CALIFORNIA EARTHQUAKE AUTHORITY

ANNUAL REPORT TO THE LEGISLATURE AND THE CALIFORNIA INSURANCE COMMISSIONER ON CEA PROGRAM OPERATIONS

Report for Calendar Year
(Pursuant to California Insurance Code section 10089.13, subdivision (a))

Date of Report: August 1, 2021

Background: California Earthquake Authority

The California Earthquake Authority (CEA) was formed through legislation in 1995 and 1996 to address primarily a homeowners-insurance-availability crisis that followed the 1994 Northridge earthquake. After that earthquake, many homeowners found it difficult, and in some cases impossible, to find basic homeowners insurance. Many others were faced with the prospect of having their homeowners insurance non-renewed as insurance companies tried to shed their exposure to earthquake risk.

Because state law required (and still requires) insurers to offer earthquake insurance to both residential policy applicants and current residential policyholders, the insurers' retreat from the California market resulted in an availability crisis for homeowners earthquake insurance. The California Department of Insurance ("CDI") reported in summer 1996, at the height of the crisis, that 95 percent of the homeowners-insurance market had either stopped or severely restricted sales of new homeowners policies.

After CEA began operations on December 2, 1996, the recovery of the California homeowners-insurance market was dramatic and swift. A Department of Insurance report noted that at the peak of the availability crisis, 82 insurers had restricted the sale of new homeowners policies—by contrast, by October 1997 and with CEA operations in full swing, only three insurers were restricting the sale of new homeowners policies.

Today, CEA is the largest earthquake insurer in California with over 65% of the residential-earthquake-insurance market. CEA participating insurers are responsible for over 75% of California's residential property insurance.

Current Market Conditions

California's Residential Property Insurance Market

The CDI year-end-2020 data indicate an increase in policy numbers in the statewide residential property insurance market: In 2020, insurers sold almost 12.3 million homeowners policies, which is an increase from the previous year's 11.9 million. (See Attachment A: *California Department of Insurance, Summary of 2020 Residential Market Totals*.)

Statewide totals, for all insurers that wrote residential property insurance in California in 2020:
- Residential Single-Family Dwelling Policies: 6,247,042
- Residential Condominium Policies: 952,217
- Mobilehome Policies: 288,714
- Residential Rental Policies: 2,760,706
- Dwelling Fire Policies: 2,006,918

California's Residential Earthquake Insurance Market – 2020

Based on the total number of residential earthquake insurance policies written in 2020, CEA and non-CEA companies together accounted for 1.69 million earthquake insurance policies statewide—an increase from 2019's 1.66 million.

CEA Operational Developments in 2020

CEA Policy Growth and Development

CEA ended 2020 with 1,136,983 policies in force, a 2.27% increase over year-end 2019.

At year-end 2020:
- There were 166,929 Homeowners Choice policyholders, an increase of 15.37%.
  - *CEA earthquake insurance for homeowners allows you to choose between two policies. The standard Homeowners bundled coverage or the Homeowners Choice where you can purchase separate policy options.*
- There were 4,190 Mobilehome Choice policyholders, an increase of 10.32%.
- The 5% Deductible option has seen the following increases:
  - 13% for Homeowners Standard
  - 26% for Homeowners Choice
  - 9% for Mobilehome Standard
  - 17% Mobilehome Choice
- More policyholders continue to select higher coverage limits on their personal-property coverage.
- Additional living expense (ALE) coverage, also known as Loss of Use coverage, is seeing an increase in higher coverage limits:
  - $50K - 17% increase
  - $75K - 20% increase
  - $100K – 28% increase
- The purchase of coverage for breakage of personal property and for damage to exterior masonry veneer increased by over 16%.

Mitigation Program Development

The CEA law directs the CEA Governing Board to annually set aside five percent of the CEA's investment income (as long as the set-aside is actuarially sound) up to five million dollars, to be used for activities that mitigate seismic risks of vulnerable residential structures in California. This includes programs to provide financial assistance to those who mitigate their homes against seismic risk.

