

# Maintaining Momentum Post ARRA

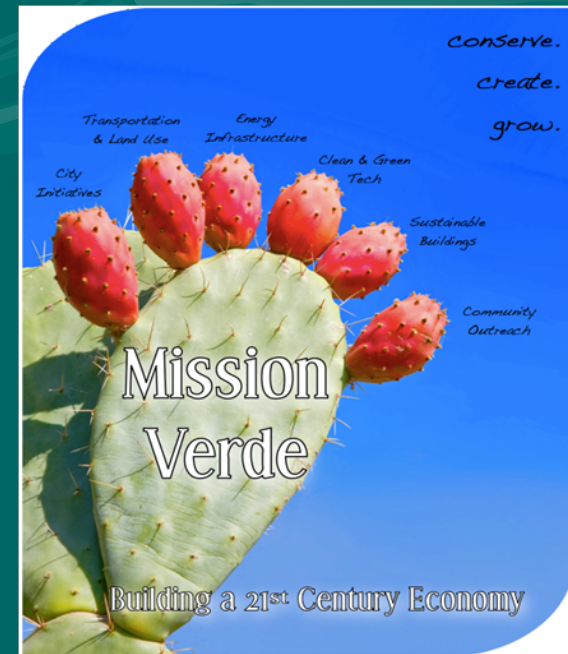
*W. Laurence Doxsey*

*Environmental Policy Director, City of  
San Antonio, TX USA*

# Building Blocks in San Antonio

Utility (CPS Energy) Strategic Energy Plan –  
Vision 2020

City Sustainability Policy/Initiative -  
Mission Verde Plan and Resolution



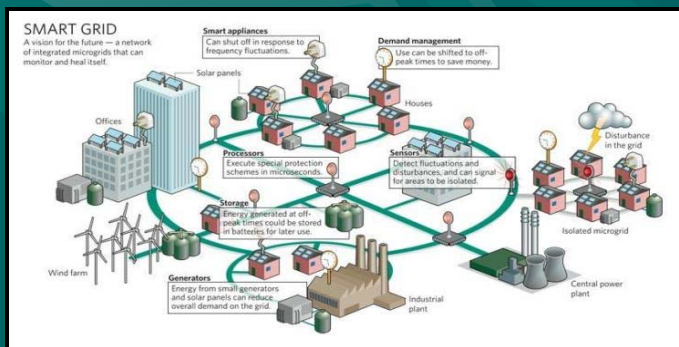
# Proactive Utility

## Vision 2020 Goal

- 1500 MW of Renewable Energy generation
- (100 MW non-wind carve out)
- 771 MW of Energy Efficiency STEP program
- AMI and Smart Grid roll-out

## Achievement to Date

- 910 MW of renewables under contract (94% of this is TX wind)
- 41MW under contract for solar farms. 9.6MW Landfill Gas; 5MW Solartricity Producer Program.
- 142 MWs overall reduction, 61MWs peak demand reduction (first 2 years).
- 40,000 meter 2yr pilot with SA wide phased roll-out to follow



# Mission Verde

- Economic approach to sustainability, focused on energy
- Position San Antonio to be a leader in 21<sup>st</sup> Century Global Economy
- Create new jobs and industries in a time of economic downturn

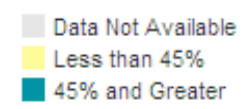
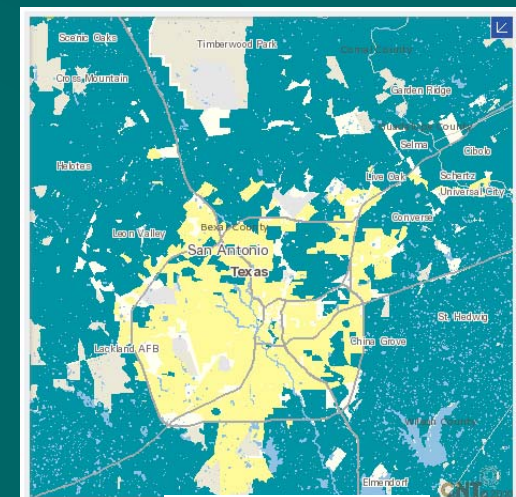




