

Sustainable Energy Strategy Implementation



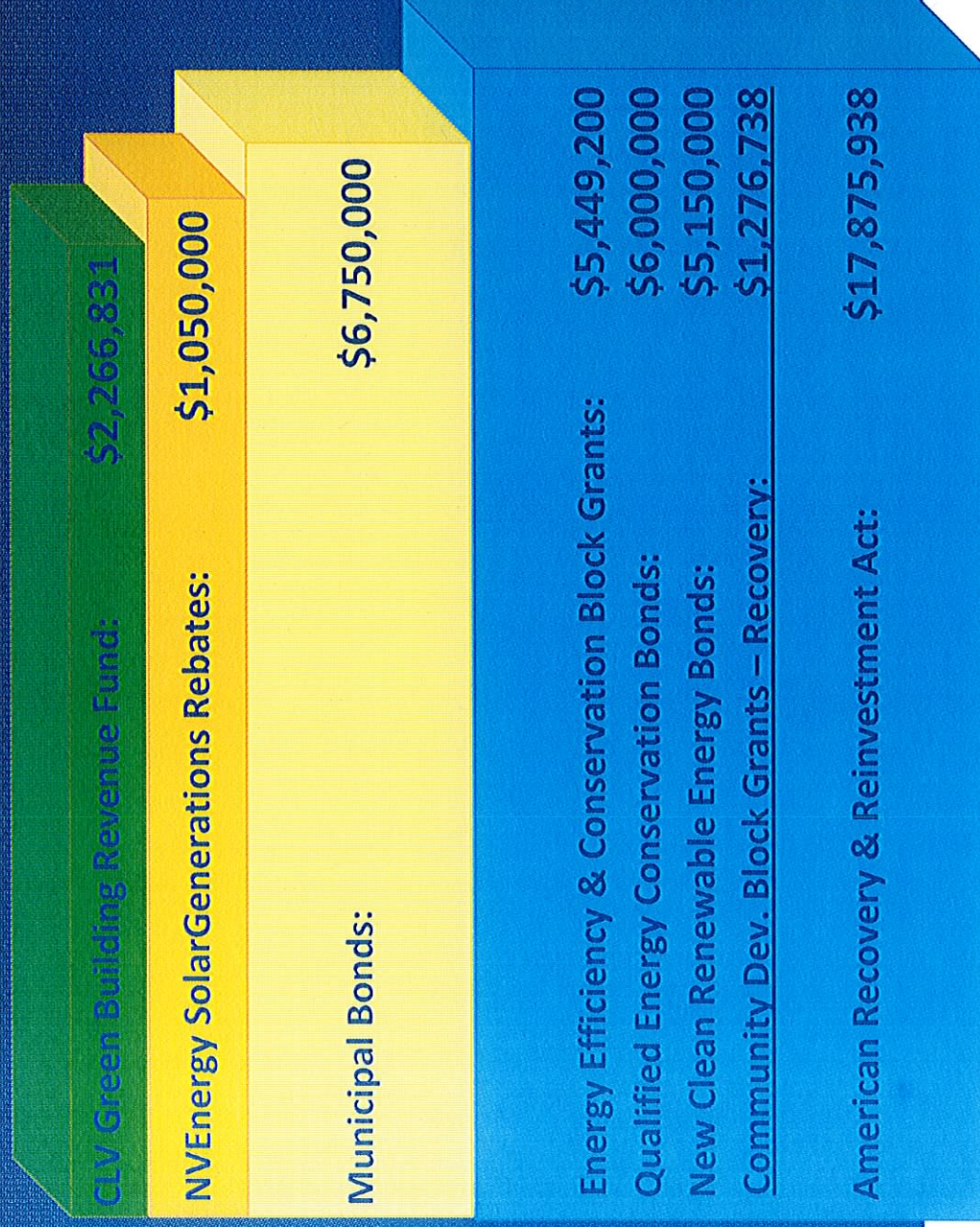
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after final agenda

