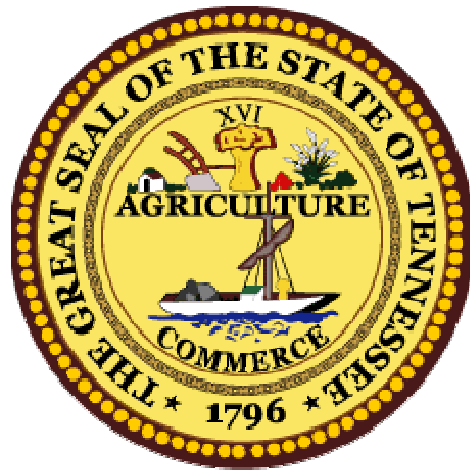


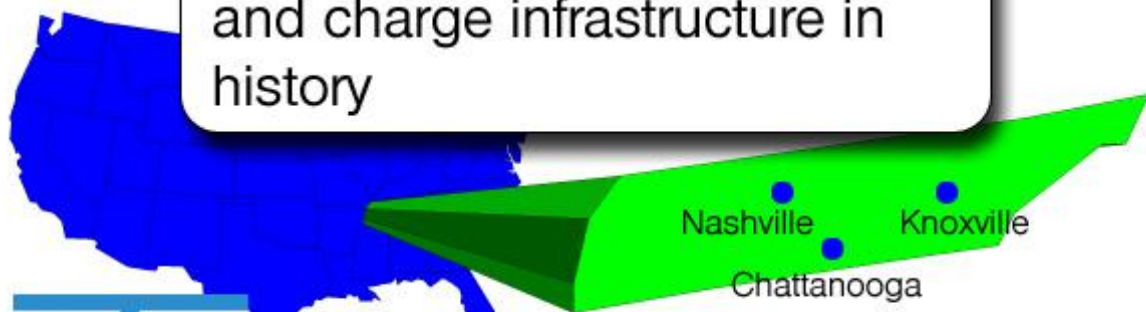
EV Micro-Climate™ Plan for the State of Tennessee



The EVProject Implementation Plan

THE EV Project

The largest deployment of EVs
and charge infrastructure in
history



eTEC Project Manager for The EV Project
An **eco**tality Company

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State of Tennessee EV Micro-Climate™ Plan

The EVProject Implementation Plan

Purpose

This document details the process for continued stakeholder engagement in the design and development of The EVProject, the largest deployment of electric vehicles and electric vehicle charging infrastructure in the history of the United States of America.

National Scope

On August 5, 2009, ECOtality North America, a subsidiary of ECOtality, Inc. (NASDAQ:ECTY) was awarded a \$99.8 million grant from the U.S. Department of Energy. The EVProject launched on October 1, 2009.



Nissan LEAF



Chevrolet VOLT

On June 16, 2010, ECOtality announced an expansion of The EVProject to include the cities of Los Angeles, California and Washington, D.C. The project was granted an additional \$15 million by the U.S. Department of Energy.

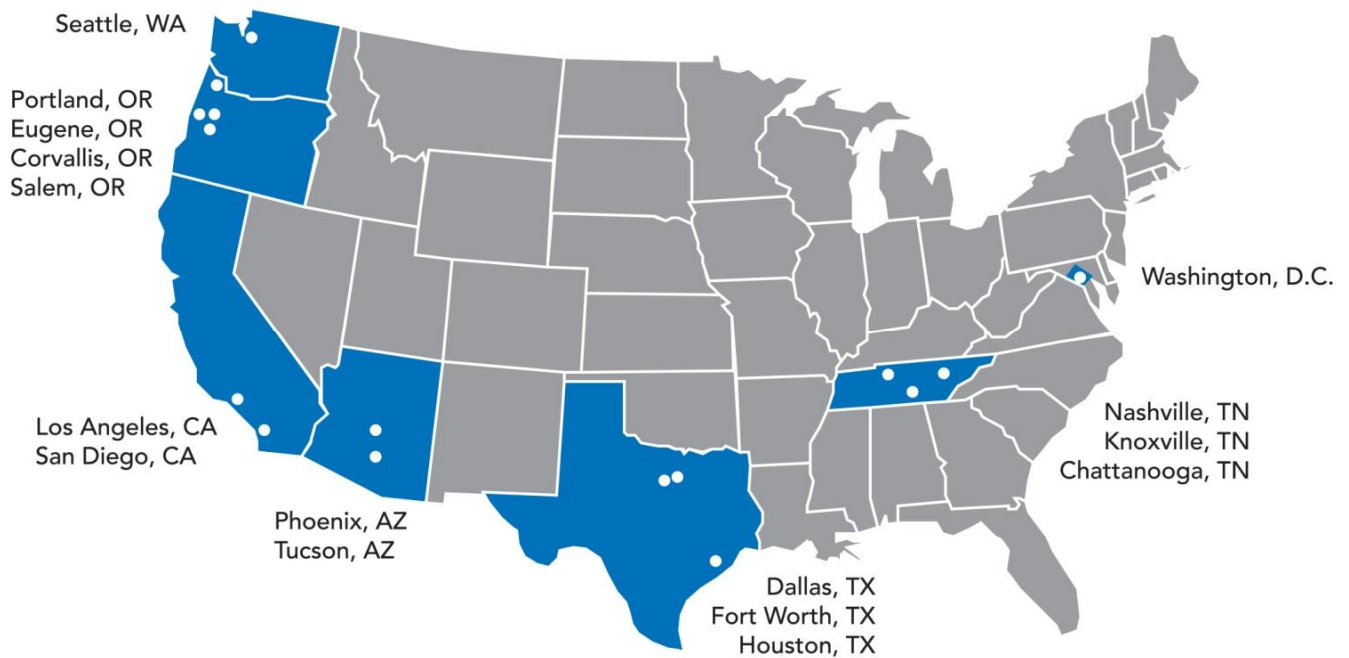
With project partner matching funds, the total value of the project is approximately \$230 million.

ECOtality North America will deploy nearly 15,000 charging stations in 16 cities located in six states (Oregon, Washington, California, Arizona, Tennessee and Texas) and the District of Columbia. Nissan North American and General Motors/Chevrolet are partners in The EV Project. Drivers of the Nissan LEAF zero-emissions electric car and the Chevrolet Volt plug-in hybrid with extended range, who qualify to participate in The EVProject, a residential charger

will be provided free, and most if not all of the costs of installation will be paid for by grant funding.

