

Joint Committee Workshop on ARRA-Funded Clean Technology Innovation in California

**AMERICAN RECOVERY &
REINVESTMENT ACT of 2009**
Delivering Energy Savings for California

July 13, 2010

Pat Perez
California Energy Commission



Where it began...

February 19, 2009



Department of Energy Funding Opportunities



ENERGY.GOV/RECOVERY

Pillars of Recovery

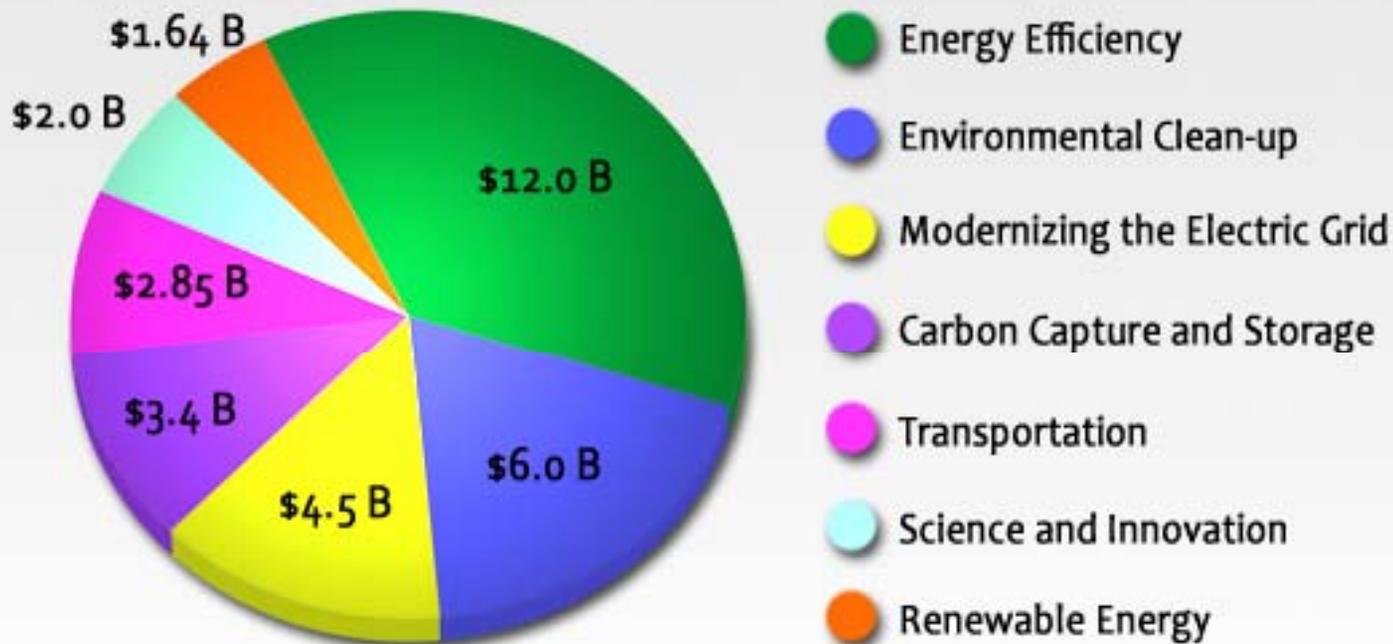


Chart total: \$32.4 billion



Department of Energy Funding Opportunities

Some Examples of DOE's Competitive Funding Opportunities

Energy Efficiency

- Building Energy Efficiency (\$346M)
- Industrial Energy Efficiency (\$256M)

Renewable Energy

- Solar (\$115M)ind (\$93M)
- Geothermal (\$400M)

Electric Grid

- Smart Grid Investment and Demonstrations Projects (\$4.2B)
- Smart Grid Workforce Training (\$100M)

Transportation

- Transportation Electrification Clean Cities Alternative Fuel and Vehicles Program (\$700M)
- Advanced Fuels (\$110M)

