

IEA DSM TASK 23

3rd Expert Meeting

- Case Study (Korea) -

2013. 7.4

Jeju Test-bed Overview

- Smart Meter: 2,331 installed
- Location: Rural Community
- Technology: Smart Meter, IHD, PV panel, Smart Appliances, EVs..
- Customer Offerings (No real money incentive)
 - Consortium focus on their business model development
 - Retail competition, mainly dynamic pricing, DR, EV charging, Energy Consulting (EnergyCare), Wholesale market participation from aggregated demand resources

Key Lessons Learned

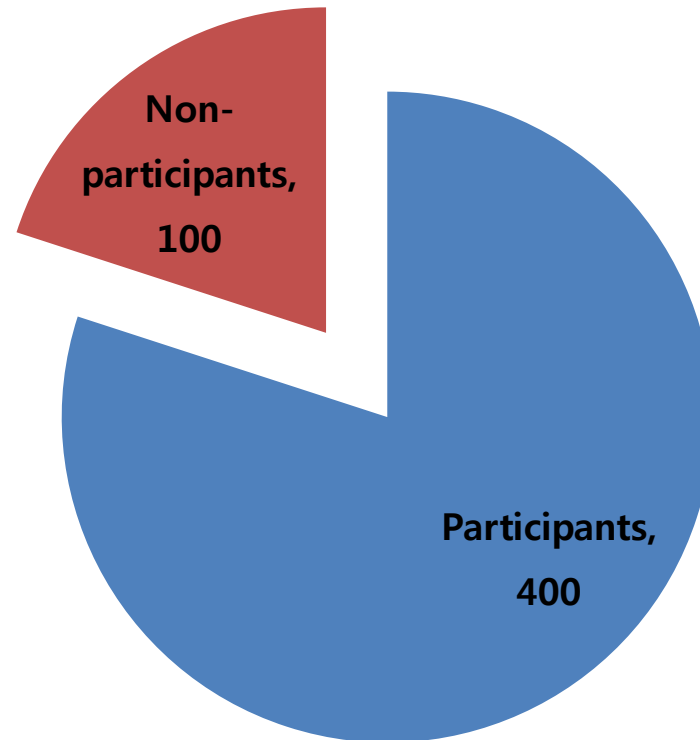
- **It is important to include diversified customer groups in terms of age, location, number of family member, household income**
- **It is very important to share customer's historical consumption data among test participating firms**
- **Customer engagement procedures are needed to be developed and introduced as a formal requirement before more wider implementation of smart meters**
- **Customers should bear part of financial burden if the customers were willingly to choose their tariffs. Simulation of electricity tariff choice was ineffective**

Major Barriers Encountered

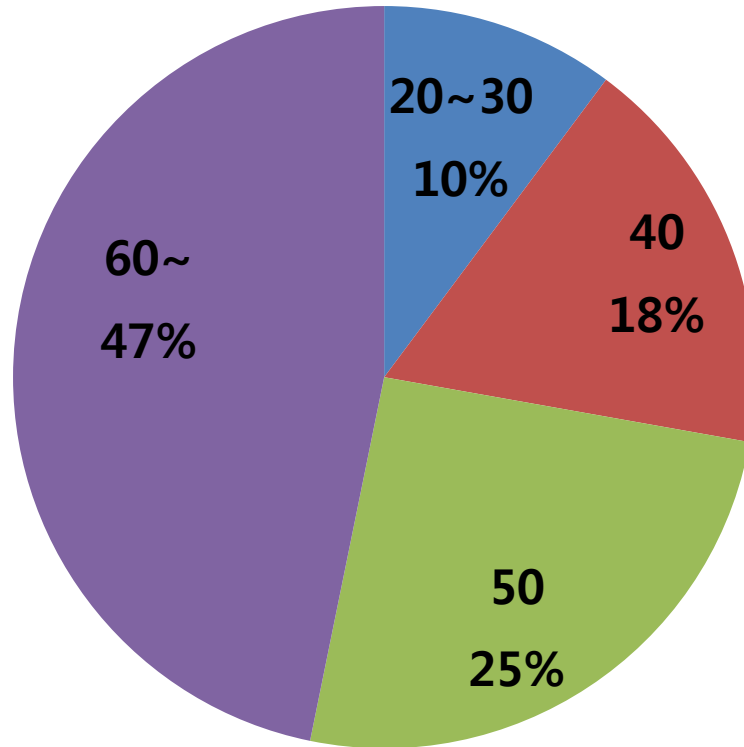
- **Lack of real money incentive**
- **Lack of customer diversity. Most of the customers in the test-bed are homogeneous**
- **Law and regulation that do not allow bundled services including electricity, gas and IT services**
- **Systems may not allow all tariff types to be trialled**
- **Conflict of interests between new entrants and transmission/distribution/retail monopoly. Neutrality of network access was not fully tested**