The EV Project will collect and analyze data to characterize vehicle use in diverse topographical and climatic conditions, evaluate the effectiveness of charge infrastructure, and conduct trials of various revenue systems for commercial and public charge infrastructure. The ultimate goal of The EVProject is to take the lessons learned from the deployment of these first 8,300 EVs, and the charging infrastructure supporting them, to enable the streamlined deployment of the next 5,000,000 EVs.

EV Project Area Map



Electric Vehicle Charging Station Technology

Standard Level 2 EVSE Connector

For wide spread EV adoption to occur, a standard for connecting the vehicle to the electric grid was required. The Society of Automotive Engineers standardized the connector for Level 2 charging as the J1772 (See appendix The J1772).



Standardized EV Charging Connector - J1772



DC Charging Connector

Not all vehicles can receive a DC charge. The Nissan LEAF and Mitsubishi i-Miev are the only two vehicles currently available in the US that offer a DC charging port. The connector has not been standardized by the Society of Automotive Engineers to date. The EVProject DC Fast Charging Stations will use the connector that is the standard in Japan. The Nissan LEAF offers the DC charging port as an option. The EVProject provides this option at no cost for participating vehicles.



CHAdMO DC Charging Connector

Level 2

Electric Vehicle Supply Equipment (EVSE) that use the standardized J1772 connector provide an AC charge. An electric vehicle owner can receive a boost in their state of charge in 1-3 hours or a complete charge in 4-8 hours, depending on the vehicle, voltage and state of charge of the vehicle. Electric vehicle operators are encouraged to charge their electric vehicles at a home charging station to 100% state of charge (SOC) and use the publicly available charging stations to extend the range of the vehicle.

DC Fast Charging

Electric vehicle charging using a DC Fast Charger delivers DC current directly to the vehicle battery. An electric vehicle owner can receive a boost in their state of charge in 5-15 minutes or receive up to 80% state of charge in less than 30 minutes.

EVProject Equipment

The EVProject will install BLINK Charging Stations in two models of Level 2 charging stations:

- Wall Mount Unit
- Pedestal Unit



Level 2 Wall Mount Unit



Level 2 Pedestal Unit

Tennessee Scope

By September of 2011, a mature electric vehicle charging infrastructure will exist in the State of Tennessee. Through a highly collaborative and interactive approach including policy makers, utilities, local, state and federal government agencies, grass roots organizations, major employers, charging station operators and leaders of industry, ECOtality North America

implements the EV Micro-Climate¹ Process to complete the electrification of transportation and paradigm shift in the fueling of vehicles occurring through the EVProject.

Geographic Area

Electric Vehicle Charging Infrastructure Area Map Design

In determining the area of coverage, the EVProject State Advisory Board considered many factors: the zip codes of those eligible for EVProject vehicle participation, Nissan LEAF Hand Raiser data, the anticipated demographics of EV purchasers, topography, population, retail areas, major employer locations, and overall commuting patterns.

Early Adopters

Through the Nissan Customer Journey (<http://www.nissanusa.com>), those interested in getting additional information were registered as a hand raiser from 4/20/10 until May. Later, they reserved a LEAF with \$99. The anonymous geographic locations of those that registered through this process were reviewed on a periodic basis. The demographics of Hybrid owners to date were another layer of data reviewed. Together, these two data layers demonstrated where early adopters would be located.

Area Specifics

Through the evaluation process for anticipated EV owner demographics, the demographics of hybrid and alternative fuel vehicle purchasers, overall population density, local topography, local and statewide traffic patterns were reviewed from a state perspective. The Tennessee Department of Transportation along with the Nashville Metropolitan Planning Organization, Knoxville Transportation Planning Organization and the Regional Planning Agency and Planning & Design Studio from Chattanooga developed a sustainable mapping model for evaluating the areas where EVs are likely to travel.

From a grid perspective, understanding the areas where home based electric vehicle charging stations will be located is a new consideration for electric infrastructure growth strategies and long range planning. The local utilities, led by Nashville Electric Service, have created a

standard mapping methodology for projecting the likely regions where electric vehicle home charging stations may appear.

Major Employers

The State of Tennessee’s Department of Economic and Community Development supplied information on the location of the top 100 employers statewide. Employers affect traffic patterns and drive commuter behavior. Their locations were considered a key element in the understanding possible EV travel patterns.

Traffic Flow

Electric vehicles will intermingle with overall traffic and therefore the existing and projected traffic flows were heavily weighed within the EVProject Boundary design. The Tennessee Department of Transportation provided data and data interpretation for this consideration.

EVProject Infrastructure Coverage Map

The cities of Chattanooga, Knoxville, Nashville, and the connecting corridors comprise the core focus of the EVProject. This gives Tennessee the largest area of EV charging coverage from a national perspective.



Charging Station Installation

Equipment

The graph below represents number of charging ports that will be installed in the Tennessee EVProject Geographic Area.

Hardware Infrastructure	Tennessee
Level 2 Vehicle Participants	1000
Level 2 Commercial	1200
Level 2 Municipal	150
DC Fast Charging Ports	60
Solar Assisted L2	125