Carbon Capture and Storage

- Carbon Capture and Storage (CCS) (\$1.5B)
- Geologic Characterization Projects (\$49M)
- CCS Research and Training (\$20M)

Science and Innovation

- ARPA-E (\$400M)
- Energy Frontier Research Centers (\$277M)
- Small Business Research (\$58M)





Energy-Related Funds Coming to California (Formula Grant & Competitive)

DOE Project Name	ARRA \$ to California to Date	% Share of Energy Program Funding ARRA \$ to California	Nationally Awarded ARRA \$ to Date	CA % Share of National Awards to Date
Advanced Research Projects Agency - Energy	\$20,985,815	0.9%	\$170,878,524	12.3%
Electricity Delivery and Energy Reliability	\$386,046,885	16.9%	\$4,279,208,432	9.0%
Energy Efficiency and Renewable Energy	\$1,182,155,681	51.9%	\$16,104,529,097	7.3%
Environmental Management	\$23,800,000	1.0%	\$5,532,161,546	0.4%
Fossil Energy	\$283,852,269	12.5%	\$1,577,340,432	18.0%
Science	\$381,878,309	16.8%	\$1,559,707,913	24.5%
TOTALS	\$2,278,718,959	100%	\$29,223,825,944	~ 8%

Date taken from The Department of Energy's (DOE) 'DOE Recovery Act Awardees - June 18, 2010'

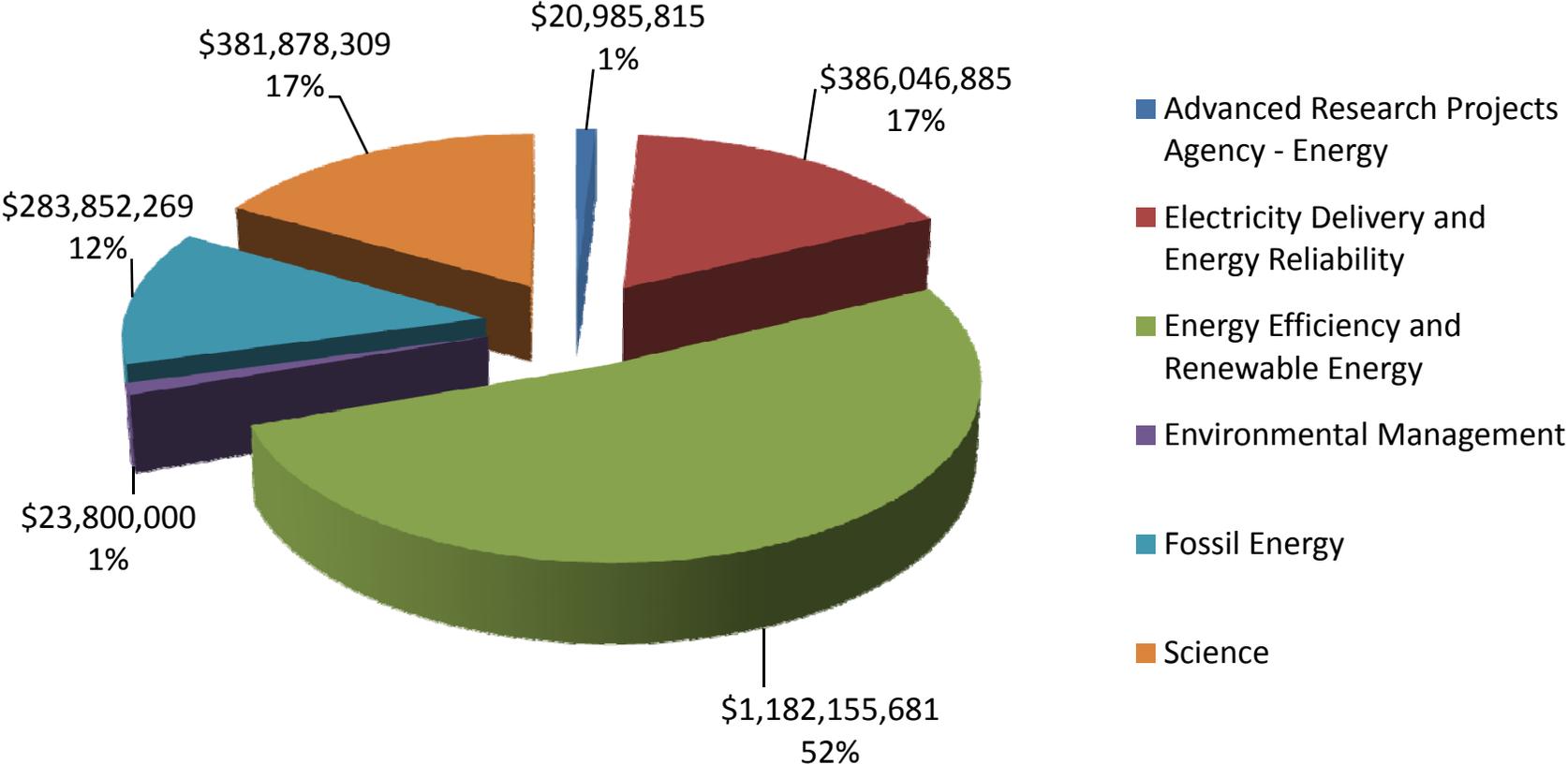
- Funding for selected DOE projects: **\$2.3 billion**
- DOE Recovery Act projects in California: **501**
- Clean energy tax credits and grants: **257**

