Clean Renewable Energy Bonds Program
2021 Annual Report

Report to the Legislature

2021

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Executive Summary

California Streets and Highways Code Section 157.8 requires the California Department of Transportation (Caltrans) to annually report to the budget committees of each house of the Legislature an update on the Clean Renewable Energy Bonds Program. The United States Congress initiated the program in 1995 to provide bond funds for financing the acquisition and installation of photovoltaic (solar) energy systems. The state statute requires Caltrans to submit this report until the bonds mature, in Fiscal Year 2023-24.

The Clean Renewable Energy Bonds 2021 Annual Report includes the following information:

- The status of each facility on which Caltrans has installed photovoltaic energy systems as part of the Clean Renewable Energy Bonds Program.
- An accounting of the costs for each photovoltaic energy system installed or acquired by Caltrans.
- A description of the energy savings Caltrans has achieved by acquiring or installing photovoltaic energy systems.
- A review and analysis of the expected cost savings at the time of issuance of the bonds versus actual to-date annual savings.

Caltrans estimates a bond payback period of 27.4 years. The photovoltaic projects have advanced departmental efforts towards energy conservation and reduction of greenhouse gas emissions as set forth in Executive Orders B-18-12 and B-30-15, and consistent with the state's renewable power statutes; "green power;" electric grid demand; energy conservation; Leadership in Energy and Environmental Design (LEED); and climate change mandates. Caltrans remains committed to meeting the Governor's goals of a sustainable clean technology economy, improved reliability of the electrical grid, and reductions in air pollution.

Background

Statutory Reference & Purpose

California Streets and Highways Code Section 157.8 requires Caltrans to annually report to the budget committees of each house of the Legislature an update on the Clean Renewable Energy Bonds Program. The United States Congress initiated the program in 1995 to provide bond funds for financing the acquisition and installation of photovoltaic (solar) energy systems. The state statute requires Caltrans to submit this report until the bonds mature in Fiscal Year 2023-24.

Program Background

Background

The Clean Renewable Energy Bonds Program was authorized as part of the Tax Incentives Act of 1995, which the United States Congress enacted to encourage energy conservation; develop energy infrastructure; and increase domestic energy production and the use of alternative energy sources.

The Clean Renewable Energy Bonds Program is administered by the United States Internal Revenue Service. Clean Renewable Energy Bonds are a type of tax credit bond where interest on the bonds is paid in the form of tax credits by the United States government. The proceeds from Clean Renewable Energy Bonds financed renewable energy and clean coal facilities projects across the United States.

On November 13, 2006, the United States Internal Revenue Service approved 93 Clean Renewable Energy Bonds Caltrans applications with a total value of $45.6 million. Caltrans subsequently reevaluated the approved projects, considering such facility factors as the age and condition of the roof and design; the long-term building retention; structural integrity; and a cost-benefit analysis. This process resulted in a reduction in the number of projects to 70, with construction and installation costs estimated at $19.9 million.

A Banc of America Securities Bond sale for capital outlay costs was obligated for a total of $20 million, plus interest of $2.2 million (1.45-percent rate) over a 15-year period.

Overview

The 70 projects funded under the Clean Renewable Energy Bonds Program were constructed and operational by January 2013 with a total generating capacity of approximately 2.4 megawatts of solar power (see Exhibit 1on

page 12. The photovoltaic panels have a life expectancy of at least 25 years. The photovoltaic energy systems have helped Caltrans meet the state's green building goals outlined in Executive Order B-18-12 signed by Governor Edmund G. Brown Jr. on April 25, 2012. Among other matters, this order set a goal for state agencies to reduce grid-based energy purchases at least 20 percent from 2003 levels by 2018; Caltrans reached the 20 percent goal by 2013. The Executive Order also sets a goal for state agencies to reduce greenhouse gas emissions 20 percent from 2010 levels by 2020. The photovoltaic energy systems continue to contribute to Caltrans' efforts supporting California's ambitious statewide climate goal of reducing greenhouse gas emissions to 40 percent below 1990 levels by 2030 (**Senate Bill [SB] 32, Pavley, Chapter 249, Statutes of 2016**) and further to 80 percent below 1990 levels by 2050 (**SB 350, De León, Chapter 547, Statutes of 2015**).