Vehicle Participants

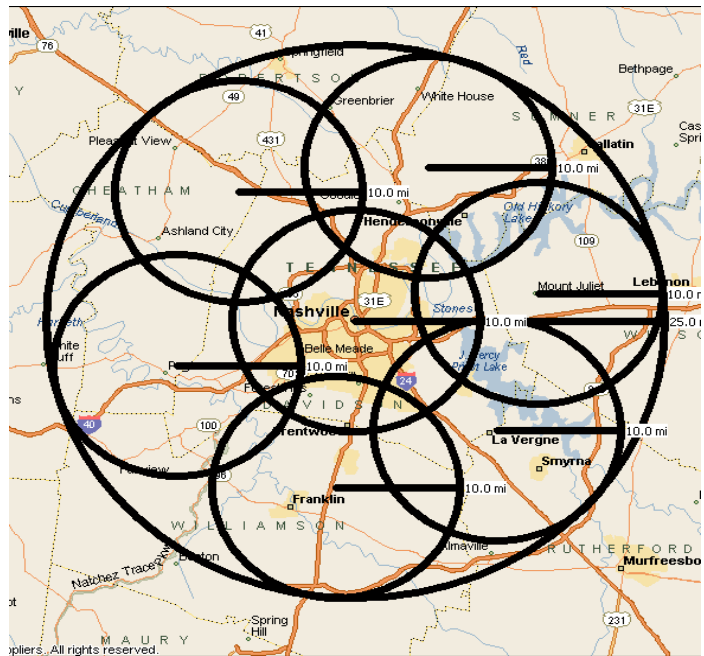
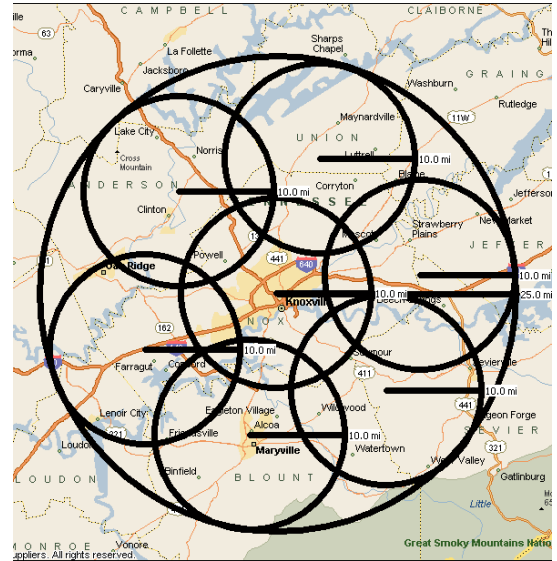
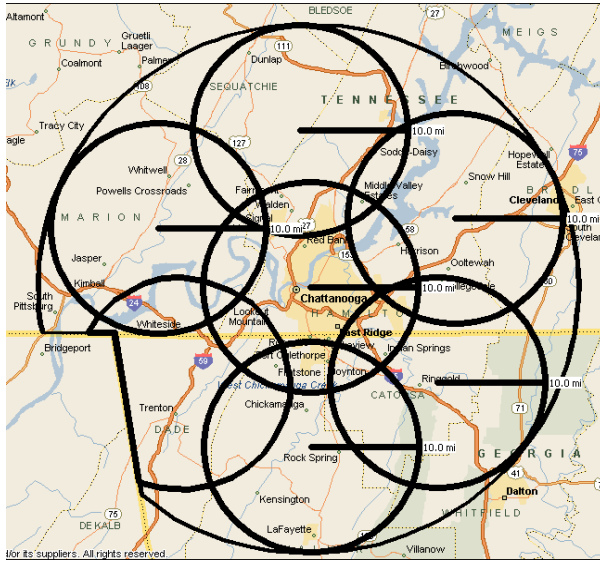
During the ordering process for the Nissan LEAF, those within the project's participating zip codes that qualify to participate in the EVProject will receive a Wall Mount Level 2 Charging Station. They also receive the DC Fast Charging port for their vehicle. Those that qualify can buy or lease their vehicle for use as a fleet vehicle or for individual. There will be up to 1000 Nissan LEAFs participating in the EVProject.

Diversity of Choice by Charging Location Type

For the EVProject, understanding electric vehicle usage and driver behavior will allow an understanding of how to grow electric vehicle infrastructure once the EVProject data collection and analysis is complete.

Within the 25 mile from city center boundaries for the areas where there will be a blanketing of electric vehicle charging infrastructure, 10 mile radius square drawn where a diversity of choice by

charging location type will be sought. Offering a choice as to location at which an electric vehicle owner will be able to charge will provide important information for the planning and development of the growth of electric vehicle infrastructure. The following show the diversity circles within each of the 3 project cities:



Commercial Locations

For the 1200 Level 2 Charging Stations, the following site types will be targeted within the EVProject: There is a goal of diversity by location of facility where charging occurs created with the intention of learning the places where people are most likely to recharge their electric vehicle using Level 2 Charging Stations.

Airports	6
Community Center/Parks	60
Convention Centers	15
Destinations	80
Educational	60
Grocers	125
Hotels	80
Libraries	15
Malls	125
Medical/Hospital	80
Parking/Park & Rides	80
Police	15
Restaurants	125
Retail	125
Theaters/Museums/Arts	80
Universities	80
Sub Total	1151
Other	49
Total	1200

These targets will be satisfied through the combined efforts of National Accounts from ECotality North America and the local efforts of stakeholders and ECotality Stakeholder Services.

Municipal Locations

The three core project cities will experience a blanketing of charge infrastructure. Each of these cities has a number of Level 2 charging stations to place on municipally owned property. They each evaluated the properties they owned to determine which were most likely to serve the early adopters and that would demonstrate the areas support of EVs.

