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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

The collage features several key elements: a tree growing from a lightbulb, a recycling bin labeled 'Paper Recycled', a circular logo with stars and 'RECOVERY.GOV', solar panels on a roof, wind turbines, a white car with 'Zero Emission' branding, and a hand holding a globe.

Department of Energy Funding Opportunities

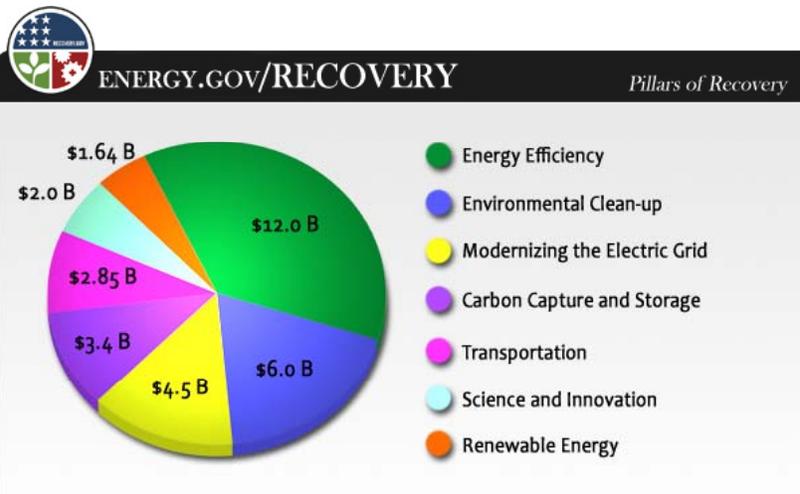


Chart total: \$32.4 billion

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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)

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

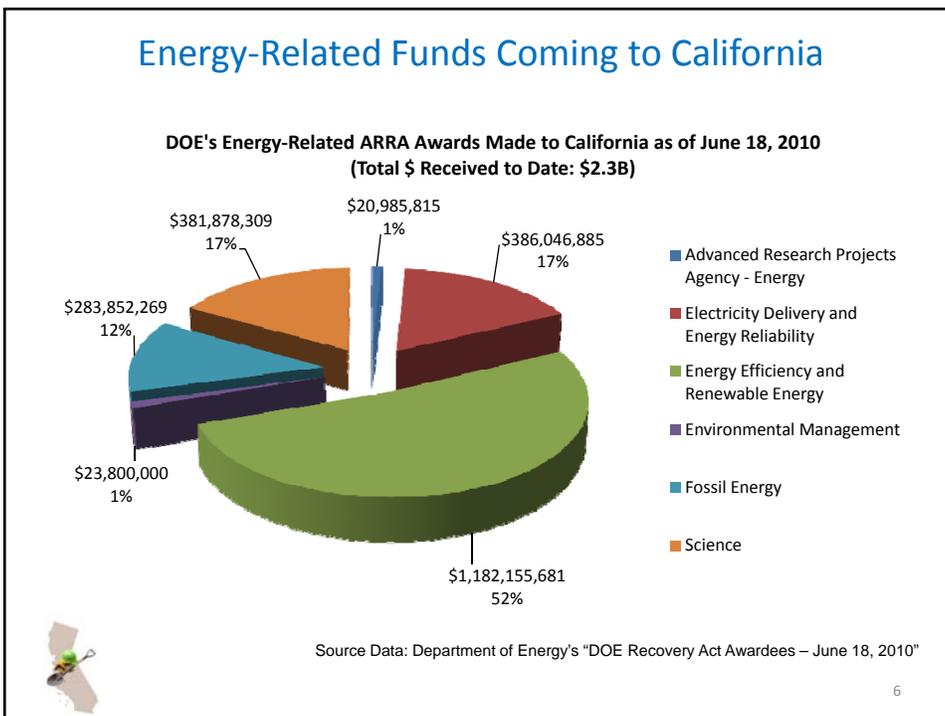


| DOE Project Name | ARRA \$ to California to Date | % Share of Energy Program Funding ARRA \$ to California | Nationally Awarded ARRA \$ to Date | CA % Share of National Awards to Date |
|---|-------------------------------|---|------------------------------------|---------------------------------------|
| 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

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.



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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



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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



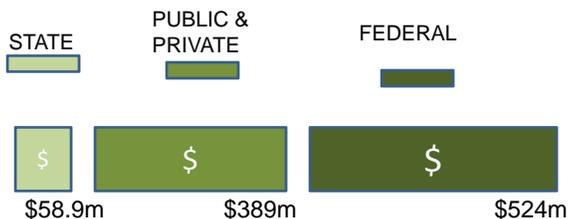
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Leveraging Funding Sources



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



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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.

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For more information on Energy Commission administered Recovery Act programs:

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



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