Locations and starting dates for generating solar power of Caltrans' 70 photovoltaic installation projects are in Exhibit 1 (see page 12). The following table lists the number of photovoltaic energy system projects by facility type.

Facility Type	Number of Projects
Maintenance Facilities	46
Equipment Shops	9
Safety Roadside Rest Areas	3
Office Buildings	4
Materials Laboratories	2
Transportation Management Centers	2
Toll Bridge Facilities	2
Truck Inspection Facilities	2
TOTAL	70

Program Status/Program Accomplishments

Status of Projects

All 70 projects were completed and generating electricity by January 2013. As noted in previous reports, Caltrans' initial process for managing production and measuring energy lacked desired accuracy, overlooking breakdowns and unable to optimize production. For the past three years, Caltrans has used eSight Enterprise, a third-party vendor, to remotely monitor and report the monthly solar power production from the 70 Clean Renewable Energy Bonds sites; this contract has been renewed from the previous expiration of March 2021 to March 2022. Since December 2017, Caltrans has been able to monitor 61 sites utilizing a "CREB PV Monitoring Database and Report Tool." The major reasons nine of the Clean Renewable Energy Bonds sites do not have telemetry monitoring are as follows:

- Five of the sites do not have existing internet capabilities.
- Four of the sites have inverters in which the electronic information is not compatible with Caltrans' telemetry monitoring system.

To ensure the photovoltaic systems operate effectively and efficiently, Caltrans has also contracted with a vendor to provide photovoltaic system service on an on-call, as-needed basis. The contract's scope of work includes the following:

- Addressing inverter issues, inverters that have gone bad, or communication links to inverters that have gone bad.
- Troubleshooting inverters and working with the inverter manufacturer to repair them.
- Testing individual photovoltaic strings to determine if all the panels are working properly per manufacturer specifications and making recommendations and replacing panels that are not operational.
- Troubleshooting and correcting any communication issues with the systems connected to the Caltrans intranet.
- Troubleshooting and fixing wiring, blown fuses, etc.

However, due to the coronavirus pandemic, on-call services/repairs were delayed or took longer than normal, causing production to be impacted at some of the sites in 2020.

Budget

Original Cost-Benefit Analysis
Caltrans examined the cost effectiveness and viability of each project. Financial factors considered for each project included energy consumption and the average cost of the utility-provided electricity for the facility. These data were compared with industry averages for the cost to install roof-mounted photovoltaic energy systems for the required kilowatt hours of electricity used at each facility. As a result, and as noted in the 2020 report, Caltrans estimated a utility savings of approximately $24.7 million over 15 years with a bond debt service payment of $22.8 million (Exhibit 2).

Revised Cost-Benefit Analysis
As explained in previous reports, due to telemetry monitoring internet and inverter issues at nine Clean Renewable Energy Bonds sites, sufficient data for the actual energy generated to accurately calculate the annual avoided cost of energy has not been available. Therefore, the original cost benefit analysis was prepared utilizing actual energy generated, when available, and a projection of the energy to be generated to estimate the annual avoided cost of energy. That original analysis found that actual energy production and cost avoidance are consistent with predicted values for sites that have been generating energy for more than a year.

In previous revisions to the original cost benefit analysis, Caltrans has adjusted the annual avoided cost of energy figure to reflect the guidelines and assumptions presented by the California Energy Commission's June 2001 "A Guide to Photovoltaic System Design and Installation." An important change was lowering the average hours of sunlight each day from eight hours to five hours. The reduced hours of energy generation extend the time to repay the bonds, i.e., 27.4 years instead of 26.4 years.

Caltrans' election to design, bid, and manage the Clean Renewable Energy Bonds projects lowered the expected construction costs from the original plan to contract these services. These savings plus rebates and unused bond proceeds enabled Caltrans to make the June 2014 scheduled prepayment on outstanding Clean Renewable Energy Bonds. That bond prepayment reduced the bond debt service by approximately $10.3 million, to $12.4 million. Caltrans' personnel support costs for the Clean Renewable Energy Bonds Program were approximately $4.4 million. As a result, Caltrans now estimates a revised utility savings of approximately $8.6 million over the 15 years with a bond debt service of $12.4 million (Exhibit 3).

