**IEEE P802.24**

**Smart Grid TAG**

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| **Smart grid use case** |  |
| Customer Information / Messaging |
| Demand Response – Direct Load Control (DR-DLC) |
| Distributed Storage – Dispatch ; Island |
| Distribution Systems Demand Response (DSDR) - Centralized Control |
| Fault Clear Isolation Reconfigure (FCIR) – Distributed DAC – Substations; DMS; Regional Distributed DAC |
| Field Distribution Automation Maintenance / Support – Centralized Control |
| Meter Events |
| Meter Read |
| Outage Restoration Management |
| PHEV |
| Premise Network Administration |
| Pre-Pay Metering |
| Pricing: Time of Use (TOU) / Real Time Pricing (RTP) / Critical Peak Pricing (CPP) |
| Service Switch |
| System Updates (Firmware / Program Update) |
| Volt / VAR Management – Centralized Control |
| Configuration Management |
| Distributed Generation |
| Field Force Tools |
| Performance Management |
| Security Management |
| Transmission automation support |

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802 applicability statement for Smart Grid

# Introduction, value and history of 802

Discusses IEEE 802 technologies only.

IEEE 802 is long lived (40 years 802.3, 20 years 802.11, 14+ years for 802.15 and 802.16), low cost, innovative (future proofing), open stand priniciples (from IEEE). Stable investment.

Add M2M capabilities of 802 standards. Low latency options.

Reference package of standards

802 standards always support backwards compatibility.

Security

License exempt possibilities. License exempt operation offers an alternative for the lack of licensed spectrum for utilities. TVWS is one example as a future source of spectrum.

Ben to write mesh blurb for how it handles hard-to-reach places.

Long term battery powered

Add latency/data rate/range tradeoffs table? Scalable cost.

# Applications for Smart Grid

Godfrey will review NIST documents for sources.

Rolfe will review 802.15.4g documents for source

Clint will review Greencom document for source.

## AMI/AMR

Define what AMI/AMR is.

Important characteristics/challenges for networking

Why 802.xy solves this problem.

 (802.15.4, 802.11, backhaul: 802.16, 802.3, 802.22 [metro Ethernet?])

## Demand response

( 802.15.4, 802.11, backhaul: 802.16, 802.3, 802.22 [metro Ethernet?])

## Distribution automation

( 802.15.4, 802.11, backhaul: 802.16, 802.3, 802.22 [metro Ethernet?])

## Protection/substation control

802.3

## Outage restoration management

## Load control

# Conclusions

(Gilb will write once paper is done)