ADDITION OF ELECTRIC VEHICLE-READY PARKING SPACES TO NEW HOMES MEETS HOMEOWNER NEEDS, LOWERS ENERGY USE, AND REDUCES GREENHOUSE GAS EMISSIONS

Transportation is the largest source of greenhouse gas emissions in the U.S. Electric vehicles (EVs) are the most promising clean and energy-efficient solution to reducing energy use and carbon emissions from the sector.

EV ownership is predicted to increase dramatically over the next decade and facilities to charge these vehicles at home need to match demand. According to the Edison Electric Institute and the Institute for Electric Innovation, about seven million EVs could be on U.S. roads by 2025. However, a key barrier to EV adoption is the high cost and hassle of retrofitting a home for EV charging equipment. We are building homes today that are almost certainly going to need retrofits in coming years to meet consumers’ demand for EV charging capabilities.

Making new homes EV-ready from the start is a cost-effective alternative to expensive retrofits. About 80 percent of homeowners prefer to charge their EVs at home. But it is far more expensive to retrofit a home to accommodate charging equipment than it is to include the necessary electrical panel capacity and EV-ready circuitry at the time of its construction.

- Research shows that the incremental cost of making a new home EV-ready can be as low as $40.
- EV-ready retrofits to existing homes, by contrast, can cost anywhere from $1,500-$4,000.
- Moreover, retrofits in certain jurisdictions also require permit fees which can cost up to $50 and engineer-drawn plans which can cost up to $200.

EV-ready homes will help lower total monthly energy costs. On average EVs are more than three times more efficient than conventional gasoline-fueled counterparts. When compared over the total lifecycle of fuel production and use, the average EV emits less than half the greenhouse gas emissions of a conventional vehicle.

The 2021 International Energy Conservation Code is the best opportunity to make new homes EV-ready. To get ahead of the increase in EV ownership expected by 2025, the next version of the International Energy Conservation Code (IECC)—should be updated to include an EV-readiness requirement.

A proposal from the Energy-Efficient Codes Coalition would add EV-readiness to the 2021 IECC. The Energy-Efficient Codes Coalition, a project of the Alliance, has proposed RE146, which would add up-front installation of necessary electrical panel capacity and EV-ready circuitry to the 2021 IECC. Approval of RE146 would remove the technical and financial burden of EV-charger retrofits thereby encouraging more drivers to purchase EVs — helping state and local governments deliver on their climate goals by reducing total energy use and greenhouse gas emissions.

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