



LESSONS LEARNED FROM BLUEINDY

AN EV SHARED-USE MOBILITY CASE STUDY

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ABOUT THIS CASE STUDY

This case study is part of the Transportation Electrification Toolkit, designed to help Connecticut municipalities develop strategies to encourage transportation electrification through the pairing of electric vehicles and residential solar photovoltaic systems and electric shared-use mobility solutions. The toolkit consists of summaries of each transportation electrification concept, a case study of the concept from outside Connecticut, and potential approaches to deploy the concept for policymakers. The toolkit also consists of a resource library and interactive data dashboards that provide quick access to relevant information on transportation electrification in Connecticut.

The toolkit is a joint effort of Atlas Public Policy, Connecticut Green Bank, and the Connecticut Department of Energy and Environmental Protection.

In 2016, Atlas Public Policy began working with the Connecticut Green Bank and the Connecticut Department of Energy and Environmental Protection on the Green Bank's strategy to accelerate alternative fuel vehicle deployment in the state. Atlas began with a market potential assessment of various alternative fuels and vehicles tailored to local conditions in Connecticut. Atlas then identified promising electric mobility concepts, including electric vehicle shared-use mobility, the pairing of electric vehicles and residential solar, and high-powered electric vehicle charging infrastructure. Atlas evaluated the suitability of these concepts as part of a strategic planning process for the Connecticut Green Bank to help the Green Bank define its role in growing the alternative fuel vehicle market in the state.

BACKGROUND

BlueIndy, launched in Indianapolis in September 2015, is the largest electric car sharing service in the United States. The [BlueIndy service](#) aims to provide its users with convenient access to an environmentally-friendly car that is less expensive than owning a vehicle. As of September 2016, BlueIndy had [240 vehicles with 80 charging stations](#), with a long-term goal of 500 vehicles and 200 charging stations. [BlueIndy reported](#) that it has 2,800 members with 32,000 rides in its first year of service. Over 80 percent of members have signed up for the yearly membership option.

PROGRAM MOTIVATION

Based in Indianapolis, BlueIndy is an EV carsharing company made possible by a public-private partnership between the City of Indianapolis, the local electric utility Indianapolis Power and Light (IPL), and the Bolloré Group. The program was championed by Indianapolis's former Republican Mayor, Greg Ballard whose term ended in 2016. The carsharing service was one piece of the Mayor's vision for bringing transportation electrification to Indianapolis. His vision also included the "[Freedom Fleet](#)," a plan to electrify the city's entire passenger vehicle fleet by 2025 and the construction of an electric bus route for the city's rapid transit line. These efforts were motivated by the municipality's desire to provide cleaner greener transportation options and to [improve its public transit](#). Of U.S. cities with populations greater than 1 million people, [Indianapolis's transit system](#) ranked the lowest in terms of ridership per capita in 2014.

Indiana is not known for having a strong market for EVs and has no state incentives supporting the sale or charging of vehicles. Compared to the rest of the nation, [Indiana has below average sales of plug-in hybrids and battery electric vehicles](#). Bolloré leveraged interest from the municipal government to test the viability of its electric carsharing service in the heart of the United States where winters are cold and summers hot. The technology and service of BlueIndy is developed and owned by the Bolloré Group. Notably, the Bolloré Group has a vested interest in deploying electric carsharing services to test and expand markets for its 'Bluecar' and [the solid-state lithium metal polymer batteries](#) that power them.

VEHICLE AND STATION OWNERSHIP

The Bolloré Group, is a French holding company whose subsidiary [BlueSolutions](#) is focused on electric mobility vis-à-vis the development of electric vehicles, carsharing, and integrated transportation solutions. The company owns all cars and charging equipment. Outside of Indianapolis, Bolloré has other EV carsharing services in France and Italy, and has plans for more services in London and Singapore in 2017. The highest profile of the group's current carsharing services is [Autolib'](#) in Paris, which has approximately 4,000 vehicles and 6,100 charging ports. The Paris program launched in 2011, most users believe the program is reducing pollution and congestion while Autolib' claims the program [reduced private vehicle](#)

[ownership](#) by over 20,000. Since its launch, Autolib’ has expanded vehicle offerings from the basic Bluecar offering to include [Blueutility](#), a Bluecar with more trunk space.