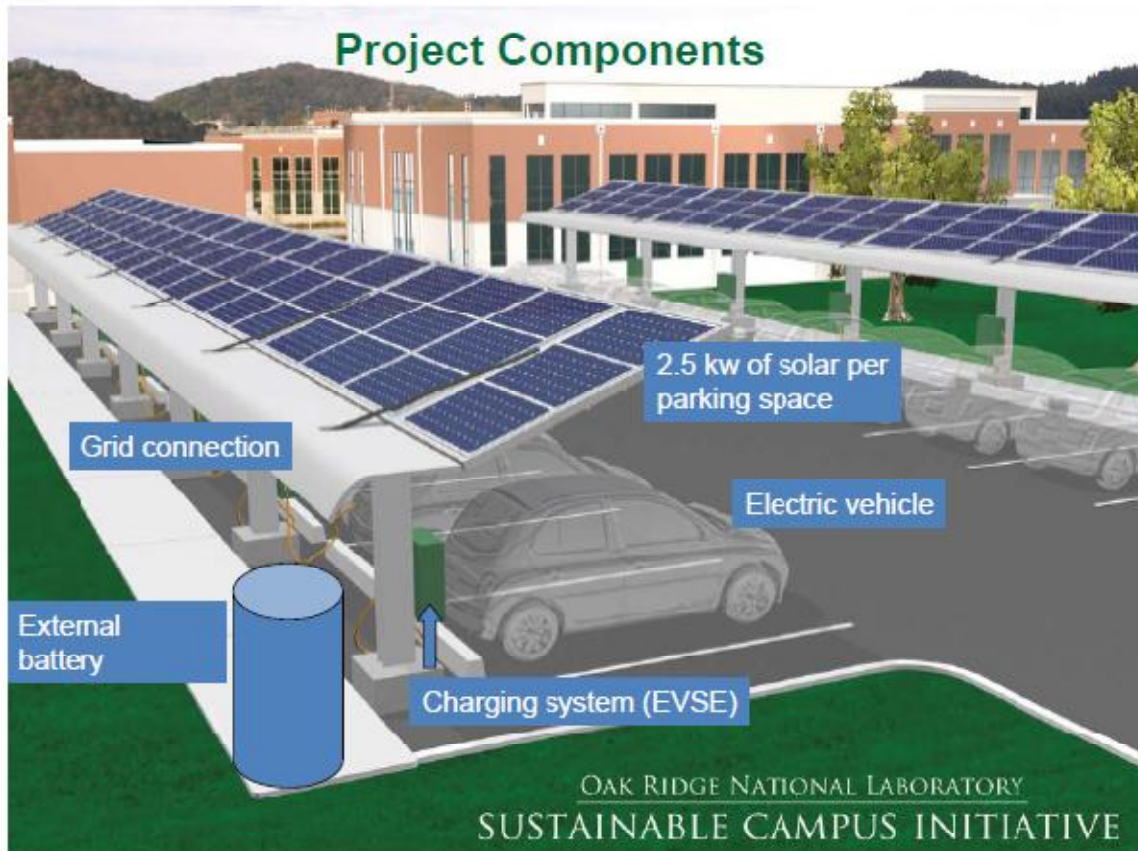
Special Projects

Solar Assisted Charging Stations

The Tennessee portion of the EV Project has an additional type of charging infrastructure deployed: solar-assisted charging stations. Oak Ridge National Laboratory received \$6.8M in grant funding within the \$99.8M American Recovery and Rehabilitation Act Department of Energy funding under DE-EE-0002194 for this demonstration project.

ORNL, in conjunction with the Electric Power Research Institute (EPRI) and the Tennessee Valley Authority (TVA), will install the SMART Station to analyze the technical issues arising from vehicle charging infrastructure (grid response, etc) and to collect data on overall performance, component reliability, etc. and provide analysis for deployment feedback.

These charging stations have Level 2 EVSE and will be implemented under a solar canopy within the TVA SMART Station. SMART is an acronym for Smart Modal Area Recharge Terminal. There are 125 charging stations that will be solar-assisted charging stations.



Corridor Charging

Providing for the travel between the project's core cities of Chattanooga, Knoxville and Nashville is another unique aspect to the Tennessee portion of the EVProject. The State of Tennessee has charging stations along I-24, I-75 and I-40 as to allow for the ability to travel between the three cities.

Other Special Projects

Within The EVProject, there is opportunity for other special projects and pilot projects.

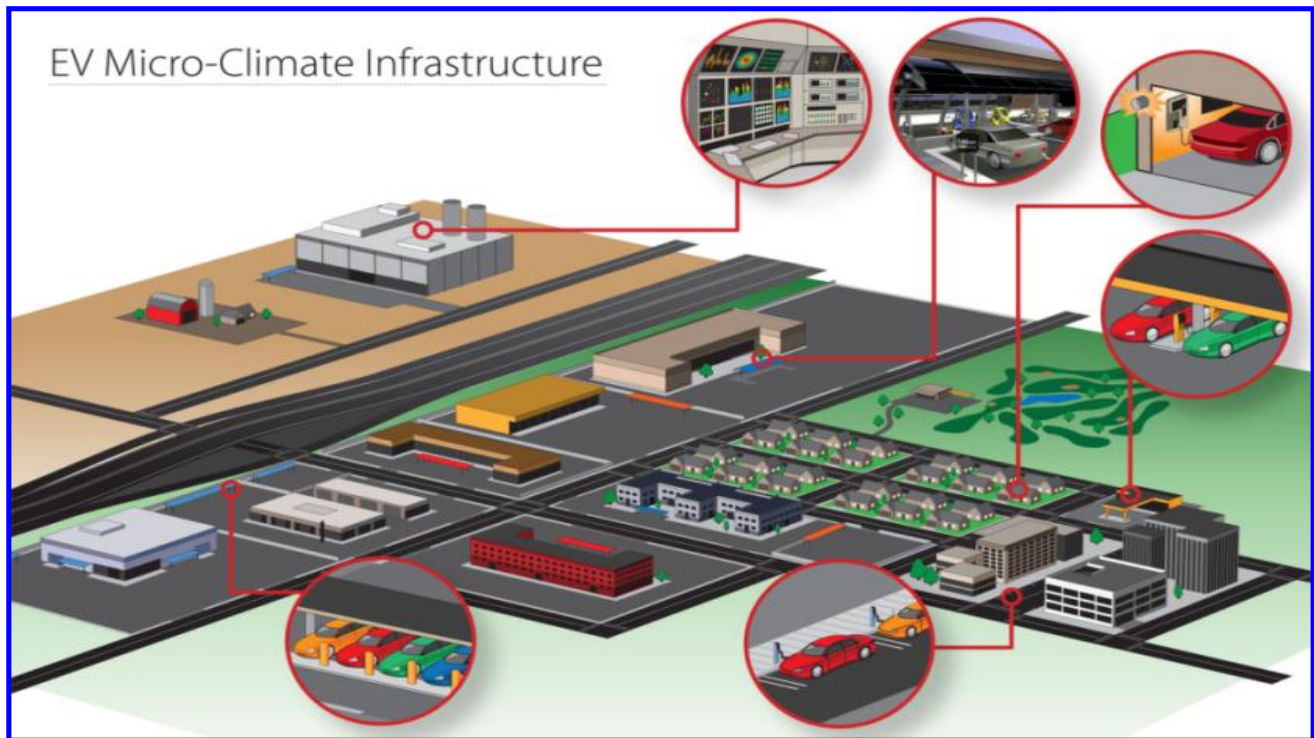
ECOtality is exploring the opportunity to participate in various special projects including: smart grid integration with the Nashville Electric Service, Knoxville Utilities Board, and Electric Power Board; a Workplace Charging Impact Study coordinated by the Chattanooga, Knoxville,

Nashville and State Chambers of Commerce; and a local Garage-Less Needs Analysis led by the Metropolitan Planning Organization. Additional special projects may be considered. (See appendix SPECIAL PROJECTS).

Implementation Process

EV Micro-Climate™ Program

ECotality North America is highly experienced with installing electric vehicle (EV) charging stations in residential, commercial and public environments, and has installed more charging stations for on-road applications than any other company. ECotality has developed its EV Micro-Climate™ program, as means of utilizing this experience to develop rich charge infrastructures, focused on Level 2 and Level 3 charging systems, as efficiently and cost effectively as possible.



Fueling Paradigm Shift

ECOtality's EV Micro-Climate[™] program is an integrated turn-key program that advances select areas for the adoption of electric transportation. Beginning with extensive feasibility and infrastructure planning studies, the program provides a blueprint for a comprehensive EV infrastructure system and provides detailed action plans for its successful execution and continued maintenance. ECOtality North America will coordinate relevant governmental organizations, utilities, automotive manufacturers, and strategic regional organizations to ensure that key cities are prepared for consumer adoption of electric transportation.

