



Edison Electric
INSTITUTE

Electric Transportation— *Survey of EEI International Members*

MARCH 2018



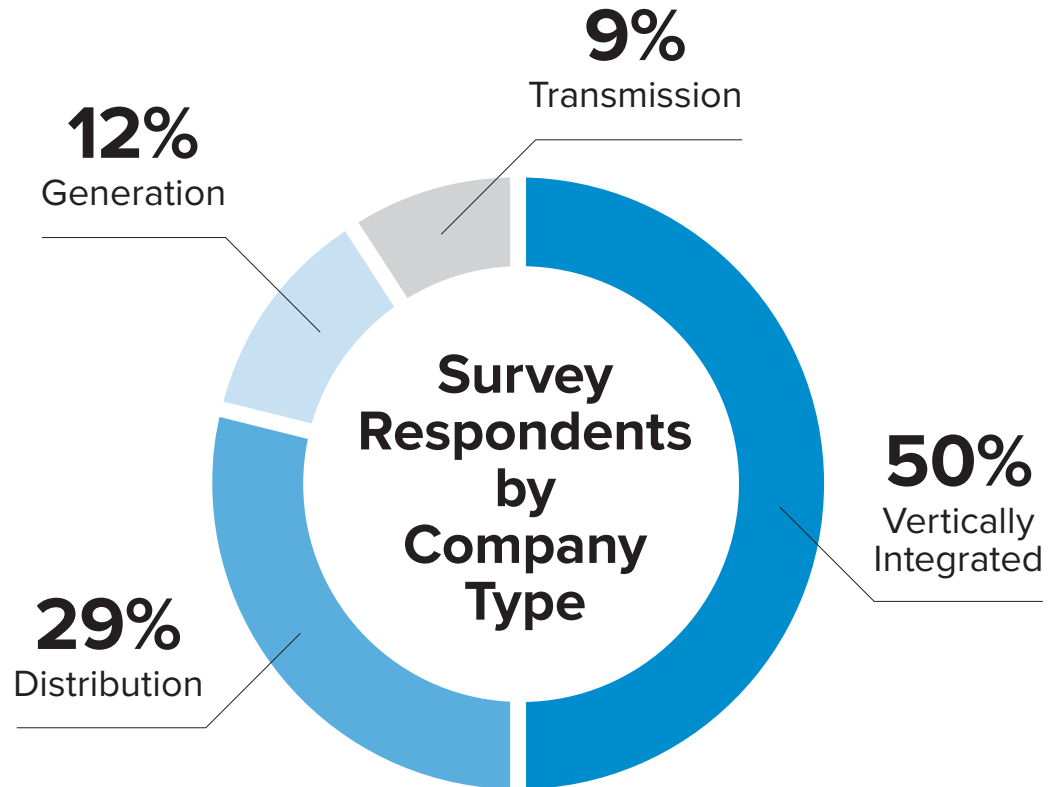
IN THIS SURVEY

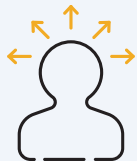
electric vehicles refer to all vehicles and transportation-related equipment that displace conventional fuels with grid-sourced electricity, including passenger vehicles, commercial and industrial vehicles, and non-road equipment such as material handling.



About the Survey

Interest in electric vehicles (EVs) is gaining momentum across the globe, and EEI member companies are leading the industry with programs that make EVs accessible to their customers. This survey of EEI international member companies assesses the status of electric vehicle deployment in key jurisdictions and industry viewpoints on deployment-related issues. Responses were collected from 34 companies across five continents in Q4 2017.

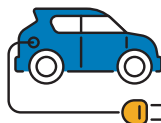




CUSTOMER DEMAND

was the leading reason among respondents for company interest in electric vehicles. However, each of the top five reasons were identified as either “Very Important” or “Extremely Important” by more than half of the respondents. This suggests that many companies see multiple, complimentary benefits to promoting greater vehicle electrification. Among distribution utility executives, 93 percent of respondents reported at least one activity currently supporting EV deployment.