Comparison of the Original and Revised Cost-Benefit Analyses

Taking into account these revisions and previous reports' revisions and updates, including such factors as outputs of a photovoltaic energy system and delays to the original Clean Renewable Energy Bonds project delivery schedule, this report provides these further cost-benefit revisions:

- The annual avoided cost has been revised from $9.1 million (Year 2020) to $8.6 million over a 15-year period.
- It will take an additional year to recoup the funds invested in the photovoltaic systems (26.4 years revised to 27.4 years; Caltrans expects the systems to operate beyond the design lifespan but at an efficiency level that will decline over time).

Conclusion

Caltrans' Clean Renewable Energy Bonds Program was established to improve Caltrans' progress towards grid-based energy conservation as set forth in Executive Order B-18-12. This was to be accomplished by installing photovoltaic energy systems on Caltrans-owned facilities at a cost of $20 million and financed through a 1.45-percent interest Clean Renewable Energy Bond. Caltrans anticipated that the Clean Renewable Energy Bonds Program would begin generating electricity one year after the sale of the bonds and that the bond debt service would be fully paid through avoided energy cost before the maturity of the bond.

Although Caltrans has not met the original projected cost savings of the Clean Renewable Energy Bonds Program, the bond debt and costs associated with the photovoltaic projects are estimated to be repaid in the form of net savings after 27.4 years. The photovoltaic projects advanced departmental efforts towards energy conservation and reduction of greenhouse gas emissions as outlined in Executive Orders B-18-12 and B-30-15 and consistent with the state's renewable power statutes, "green power," electric grid demand, energy conservation, Leadership in Energy and Environmental Design (LEED), and climate change mandates.

The longstanding policy of the State of California is to grow its robust, sustainable clean-tech economy, improve reliability of the electric gird, and reduce air pollution. In alignment with this policy, the Caltrans Clean Renewable Energy Bonds Program works towards reaching the Governor's goal of stimulating investments in green technology, creating new jobs for small and disadvantaged business enterprises, including new and limited contracting small business enterprises, and promoting energy independence. While the average number of homes powered per megawatt of solar power varies from state to

state due to the average sunshine, average household electricity consumption, and the temperature and wind, the generating capacity of approximately 2.4 megawatts of solar power from Caltrans' 70 sites is estimated as equivalent to the electricity to power approximately 500 homes per year in California.

Exhibits

1. Clean Renewable Energy Bonds Projects

Num	District	Project	City	Project Cost	kW AC Actual	Date Began Gen Power
1	3	Elk Grove Maintenance Station	Elk Grove	$115,368	15.0	7/20/2010
2	3	Willows SRRA	Glenn County	$29,143	3.0	8/26/2010
3	3	Sunrise Maintenance Station	Rancho Cordova	$231,000	30.0	7/19/2010
4	3	District 3 - Maint. Facility 2	Chico	$155,000	23.0	9/14/2010
5	4	District 4 - Maint. Facility 3	Cupertino	$169,675	20.0	9/21/2010
6	10	John C. Erreca SRRA	Merced County	$56,800	9.0	8/3/2010
7	6	Porterville Maintenance Station	Porterville	$120,362	15.8	7/19/2010
8	5	District 5 - Maint. Facility 5	Santa Maria	$107,300	15.0	8/20/2010
9	5	District 5 - Maint. Facility 2	Monterey	$55,600	13.0	8/19/2010
10	4	District 4 - Maint. Facility 19	Walnut Creek	$142,700	20.0	9/7/2010
11	4	Equipment Building #7	San Leandro	$239,400	45.0	9/22/2010
12	6	District 6 - Maint. Facility 2	Delano	$164,025	20.0	10/11/2010
13	6	Lebec Maintenance Station	Lebec	$133,808	15.8	10/4/2010
14	6	District 6 Office Building	Fresno	$432,669	89.3	9/22/2010
14		District 6 Office Building - Supplemental Work		$71,205		
15	6	District 6 - Maint. Facility 3	Fresno	$163,027	22.0	11/10/2010
16	6	Equipment Building #11	Fresno	$180,723	35.0	11/17/2010
17	2	Burney Maintenance Station	Burney	$198,900	30.0	10/26/2010
18	3	Equipment Building #5	Marysville	$457,631	92.2	11/18/2010
19	6	Equipment Building #12	Bakersfield	$211,632	42.0	12/8/2010
20	11	District 11 - Maint. Facility 4	San Diego	$178,835	35.7	12/9/2010
21	10	Westley SRRA	Stanislaus County	$123,869	14.0	11/30/2010
22	4	District 4 - Maint. Facility 8	Hercules	$109,563	12.0	12/15/2010
23	4	District 4 - Maint. Facility 6	Gilroy	$49,479	7.0	12/16/2010
24	9	District 9 - Maint. Facility 1	Bishop	$184,190	35.0	12/16/2010
25	6	District 6 - Maint. Facility 4	Visalia	$224,754	30.0	1/17/2011
26	9	District 9 Office Building	Bishop	$441,058	89.3	1/19/2011
27	7	District 7 - Maint. Facility 10	Tarzana	$64,398	10.0	1/25/2011
28	3	District 3 - Maint. Facility 1	Auburn	$111,300	20.0	1/26/2011

