Landis+Gyr Pay-As-You-Go Prepayment Technology

Presented by
Marsh Creek LLC
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Global Leader in Smart Metering Solutions

+ Largest installed global base in the industry (>300 million devices).
+ 25 years of smart metering innovation.
+ Leader delivering prepayment technologies for a variety of utility services since 1962.
+ Gridstream® is end-to-end smart grid solution combining metering, communications, network management, software, grid and consumer applications, and professional services in a single secure and integrated platform.
+ Committed to improving energy efficiency and environmental conservation.
L+G’s “Customer-Focused” Prepayment

+ 24/7 real-time information

+ Consumer able to purchase in amounts and at times of their own choosing

+ Supports TOU and complex rate structures

+ Access to power service is determined by consumer behavior (utility does not cut-off service to site)

+ Able to configure components of an individual consumer’s service plan (rates, arrears %, low credit warning, etc.) to better support their preferences and needs

+ Accommodation for various methods/means of payments

+ Landlord customer class able to manage assets in support of end-use consumer behavior
Prepayment Systems

+ Smart Card / AMPY Pay-As-You-Go Prepayment
  • Standalone PLC based technology

+ Next Generation real-time prepay and RF Gridstream infrastructure
  • Addition of real-time, two-way AMI which blends “customer-focused” prepayment to help utilities serve the both prepayment and credit customers needs.
Alaska Smart Card Pay-As-You-Go

History

• In 2005 Marsh Creek selected the Alaska distributor for the Ampy prepay metering system.
• First Ampy smart card Pay-As-You-Go metering system installed on Saint George Island in 2006.
• 40 remote electric utilities throughout Alaska are now using the Ampy systems with technical support provided by Marsh Creek.

Utility Benefits

• Positive cash flow.
• Automatic collection of arrears.
• No more disconnects and reconnects.
• Cost effective - easy to install
• Collection hassles eliminated.
Alaska AMPY Smart Card Program

Consumer Benefits

• No more bills.
• Deposit avoidance – no more reconnect fees.
• Budget tool – you can pay a little bit every day or as needed.
• User friendly.
• Consumer becomes “Energy Wise”
• Widely accepted by all ratepayers.

Acceptance - Independent Survey Results

Aleutian Pribilof Island Association (APIA)

• 30% of households surveyed.
• 31% Very Satisfied.
• 69% Satisfied.
• 0% Not Satisfied.
• 100% Conserving More Energy.
Alaska AMPY Smart Card Pay-As-You Go Overview

Utility Clerk enters payment in computer and runs Smart Card

Customer’s Smart Card now knows what amount was paid minus any debt

Run Smart Card through the Ampy Customer Information Unit (CIU) at your house.

CIU will show your money running backwards as power is consumed.

Main Breaker Panel

PLC Data Communication
120V branch circuit

Ampy 5252
Meter
Pay As-You-Go Meter Overview

+ Standard 2S and 12S socket meter forms
+ Proprietary, fully-rated, internal 200A contactor
+ Configurable cycling, displays and timing
+ 4 kWh rate registers
+ TOU and/or usage-based rate registers
+ Tamper detection
+ Internal real-time clock
+ Programmable “friendly” non-disconnect periods
+ Programmable for prepayment or credit operations
+ Reconfigurable via Smartcard
In-Home CIU (Customer Information Unit)
Real-Time Information

+ Plugs into any 110V outlet
  + (Battery power when supply disconnected)
+ Provides full usage data to consumer.
  - Credit Balance
  - Days Credit Remaining
  - Cost Per Hour
  - Cost Today
  - Cost Yesterday
  - Cost This Month
  - Cost Last Month
  - Present demand (kW)

+ Global/Individual messages
+ Emergency credit code
  - (24 hours or 1 week)
+ Low credit alarm
AMPY Management System (AMS)

+ Comprehensive back-end management and front-end vending application

+ Generous system configuration
  + Application settings, user administration, meter administration
  + Holiday schedules
  + Rate plans
  + Meter/CIU configurations
  + Fixed fees/miscellaneous charges
  + Tax administration
  + Fuel adjustment charge
  + Disconnect periods
  + Emergency credit
  + Landlord functions
  + Customer account configuration
  + Create Smartcards/Vending
Salt River Project

+ Political subdivision of Arizona founded in 1903

+ 2nd largest electric utility in Arizona serving 985,000 residential, commercial, and industrial customers

+ 3rd largest public power utility in the U.S.
Smart Card Pre-Pay Today

- Largest Prepayment Program in North America with 149,000 active customers
- Represents 17% of residential customer base
- Voluntary alternative to standard residential price plans
SRP Customer Satisfaction With Smart Card Program

*Significantly different compared to FY14 YTD
Why Customers Love It

+ 87% “Prefer M-Power over monthly billing”

+ 76% Voluntarily chose M-Power for Control

+ 97% say “M-Power could Help a Lot of People”

+ 90% say “it helped me Manage My Finances”

+ 92% “Use Electricity More Wisely”

+ 80% “Use a lot less electricity”
SRP and Landis+Gyr long term agreement to update and expand its advanced metering and prepay technology. Once completed will begin installing more than one million state-of-the-art smart meters to provide both credit and prepayment options for all customers.

**Objectives**

+ **Enhance the customer experience**
  - Maintain real-time information (in-home display)
  - Tokenless (all payment channels)
  - Time-of-Day pricing
  - Information via mobile device

+ **Build future-ready AMI system that enables both credit and prepay**
  - Expansion of fully integrated system

+ **Leverage existing investment in prepay**

+ **Realize operational benefits**
  - Eliminate meter exchanges

+ **Platform for growth**
Next Generation Prepay

2014 Phase 1: Install a Gridstream communication infrastructure
               Modify current prepay meter to use Gridstream

2015 Phase 2: Develop prepay for Gridstream/L+G Focus meter

2016 Phase 3: Develop new, real-time display
Next Generation In-Home Display

+ Color touchscreen
+ Customer defined alerts
+ ZigBee
Thank you!

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