Survey Results



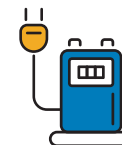
79%

of companies surveyed are engaged in activities to promote or encourage electric vehicle adoption



41%

of electric companies surveyed have a target or goal for converting a portion of their vehicle fleet to electric vehicles



47%

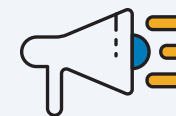
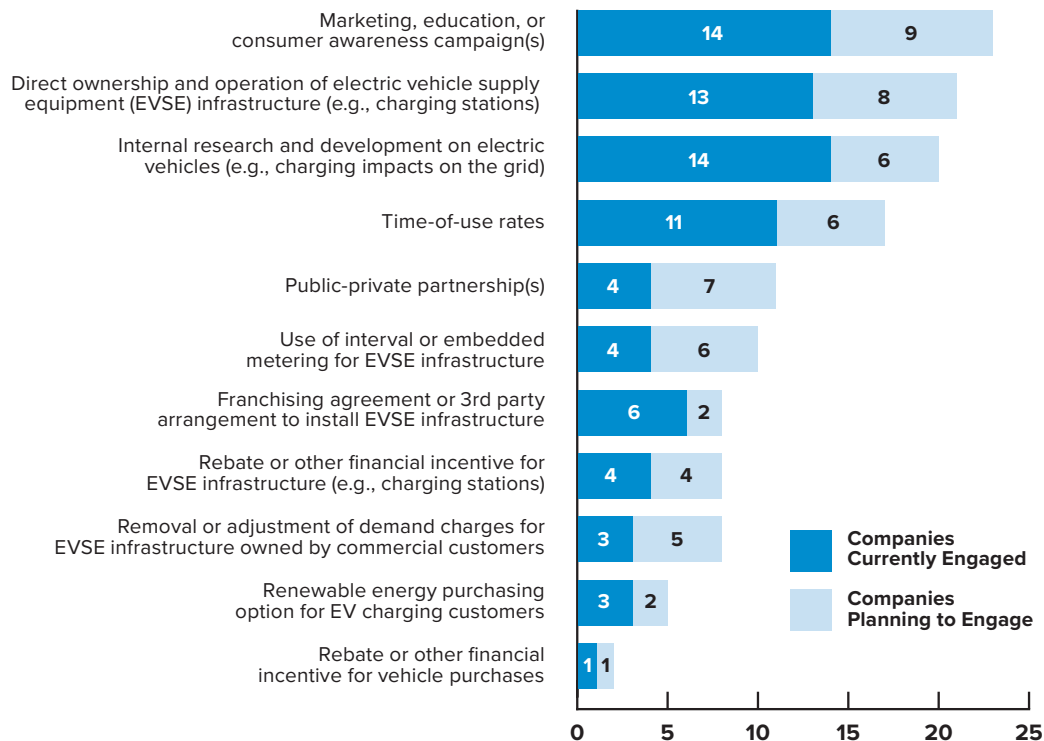
of electric companies surveyed have a target or goal for installing electric vehicle supply equipment (e.g., charging stations) for fleet use

Top Reasons Electric Companies Are Supporting Electric Vehicle Deployment

(in order of priority):

1. Customer demand or interest
2. Increasing network utilization
3. Environmental benefits/reduced air pollutants
4. Load growth/new sources of electricity sales
5. Public relations
6. Infrastructure investment opportunity

Current & Planned EV Programs*



ELECTRIC COMPANIES

are involved in a wide range of programs designed to encourage greater EV adoption and prepare the grid for potential impacts. Marketing, education, or consumer awareness campaigns are the most common with two thirds of all respondents indicating active or planned programs. Direct utility ownership of EV supply equipment is the fastest growing activity with almost a quarter of respondents indicating plans to become involved within the next three years.

* Dark blue indicates the number of companies currently engaged in an activity. Light blue indicates the number of companies planning to engage in an activity in the next three years.