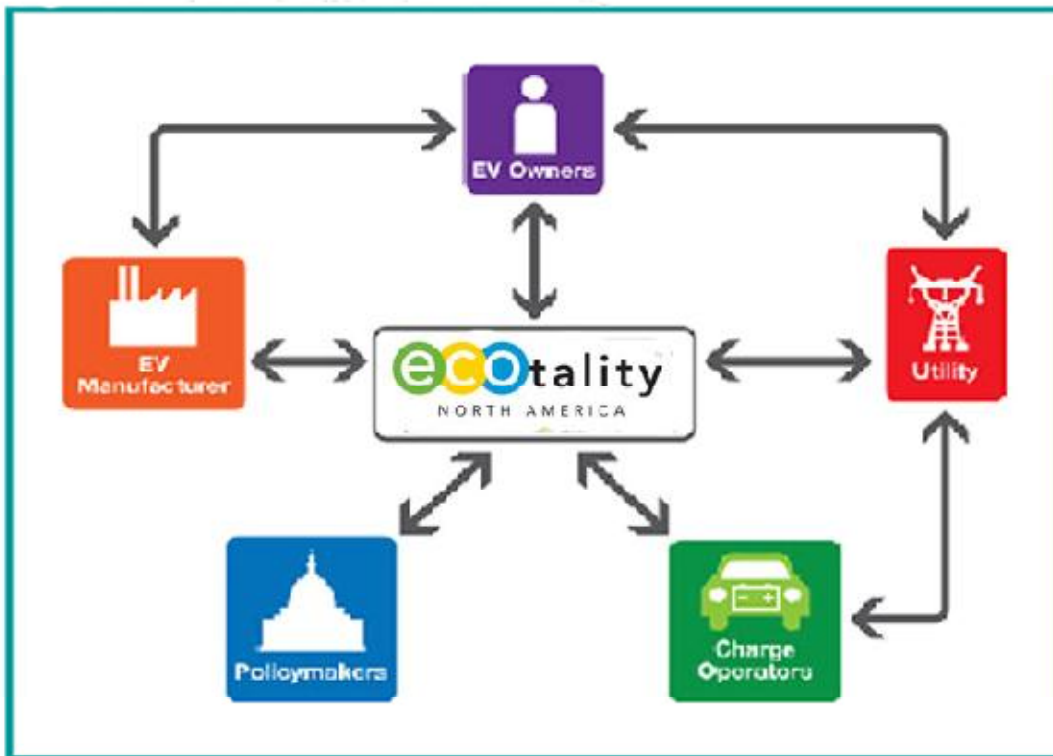
The implementation of an EV Micro-Climate[™] includes physical charge infrastructure installations at residential, commercial and public locations, as well as comprehensive regulatory, public awareness and marketing programs to support the various value chains associated with the EV Micro-Climate[™].

The ECOtality EV Micro-Climate[™] is a process by which a custom electric vehicle infrastructure results from the implementation of a standard process. Documenting the process by which a truly rich, highly functional and scalable electric vehicle charging infrastructure is grown through public/private partnership which creates Best Practices for wide spread EV adoption. EV Micro-Climate[™] results in an understanding of how consumers use electric vehicles and charging infrastructure: Lesson Learned.

Together with a core stakeholder group, EV Micro-Climate[™] creates a framework from which the infrastructure develops. Ongoing stakeholder engagement ensures that the projects goals and objectives are met in the near term and provides opportunity to discuss the opportunities and challenges of using electricity as a fuel.

Stakeholder Involvement

The key deliverables for the EV Project are Best Practices for the implementation of electric vehicle charging infrastructure, Lessons Learned about how vehicle operators use electric vehicles and the charging infrastructure. EV Micro-Climate[™] involves significant stakeholder interaction.

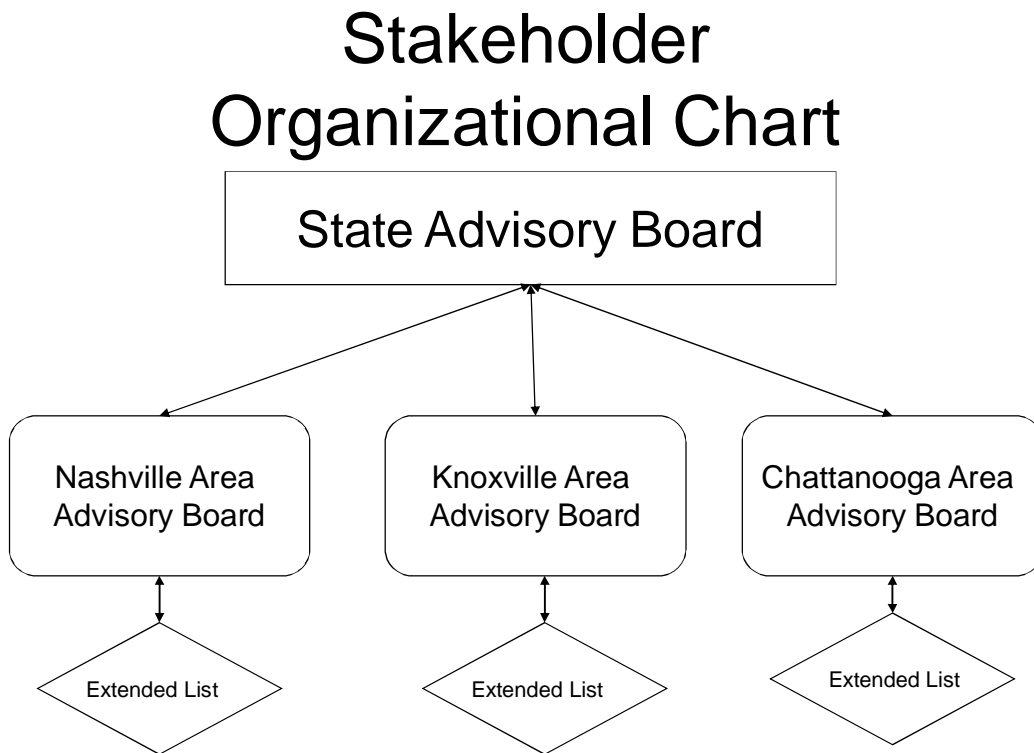


This standard process results in a custom infrastructure whether it is applied on the macro level, as in the case of the EVProject, or on the micro level as with a particular organization or fleet as in our Clean Commute Program in New York City.

