San Jose’s Green Vision
Can cities become richer by becoming greener?

Planning for Sustainable Economic Development Across the Americas - Curitiba, Brazil – June 7 and 8, 2011
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Former Chief Development Officer, City of San Jose, CA
San Jose’s Philosophy

1. Sustainability is good for economy & will create more jobs and prosperity than are displaced

2. Clean technology is not simply an emerging industry sector, but rather a mechanism to transform the entire global economy

3. The worldwide competition for clean tech jobs will be intense and success will require policy entrepreneurship & strategic partnerships
Cities can create a market and spur growth by influencing both supply & demand-side levers:

**Supply Side**
- Innovation & Manufacturing of Clean Tech products
- Employment in Clean Tech & support industries

**Clean Technology**
- Market-driven innovations that:
  - Utilize renewable energy sources
  - Manage energy resources more efficiently
  - Reduce environmental impacts

**Demand Side**
- Awareness & Adoption of Green practices
- Purchase of Clean Tech products
San Jose’s 15-year plan built upon Economic Development Strategy to spur job growth, demonstrate environmental leadership & build a model 21st century city
Green Vision Goals

1. Create 25,000 Clean Tech jobs
2. Reduce per capita energy use by 50%
3. Receive 100% of our electrical power from clean renewable sources
4. Build/retrofit 50 million sf of green buildings
5. Divert 100% of the waste from our landfill & convert waste to energy
6. Recycle/reuse 100% of wastewater
7. Adopt a General Plan with measurable standards for sustainable development
8. Ensure that 100% of public fleet vehicles run on alternative fuels
9. Plant 100,000 new trees & replace 100% of streetlights with smart, zero-emission lighting
10. Create 100 miles of interconnected trails
Green Vision Development

Citywide team working to advance strategic goals:

- Driving economic growth & create well-paying jobs
- Growing revenues for vital city services & reducing costs
- Improving quality of life & attracting young talent
- Showcasing environmental leadership & reducing the region’s carbon footprint
- Demonstrating that economic growth & environmental sustainability are interconnected
Green Vision Implementation

Organization:

• Steering Committee: City Manager’s Office & Executive/Senior Staff (Sponsors)

• Implementation Team: Individual Goal Leaders

Benefits of Integrated Approach:

• Collaboration/removal of departmental silos

• Engagement of entire organization
Transforming Challenges into Opportunities

Challenge: Street Lighting
- Electricity & maintenance costs
  ~$4.5 million per year
  ~16,000 tons of CO₂

New Lighting Policy
- Reduce costs & emissions
- Replace traditional lights w/ efficient lights
- Increase renewable power
- Provide electrical vehicle charging stations

Spur Job Creation
- Catalyze innovation/incubation
- Drive manufacturing & installation jobs
- Create global export opportunities
- Generate revenues for City services

Create Market
- LED lighting innovation
- Smart communications technology
- Integration of lighting & solar infrastructure for electric vehicles

City of San Jose
Capital of Silicon Valley
Key Areas of Focus: Land Use

- Envision San Jose 2040 (General Plan Update)
- North San Jose Vision
- Employment Lands Preservation Framework
- Green building standards for new construction & large rehabilitation projects
- Transit-oriented design & greater density
Clean Tech Strategy: Key Opportunities

• **Renewable Energy**: solar (PV, CIGS, CSP, CPV), fuel cell, storage/distribution

• **Green Building**: energy efficiency, control & monitoring systems, LED lighting, materials

• **Clean Transportation**: alternative fuels & vehicles, mass-transit, smart infrastructure
Clean Tech Strategy: Approach

SJ’s Integrated Model for Clean Tech Innovation:

<table>
<thead>
<tr>
<th>Research</th>
<th>Incubation</th>
<th>Prototyping/Demonstration</th>
<th>Testing/Certification</th>
<th>Production</th>
<th>Consumer Adoption/Integration</th>
</tr>
</thead>
<tbody>
<tr>
<td>UCs SJSU DOE/NREL</td>
<td>Environ. Bus. Cluster Clean Tech Support Services</td>
<td>SVTC Early Public Adoption Demonstration Policy</td>
<td>UL Development Facilitation City/SJRA Incentives</td>
<td>Development Facilitation City/SJRA Incentives</td>
<td>Creating Consumer Demand Streamlined Policies</td>
</tr>
</tbody>
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Workforce Development
Clean Tech Strategy: Innovation

World class incubators:

- EBC Environmental Business Cluster
- biocenter

Capitalizing upon venture capital investment:
- Silicon Valley companies received 62% of total CA investment & 21% of total U.S. investment in 2007

Forming new incubation partnerships:

- California Clean Tech Open
- NASA
- NREL
- Sandia National Laboratories
- Underwriters Laboratories
Company Attraction & Expansion

Nanosolar
✓ Manufacturing thin-film solar cells in San Jose
✓ $300M in venture capital & 300+ jobs

Philips Lumileds
✓ Manufacturing energy-efficient light emitting diode (LED) products
✓ 540 jobs
Innovative training programs:

- On-the-job training & classroom programs
- Industry involvement in community college curricula
- Job placement/employee recruitment services
- Green collar job training with Federal, State and private funds
San Jose is home to 3,500+ clean tech and green collar jobs, including:
What Makes San Jose’s Strategy Different?

• Complete integration of economic development and environmental sustainability efforts

• Belief that climate change presents the greatest economic opportunity since WWII, rather than impediment to business

• Recognition that massive scale of challenge demands bold action, innovative policies, programs, and funding mechanisms
Conclusion

Can cities can become richer by becoming greener? Yes!!

Questions and Dialogue

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