our utility and our customers," said Jim Smith, Vice President of Engineering & Operations for Jackson EMC.

The cooperative has experienced a 54 percent growth in membership over the last 10 years, with dramatic growth in three counties – Barrow (94%), Jackson (65%) and Gwinnett (56%) – that were listed among the 100 fastest-growing counties in America for 2002-2004. This growth created the need for a system that would meet short- and long-term goals.

"The results of a propagation study done in preparation for this deployment, combined with the business case developed by Jackson officials makes a clear statement that FlexNet is a real world, practical solution for any rural co-op seeking an AMI solution," said Bill Yeates, Executive Vice President for Conservation Solutions at Sensus.

(more)



FlexNet AMI Provides Real Solutions to Diverse Customer Base

There is no such thing as a "stereotypical utility." Every organization has its unique needs, driven by factors such as geography, budget and customer base. Utilities are solving data collection challenges and are achieving reliable results with an advanced metering infrastructure (AMI) system that features flexibility and solid engineering in a simple, straightforward format.

FlexNet, by Sensus, provides that unique solution. Grounded by an exclusive Primary-Use license frequency that fuels a host of unmatched features, FlexNet delivers solutions to an assortment of utilities: large and small, urban and rural, electricity, gas or water.

FlexNet is a simple, flexible and reliable RF fixed network data collection system, which is designed to increase meter reading efficiency, reduce overhead costs, and enhance customer service. FlexNet offers both two-way and one-way fixed based monitoring through a wireless, minimal infrastructure. This Primary-Use licensed system is the only one in the industry and it gives utilities access to a protected, guaranteed frequency allowing data transmission to occur at up to double the power of other systems. And, FlexNet is scalable to accommodate growth as a utility expands its service territory.

With over 100 FlexNet deployments, Sensus is serving the AMI needs of diverse utilities across North America. For instance...

A 15-year agreement with Hawaiian Electric for a mass deployment of FlexNet places about 430,000 residential and commercial iCon smart electric meters throughout the state by 2015. Just 19 tower network sites provide two-way radio frequency network coverage based on the Primary-Use licensed frequency. These features support new pricing and demand-response initiatives to help customers manage their own electricity use by taking advantage of various pricing options and programs designed to enhance energy conservation efforts.

In Atlanta, one of the largest cooperatives in the United States, Jackson Electric Membership Corporation, is deploying nearly 250,000 iCon smart meters and the Sensus FlexNet AMI solution for the 1000+ square-mile territory. A 54-percent growth rate over the last decade prompted the need for a system that satisfies short-and long-term goals. Based on a propagation study and Jackson's own business case, Cooperative officials say FlexNet's tower-based system became the AMI system of choice once it proved to require a minimal infrastructure while yet offering an advanced set of utility and consumer features. The 11 Tower Gateway Base Stations needed to run the FlexNet system will all be housed on existing, utility-owned infrastructure.

A partnership between Southern Company and Sensus created one of the largest AMI contracts in history, with more than 4.3 million consumers of Southern Company subsidiaries benefitting from FlexNet as a Smart Meter program is deployed. Meters are now read remotely and provide data that will lead to electricity pricing options for Southern Company customers.

Both electric and natural gas customers in Wisconsin, Iowa and Minnesota, part of the Alliant Energy service area, are getting more than one million iCon smart electricity meters and 400,000 FlexNet AMI gas SmartPoint enabled meters. FlexNet allows Alliant Energy to leverage its prior investment in an extensive array of communications towers already in place for voice communications.

WHY FLEXNET DELIVERS

The FlexNet two-way communications network provides electric utilities with enhanced capabilities such as on-demand reads, remote demand register reset and remote shut-off, open system home area network options and smart grid applications like monitoring energy distribution.

FlexNet overlaps receiver coverage of meters, provides data/message redundancy and failover backup provisions. The tower-based system allows for a turn-key deployment not reliant on public vendors. Massively redundant parallel paths guarantee data delivery.

