

Search for:

- [Subscribe](#)
- [Search](#)
  
- [Subscribe](#)
- [Search](#)
  
- [News](#)
- [Insights](#)
  - [Editor's Notes](#)
  - [Expert View](#)
  - [Trends](#)
  - [White Papers](#)
  - [Ask The Experts](#)
- [Industries/Topics](#)
- [Events & Resources](#)
  - [Events](#)
  - [Event Recordings & Videos](#)
  - [Get Started](#)
  - [RFID Journal Glossary](#)
  - [RFID Journal Awards](#)
  - [Magazine Archive](#)
  - [FAQs](#)

Select Page

# Dutch Utility Provider Reinvents Approach to Public Lighting

Few sectors of the world economy are slower to adapt to change than utilities, particularly when that change requires the relinquishing of any control over infrastructure. But

Alliander, Holland's largest operator of electricity and gas grids, is breaking the mold. Last year, the utility founded Smart Society Services, a new business that has built the Open Smart Grid Platform (OSGP), an open-source software platform that allows municipalities to control and manage lighting—and, eventually, other public-facing systems as well, such as waste collection and energy metering—by using standards-based protocols and Internet of Things devices.

This year, Alliander will begin to hand over control of public street lighting to Dutch municipal governments. The change will come via its rollout of FlexOVL, the first IoT solution based upon the OSGP.

“Municipalities want to control their lighting systems without having to depend on a single supplier,” said Hans van Egmond, Smart Society Services' general manager, in a presentation at the Global Smart Cities Challenge in Washington, D.C., on June 1. “They want to manage switching times and dimming times, and more efficiently maintain the public lighting network.”

Alliander was a founding partner during the first phase of Amsterdam's Smart City effort that began in 2009, and launched a street-lighting pilot in 2013. As it acquired IoT expertise, and as demand rose for more remote control and monitoring of smart devices, the company found itself stymied by commercial systems and the inflexible World War II-era “ripple” load-control mechanism. Thus, it began developing the OSGP in 2011.

The operator calls OSGP “an open, generic, scalable and independent Internet of Things platform.” The layered platform acts as a connecting link between Web applications like FlexOVL and smart devices. To operate it, the user (the municipality) employs one or more applications, such as FlexOVL, to monitor and control devices (streetlamps). The applications connect to the platform via several Web services that are divided into functional domains—for instance, public

lighting or smart metering.

“The way we designed and built the Web services layer is generic, so a lot of code is reused for different services,” van Egmond explained. “However, there is a dedicated group of Flex0VL services [such as public lighting functions] available. These are needed for authorization purposes.”

Van Egmond added that third-party developers can use Flex0VL Web services to develop and integrate new public lighting applications. The platform handles application requests securely, using authorization, authentication, device management and logging functions as defined by the European Network for Cyber Security. For translating and communicating user or operator commands to streetlamp controllers, the platform will employ multiple protocols, including the International Electrotechnical Commission’s (IEC) Smart Metering (IEC 62056) and Electrical Substation Automation (IEC 61850) protocols.

During the first phase, Smart Society Services will deploy 200 Flex0VL controllers in small-scale rollouts throughout 15 cities. In each of these deployments, between eight and 12 of the controllers will be used instead of the substation switching relays that currently turn blocks of public lighting on and off.

Once those are in place, van Egmond said, Smart Society Services will “give the remote” to the municipalities, relinquishing control over block-based streetlight switching. Ultimately, the company will roll out 20,000 Flex0VL controllers across the 150 municipalities to control 800,000 streetlights within its coverage area.

Jeffrey de Grijs, Smart Society Services’ business-development manager, said that the project will be revenue-neutral for the local governments unless they want greater granularity in their lighting control, such as turning on or off only a

portion of the 40 light poles connected to each FlexOVL controller. Van Egmond noted that they have already tested single-streetlamp granularity with the FlexOVL application, using the Digital Addressable Lighting Interface (DALI) protocol, a lighting-control standard for sensor-enabled, dimmable lights.

The platform may also be deployed to monitor such objects as electric car charging stations, streetlights, bridges and locks. OSGP will be made available as open source software under the Apache 2.0 open-source license and managed by the OSGP Foundation, an independent, non-profit software foundation. The company says it will launch the foundation as soon as it recruits “independent board members.”

Smart Society Services’ business model is to charge for the software and services—such as design, integration, application development and maintenance—that it provides to support implementations utilizing the Open Smart Grid Platform.

Van Egmond reported that Smart Society Services is currently in discussions with Holland’s other utilities about adopting the OSGP, but that they “are not sure” about giving control of municipal lighting over to municipal governments. He acknowledged that their resistance has a lot to do with the technology, stating, “Bringing in open-source to a utility is as much a revolution as changing who does the switching.”



- ABOUT
- ADVERTISE
- CONTACT

FOLLOW US ON

- Follow

- Follow
- Follow
- Follow



© 2024 Emerald X, LLC. All Rights Reserved  
ABOUT CAREERS AUTHORIZED SERVICE PROVIDERS Your Privacy  
Choices TERMS OF USE PRIVACY POLICY