Num	District	Project	City	Project Cost	kW AC Actual	Date Began Gen Power
29	7	District 7 - Maint. Facility 1	Altadena	$138,668	20.0	1/25/2011
30	3	Main Lab Bldg (Translab) (New Warehouse) Phase I	Sacramento	$887,000	165.0	4/11/2011
31	1	Bracut Maintenance Station	Eureka	$255,721	50.0	3/11/2011
32	1	Equipment Building #1 (2101)	Eureka	$174,892	30.0	2/16/2011
33	1	District 1 - Maint. Facility 1 (Annex)	Eureka	$139,989	25.0	2/16/2011
34	7	Newhall Maintenance Station	Valencia	$164,297	33.0	2/9/2011
35	9	Shoshone Maintenance Station	Shoshone	$99,733	15.8	2/22/2011
36	8	Equipment Building #15	Barstow	$192,500	30.0	2/11/2011
37	11	Equipment Building #18	San Diego	$379,898	65.0	4/14/2011
38	7	District 7 - Maint. Facility 5	Monrovia	$142,408	20.0	3/17/2011
39	12	District 12 - Maint. Facility 1	Orange	$207,899	42.8	4/13/2011
40	4	District 4 - Maint. Facility 9	Napa	$84,024	8.0	6/8/2011
41	7	District 7 - Maint. Facility 2	Camarillo	$210,465	30.0	3/14/2011
42	1	District 1 Office Building	Eureka	$372,539	75.0	4/25/2011
43	12	Costa Mesa Maintenance Station	Costa Mesa	$212,061	42.8	7/14/2011
44	4	District 4 - Maint. Facility 15	San Leandro	$176,913	30.0	3/27/2012
45	11	San Diego - Coronado Bridge	San Diego	$202,000	47.6	5/27/2011
46	11	San Onofre SB I-5 Truck Inspection Facility	San Onofre	$99,000	23.8	5/25/2011
47	7	District 7 - Maint. Facility 3	Commerce	$206,420	36.5	1/14/2013
48	5	Equipment Building #10	San Luis Obispo	$272,843	48.0	4/23/2011
49	4	District 4 - Maint. Facility 7	Hayward	$158,750	30.0	4/27/2011
50	4	District 4 - Maint. Facility 2	Crockett	$184,800	25.0	5/10/2011
51	4	South San Jose Maintenance Station	San Jose	$170,738	30.0	5/23/2011
52	4	District 4 Maintenance Facility	Petaluma	$135,497	20.0	6/24/2011
53	5	District 5 - Maint. Facility 4	Santa Barbara	$99,285	15.0	2/8/2012
54	1	District 1 - Maint. Facility 3	Ukiah	$177,489	25.0	9/7/2011
55	4	District 4 - Maint. Facility 1	Benicia	$185,800	30.0	7/6/2011
56	10	Stockton Maintenance Station	Stockton	$214,050	30.0	10/18/2011
57	5	District 5 - Maint. Facility 1	Buellton	$89,600	15.0	10/20/2011
58	5	Santa Cruz - Maint. Facility 17	Santa Cruz	$102,373	15.0	10/12/2011