The EV Micro-Climate Process encourages a very interactive relationship with all stakeholders. To manage this process, ORNL has provided a password protected web portal for information sharing and exchange. Through the web portal, the various project documents, research material, media clips, project presentations, meeting notes and agendas and schedule for the ECotality staff are made available to the group for maximum stakeholder input. The result of the EV Micro-Climate Process is a truly rich, highly functional and customized electric vehicle charging infrastructure create together as a stakeholder group.

Stakeholder Organization

There are four Advisory Boards that have been created for the EVProject in the State of Tennessee. The Advisory Boards review and contribute content to documents in the EVProject and evaluate the near and long term project needs and milestones.



EVProject Documents

The project documents include: The EVProject Infrastructure Deployment Guidelines, the Long Range EV Charging Infrastructure Plan for Tennessee and this document, the EVProject Implementation Plan.

The documents remain active and under ongoing evaluation resulting in continually relevant project documentation of the Best Practices for growing electric vehicle charging infrastructure.

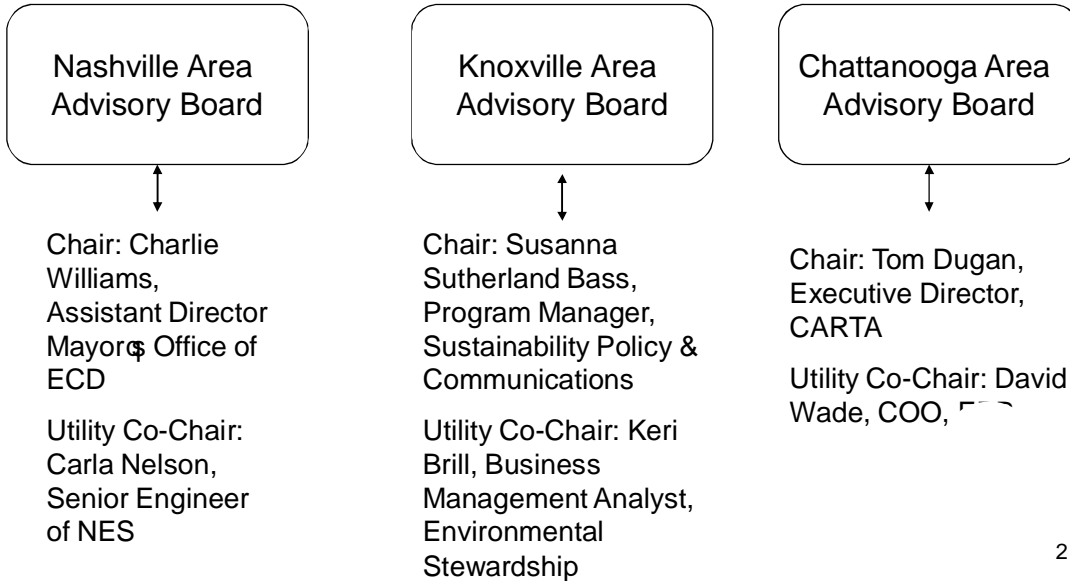
Area Advisory Boards

The Advisory Boards consisted of core members and member organizations from the utility sector, the public and private sectors. The focus during Phase I of the infrastructure design on the overall education of the near term needs to achieve the long term electric vehicle infrastructure growth plan and policy issues, technology developments, impacts, opportunities and the considerations involved with wide spread EV adoption.

During the second phase of the Infrastructure Design, the board membership expanded to include members and organizations involved in alternative fuels, sustainable transportation, the private sector and those interested in electric vehicles and electric vehicle charging.

The Area Advisory Boards have a Chair and a Utility Co-Chair. The Area Advisory Board Chair will function as another point of contact for local area stakeholders, lead the local messaging, lead the siting focus group for the local areas, municipal allocation of assets and assist in the coordination of the media and commercial partner outreach. The Area Advisory Board Utility Co-Chair will function as the point of contact for issues from a utility perspective for the area.

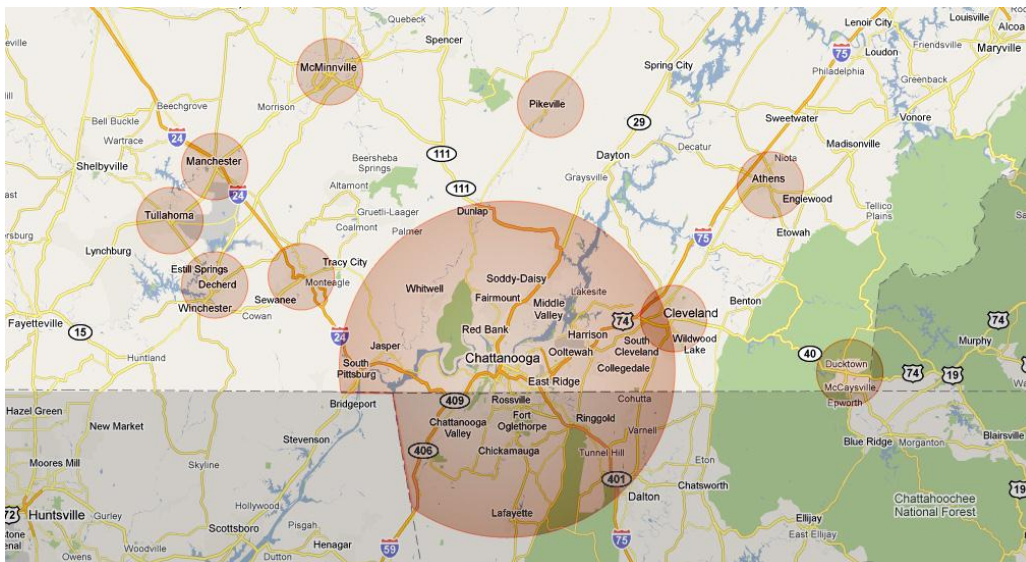
Area Advisory Board Chairs and Utility Co-Chairs