Thank You

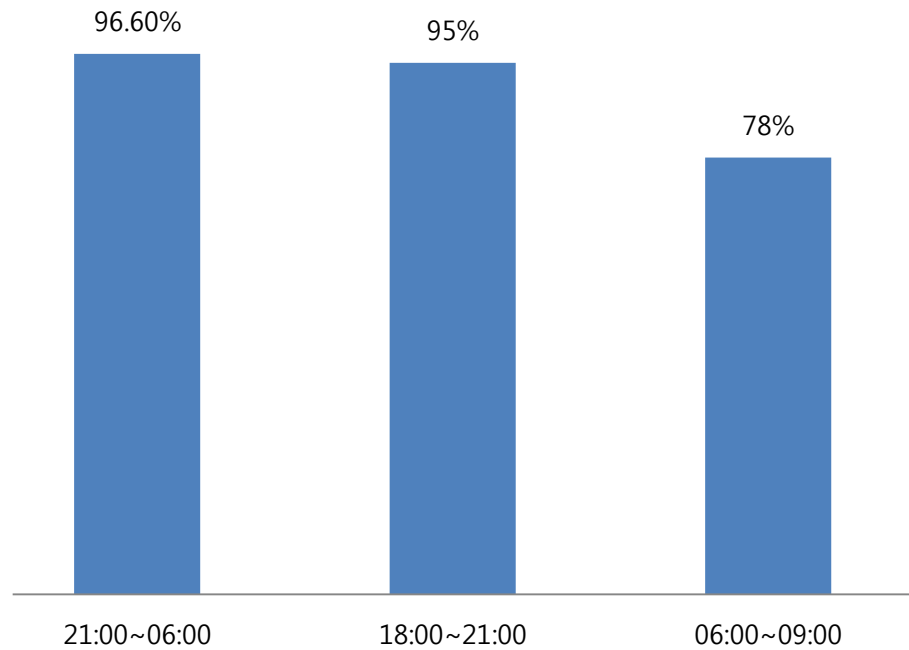
Survey: Jeju Test-bed



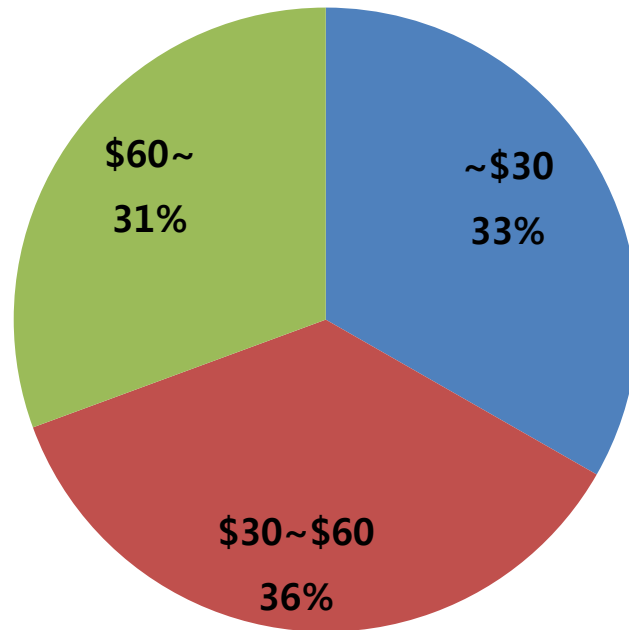
Age Distribution



Time at home



Monthly power bill



Results

- **Average usage time of major home appliances: 10 hours**
 - **TV, Heater/Cooler, Fridge, Rice Cooker, Washer**
- **How to reduce electricity consumption**
 - **Live warmer in Summer, colder in winter(65.4%)**
 - **Unplug the cord or use electronic devices that shut down standby power(65%)**
 - **Try to reduce the use of other electronic devices(50%)**
 - **Use smart appliances/LED lights(15%)**
 - **Use renewable energy(12.6%)**
- **Electricity conservation**
 - **Strongly positive: 48.6%**
 - **Positive: 37.6%**