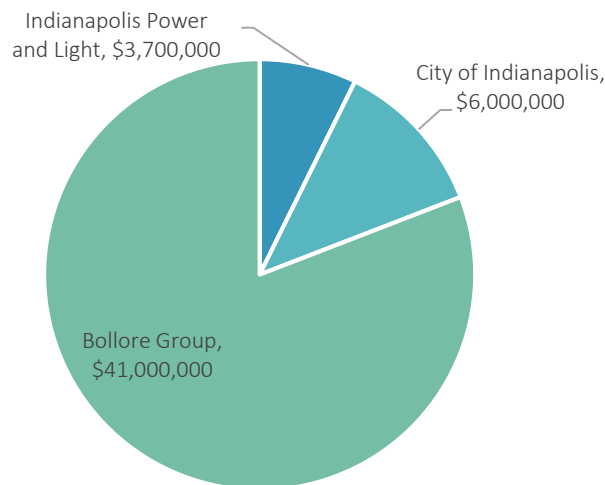
PROGRAM FUNDING

Funding for BlueIndy came from Bolloré, the City of Indianapolis, and Indianapolis Power & Light (IPL), see Figure 1. IPL received approval from the Indiana Utility Regulatory Commission to use ratepayer funds for \$3.7 million expense associated with electricity distribution system level upgrades. IPL requested up to \$16 million to cover charging station deployment, but the commission only [approved](#) the smaller amount. Bolloré covered the approximately \$12 million gap in funds with help from the City of Indianapolis, in addition to the company’s initial investment of [\\$35 million](#).

The city’s funding contribution is allocated for road marking, signage, and station installation and comes from the [city’s parking meter fund](#). Under this arrangement public funding is [placed in escrow](#) and is distributed at a rate of \$100,000 for each EV charging location completed, so long as BlueIndy meets the agreed upon conditions. Both the city and IPL are [entitled to a share of profits](#) from the BlueIndy program. Funds will first go to IPL for rate mitigation until 125 percent of the ratepayer funds have been recovered. After that point, the city and IPL will split all profits evenly.

The City of Indianapolis has a contract with BlueIndy for 15 years in which BlueIndy has the exclusive right to provide an electric car-sharing service on city-owned property and city-owned public rights of way. The state and county will receive an additional excise tax from the program. A [2016 franchise agreement](#) between BlueIndy and Indianapolis also called for BlueIndy to pay \$45,000 a year to compensate the city for lost revenue from parking meter payments resulting from charging station’s being cited at public parking spots.

FIGURE 1: FUNDING FOR BLUEINDY MOSTLY CAME FROM THE PRIVATE SECTOR



PROGRAM DESCRIPTION

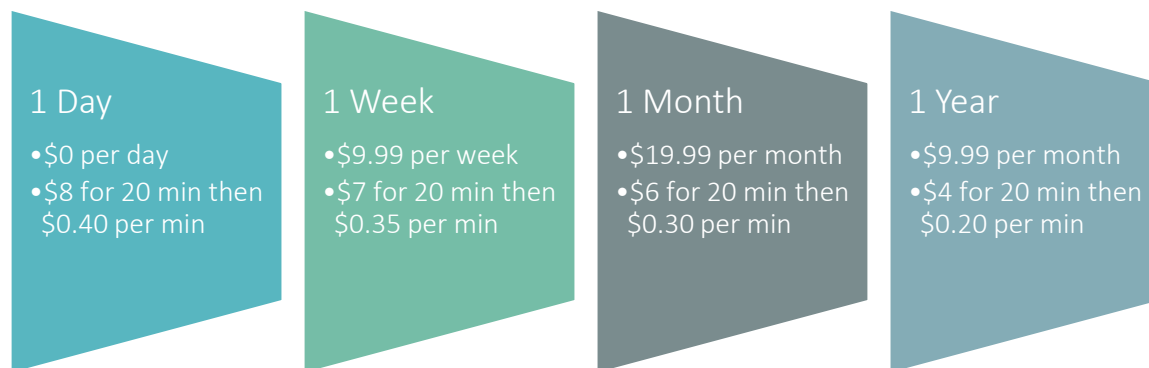
BlueIndy is a subscription-based service which users can sign up for online or at any of the BlueIndy enrollment kiosks; users must have a credit card and a driver’s license to join the program. Membership options and usage fees for the service vary by frequency and duration of use (see). With membership, users do not pay additional fees for insurance and users are always guaranteed a free parking spot wherever there is an open charging port. Within the first six months of the service, IPL customers who signed up for an annual membership received [the first two months free](#). To encourage membership among younger demographics, BlueIndy offers a “Youth & student yearly membership,” which includes a reduced rate of \$30 per year and \$3 for the first 20 minutes of driving.