REGULATORY BARRIERS

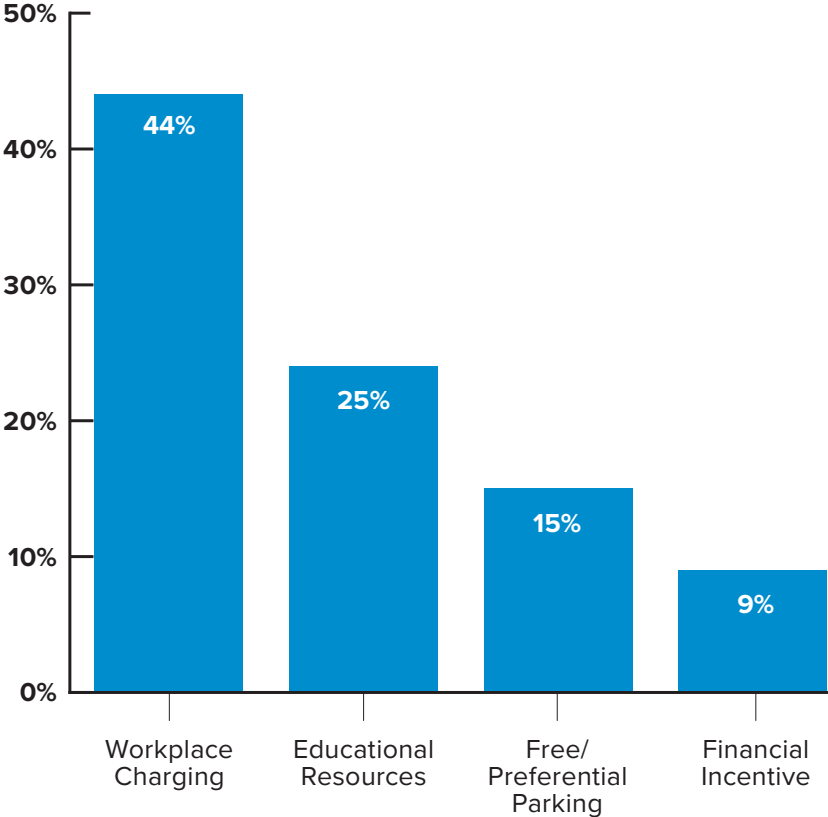
were the top barrier identified by 44 percent of respondents as a leading factor in preventing greater action by electric companies. One in five respondents identified a lack of customer demand as a key factor, while only 3 percent cited concerns about potential grid impacts as a significant barrier.

Top Barriers Preventing Electric Companies from Promoting Electric Vehicles More Aggressively

(in order of priority):

1. Policies/regulations are unclear or constrain utility involvement (e.g., lack of approval to include EVSE in rate base)
2. No customer demand
3. Not relevant to company business model
4. Uncertainty about how to get involved
5. Concerns about grid impacts