7/14/09 #65

Funding Sources



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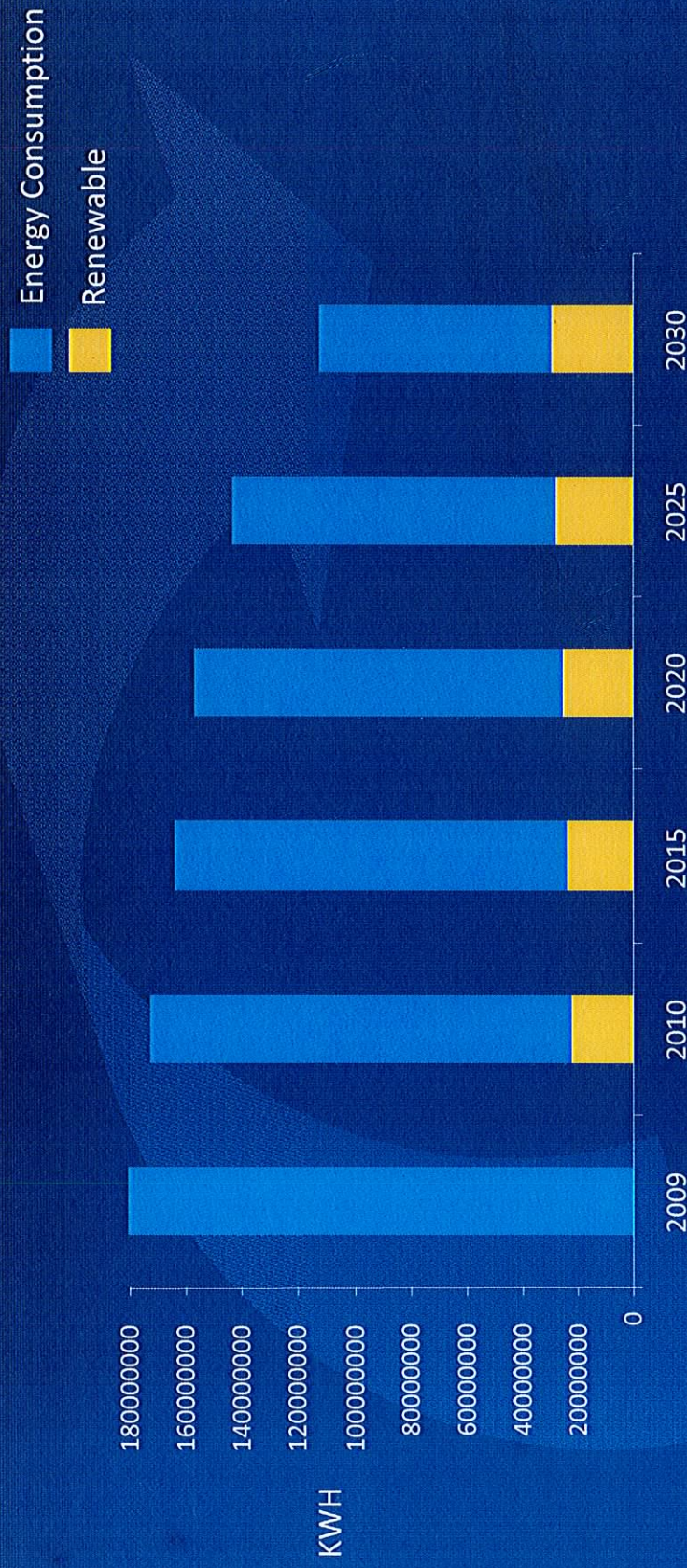
Reinvestment of Realized Savings



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Energy Consumption Over Time



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Solar Facilities Program

- Construct 17 solar covered parking structures on CLV sites
- Provide renewable energy for City facilities
- Manage City energy costs
- Raise public awareness of solar energy



