## The Challenge: Affordable Housing and Transportation

The general rule of thumb of budgeting for housing and transportation:



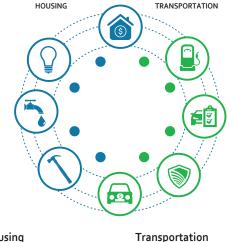
But many families struggle to cover these costs. Some qualify for public subsidies, but they only cover a portion of the costs as they don't consider total cost of ownership of the vehicles or housing:

- Utility costs
- Energy usage
- Fuel
- Maintenance

An ideal solution is to lower costs beyond these targets through a systems approach and to review housing and transportation together rather than independently.

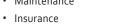
### The Solution: A Systems Approach

Focusing on each individually or in silos prevents us from realizing more efficient methods for community planning. A more coordinated planning effort between housing development and transportation will create these crossefficiencies, including technical and financial benefits.



#### Housing

- Upfront cost of home
- Electricity/natural gas
- Water
- Maintenance
- Upfront vehicle cost
- Fuel
- Maintenance





A systems approach to affordable housing and transportation



A systems approach to affordable housing and transportation

www.in.gov/ihcda/movingforward.htm

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#### The Project

- The Indiana Housing and Community Development Authority (IHCDA) will engage two community developers to design and construct energy efficient housing, integrating plug-in vehicles and infrastructure, to create the most cohesive, cost effective and energy efficient community development process in Lake County.
- The selected developers will have a team of subject matter experts, assembled by Energy Systems Network (ESN), to support and encourage a systems-level approach, solving the challenge by evaluating and selecting new technology options, identifying creative financial solutions, and integrating the development processes for affordable housing and transportation for a community.
- Advisors will include state agencies, academia and non-profits, utilities, developers, industry (technology and product providers), financing and others.



# ENERGY SYSTEMS NETWORK

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#### A Team Approach

ESN is assembling a team of experts from industry and academia to provide the necessary support and guidance for the two selected developers to design the most innovative and energy efficient community development/ transportation project.

#### Outcomes

- Two affordable housing developments in Lake County
- New technology commercialization related to energy efficiency, renewables, integrating existing technologies, grid connection, etc.
- Academic research and data analysis on reducing energy usage through an interconnected energy efficient design
- A replicable design process for other communities and states to follow
- Follow-on funding from other state and federal agencies to expand on the model in future years
- Unique financing options for families by examining cost savings for affordable housing and transportation simultaneously
- Use the solutions proven through this initiative in other real estate applications outside of affordable housing and transit



