

# The Challenges of Establishing A Common AMS View In Texas

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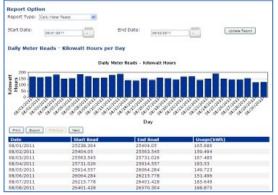
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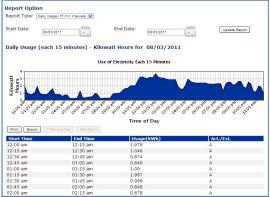
#### Customer Enablement – Smart Meter Texas portal (2010)







- Common View Four Utilities ~ 7.2 M Meters
  - ✓ Understand & manage energy usage
  - ✓ Provision HAN devices
  - ✓ HAN Services (Messaging, Pricing, Control)
  - ✓ Energy Data export functionality for
  - ✓ additional analytics
  - ✓ Rep-of-Record Programs
  - ✓ Third-Party Programs



www.smartmetertexas.com



#### Customer Enablement – Third-Party Services, Tools & Programs



#### Rep-of-Record (ROR)

- Bill Analysis
- Summary e-mail
- Mobile applications

#### Third-Party (Retail Electric Provider, Others)

- Bill and Consumption Analysis
- Home Energy Management Solutions
- Vehicles & Appliances
- Distributed Generation

#### **Distributed Generation**





## Home Energy Management Solutions









#### **Vehicles & Appliances**



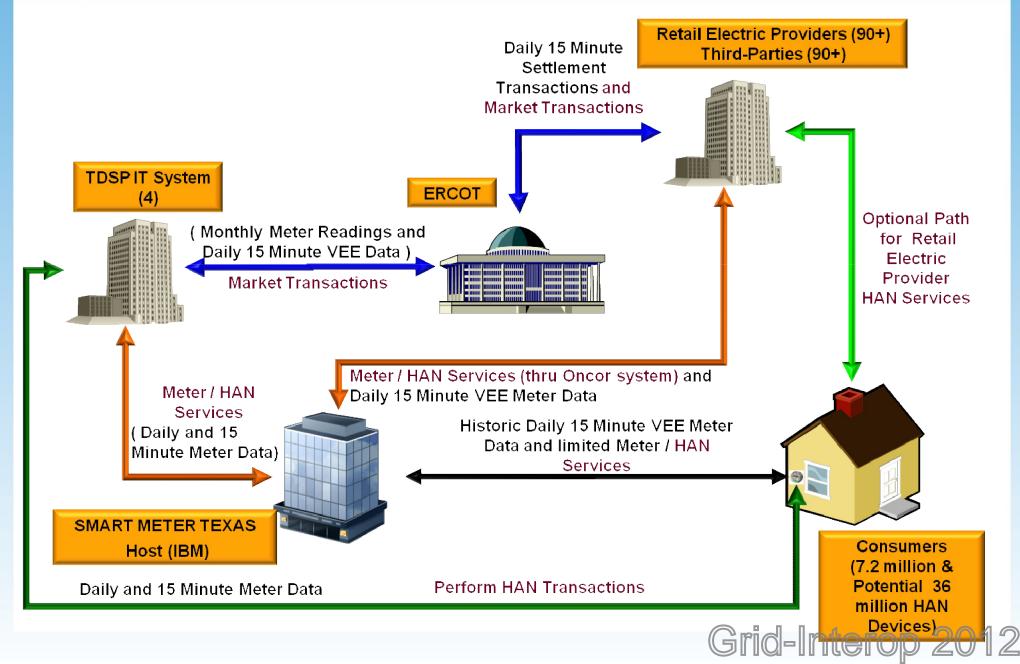




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## The Texas AMS Landscape





## Smart Meter Texas Portal – Overview (Approx. 170 Functional Requirements)

#### Users **Functions SMT Domains** TDSP Advance **Meters & Home** Channels Metering Networks Area Networks (HAN) Portal, Web & Email Security Residential HAN Provisioning Business HAN History & Access 3rd Party Friends Management SMT Portal Management REPs Friends Management 3rd Parties. Energy Usage TDSPs Reporting **ESB** ERCOT CenterPoint. Meter/Premise Data Energy PUCT **Email** HAN Provisioning API HAN Messaging • REPs HAN History **APIs** 3<sup>rd</sup> Parties **SMT Data** Energy Usage TDSPs (Machine to Machine) Reporting Warehouse • 7.1M Smart Meter/Premise Data Meters Interval reads FTP every 15 mins HAN Status • REPs **FTP** Energy Usage Home Area 3rd Parties NAESB & Reporting Network (Usage Meter & TDSPs Meter/Premise Data Premise File Sharing) Devices ETL

GBS Design & Development inception: April 2009
GBS AMS Production Support inception: Nov 2009

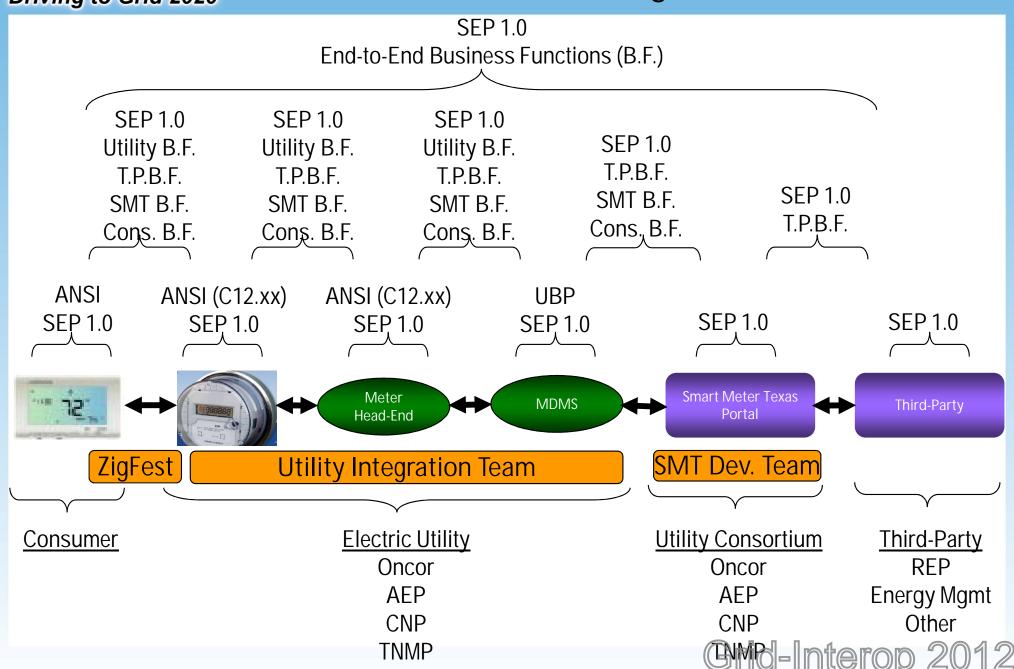
GTS Hosting inception: Aug 2009

Usage Data

- •15 Min Interval
- Daily Meter Reads
- •Monthly Billed Usage



### Texas AMS Environment – HAN Integration Testing





## Challenges / Lessons Learned

- Understanding evolving Industry Standards and associated gaps
- Understanding Regulatory requirements and associated gaps
- Understanding new Customer programs
- Understanding new Vendor programs / products
- Managing Change
- Identifying skills for higher order functions
- Identifying a common set of requirements for all parties
- Collaboration
- Establishing a common implementation philosophy
- Using a common set of standards based on different technologies
- Establishing a baseline platform capable of expansion
- Lack of conformance product / end-to-end testing programs
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