# Mission Verde Initiatives

- Create a 21<sup>st</sup> Century Energy Infrastructure
- Double Bottom Line Venture Capital Fund
- Green Jobs Program
- Economic Development Strategies
- New Construction Building Code
- Green Retrofit Program
- Transportation
- Sustainable Real Estate Development
- Green One Stop Center
- City Leading by Example

Housing & Transportation Costs as % Income





# Mission Verde Resolution included enhancements/additions

- Water conservation and efficient use
- Waste reduction, recycling and use
- Clean, alternative transportation fuels, including electrification
- Low-impact development
- Historic preservation and compact, in-fill development
- Tree cover, green space, reflective roofs and shade structures
- Consumption of locally-produced food

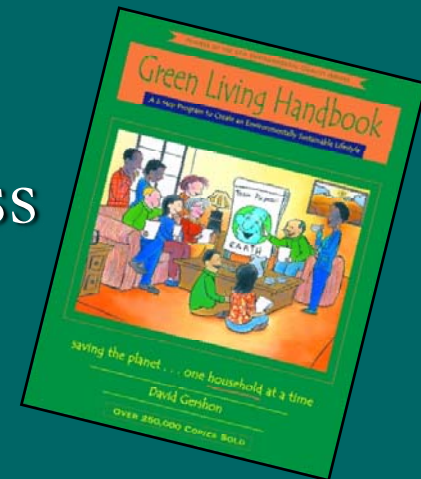


# Utility as Partner

- Program Designs test new models
  - Vet marketing strategies jointly
  - Use utility marketing resources
  - Employ utility staff
- 
- Examples: Revolving Loan Fund; Private Lender Incentivizing; Grass Roots and Direct Marketing Strategies

# Interdepartmental Teamwork, Support, and Empowerment

- Engage other departments in project management
- Tailor deliverables for other departments
- Build internal knowledge and awareness





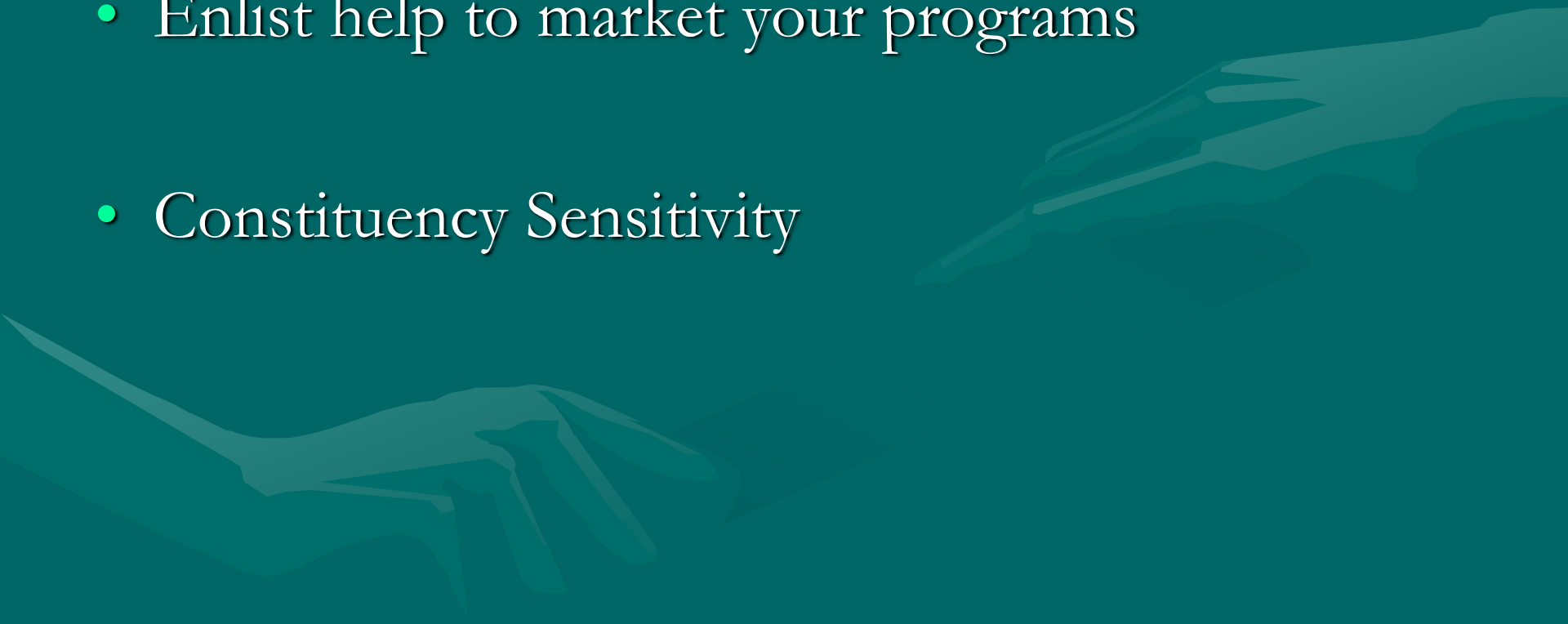
# External Collaboration and Business Development