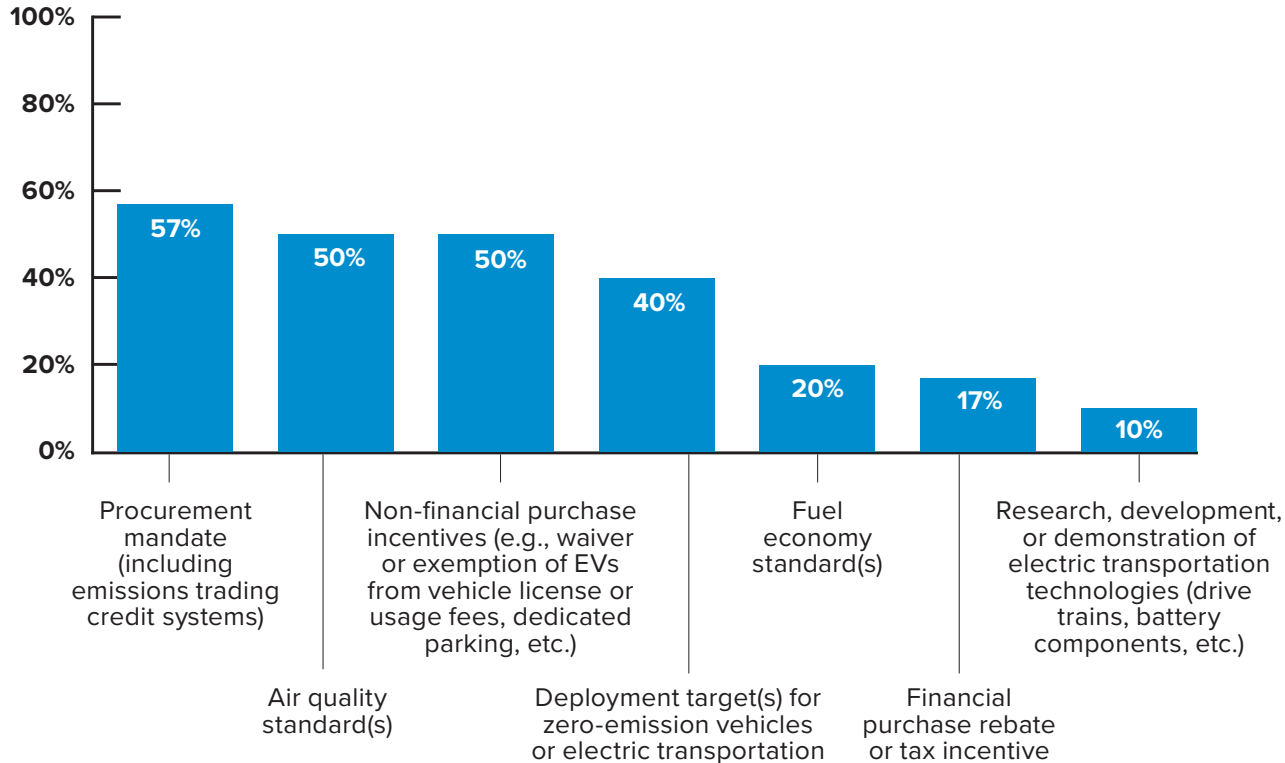
Two Out of Three Companies Surveyed International Offer Some Form of Incentives or Benefits to Employees Who Purchase an Electric Vehicle



WORKPLACE CHARGING

is the most common employee benefit with 44 percent of respondents indicating at least limited availability. Other programs and incentives mentioned by respondents include the provision of favorable leasing terms, inclusion of EV ownership in company wellness programs, and resale of company fleet vehicles to employees.

Most Common National or Local Policies in Place to Support EV Deployment



Most Common National or Local Policies in Place to Support EV Supply Equipment (e.g., Charging Station) Deployment



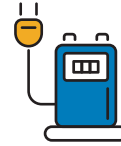
94%

Financial, tax or other monetary incentive



53%

Government direct investment or public-private partnership(s)



43%

Deployment target(s) for EV charging stations or other EV supply equipment



40%

Procurement mandate (e.g., EVSE requirement in building codes or property regulation)



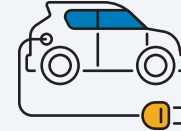
20%

Standards ensuring EV supply equipment (e.g., charging stations) interoperability



