

ecotalityTM

clean electric transportation technologies

EV ***Micro-Climates***[©]

In coordination with **NISSAN**

**"The drumbeat of the electrical transportation
is accelerating like nothing I've ever seen in
my life."**

*- **Andy Grove**, former chairman of Intel, July 2008
The "Father" of computer Chip technology*

A leader in clean electric transportation technologies

- **Leading EV infrastructure Experience**
 - Involved in every North American EV initiative to-date.
 - Over 5,100 Charging Stations Installed
- **Premier Battery Fast-Charge Systems**
 - Fortune 500 customer base, utilities, and Government OEMs
- **Advanced Transportation R & D, Engineering & Testing**
- **Primary Contractor to Department of Energy in EV sector**
 - 6+ million miles of vehicle testing on over 200 advanced fuel vehicles

Current Markets

Material Handling
Airport Ground Service Equipment
Neighborhood Electric Vehicles

Emerging Markets

Electric Vehicles (EV)
Plug-in Hybrid Electric Vehicles (PHEV)
Public and Home Charging Stations

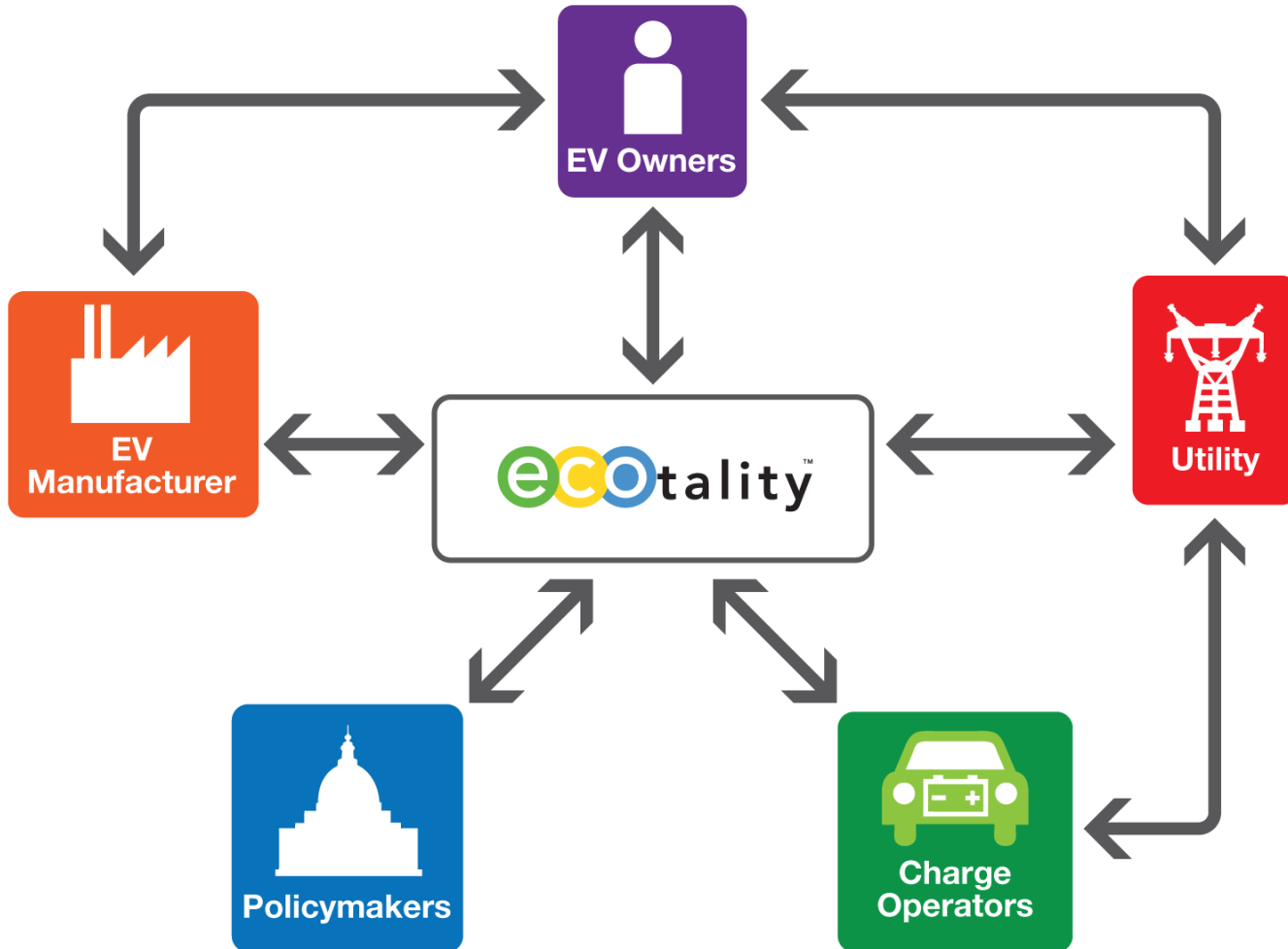
ECOtality's Clients



The logo features the letters 'EV' in a bold, blue, sans-serif font, positioned inside a solid orange circle. To the right of the circle, the words 'Micro-Climates' are written in a blue, italicized, sans-serif font, followed by a copyright symbol (©).