- Visible and High Profile Examples
- Starting New Enterprises
- Extensive Partnerships



# Engaging Policymakers

- Enlist help to market your programs
- Constituency Sensitivity



# Conclusion

- Develop replicable and or ongoing program designs
  - Market/promote your value in a broad manner
  - Expand your stakeholders
  - Develop leveraging partnerships
- 



## Sustainability Programs post-ARRA

*City of Fort Worth, Texas*

Presented to:

# **EECBG & SEP South Central Regional Peer Exchange**

Presented by:

**James Masters, CEM®, Conservation Specialist**

March 16, 2011  
San Antonio, Texas



# Transportation and Public Works / Facilities Management

Activity #	Description	<u>Original Budget</u>	<u>Changes</u>	<u>Changes</u>	<u>Final Budget</u>	<u>VI(b)</u>
1a	Greenhouse Gas Inty	\$ 84,157	\$ -	\$ -	\$ 84,157	\$ -
1b	EPA Portfolio Manager	\$ 192,882	\$ (121,050)	\$ -	\$ 71,832	\$ 71,832
1c	Sustainability Plan	\$ 95,308	\$ -	\$ -	\$ 95,308	\$ -
2	Building Efficiency Specialist	\$ 180,209	\$ (56,119)	\$ -	\$ 124,090	\$ 124,090
3	Revolving Loan Fund	\$ 476,540	\$ (476,540)	\$ -	\$ -	\$ -
4a	BRIT	\$ 142,962	\$ (142,962)	\$ -	\$ -	\$ -
4b	Lighting Efficiency	\$ 919,368	\$ (9,223)		\$ 910,145	\$ 910,145
5	High Performance Building (LEED)	\$ 420,355	\$ -	\$ 734,911	\$ 1,155,266	\$ 1,155,266
6	Water Dept.	\$ 1,815,526	\$ -	\$ -	\$ 1,815,526	\$ -
7	Traffic Signal	\$ 762,465	\$ -	\$ -	\$ 762,465	\$ -
8	Bike Plan	\$ 381,232	\$ -	\$ -	\$ 381,232	\$ -
9	Renewable Energy	\$ 715,978	\$ -	\$ 70,983	\$ 786,961	\$ 786,961
10	Administration	\$ 551,318	\$ -	\$ -	\$ 551,318	\$ -
<b>Total</b>		<b>\$ 6,738,300</b>	<b>\$ (805,894)</b>	<b>\$ 805,894</b>	<b>\$ 6,738,300</b>	<b>\$ 3,048,294</b>