Num	District	Project	City	Project Cost	kW AC Actual	Date Began Gen Power
59	5	District 5 Office Building	San Luis Obispo	$365,228	73.5	10/19/2011
60	7	Chilao Maintenance Station	La Canada	$121,569	12.0	8/4/2011
61	2	Quincy Maintenance Station	Quincy	$172,351	30.0	10/6/2011
62	11	Calexico NB Truck Inspection Facility	Herber	$108,675	15.0	7/27/2012
63	8	District 8 - Maint. Facility 1	Riverside	$171,792	30.0	1/18/2012
64	4	Antioch Bridge Toll Plaza	Antioch	$78,931	10.0	7/5/2012
65	3	Main Lab Bldg (Translab) (Exist Geotech & Structure Materials) Phase II	Sacramento	$284,076	44.0	8/11/2011
66	12	TMC #6	Irvine	$254,395	50.8	3/7/2012
67	12	District 12 Maint. Facility	Orange	$244,627	43.9	2/15/2012
68	7	District 7 Maint. Facility	Long Beach	$238,900	45.2	7/1/2012
69	11	TMC #5	San Diego	$235,292	40.0	3/2/2012
70	3	Division of Equipment Building	Sacramento	$414,000	100.0	8/2/2012
			Total:	**$13,750,902**	**2,375.8**	
			Telemetry Monitoring Costs:	$354,892		
			Project Costs:	**$14,105,794**		
			Rebates:	($3,701,194)		
			TOTAL PROJECT COSTS:	**$10,404,600**		

2. Clean Renewable Energy Bonds 15-Year Bond Term (Original Cost Benefit Analysis)

Fiscal Year	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	Total (Yr 1-8)
Annual Avoided Cost	$403,457	$1,237,411	$1,389,299	$1,444,871	$1,502,666	$1,562,772	$1,625,283	$1,690,295	**$10,856,054**
DOT Cost (Maint.)	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
State Highway Acct	($925,000)	$0	$0	$0	$0	$0	$0	$0	**($925,000)**
Bond Debt Payment	($1,781,111)	($1,624,000)	($1,604,667)	($1,585,333)	($1,566,000)	($1,546,667)	($1,527,333)	($1,508,000)	**($12,743,111)**
Net Avoided Cost	($2,302,654)	($386,589)	($215,368)	($140,462)	($63,334)	$16,106	$97,950	$182,295	**($2,812,057)**

Fiscal Year	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	Total (Yr 1-15)
Annual Avoided Cost	$1,757,906	$1,828,223	$1,901,352	$1,977,406	$2,056,502	$2,138,762	$2,224,312	**$24,740,517**
DOT Cost (Maint.)	$0	($300,000)	$0	$0	$0	$0	$0	**($300,000)**
State Highway Acct	$0	$0	$0	$0	$0	$0	$0	**($925,000)**
Bond Debt Payment	($1,488,667)	($1,469,333)	($1,450,000)	($1,430,668)	($1,411,333)	($1,392,000)	($1,372,667)	**($22,757,779)**
Net Avoided Cost	$269,240	$58,889	$451,352	$546,738	$645,169	$746,762	$851,646	**$757,738**

Assumptions:

1. Clean Renewable Energy Bonds anticipated to be sold by December 2008.
2. Clean Renewable Energy Bonds debt service payments begin in Fiscal Year 2009-2010 (Calendar Year 2009).
3. Year 1 is Fiscal Year 2009-10.
4. Photovoltaic maintenance cost estimated at $300K every 10 years.
5. Bond costs will be funded either through rebates, bond proceeds or the California Department of Transportation.

3. Clean Renewable Energy Bonds 15-Year Bond Term (Revised Cost Benefit Analysis)

Fiscal Year	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	Total (Yr 1-8)
Annual Avoided Cost	$0	$190,783	$498,819	$641,881	$693,377	$765,237	$757,599	$693,445	**$4,241,141**
DOT Cost (Support)	($1,980,000)	($1,720,000)	($660,000)	($40,000)	$0	$0	$0	$0	**($4,400,000)**
DOT Cost (Maint.)	$0	$0	$0	$0	$0	($148,373)	($46,855)	$0	**($195,228)**
State Highway Acct	($925,000)	$0	$0	$0	$0	$0	$0	$0	**($925,000)**
Bond Debt Payment	($1,482,361)	($1,604,000)	($1,584,667)	($1,565,333)	($1,546,000)	($551,868)	($481,744)	($475,565)	**($9,291,538)**
Net Avoided Cost	($4,387,361)	($3,133,217)	($1,745,848)	($963,452)	($852,623)	$64,996	$229,000	$217,880	**($10,570,625)**