EV *Micro-Climates*®

- Establishes a rich charging infrastructure
- Feasibility & planning studies provides blueprint & action plans for successful execution and continued maintenance.
- Interface with stakeholders to ensure area is prepared for electric transportation and fosters consumer adoption.
- Implementation includes:
 - Physical installations, Sensible Policies & Strong public awareness campaign
- ECOtality assists automotive manufacturers with home installations & provides fast charging systems in strategic locations
- **Create Public and Private alliances** to minimize the cost to taxpayers



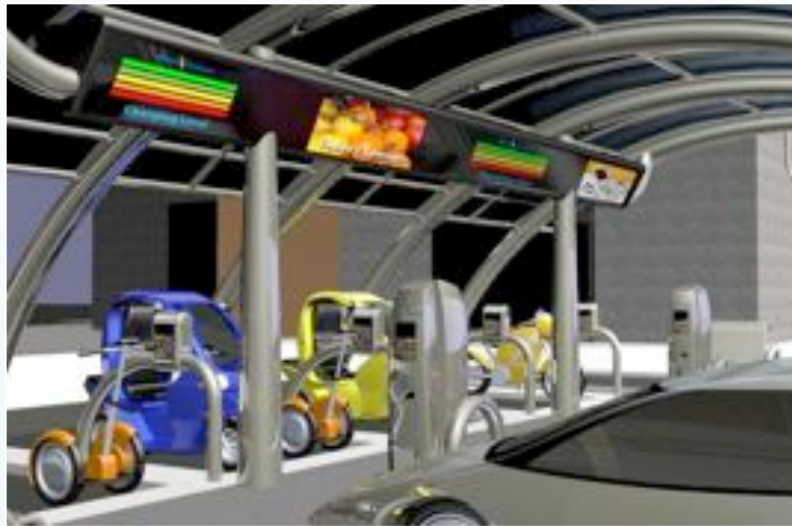
Integrated program to advance areas for the adoption of electric transportation

Different Charging Levels

	Specifications	Time to charge batteries (10-30kWh)	Applications
Level 1 Charger	120VAC, 12Amps	8-24 hours	Emergency Use
Level 2 Charger	240VAC, 40Amp	2-8 hours	Residential, Commercial, Public Areas
Level 3 Charger	480VAC/ 3Phase 30kW to 250kW.	10-30 minutes	Commercial, Fleet use

- EV Micro-Climate primarily uses Level 2 & 3.
- Level 2 applications: residential/garage, commercial & public charging stations
 - i.e. Shopping malls, corporate offices, fleet facilities, parking lots, street charging...
- Level 3 fast-charge stations primarily for commercial locations & fleets
 - i.e. Wal-mart, Starbucks, BP/AMPM, USPS...

Conceptual Fast Charge Stations



- ECOtality is working with major auto OEMs to establish regions as launch markets for new EVs.
- Promote successful EV launch in each region:
 - Work w/ stakeholders to create sustainable business models
 - Launch markets equipped with proper infrastructure & sensible policies to support EVs
 - Create Roadmap/Action plan
 - Establish universal charge infrastructure
 - Efficiently establish infrastructure.



- March 6, 2009
 - Announced partnership in Pima County / Tucson
- April 16, 2009
 - Announced Partnership in Maricopa County / Phoenix
- I-10 “EV Corridor” to utilize fast-charging.
- Begin infrastructure deployment: Summer 2010
- Nissan vehicle launch in Fall 2010



- Reduced auto emissions to meet & exceed local, state & federal air quality standards
 - 1,000 BEVs over 7 years = Reduction of 6.6 Million LBS of CO2
- Utilities can create Clean Mobility Model - from solar generation to EV's on the road – near zero emissions.
 - Over 50% reduction in CO2 Emissions (well-to-wheels)
- Creates leadership position for clean transportation technologies, renewable energy and sustainability.
- Establishes a new market with ample “green collar” job opportunities
- Creates launch venue for all EVs & positions region for immediate stimulus infrastructure funding.

- Deploy 1,000 Nissan BEVs in 5 markets
 - Phoenix / Tucson
 - San Diego (CA)
 - Seattle / Washington
 - Portland / Oregon
 - Tennessee
- ~\$20M of charge infrastructure in each market
- Creates mature charge infrastructure
- Options for Interstate corridors & solar charge stations
- 40+ proposal supporters
 - 11 governmental groups
 - 9 regional utilities

Contact Info

Colin Read
P: 480-219-5005
cread@ecotality.com



6821 E. Thomas Rd
Scottsdale, AZ 85251

Websites

www.ECOTality.com

www.etcEVs.com

www.mini-charger.com

APPENDIX SLIDES

Governmental Actions

- Expedite permitting for residential & commercial charging system installations (Building Codes?)
- Provide incentives to purchase an EV and install EV charging stations
- Establish regulatory consistency amongst state and local regulations
- Link EV programs and infrastructure to regional transit and air quality programs
- Expedite permitting and approval for facilities to provide fast charging locations
- Establish roll out plan for 220V EV charging equipment at public locations
- Public education programs

Utility Actions

- Determine installation process for customers
- Tiered rates to encourage consumer charging activities
- Reduced rate charging? No-charge periods?
Utility override protocol?
- Sponsored charging spots in high traffic areas
- Participate in customer education
- Help screen customers with smart meters
- Provide payment options

Local Businesses

- Providing charging spots in parking lots
- Sponsor charging spots in high-traffic zones
- Contribute to education plan
- Create plug-in only spots
- Provide employees incentives to buy an EV
- Provide employees incentives to contribute to larger educational plan
- Invest in technical education assistance needed for EV support workers