Date Source: Department of Energy



Energy-Related Funds Coming to California

**DOE's Energy-Related ARRA Awards Made to California as of June 18, 2010
(Total \$ Received to Date: \$2.3B)**



Source Data: Department of Energy's "DOE Recovery Act Awardees – June 18, 2010"



Large DOE ARRA Awards to California

- **BrightSource Energy** - \$1.37 billion in loan guarantees to support the construction and start-up of Ivanpah Solar Complex, three utility-scale concentrated solar power plants located in California's Mojave Desert.



- **Tesla Motors** - \$465 million loan to repurpose a manufacturing facility in Fremont, California to produce electric drive trains, electric vehicles and battery packs.



- **The Sacramento Municipal Utility District** - awarded \$127.5 million to install a comprehensive regional smart grid system.
 - CEC's PIER Program is providing \$1M in cost-share pending finalized DOE grant agreement.



Large DOE Clean Energy Technology ARRA Awards To California

- Awarded \$308 million for Hydrogen Energy International 's Hydrogen Energy California (HECA) project in Bakersfield, CA.
 - HECA will bring clean power to over 150,000 homes in the local community, create new jobs and avoid the emissions of more than two million tons of greenhouse gases
- Twenty California small businesses were awarded nearly \$3 million in ARRA funds for small business innovation research, development, and deployment of clean energy technologies.
- Eleven California entities awarded over \$22 million in Advanced Research Project Agency- Energy (ARPA-E), capturing nearly 24 percent of the entire national award funding



Energy Commission's Clean Energy Business Financing Program

- ARRA State Energy Program (SEP) funds provide \$30.6 million in low-interest loans to eligible applicants that improve or expand their energy efficiency or renewable energy manufacturing facilities in California.
 - Encourages the production and manufacture of energy efficiency and renewable energy components; systems and technologies; alternative and renewable fuels; and vehicles and vehicle components.
- Status of program:
 - Notice of Proposed Awards (NOPA) - July 2010
 - Anticipated Business Meeting for approval of loan awards is expected in late August