## Transportation and Public Works / Facilities Management

- 1(a) Planning & Strategy – City Greenhouse Gas Inventory
- 1(b) Planning & Strategy – City Facility Benchmarking
- 1(c) Planning & Strategy – City Sustainability Action Plan
2. Facility EE Operations Improvement – City Building Efficiency Specialist
3. Efficiency Incentive – Revolving Loan Fund
- 4(a) Lighting Improvement – BRIT Facility Parking Lot
- 4(b) Lighting Improvement – City Facility Parking Lots & Garage
5. High-Performance Building – Greening Public Events Facilities
6. Water Utility Improvement – City WWTP Building Systems
7. Transportation Improvement – City Traffic Signalization Pilots
8. Transportation Improvement – City Bicycle Commuting Pilots
9. Renewable Energy – City Facility Solar Hot Water & Power Pilots



## Transportation and Public Works / Facilities Management

*Conservation Reserve Account; (Utility Incentives)*

*Administrative Regulations; (Air Temperature Regulation (AR-F1))*

*Municipal Energy Management Plan; (MEMP)*

*Leadership in Energy & Environmental Design (LEED®)*

*Performance Benchmarking; (Energy Star Portfolio Manager)*

*Retro-/Continuous Commissioning; (i.e. TAMU/ESL Program)*

*Conservation Awareness Program; (CAP)*

*Purchasing Guidelines; (e.g. Energy Star, WaterSense)*

*GHG/Carbon Footprinting; (Facilities & Processes)*

*Enterprise Funds; (Water/Sewer, Muni.Golf, Aviation, Muni.Parking)*

*Internal Service Funds; (Equipment Services, Information Systems)*



## Transportation and Public Works / Facilities Management

- **Show me the money!!!!!!!!!!!!;**
- Developed as Budget neutral or better to the City – utility, operations and maintenance savings accumulated to recover all project costs, financing and follow-on service contracts.
  - Loans such as LoneSTAR (Loan Saving Taxes & Resources) – low interest project financing available competitively through Texas State Energy Conservation Office (SECO);
  - Leases such as Municipal Equipment Lease-Purchase (MELP) financing are available competitively in the financial services marketplace;
  - Cash as available from reserves within City fund accounts (Commercial Paper Sewer Fund, Public Events Fund, Special Trust Fund);
  - Grants such as the American Resource & Reinvestment Act of 2009's (ARRA) EECBG are available as either formula based or competitively based through the United States' Department of Energy (DOE).
  - Performance Contracting



## Transportation and Public Works / Facilities Management

### **LoanSTAR Revolving Loan Program**

- The Texas LoanSTAR (loans to Save Taxes And Resources) Program uses a revolving loan mechanism, which will allow it to continue indefinitely and benefit generations of future Texans. The program was initiated by the Texas Energy Office in 1988 and approved by the U. S. Department of Energy (DOE) as a statewide energy efficiency demonstration program. The quality control on all phases of LoanSTAR has made it one of the most successful and best-documented building energy efficiency programs, state or federal in the United States.





## Transportation and Public Works / Facilities Management

A Municipal Lease is a contract that has many of the characteristics of a standard commercial lease, with three primary differences:

- In a Municipal Lease, the intent of the lessee is to purchase and take title to the equipment. The financing is a full payout contract with no significant residual or balloon payments at the end of the lease term.
- The lease payments include the return of principal and interest, with the interest being exempt from Federal income taxation to the recipient. Typically, a tax-exempt interest transaction will be financed at interest rates lower than equivalent commercial financing.
- The Municipal Lease provides for termination for non-appropriation of funds by the Government Agency.





## Transportation and Public Works / Facilities Management

### **What is Energy Performance Contracting?**

- **Here's how it works:**

You enter into an agreement with a private energy service company (ESCO). The ESCO will identify and evaluate energy-saving opportunities and then recommend a package of improvements to be paid for through savings. The ESCO will guarantee that savings meet or exceed annual payments to cover all project costs—usually over a contract term of seven to 10 years. If savings don't materialize, the ESCO pays the difference, not you. To ensure savings, the ESCO offers staff training and long-term maintenance services.