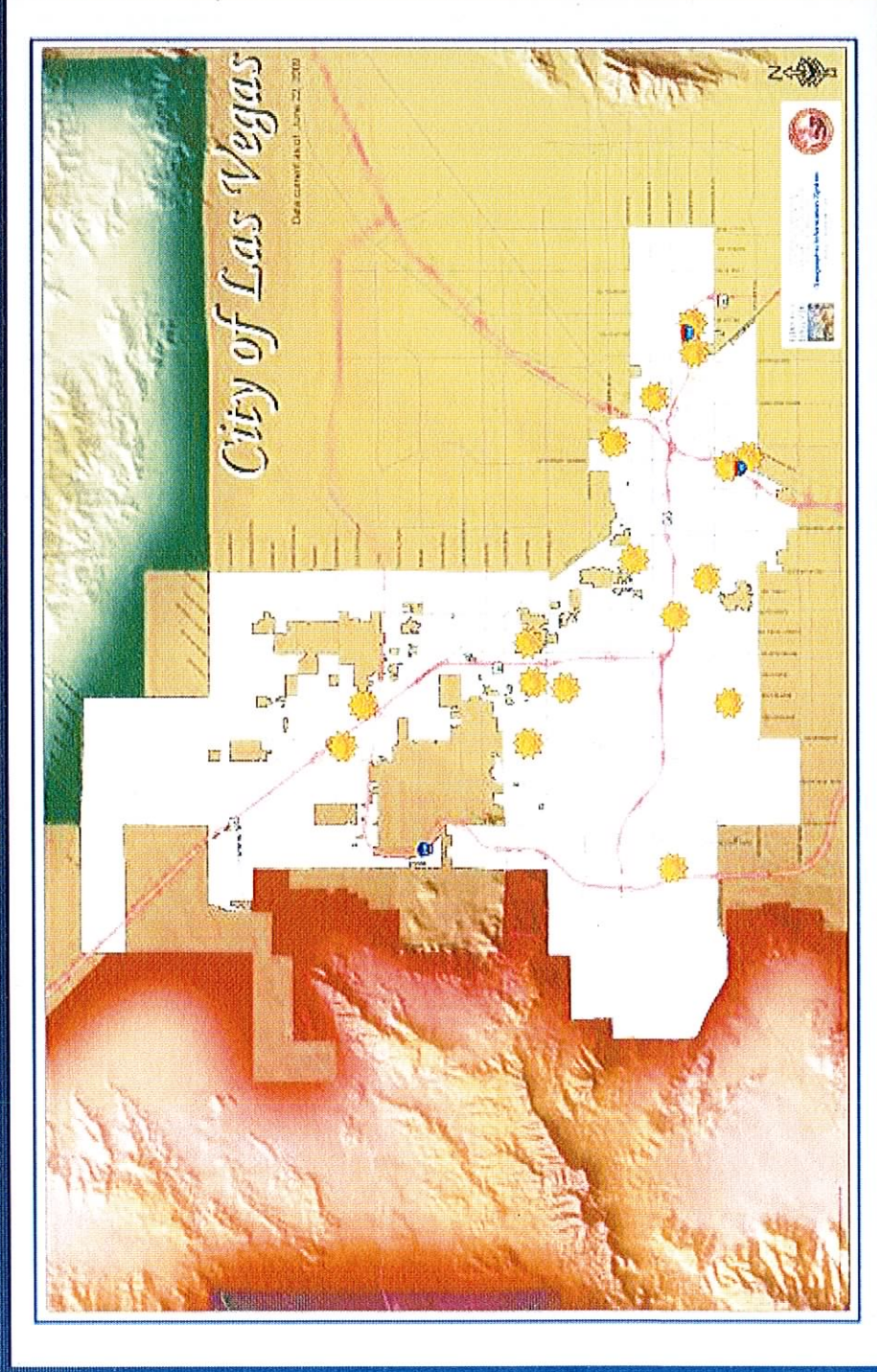
Cost	\$12,502,738
kWh Generated	2,068,122
Jobs	131
CO ₂ Reduction	1,594 tons
Annual Savings	\$206,812

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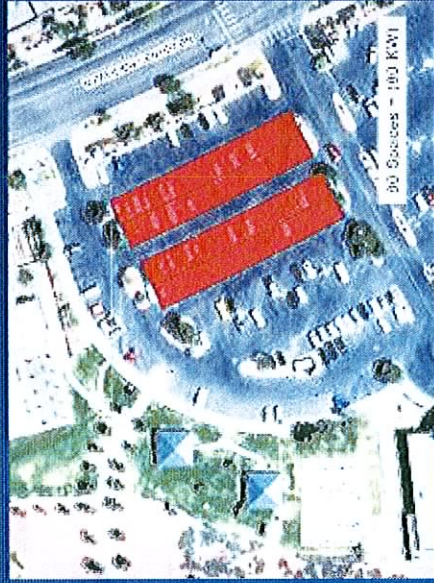
Solar Facilities Program Map



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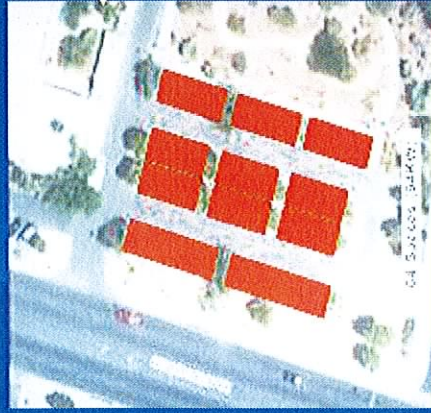