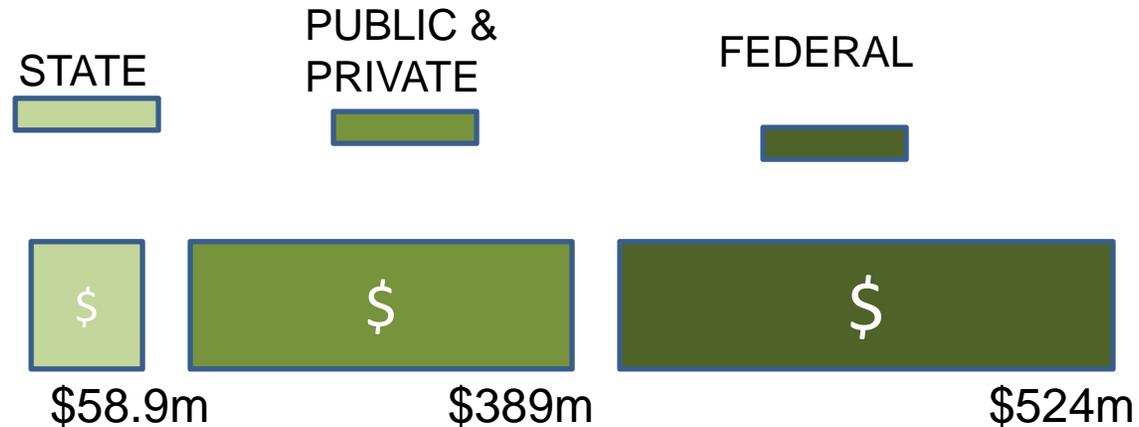


Leveraging Funding Sources



The Energy Commission program awards leveraged more than \$800 million in federal and other public and private sector funding.

State funding: Public Interest Energy Research (PIER) Program (\$22.4m) and the Alternative and Renewable Fuels and Vehicle Technology Program (\$36.5m).



Does not include single awards for multi-states



AB118-ARRA Project Leverage

Alternative and Renewable Fuel & Vehicle Technology Program Match Funds (AB118)0					
Prime Applicant	Project and Description	Award Amount* (AB118)	Federal Funding (ARRA)	Additional Funding	Total Project Amount
Electric Transportation Engineering (ETEC) Corp. / Nissan	Charging Infrastructure for Nissan Leaf Rollout	\$8,000,000	\$39,350,127	\$32,572,007	\$79,922,134
Sacramento Municipal Utility District (SMUD)	Charging Infrastructure for Plug-In Hybrids and Electric Vehicle Demonstration with General Motors	\$553,000	\$2,116,898	Not yet known	\$2,669,898
Sacramento Municipal Utility District (SMUD)	Charging Infrastructure for Plug-In Hybrids and Electric Vehicle Demonstration with Chrysler	\$100,000	\$2,209,000	Not yet known	\$2,309,000
South Coast Air Quality Management District (SCAQMD)	PHEV Medium-Duty Commercial Fleet Demonstration and Evaluation	\$5,000,000	\$27,994,490	\$20,102,652	\$53,097,142
Coulomb	Electric Vehicle Infrastructure	\$3,417,000	\$3,354,000	\$508,000	\$7,279,000
Department of General Services	Propel - Installation of E85 Fueling Stations	\$4,000,000	\$6,917,000	\$16,260,371	\$27,177,371
South Coast Air Quality Management District	Replacement of Diesel-Fueled Heavy-Duty Drayage Trucks with Natural Gas	\$5,142,000	\$9,408,389	\$19,440,000	\$33,990,389
San Bernardino Associated Governments	Ryder Trucks - Ultra Low Emission LNG Local Goods Movement Using LNG Trucks and LNG/CNG Fueling Infrastructure	\$9,308,000	\$9,950,708	\$17,062,737	\$36,321,445
Envia Systems Inc.	Development of High Energy Density Lithium Batteries for Electric Vehicles and Plug-In Hybrid Electric Vehicles	\$1,000,000	\$4,000,000	\$329,000	\$5,329,000
Total:		\$36,520,000	\$105,300,612	\$106,274,767	\$248,095,379

*Awards pending final DOE contract execution.



For more information on Energy Commission administered Recovery Act programs:

<http://energy.ca.gov/recovery/>