## Transportation and Public Works / Facilities Management

- **Show me the money!!!!!!!!!!!!;**
  - General Fund; City supports sustainability through U.S. Conference of Mayors' *Climate Protection Agreement*
  - Fort Worth Convention Center (FWCC), Will Rogers Memorial Center (WRMC)
  - Fort Worth Water Department; Aeration Diffusers, Turbine Waste-Heat Recovery, Anarobic Co-Digestion, Digester Mixing, SCADA, System, Aeration Anoxic Zones, Aeration Control, Pumps & Motors
  - Performance Contracting; Work paid for via savings generated by the work itself.
  - Utility Incentives; Government (State or Federal) Demand Side Management (DSM) programs
  - Edison Electric Institute; Residential/Commercial/Industrial Efficiency and Demand Response Programs c/o Steven Rosenstock, P.E.
  - [http://www.eei.org/industry\\_issues/retail\\_services\\_and\\_delivery/wise\\_energy\\_use/programs\\_and\\_incentives/progs.pdf](http://www.eei.org/industry_issues/retail_services_and_delivery/wise_energy_use/programs_and_incentives/progs.pdf)



## Transportation and Public Works / Facilities Management

### **Highlights of EEI Member and Non-Member Residential/Commercial/Industrial Efficiency and Demand Response Programs for 2008**

- (Last Updated on August 1, 2008)
- [http://www.eei.org/industry\\_issues/retail\\_services\\_and\\_delivery/wise\\_energy\\_use/programs\\_and\\_incentives/progs.pdf](http://www.eei.org/industry_issues/retail_services_and_delivery/wise_energy_use/programs_and_incentives/progs.pdf)
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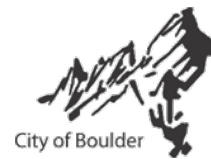


## Transportation and Public Works / Facilities Management

- CenterPoint Energy Texas -Residential Resource Guide
- -Energy Star Homes Program
- -Hard to Reach Program
- -Commercial and Industrial Standard Offer Programs
- On-line information about energy efficient technologies and practices for existing and new homes.
- On-line information about C/I energy efficiency and demand response programs. <http://www.centerpointefficiency.com/>
- <http://www.centerpointhtrsop.com/customer.shtml>
- <http://www.centerpointefficiency.com/energystar/index.htm>
- <http://www.centerpointcisop.com/>
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# MARKET TRANSFORMATION: HOW TO USE ARRA FUNDS TO KICKSTART A LASTING CHANGE IN OUR COMMUNITIES





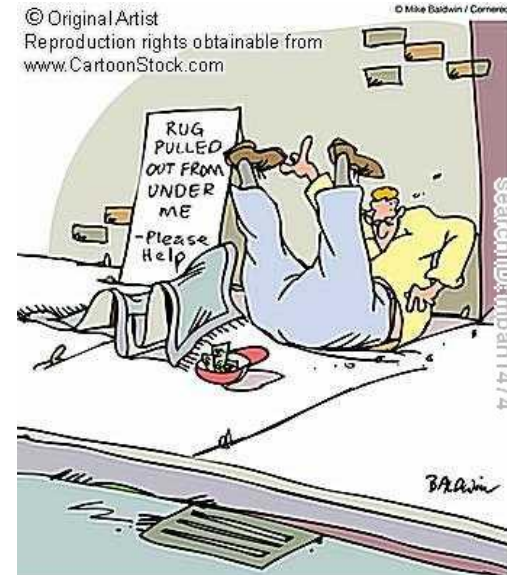
# FINANCE:

- Revolving Loan
  - Can live beyond ARRA
- Market Transformation in the banking Sector
  - Energy Efficiency Works
- Expending ARRA Funds
  - Expended vs.
  - Obligated



# REBATES:

- Meant To Jump Start Energy Efficiency Investment
  - Not a sustainable policy
    - A nudge for the local economy
- Careful When Ramping Down
- Looking For Alternatives In The Market
  - Utilities
  - Your Own Market Transformation