Solar Covered Parking Site Plans



Veterans Memorial Community Center
80 spaces = 80 kW

Fire Station 10
24 spaces = 38 kW



Natural History Museum
64 spaces = 64 kW



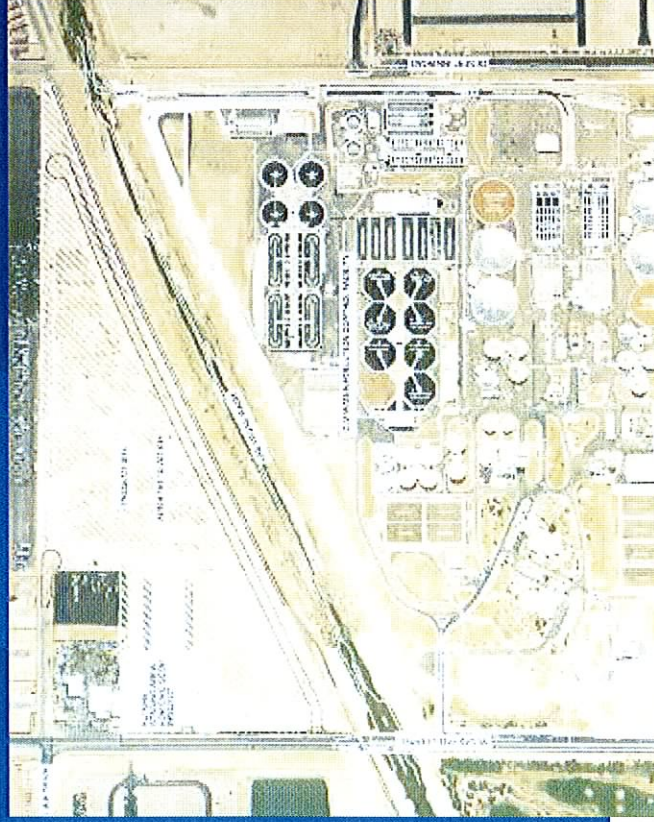
West Services Center
48 spaces = 48 kW

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Water Pollution Control Facility Solar Project

- Up to 4 MW solar generation facility to provide power for waste water treatment operations
- Funded by CLV Sewer Enterprise Fund



Cost	\$22,000,000
kWh Generated	8,800,000
Jobs	190
CO ₂ Reduction	3,996 tons
Revenue	\$792,000

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Facility Retrofits Program

- Perform energy audits on key CLV facilities
- Perform prioritized energy retrofits to maximize energy efficiency
- Reduce City energy costs



Cost:	Energy Audit	\$100,000
	Energy Retrofits	\$5,780,000
kWh		4,816,667 kWh
Jobs		70
CO ₂ Reduction		3,713 tons
Annual Savings		\$578,000

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Exterior Lighting Upgrades

- Replace existing CLV street lights with
- Manage City energy costs



Cost	\$6,750,000
kWh Saved	3,017,647
Jobs	20
CO ₂ Reduction	2,326 tons
Annual Savings	\$1,021,765

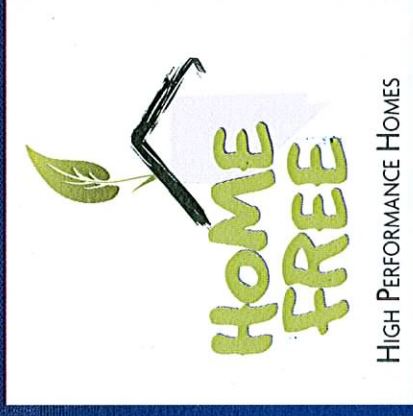
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Home Free Nevada Community Rebates

- Finances energy audits based on EPA's Home Performance with Energy Star program
- Provides up to \$1,000 rebate to homeowners for energy audits and retrofits
- Enables homeowners to lower/manage rising energy costs
- NV Energy partnership



Cost	\$500,000
kWh Saved	1,980,000
Jobs	250
CO ₂ Reduction	1,526 tons
Annual Savings	\$260,000

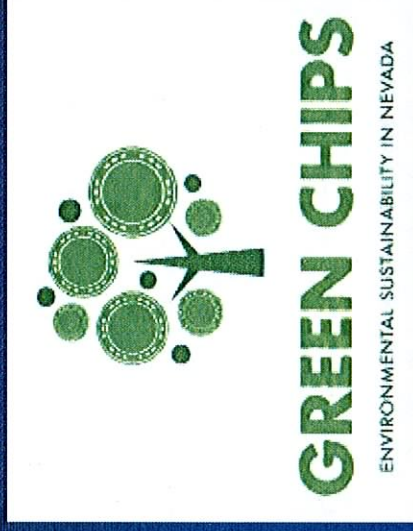
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Green Chips Revolving Loan Fund