17%

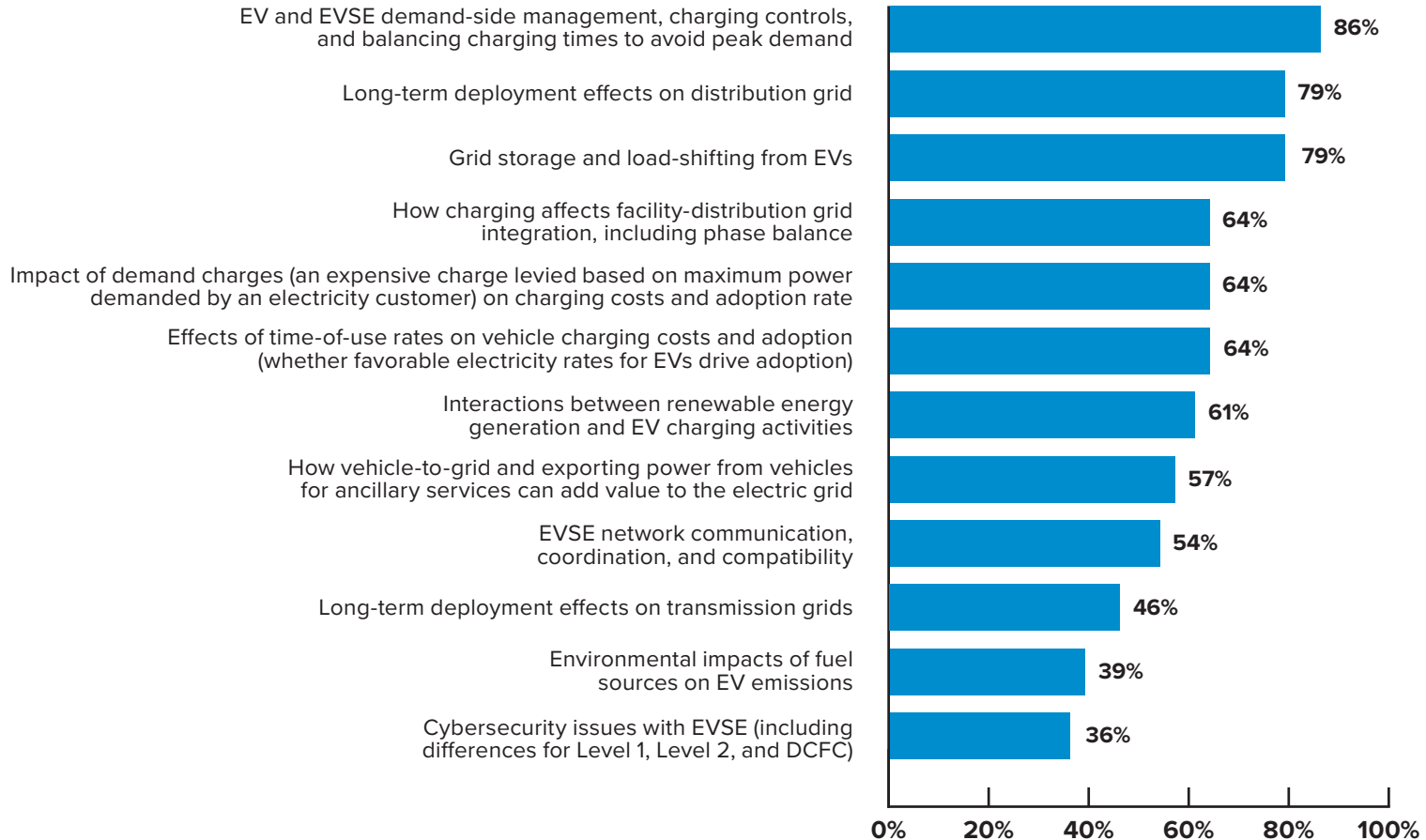
Research, development, or demonstration of EVSE technologies (e.g., fast charging, vehicle-to-grid feedback)



93% OF RESPONDENTS

indicated at least one policy in place at the national or local level to support EV or EVSE deployment. Procurement mandates or air quality standards are the most common EV policy reported in 70 percent of respondents' jurisdictions. Financial incentives from EV supply equipment are significantly more common than financial incentives for vehicle purchasing as reported by 53 percent and 17 percent of respondents, respectively.

Top Priorities for Effective EV Grid Integration





CHALLENGES RELATED

to operating the distribution system, including charging controls and load-shifting, were given the highest priority and identified as “Very Important” or “Extremely Important” by four out of five respondents. Cybersecurity issues were the lowest priority, identified as a high priority by only 36 percent of respondents.

THE EDISON ELECTRIC INSTITUTE

(EEI) is the association that represents all U.S. investor-owned electric companies. Our members provide electricity for about 220 million Americans, and operate in all 50 states and the District of Columbia. As a whole, the electric power industry supports more than 7 million jobs in communities across the United States. In addition to our U.S. members, EEI has more than 60 international electric companies with operations in more than 90 countries, as International Members, and hundreds of industry suppliers and related organizations as Associate Members.

Organized in 1933, EEI provides public policy leadership, strategic business intelligence, and essential conferences and forums.

For more details about the survey and EEI International Programs contact international@eei.org or visit our website at eei.org/international.



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