Electric Vehicle Charging Station Prototype
Abby Bristow, Master's Project, Illinois Institute of Technology, Spring 2011
94% of energy delivered to the U.S. transportation system is petroleum-based.

*Electrification Coalition
The US spends between 67.5 billion and $83 billion annually to secure the international oil supply lines and infrastructure, using military force if required.

*RAND Corporation - Imported Oil and U.S. National Security*
Since December 2007, crude oil and petroleum products have routinely accounted for more than half of the monthly U.S. trade deficit.
30% of Chicago’s Greenhouse Gas Emissions are generated by Transportation.

*Chicago Climate Action Plan
4 FACTORS AFFECT TRANSPORTATION EMMISIONS:

1. VEHICLE MILES TRAVELED
2. VEHICLE TYPE
3. VEHICLE SYSTEM OPERATION
4. FUEL
A series of errands over the course of a busy Saturday can extend beyond the life of the battery.

*Electrification Coalition*
The most significant challenge facing the deployment of public charging infrastructure is business model and cost. A profitable business model for public charging infrastructure has not been reliably demonstrated.

*Electrification Corporation – Fleet Electrification Roadmap*
The Proposal
SUBURBAN
MORE CHARGING SPACES
BIGGER RETAIL SQUARE FOOTAGE
POTENTIAL FOR LONGER CHARGE TIMES

URBAN
SMALLER RETAIL SF
LESS PARKING SPACES
TRANSPARENT SOLAR PANELS

STRUCTURE

PROGRAM/INTERACTIVE BOX
THE WALL SYSTEM

"COMMUNICATIVE" SURFACE
- Battery Capacity
- Solar Panel Status
- Traffic Conditions
- News
- Weather
- Program Inside

INTERACTIVE "BUTTONS"
- Charging Interface
- Workstations
- Vending
MEDIUM PROTOTYPE