



TiE Hyderabad
Cleantech 2010
Presentation by
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FEW KEY SLIDES



FROM DEC 2009

➤ **Concerns & Gaps**

Smart Meters

- + Meter cannot be the 'One' to monitor and 'Manage' Energy
- + Don't include "User Preferences/Choices" and ensure Savings

Energy Management

+ **Who pays?**

- Utility cares only about Peak Demand, likes usage to be high – rest of the time

+ **Vast base of legacy energy devices**

+ **Many Gateways/Interfaces at home**

- **Cable/SetTopBox, WiFi, DSL/Internet**
- *** New Energy Interface/Gateway – will find a place in others**

***Need integrated Platform for all Stakeholders – Utility & Consumer**



ISSUES WITH SMART METER PROJECTS

- **US regulators are hard on Smart Meter projects**
 - + **Lawsuit on \$2.2B PG&E Project in California**
 - + **TOU tariffs rejected in Baltimore**
- **Plans do not include “Consumer”**
 - + Education, access to savings applications, ...
- **Also do not ensure ‘Promised Savings’**



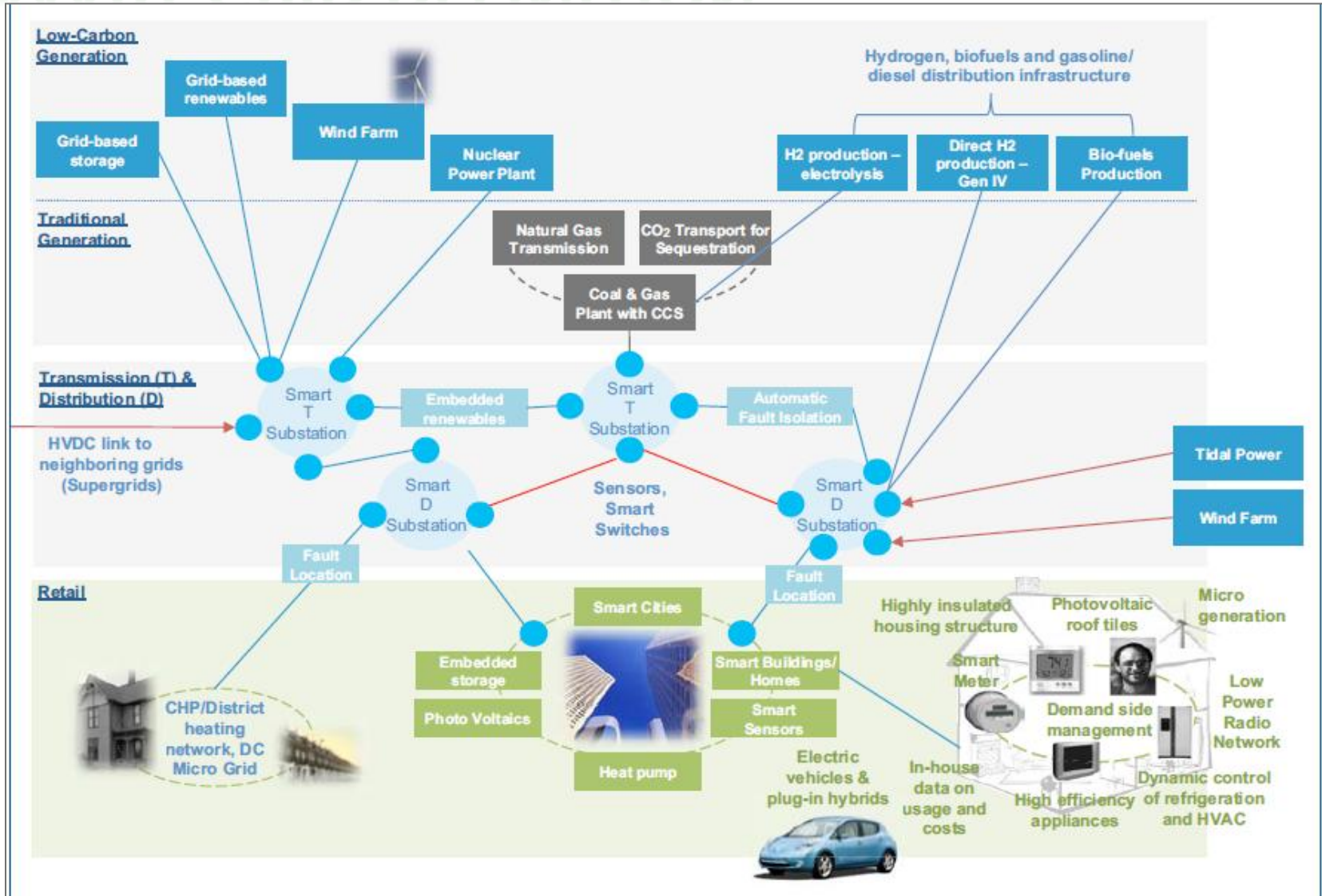
FIELD LESSONS FROM SMART GRID PILOTS

➤ Lessons

- + Pilots are a must
- + Ecosystem to encourage innovation isn't great
- + Should be “Consumer-centric” for success
 - Flexibility to try newer solutions
- + Policy makers need to support innovation
 - Through incentives and price signals to match policy agenda
- + Extend the platform for others elements
 - Water, Waste, Gas, ...
- + Technology challenges
 - Data privacy, network, security, interoperability and standards



SMART GRID DEFINITION



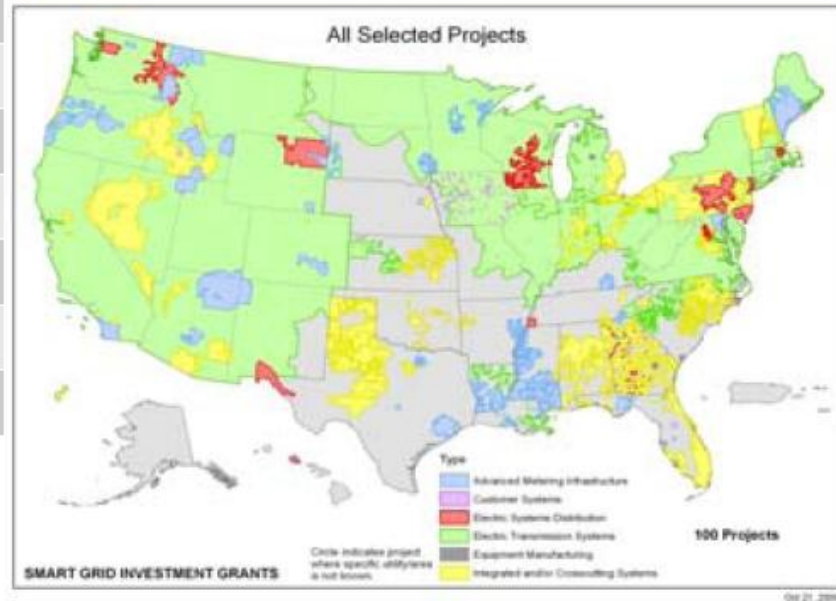


HIGH POTENTIAL – JUST IN US

Category	\$ Million
Integrated/Crosscutting	2,150
AMI	818
Distribution	254
Transmission	148
Customer Systems	32
Manufacturing	26
Total	3,429

- 18 million smart meters
- 1.2 million in-home display units
- 206,000 smart transformers
- 177,000 load control devices
- 170,000 smart thermostats
- 877 networked phasor measurement units
- 671 automated substations
- 100 PEV charging stations

Geographic Coverage of Selected Projects



US DOE Grants in 2009