About the Bolloré Bluecar

[Bolloré’s Bluecar](#), is an all-electric vehicle with a lithium metal polymer 30-kilowatt-hour battery that give it a maximum estimated 150 miles of range in urban driving conditions using Europe’s test conditions, which tend to [overestimate range compared to U.S.-based estimates](#). (Because the vehicle is not currently for sale in the United States, a U.S.-based range estimate is not available.) The vehicle features an on-board computer, GPS, and technical assistance that is available 24/7. The car seats four passengers, the body is designed by Italian coachbuilder Pininfarina, and assembled by the Renault Group.

Members can book rides with BlueIndy for one-way trips, allowing drivers to pick vehicles up and return them to any designated parking spot around the city. To find a car and start driving, users must have already received the keycard needed to open vehicles. Reservations can be booked on BlueIndy’s mobile app or at a kiosk. For all drivers, the first 20 minutes of driving is billed as a fixed fee and then additional time is billed by the minute. A trip can only be ended once the vehicle has been plugged into a charging station. Drivers can incur a \$55 charge if they do not plug the car into a BlueIndy charging station upon returning the vehicle and have a [\\$500 deductible in case of an accident](#).

FIGURE 2: BLUEINDY MEMBERSHIP PLANS



Source: <https://www.blue-indy.com/#offer>

LESSONS LEARNED FROM BLUEINDY

BlueIndy broke ground in several areas. The program's public-private partnership demonstrates that government and the private sector can identify a mutually beneficial arrangement that can expand electric mobility access. Early ridership data and the potential expansion of the program also provide evidence that consumer interest in electric mobility solutions is robust outside of primary EV markets. Two challenges addressed during the program's early stages, the authorization of public funding and the siting of publicly available charging infrastructure, indicate cities should encourage greater stakeholder engagement and build a more robust case for the public benefit of a program.

A strong public-private partnership is needed to bring electric mobility to more people. The program was championed by Mayor Ballard whose team pulled together the key partners for vehicles and charging infrastructure with the backing of the city's chief executive. The local electric utility (IPL) helped lead the way on infrastructure as it was interested in expanding its electricity retail market while Bolloré provided the vehicles to expand the market for its EV technologies and car sharing services. Although government stakeholders sometimes disagreed over the details, a broad consensus existed on the value of BlueIndy to the people in the metropolitan region of Indianapolis. Advocates of the program state that it benefits the public by [reducing the environmental impacts of transportation and the cost of mobility for users](#). With that strong support, Bolloré overcame early public funding setbacks and committed a sizeable private investment to get the program off the ground.

Starting with the urban core and expanding outward could be a winning strategy. BlueIndy began operating in the urban core to demonstrate to city dwellers and visitors that an EV carshare program was a viable transportation option. The BlueIndy program gained traction in its first year by successfully [attracting members](#) and continuing to push forward to [deploy additional stations](#). With its potential expansion to [Hamilton county](#), BlueIndy may show how innovative mobility solutions do not have to be restricted to areas with high population density and can accommodate the needs of residents outside the city center.

Articulating the public value proposition of EVs, especially the benefits of transportation electrification to electricity ratepayers is an early imperative to attain broad public support. In April 2014, BlueIndy and IPL asked for the Indiana Utility Regulatory Commission to approve \$16 million to cover the cost of the program's charging infrastructure, which would increase average electricity bills by 44 cents. Ratepayer advocates [argued](#) that the rate increase would disproportionately benefit Bolloré, claiming that not all citizens would benefit from or use the BlueIndy program.