FlexNet's advanced RF system design translates into huge cost savings and reliability. Capital costs are reduced and recurring costs lowered due to breakthrough reductions in the number of data collection points. And FlexNet has demonstrated incredible range and reliability in the toughest combinations of urban and rural geographies. Maybe that's why utilities large and small trust their AMI deployments to Sensus at an ever-increasing pace.

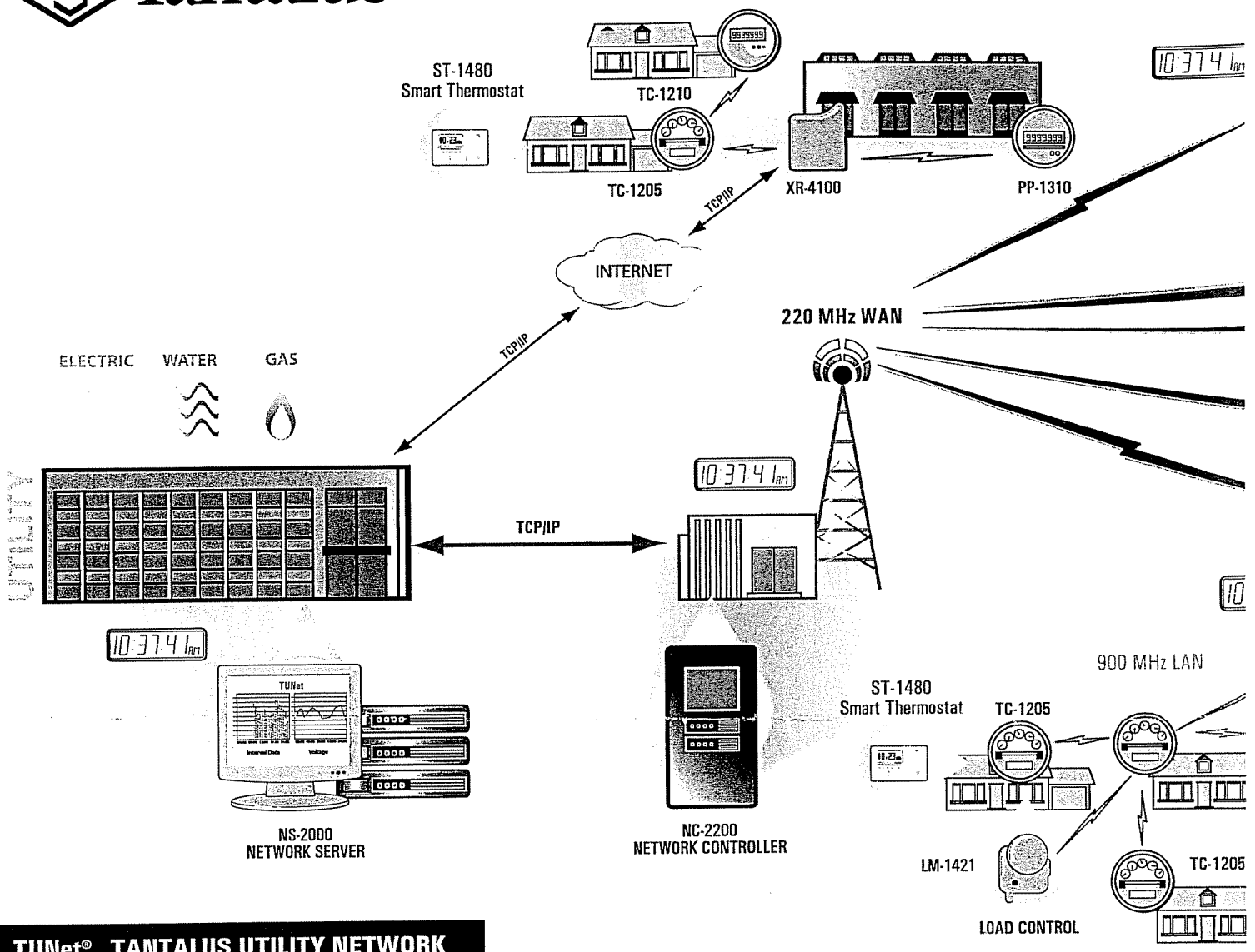
SENSUS

TANTALUS

EXHIBIT D

CASE NO. 2009-00143

Tantalus



TUNet® TANTALUS UTILITY NETWORK

TUNet is a two-way, real-time, wireless data communications network that monitors and controls electric, gas and water utilities. It supports multiple applications making advanced metering, outage management, power quality monitoring, load management and distribution automation practical throughout urban and rural service areas. The hybrid network provides vast coverage using minimal infrastructure. Time synchronization enables a utility to execute precise measurements and control actions across any portion of the network.

WAN - the long-range communications backbone connects collection points to the utility. Data travels over the narrowband 220 MHz frequency band, which is ideally suited for long-range communication even over challenging terrain. TUNet devices can be surgically deployed anywhere within radio range.

If a utility/municipality operates fiber, WiFi or another network, or if 220 MHz is unavailable, then an alternative direct TCP/IP connection may be used for WAN transmission.

LAN - a peer-to-peer network that operates on the license exempt 900 MHz frequency. It is a self-initiating, self-healing network that is inherently more reliable and less expensive to operate than other RF networks. Each LAN device can send and receive data. Data can be sent to other LAN devices and, ultimately, to a WAN collection point for transmission to the Network Controller.