- Public/Private non-profit that funds green community projects
- Provides low-interest financing after tax incentives and rebates have been utilized
- Enables homeowners to lower/manage rising energy costs



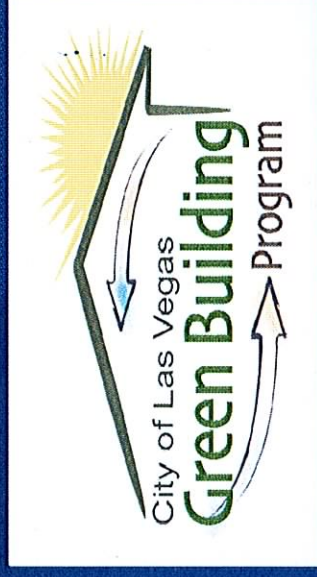
Cost	EECBG QECB	\$175,000 \$846,000
kWh Saved		1,980,000
Jobs		250
CO ₂ Reduction		1,500 tons
Annual Savings		\$260,000

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Green Building Program

- Updated program adds new incentives for new and existing buildings in commercial and residential sectors, including
 - Expedited Plan Check
 - Permit and Certification Fee Reductions
 - Green Building Grants
- Buildings built to LEED, SNGBP
- Partnership with NV Energy



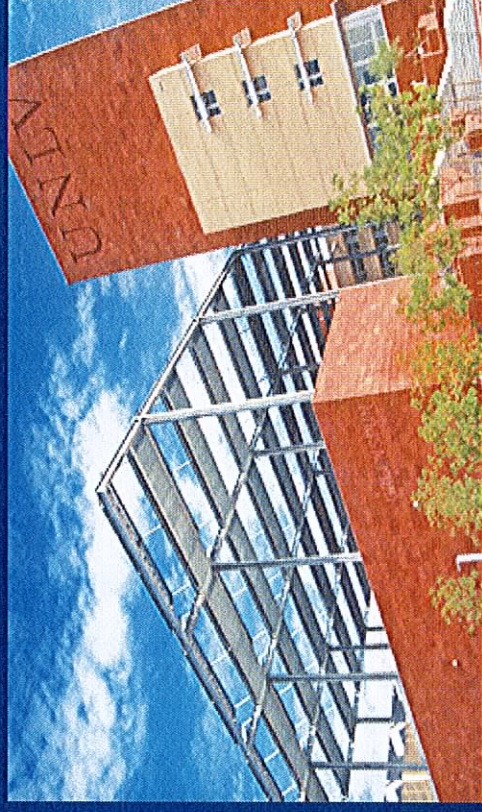
Cost	GBSRF	\$445,000
kWh Saved		1,050,000
CO ₂ Reduction		800 tons
Tax Revenue		\$550,000

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Outreach and Education

- City-UNLV partnership will highlight the importance of renewable energy, energy efficiency, and conservation
- Website with interactive map
 - Conservation measures taken
 - Energy produced or saved
 - GHG emissions reduced
- Outreach to community members



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Revenue for the City

- Total investment
- Economic Impact
 - Jobs
 - Gross Product
 - Tax Revenue

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Mid-2009 SES Implementation Evaluation

CITY OPERATIONS

100% of decisions on major capital projects and new City programs will triple bottom line.

Invest in renewable energy projects.

Invest 100% of cost savings from renewable energy projects in energy conservation and renewable energy projects.

Reduce City's carbon footprint.

Reduce rate of electricity consumption.

Achieve renewable energy portfolio standard.

Implement preferential purchasing policy for products that are certified environmentally friendly.

Increase amount of fuel consumed to cleaner-burning, domestically-produced alternative fuel.

Adopt contracting policy consistent with NRS that considers sustainable practices as criteria for awarding contracts.

	2009	2010	2011	2015	2020	2030
	X					
	↑		3 mw	7mw		
	X					
	↑		10%		20%	30%
	↑		5%			
	↑		10%		20%	30%
	X					
	X	90%				
	X					

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Mid-2009 SES Implementation Evaluation

CITY CODES & REGULATIONS

	2009	2010	2011	2015	2020	2030
Adopt form-based sustainability zoning code	↑					
Adopt an energy code 30% more efficient than current code	↑					
Work with Green Council to revise Green Building Program to include incentives and mandates	↑	Launching July 2009				

COMMUNITY INVOLVEMENT

Participate in creating regional Home Performance energy audit and conservation program, and provide incentives to residents who enroll in program	↑	Launching July 2009				
Implement residential solar rebate program	↑	In progress				
Implement indoor water conservation program	↑	In progress				

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