Fiscal Year	**2017-18**	**2018-19**	**2019-20**	**2020-21**	**2021-22**	**2022-23**	**2023-24**	**Total (Yr 1-15)**
Annual Avoided Cost	$658,159	$677,637	$642,113	$564,671	$587,258	$610,748	$635,178	**$8,616,905**
DOT Cost (Support)	$0	$0	$0	$0	$0	$0	$0	**($4,400,000)**
DOT Cost (Maint.)	($174,225)	($60,582)	($58,750)	($121,774)	($150,000)	$0	$0	**($760,559)**
State Highway Acct	$0	$0	$0	$0	$0	$0	$0	**($925,000)**
Bond Debt Payment	($469,386)	($463,207)	($457,028)	($450,849)	($444,670)	($438,491)	($432,312)	**($12,447,481)**
Net Avoided Cost	$14,548	$153,848	$126,335	($7,052)	($7,412)	$172,257	$202,866	**($9,916,135)**

Fiscal Year	***2024-25***	***2025-26***	***2026-27***	***2027-28***	***2028-29***	**Total (Yr 1-20)**
Annual Avoided Cost	$660,585	$687,009	$714,489	$743,069	$772,791	**$12,194,848**
DOT Cost (Support)	$0	$0	$0	$0	$0	**($4,400,000)**
DOT Cost (Maint.)	$0	$0	$0	$0	$0	**($760,559)**
State Highway Acct	$0	$0	$0	$0	$0	**($925,000)**
Bond Debt Payment	$0	$0	$0	$0	$0	**($12,447,481)**
Net Avoided Cost	$660,585	$687,009	$714,489	$743,069	$772,791	**($6,338,192)**

Fiscal Year	2029-30	2030-31	2031-32	2032-33	2033-34	2034-35	2035-36	2036-37	Total (Yr 1-28)
Annual Avoided Cost	$803,703	$835,851	$869,285	$904,056	$940,219	$977,827	$1,016,941	$1,057,618	**19,600,348**
DOT Cost (Support)	$0	$0	$0	$0	$0	$0	$0	$0	**($4,400,000)**
DOT Cost (Maint.)	$0	($150,000)	($150,000)	$0	$0	$0	$0	$0	**($1,060,559)**
State Highway Acct	$0	$0	$0	$0	$0	$0	$0	$0	**($925,000)**
Bond Debt Payment	$0	$0	$0	$0	$0	$0	$0	$0	**($12,447,481)**
Net Avoided Cost	$803,703	$685,851	$719,285	$904,056	$940,219	$977,827	$1,016,041	$1,057,618	**$767,308**

Assumptions:

1. Clean Renewable Energy Bonds sold June 10, 2009.
2. Clean Renewable Energy Bonds debt service payments began in Fiscal Year 2009-2010 (December 15, 2009).
3. Photovoltaic maintenance cost estimated at $300K every 10 years.
4. Repair maintenance cost is based on maintenance contract encumbrances.
5. Bond costs will be funded either through rebates, bond proceeds or the California Department of Transportation.
6. Photovoltaic Total Project Cost = Approximately $10.4 million

Appendix A. Statutory Reporting Reference

STREETS AND HIGHWAYS CODE - SHC
DIVISION 1. STATE HIGHWAYS [50 - 897]
(Division 1 enacted by Stats. 1935, Ch. 29.)

CHAPTER 1. Administration [50 - 227.1]
(Chapter 1 enacted by Stats. 1935, Ch. 29.)

ARTICLE 3.7. Clean Renewable Energy Bonds for the Department of Transportation
[157 - 157.8]
(Article 3.7 added by Stats. 2008, Ch. 756, Sec. 15.)

157.8.
On or before March 1 of each fiscal year, and until maturity of the bonds issued pursuant to this article, the department shall report to the budget committees of each house of the Legislature with regard to the issuance of bonds and the acquisition and installation of solar energy systems under this article. The report shall include, but not be limited to, the status of each facility on which the department has installed solar energy systems; an accounting of the costs for each solar energy system installed or acquired by the department; a description of the energy savings the department has achieved by acquiring or installing a solar energy system or systems; and a review and analysis of the expected cost savings at the time of issuance of the bonds versus actual savings annually.

(Added by Stats. 2008, Ch. 756, Sec. 15. Effective September 30, 2008.)