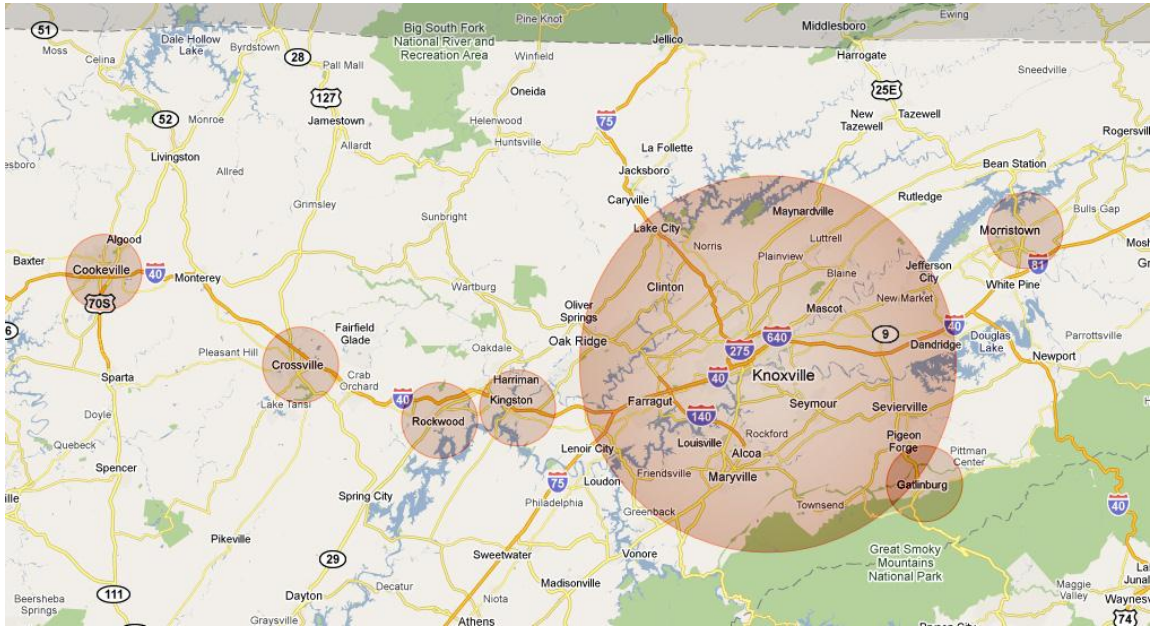


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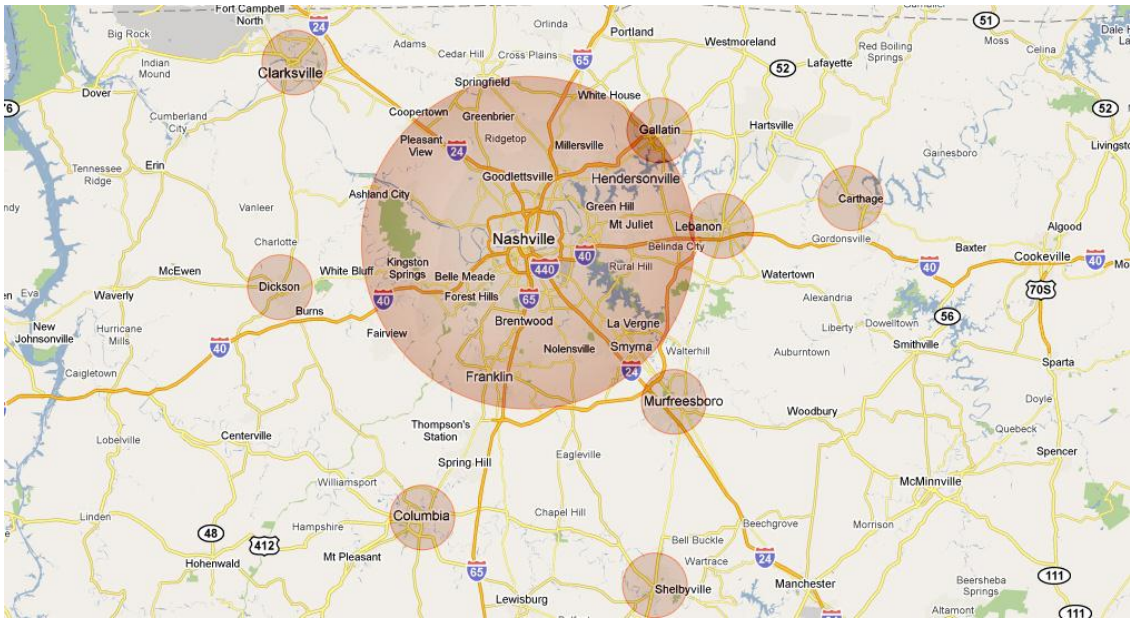
Area Advisory Board Coverage

Each Area Advisory Board will serve the needs of the core project city and the surrounding area. The Chattanooga area encompassed 25 miles from city center in Chattanooga and dips into Georgia.





The Knoxville Area serves 25 miles from city center of Knoxville and the surrounding area.



The Nashville Area serves 25 miles from city center of Nashville and the surrounding area.

Area Board Focus

The function of the Area Advisory Board is to actively engage in the EVProject for the purposes of understanding the impacts of wide spread EV adoption. These members individually and as member organizations work together to coordinate happenings of the EVProject, work through challenges that arise and to collaboratively create a custom electric vehicle charging infrastructure for the specific needs of the local area.

Board Dedication

The Advisory Boards met regularly through teleconferences and group. During the meetings key stakeholders are educated on the EVProject deliverables, needs, goals and challenges for purposes of interactively engaging them in the design and implementation of the truly rich and highly functional electric vehicle charging infrastructure. Notes from these meetings are documented and disseminated back to the group. Each stakeholder organization contributes time, energy, staff and resources to the EVProject on a continuing basis.

Considerations Councils

In order to ensure that each opportunity and challenge is properly addressed throughout the EVProject, councils are formed for each major area of consideration for EV adoption:

- Permitting, Inspection and Standards
- Utility Considerations
- Siting Council
- Public and Educational Outreach

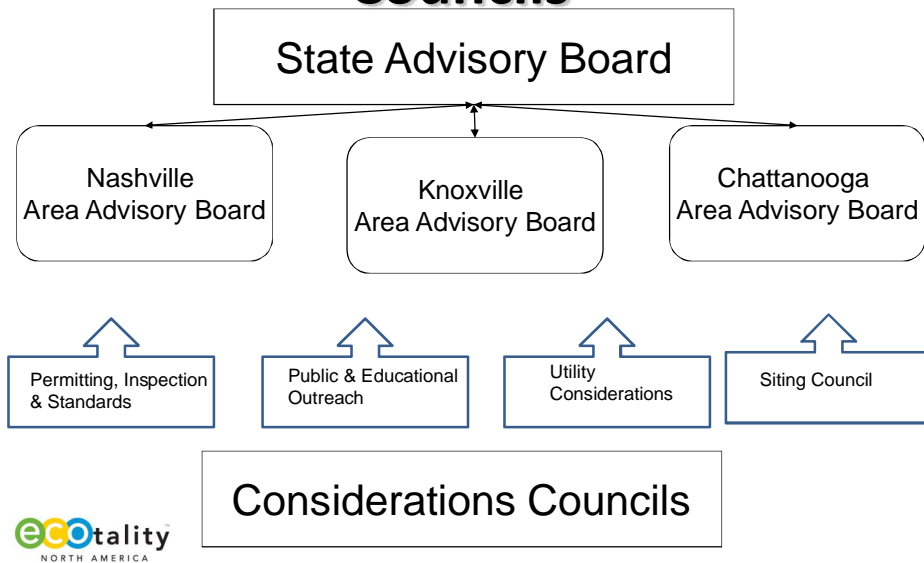
Considerations Council Roles and Responsibilities