The commission only [partially approved](#) IPL's request and denied the cost recovery for \$12.3 million installation of charging stations and kiosks for BlueIndy, approving only the investment in upgrades to distribution infrastructure. A study on the potential benefits of EV adoption could have helped make the case for the public investment. In California, for example, the electric utilities have [successfully showed](#) to their regulatory commission that transportation electrification can benefit all ratepayers, through the higher utilization of existing assets and a net economic benefit for the state.

Programs should strive to attain broad support for local public officials before launch. BlueIndy and a large city fleet electrification program were Mayor Ballard's two key initiatives to reduce the city's dependence on petroleum. The Indianapolis City Council [claimed](#) the Mayor's office developed these programs without its consultation, culminating in a [lawsuit](#) by the Marion County Auditor against the city after it deposited \$6 million in BlueIndy's escrow account. The lawsuit claimed the Mayor's office did not open a public bid for project-related construction and did not receive the budget appropriations necessary; the

lawsuit was dropped in March 2016 after new Indianapolis Mayor Joe Hogsett took office. The city's fleet electrification project also complicated the Mayor's messaging for BlueIndy. A [2016 audit](#) revealed that, despite the program embodying the best interest of the city, the agreement with Vision Fleet for 425 vehicles posed a risk to the city due to the ineffective implementation of the program.

Greater engagement with the city council, and potentially other public officials, could have resulted in a smoother rollout of the program. As with any public program, all the relevant parts of government should have a voice in the process to create a robust, thoughtful program.

Early and frequent stakeholder engagement is necessary to build a stronger, more broadly supported program. During the regulatory proceeding for IPL, consumer groups [stated](#) that there was little consultation of the community and a lack of transparency surrounding the city's negotiations with BlueIndy, resulting in charging station siting becoming a major point of contention. Critics say that BlueIndy stations occupy valuable parking spots and that the community was not consulted on siting. Now, [a new agreement](#) between the city and BlueIndy allows the city to relocate up to seven stations at the expense of BlueIndy if businesses are suffering financially because of them. Earlier consultation with local stakeholders would have likely prevented this issue.

FUTURE PLANS FOR BLUEINDY AND INDIANAPOLIS

EXPANDING MOBILITY CHOICES IN INDIANAPOLIS

BlueIndy has set Indianapolis at the forefront of public transportation innovation, but the program is just part of plans in and around Indianapolis to develop a more sustainable, smarter network of mobility solutions. Notably, Indianapolis has plans in place to build an [electric bus-rapid transit line](#) through the city starting in 2017. Funding for Phase 1 of the project is slated to come from a \$75 million Federal Small Starts Grant, \$18 million in local and state funding, and a grant from the federal Transportation Investment Generating Economic Recovery (TIGER) program.

The City of Indianapolis's Department of Transportation developed a [plan](#) for smart corridors through the city as part of its application for the U.S. Department of Transportation's [Smart City Challenge](#). Although the city did not win the challenge, its proposal highlights how Indianapolis hopes to develop and integrate the BlueIndy fleet and its planned electric bus route. The proposal outlined projects to automate the electric bus route and BlueIndy routes. The BlueIndy airport-to-downtown route was proposed as a pilot because of its popularity and ability to demonstrate the value of autonomous capabilities in urban and highway roads. Automation provides cost savings and could remove the BlueIndy's reliance on users plugging in the vehicles after completing trips. The proposal also outlined plans to add vehicle-to-grid technology to BlueIndy, which would add it to the portfolio of assets available to IPL for electricity supply and demand management activities.

BLUEINDY EXPANSION

The BlueIndy program continues to expand towards its long-term goals for station and vehicle deployment, and membership. To break even on its investment, Bolloré stated it would need [15,000-](#)

[20,000 members](#) (BlueIndy has 2,800 members as of July 2016). BlueIndy is exploring the expansion of its offering around the Indianapolis region, such as [Carmel, Indiana](#). The Carmel Mayor believes the service could be valuable for families with only one vehicle available.

While BlueIndy is looking to attract new members in and around Indianapolis, Bolloré may also be looking to expand its U.S. carsharing operations into Los Angeles. As of October 2016, Bolloré automaker partner PSA Group (Peugeot Citroën) [announced plans](#) to re-enter the United States automotive market through car-sharing services in order to establish distribution channels. They revealed Los Angeles as a target location.



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