

## Shedding Light on LED Streetlights

### **An innovative practice in Asheville, North Carolina, is spreading into Michigan and elsewhere — helping cities replace tens of thousands of streetlight bulbs and save millions of dollars.**

Just hours after his August 5 meeting with local utility officials, Dave Norwood, sustainability coordinator for Dearborn, Michigan, was confident that in 2015 a deal would be struck to invest as much as \$30 million to upgrade as many as 70,000 streetlights in 15 local communities with LED bulbs. The process of getting the communities and the utility, DTE Energy, aware of the potential savings and benefits the changeover would generate, and how it could be paid for, had started nine months earlier at a “breakthrough convening” supported by a grant from the USDN Innovation Fund. But the real beginning of the Michigan effort, Norwood volunteers, “started with a piece of paper,” a case study he’d read several years earlier. “[LED Streetlights Make Dollars and Sense](#),” also backed by USDN funds, detailed how Asheville, North Carolina, had paid for its LED-streetlight upgrade and what it had done with savings from reduced electricity consumption.

The November 2013 convening brought together local governments, the Michigan Public Service Commission (the state regulator), the Southeast Michigan Regional Energy Office (SEMREO, a regional nonprofit), and DTE Energy’s Community Lighting team. Initially, the utility had been reluctant to participate. “This was due to a perception that the event was an opportunity for municipalities to come together to criticize, confront, and berate the local utility into lowering their LED streetlight tariff,” says Norwood. “It was critical to break down barriers.” Extensive background discussions helped to start building trust between the utility and the local governments based upon their mutual interests.

As a critical outcome of the facilitated convening, DTE agreed to work with the communities collectively to develop a regional-scale LED project, rather than its usual practice of working with each community individually. The communities formed a Regional Street Lighting Consortium, staffed by SEMREO, with the purpose of converting streetlights in the metropolitan Detroit region over the next five years. They believed a regional replacement program would reduce costs to the communities, improve public safety, and reduce the cities’ carbon footprints. They also hoped some of the financial savings could be used to create a regional fund to support future urban energy savings projects.

Since the convening, the cities have met four times with DTE Energy. Now, the project has a name, “Bright Lights, Bright Future,” and its potential scope, cost, and benefits are being carefully estimated: the upgrade of 30,000-70,000 streetlights has an estimated cost of \$15-30 million. The payback period for the investment is pegged at less than six years, and a percentage of the savings would be set aside for the Regional Energy Office to use for additional energy-saving projects.

Now the group is exploring how to finance the project, with a surprisingly large set of possibilities, according to Norwood. “We will have something to present to DTE that we feel they can go forward with.”

As Norwood can see the finish line for what he describes as “a long journey,” he recalls the efforts origins: “It started with Maggie Ullman in Asheville.” Ullman, then the city’s sustainability program manager, had negotiated the city’s LED streetlight upgrade and then helped draft the detailed case study by USDN. That led several cities in North Carolina to work successfully with the state League of Municipalities to persuade the state’s Utilities Commission to require Duke Energy to offer an LED streetlight rate to all of their customer cities in the state. And it led to Norwood’s interest. “I’d been shopping the case study to anyone in Michigan who’d listen,” he recalls. When SEMREO expressed interest in helping, the idea for a breakthrough convening was developed.

Michigan’s convening didn’t just result in progress locally, it also generated a guidance document for other cities considering how to work with their utilities to advance LED streetlight conversion. Drafted by former Knoxville Sustainability Director Susanna Sutherland, the “[Bright Lights, Bright Futures](#)” report provides a detailed description of the Michigan convening process and common language for cities and utilities to use when negotiating LED upgrade arrangements.

At the USDN annual meeting in September 2014, Houston Mayor Annise Parker, thanked Asheville and other USDN cities for advising Houston on LED upgrade strategies, noting that the city has committed to replace 165,000 streetlights with \$28 million in annual savings – one of the largest conversions in the United States.