



Applied Communication Sciences Receives Department of Energy Grant for Groundbreaking Cyber Security Energy Infrastructure Research

First-of-its-Kind Technology Will Provide Utilities with Enhanced, Early Warning of Malicious Behavior within Smart Grid Networks

BASKING RIDGE, NJ – October 10, 2013 – The US Department of Energy (DOE) has awarded Applied Communication Sciences (ACS) a grant to accelerate the development of advanced security monitoring capabilities in ACS's SecureSmart™ Monitoring Solution to help protect the nation's new Smart Meter infrastructure against cyber attack. The grant is part of \$30 million in recently announced DOE awards to research, develop and demonstrate new tools and technologies to bolster the defense of the nation's energy delivery systems.

The ACS SecureSmart project leaps ahead of current industry initiatives and focuses on the detection component of the industry-standard "defend, detect, and respond" security doctrine. The primary objective of this research is to accelerate commercial availability of intrusion detection capabilities and security analytics to independently monitor and detect anomalous and malicious activity in wireless communications for Advanced Metering Infrastructures (AMIs) and Distribution Automation (DA) networks. AMI and DA Field Area Networks (FANs) are the largest, and some of the most complex, networks now operated by US utilities.



U.S. REP. LEONARD LANCE (NJ-7) VISITS ACS NJ HQS TO REVIEW PROGRESS ON THE FIRM'S SECURESMART MONITORING SOLUTION WITH ACS CEO BRENT GREENE.

"Utilities are in a race against time to secure their Smart Grid networks against cyber adversaries," notes Stan Pietrowicz, ACS Smart Grid Program Manager and the project team's leader. "The 'grace period' during which adversaries re-tool and become familiar with Smart Meter technology is rapidly closing. Our defenses will be tested, ready or not. Detection and situational awareness will be key to ensuring a secure Smart Grid."

The DOE grant will advance first-of-a-kind technology developed by ACS, which is currently deployed by the Sacramento Municipal Utility District (SMUD). ACS will conduct formal research of actual security risks in wireless FAN communications by intercepting and analyzing live field traffic using its sensor technology. Through a practical and results-oriented approach, ACS will develop advanced intrusion detection analytics to extend the security monitoring and analysis capabilities of ACS's *SecureSmart* Managed Security Services infrastructure and demonstrate the value and benefits in a utility partner's operational environment.

To improve utilities' situational awareness and visibility into AMI and DA FANs, ACS plans to distill network performance information and visualize network operation from packet flows. ACS will model

FAN traffic to define normal operating baselines and develop indicators for FAN health. Key results expected from this research include:

- 1) Wireless FAN Security Weaknesses and Detection Analytics
- 2) FAN Traffic Modeling, FAN Health Indicators, and FAN Operational Baselines
- 3) Efficacy of Mobile FAN Probes

ACS's research program is expected to begin in late October 2013 and will continue for approximately 20 months, culminating with a field trial of the enhanced SecureSmart Monitoring Solution. This is the second DOE cyber security grant that ACS has been awarded. The prior grant was made in 2010 and focused on researching tools and methods to harden communication security of energy delivery systems.

Utilities interested in additional research details on the SecureSmart monitoring solution can contact ACS at info@ACS.com.

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About Applied Communication Sciences (ACS)

Drawing on its Bell Labs heritage, Applied Communication Sciences delivers advanced research, consulting and engineering to enable government agencies, utilities and commercial enterprises to fully exploit the future of communications and information technologies. The company is headquartered in Basking Ridge, NJ, and is a wholly-owned subsidiary of [The SI Organization, Inc.](#) For more information about Applied Communication Sciences, visit www.appcomsci.com.

Contact:

Craig Vielguth
Applied Communication Sciences
+1 908.748.2600
cvielguth@appcomsci.com