# CONTRACTORS

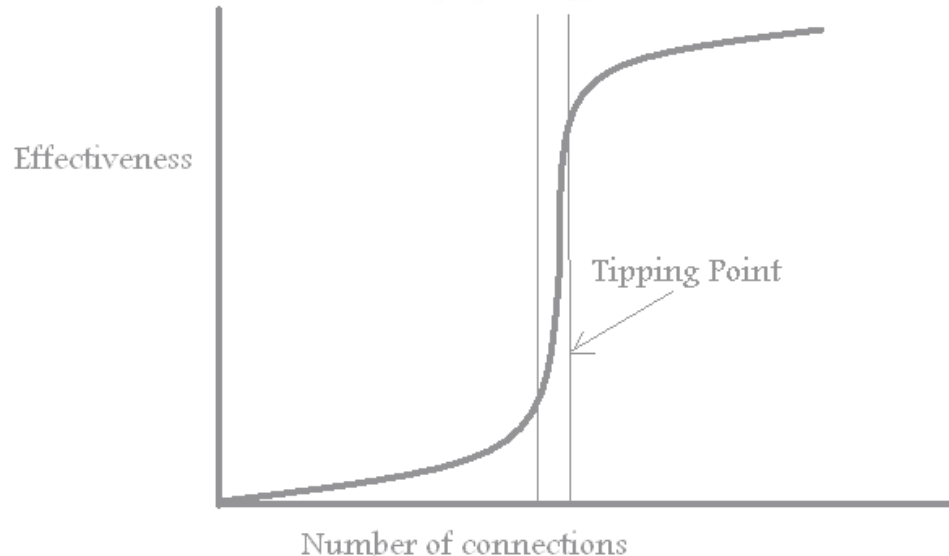
- Support And Trust
  - Your Direct Contractors
    - Building Relationships Through ARRA Programs
    - Subcontractors as well
- SOQ's
  - Contractor Training and Networking
- Sharing Information
  - Boulder County Refrigeration Tune-Up Program



# SOCIAL MOBILIZATION: CREATING LOW COST CHANGE THROUGH EXISTING SOCIAL NETWORKS

- Tipping Point: The name given to that one dramatic event in an epidemic when everything can change all at once is the Tipping Point.

-Malcolm Gladwell, “Tipping Points”



# SOCIAL MOBILIZATION

- A very small number of people are connected to everyone else in a few steps- the rest of us are linked to the world by those special few.
- Utilizing these networks to spread awareness... reach the tipping point
  - Ex: Community Mapping Project



# YOUR ENERGY EFFICIENCY NETWORK:

## WHO CREATES SOCIAL MOBILIZATION?

### ○ Connector:

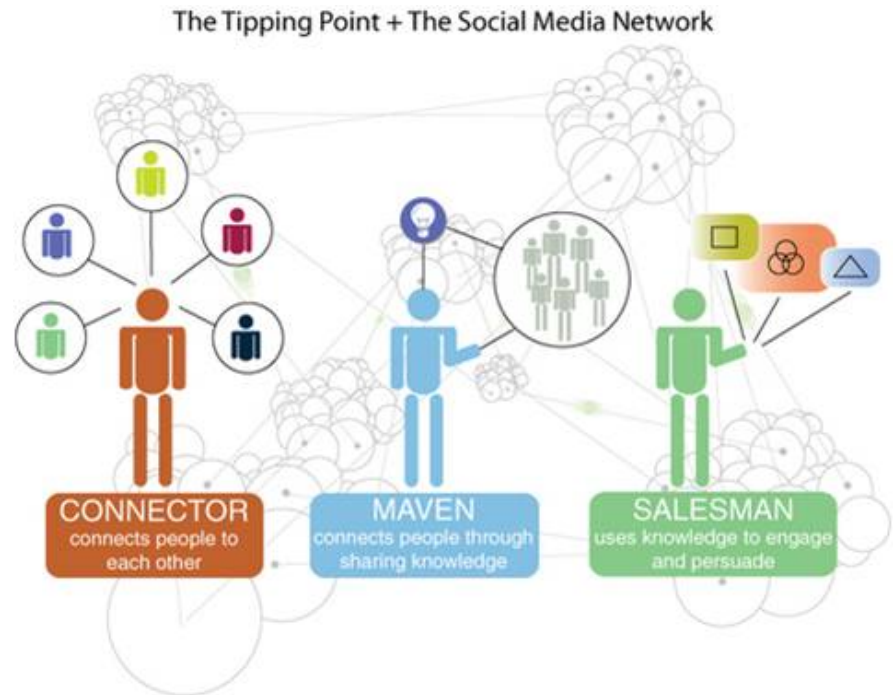
- Examples From Boulder
  - Chamber of Commerce  
Community Affairs Manager
  - Elected Officials
  - Rotary Clubs