These councils will meet periodically to ensure that project milestones are reached and that issues are either solved or logged and strategies created. Quarterly, these councils present to the Advisory Boards as to developments occurring within each area of consideration. They are responsible for coordinating and composing the addendums necessary for keeping the EVProject documents current.

Scheduled addendum submission dates for EVProject documents are:

- November 2010
- March 2011
- December 2012
- June 2013

Advisory Boards & Considerations Councils



Permitting, Inspection and Standards

The installation of EVSE requires permitting and inspection from the appropriate permitting and inspection office. The Considerations Council for Permitting, Inspection and Standards will seek to create a streamlined permitting and inspection process for the EVProject, for Best Practices for wide spread electric vehicle deployment and keep current on electric vehicle charging equipment and installation standards. The State of Tennessee's Department of Commerce and Insurance will lead the effort for permitting and inspection processes. The State of Tennessee has a strong interest in understanding how to ensure that the permitting and inspection processes can provide for a standardized and streamlined process.

The Electric Power Research Institute (EPRI) in conjunction with the Tennessee Valley Authority (TVA) will lead this effort for developing EVSE, EVSE Connector and Industry Standards.

Utility Considerations

The use of electricity as a fuel requires the understanding and analysis of generation and electric grid impacts. EPRI and TVA, along with TVPPA will jointly work toward collecting the relevant industry, technology and policy developments for the utility considerations and provide for the methodology for information dissemination to the utilities involved within the Tennessee market and through the TVA territory, keeping the utility industry abreast of developments in the EVProject and in the electric vehicle and electric vehicle supply equipment industry.

Siting Considerations Council

Siting of the electric vehicle charging stations engages all stakeholder organizations. In order to ensure that diverse set commercial partners are found to achieve a truly rich electric vehicle infrastructure, there needs to be input from multiple resources. The siting council consists of focus groups for industry specific consideration.

Zoning and Land Use Focus Group

Led by The University of Tennessee Municipal Technical Advisory Service the Tennessee County Technical Advisory Service and the Tennessee Renewable Energy Economic Council together

Hospitality Siting Focus Group

Led by the Tennessee Hospitality Association

Medical/Hospital Siting Focus Group

Led by the Tennessee Hospital Association

University Siting Focus Group

Led by the State of Tennessee Department of Economic and Community Development and Oak Ridge National Laboratory

Destinations Siting Focus Group

Led by the State of Tennessee Department of Tourist Development in conjunction with the TN Hospitality Association

Retail and Grocery Siting Focus Group

Led by the Tennessee Retail Association, Tennessee Grocer and Convenient Store Association

Public and Educational Outreach

Messaging within the EVProject will involve many facets within each member organization, area and with the various stakeholder groups. The State of Tennessee Department of Economic and Community Development, Southern Alliance for Clean Energy and Oak Ridge National Laboratory will be key resources for this effort.

Infrastructure Design, Planning and Installation**Phase I**

From March 2009 until June 2009, Phase I of the EVProject Infrastructure Design involved weekly teleconference meetings with each Advisory Board to discuss matters related to the successful implementation of a truly rich and highly functional electric vehicle charging infrastructure. We began each advisory board with an initial kickoff meeting and held various working sessions in each area.

Each member organization was invited to participate with any members of their organization that they deemed necessary. Agendas were provided and notes taken for each meeting. There was a near 100% participation rate in the Phase I EVProject Advisory Board meetings and teleconferences.

Phase II

During Phase II, from July through September, stakeholders participate in advisory board meetings, and created considerations councils and focus groups.

Considerations Councils meet regularly to explore specific topics are responsible for keeping the project documents current and relevant through the release of regularly scheduled updates and addendums. The Considerations Councils and Focus Groups together explore the challenges and opportunities for wide spread electric vehicle adoption. The Considerations Councils will bring updates to the Advisory Boards at least once each quarter:

- February
- May
- August
- October

EVProject Focus Groups specifically assist in the siting of charging stations. They hold strategy sessions, design industry specific messaging about EVs and the EVProject, and bring together industry leaders in roundtable discussions to identify how EV adoption will affect their businesses, find opportunities for case studies and conduct industry specific outreach.

Phase III

From October until January, Phase III of the EVProject, also referred to as the EVProject Roadmap Process, seeks electric vehicle charging hosting sites that create the diversity of choice in charging location type that results in a truly rich, scalable electric vehicle charging infrastructure. Sites will be identified and site assessments are performed.

Phase IV

The final phase in the EVProject, from January until September 2011, installation of publicly available charging stations take place. Each potential hosting partner will initiate the EVProject Hosting Partnership process by submitting an executed Letter of Intent for EVProject participation. The LOI demonstrates that an organization is interested in evaluating whether

their location would be an ideal location for electric vehicle charging. The Hosting Partner is not obligated to participate in the EVProject through the Letter of Intent and ECOtality is not obligated to install EVProject electric vehicle charging equipment at the site. The LOI is the first step in the process for being considered a potential charging location and EVProject Hosting Partner.

There will be a site assessment performed on each site to determine the ideal low cost installation scenario. The certified contractor network (CCN), managed by Bovis Lend Lease, will perform the site assessments and document any cost differential between the low cost installation scenario and the hosting partner's preferred installation site. Each commercial L2 EVSE installation will have \$1,200 (per unit) grant funding budget for installation costs.

EVProject Legacy

The State of Tennessee, in participating in the EVProject, takes a leadership role in furthering the understanding of electric vehicles and charging infrastructure. With a continued focus on sustainability and the environment, the collaborative effort that is taking place through the EV Micro-Climate[™] process, allows Tennessee to demonstrate how working together, through public and private partnership can have a lasting positive impact for the region and set the example for sustainable practices. As market penetration continues to grow, the Tennessee Valley has the strategies in place to support electric vehicles.