INFRASTRUCTURE	NS-2000	Network Server	Ce
	NC-2200	Network Controller	Co
ADVANCED METERING	RT-3205	220 MHz Transceiver	Pro co
	TC-1205	TPM Controller	Ad
	TC-1210	TPM Controller	Ad
	TC-1216	TPM Controller	Ad
	PP-1310	C&I Meter Reader	Ad
ANCILLARY PRODUCTS	RD-1000	Remote Disconnect / Reconnect	Fa
	LM-1421	Load Management Switch	En
	XR-3100	Crossband Repeater	22
	XR-4100	WAN Collector Ethernet	Et
	ST-1480	Programmable Thermostat	A

Inter County Energy
Points of Interest
AMI Questionnaire

Tantalus

	YES	NO	DESCRIPTION
COMMUNICATIONS			
Power Line Carrier		X	
Mesh network	Y		Hierchical network using 900 MHz for Local Area Network (LAN), 220Mhz for Wide Area Network.
Licensed Radio	Y		
frequency	220		
Unlicensed Radio	Y		
frequency	900		
Pager		X	
Other			
FUNCTIONALITY			
KWH	Y		
Demand	Y		
Real Time Pricing	Y		
Net-Metering	Y		next generation modules
Forward			
KWH			
KW			
Reverse			
KWH			
KW			
Both			
KWH			
KW			
TOU	Y		
Multiple KWH & KW			two seasons, four tiers
Number of Seasons			
Number of Daily Intervals			
Meter Storage Capability			
Connect/Disconnect			
1PH	Y		
3PH		X	
Outage Notification	Y		automatic,
Notification Time			within seconds
Notification Accuracy			we differentiate between outage and loss of communications
Outage Verification	Y		
Verification Time			minutes
Voltage Monitoring	Y		
% Tolerance	1		
3 phase availability			
Remote Display	Y		
KWH usage			
Inst KW			
KWH/KW cost			
Billing Period Total Cost			
Real Time Pricing			
3 phase availability			
Load Management	Y		
# of relays/points	3		
Relay sizes available	30A		
Prepay Capability			
Substation Identification			yes using contextual addressing
Feeder Identification			
Phase Identification			
Multi-Utility			
Gas			partner with Badger Meter - ORION
Water			ORION