### ○ Maven:

- Early Adopters,
  - The people who seek out your programs
  - EE Geeks

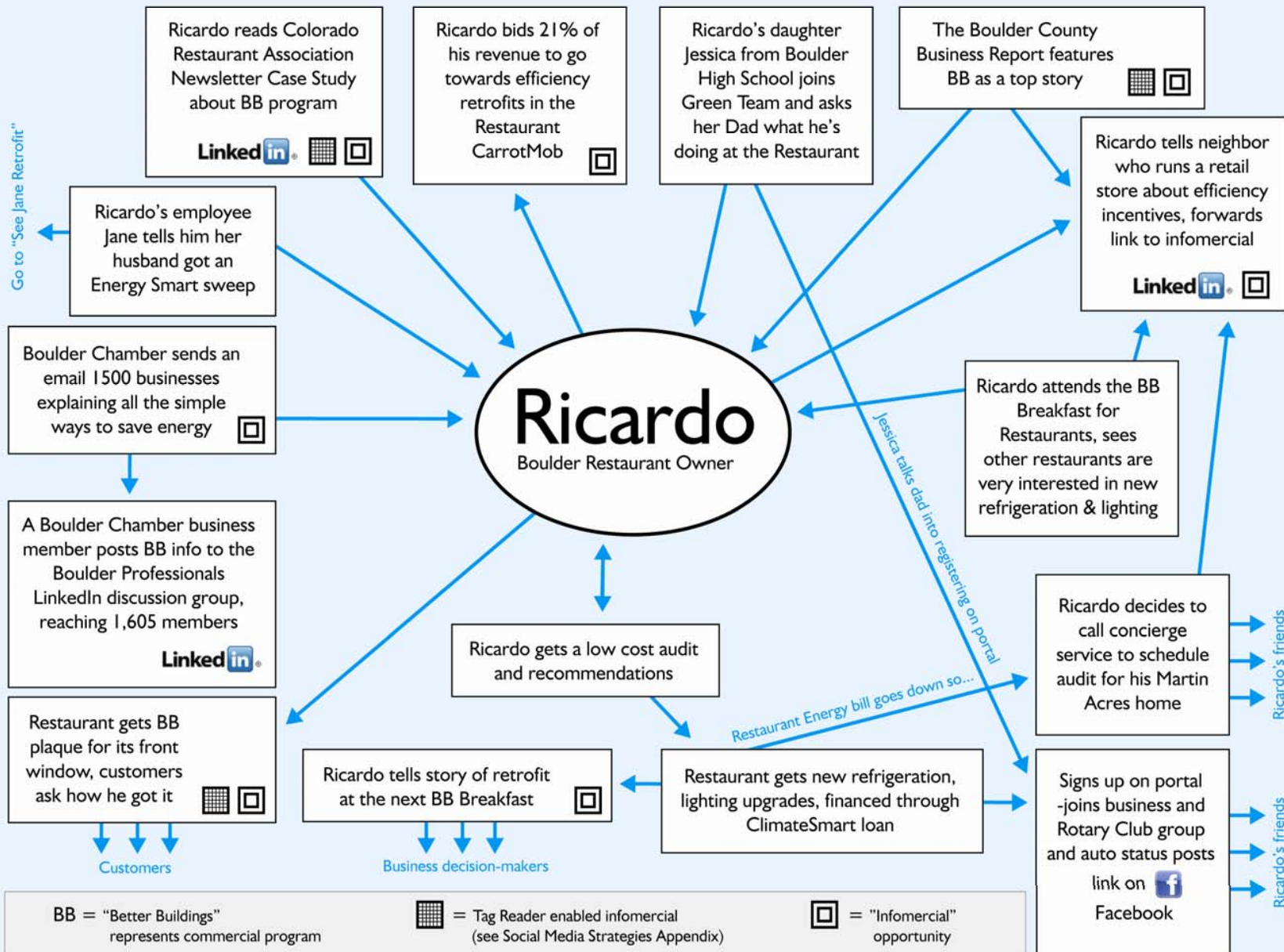
### ○ Salespeople:

- Yours Truly and the Entire EnergySmart Staff
  - Energy Advisors
  - Social Mob Staff





# See Ricardo Retrofit



# CREATING A SOCIAL NORMING EFFECT: EDUCATION AND OUTREACH, WHAT'S THE MESSAGE?

## ○ In The Home:

- Energy Efficiency is the new way of keeping up with the Jones'.
- Key Message: "Everyone is doing it."
  - Remember HighSchool? Peer Pressure Works! (nice haircut)
- Appeal to emotion-
  - Keep your family safe/comfortable/cozy etc..

## ○ In the Business:

- All the other local businesses are participating
- "Your competition just had an assessment"
  - "Oh no! What do they know that I don't? I don't want to lose competitive advantage!"

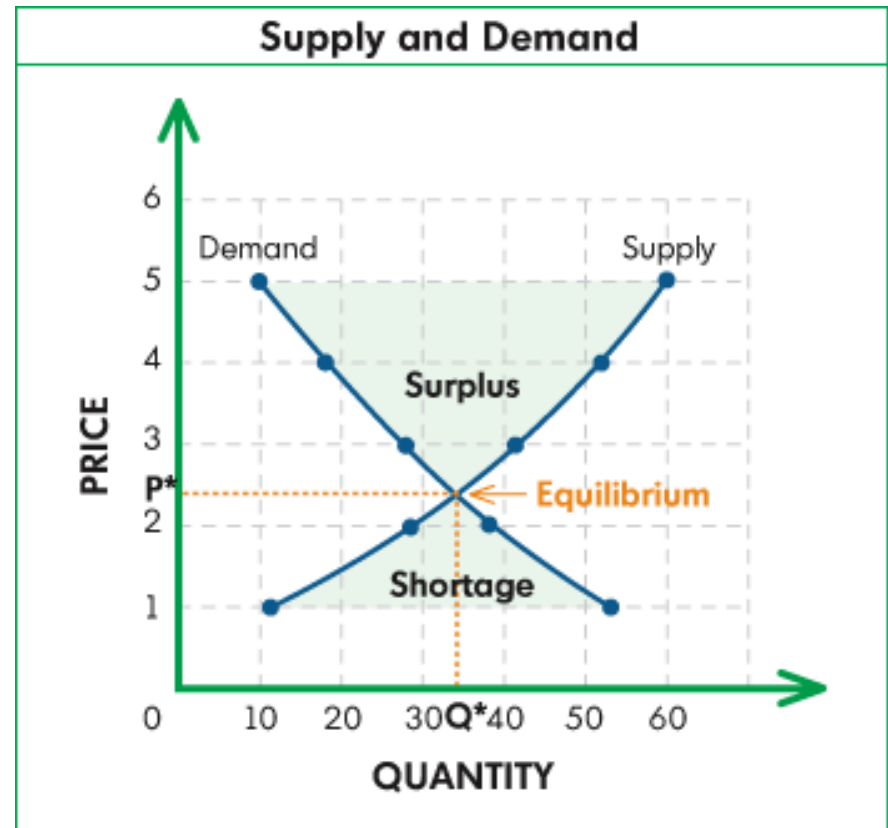




# SOCIAL MOBILIZATION = MARKET TRANSFORMATION

## ○ Simple Economics-

- If We Can Drive and Increase Demand In Our Community: The Supply Gets Better, More Competitive and Thus More Affordable
  - Supply of Good Contractors
  - Supply of EE Measures
    - Cost of CFL's etc...
- EE Becomes More Viable on Its own
- Competition Among Contractors for Better/Cheaper Service



# ANY QUESTIONS?



## **Visibility is key!**

Better Buildings Funded Lighting Retrofit at The Bluebird Theater in Denver. An associated media event sparked a flurry of interest and drove demand.



**energySMART**  
Your Efficiency Solutions