In 2020, the CEA mitigation program coordinated projects in three focused areas:

1. Guidelines Development

   The ATC 110 earthquake-guidelines-development project, first phase, completed on June 20, 2018. Now called FEMA P-1100, Vulnerability-Based Seismic Assessment and Retrofit of One- and Two-Family Dwellings, the bulk publication consists of three volumes:
   - Volume 1, Prestandard publication (published October 2019)
   - Volume 2, FEMA plan set (published November 2019)
   - Volume 3, background documents (completed November 2019)

   The second phase of this project consists of developing a training program for Contractors, Building Officials, and Engineers. A training outline has been drafted and the program is currently being developed. This phase is estimated to be completed in Q4 2021.

   The third phase will involve CEA working closely with FEMA and the International Code Council (ICC) to adopt the guidelines as industry standards, which paves the way for adoption into California's building code. Additionally, by creating a uniform seismic-retrofit-design method for homeowners, contractors, and engineers, the new guidelines will help the CEA and others (1) establish and expand incentive programs to encourage seismic retrofits, such as that of the California Residential Mitigation Program, and (2) enhance the CEA's ability to develop and provide suitable mitigation discounts for CEA-insured homeowners.

2. Earthquake Brace + Bolt Program (EBB)

   The EBB program was developed to help homeowners lessen the potential for damage on their houses during an earthquake. A residential seismic retrofit strengthens an existing older house, making it more resistant to earthquake activity. The seismic retrofit involves bolting the house to its foundation and adding bracing around the perimeter of the crawl space. EBB offers eligible Californians a grant of up to $3,000 to help pay for a seismic retrofit.

   This program is now in 355 ZIP Codes and by end of 2020 had completed more than 13,000 retrofits.

   In addition to CEA's mitigation funding, EBB has received $6 million (provided through two appropriations from the State of California) and a $300,000 grant (provided through FEMA's Hazard Mitigation Grant Program). CEA also has applied for several more federal grants and have been awarded $23 million in two grants to retrofit up to 7,600 houses statewide.

3. Research Program Development

- Cripple-Wall-Performance Effects

  The CEA–PEER project "Quantifying the Performance of Retrofit of Cripple Walls and Sill Anchorage in Single-Family Wood-Frame Buildings" is a multi-year, multi-disciplinary project coordinated by the Pacific Earthquake Engineering Research (PEER) Center and funded by the CEA.

  Quantifying the difference of seismic performance of unretrofitted and retrofitted single-family wood-frame houses is important in California due to the high seismicity of the state. Inadequate lateral bracing of cripple walls and inadequate sill bolting have been observed to be primary reasons for damage to residential homes, even in moderate earthquakes.
  The resulting project research demonstrated that a brace-and-bolt retrofit is significantly valuable and has a great cost-benefit ratio—namely that a retrofit could save potentially hundreds of thousands of dollars in damage repairs to a single-family wood-framed house after an earthquake.

  This project was completed November 2020

- CEA Damage-Assessment Guidelines

  In 2007 CEA provided major funding for the Consortium of Universities for Research in Earthquake Engineering (CUREE), whose work produced the "Assessment and Repair of Earthquake Damage" The guidelines were last updated in 2010.

  To ensure guidelines continuity, CEA contracted with Applied Technology Council (ATC) in May 2018 to update the existing CUREE Guidelines and to develop companion engineering guidelines (Damage Assessment and Repair Guidelines for Residential Wood-Frame Buildings. Vol. 1 – General, Vol. 2 – Engineering").

  The new guidelines are available for free download on the CEA website (Volume 1, Volume 2) and can be ordered in hard copy through the ATC's online store. Volume 1 of the series is intended to be used by insurance claim representatives, building contractors, homeowners and others familiar with construction and repair, while Volume 2 is intended to be used by structural and geotechnical engineers and others with relevant technical experience.

  This project was completed June 2020

- UCERF3 Analysis

  The UCERF3 model represents a substantial advancement in science. It is also complex, yielding more than 250,000 fault-based ruptures—25 times more than the UCERF2 model. To deal with the complexity, work is required to identify which of the UCERF3 model's "branches" most influence modeled results.

The CEA contracted with the Southern California Earthquake Center (SCEC) to manage and carry out the further efforts and collaboration of the UCERF3 research participants. USGS and SCEC had leading roles in the development, progress, and quality control of the project, with oversight and appropriate management provided by the CEA Research Department.

According to the UCERF3 report:

- There is a more than 99 percent chance in the next 30 years one or more magnitude 6.7 or greater earthquakes will hit somewhere in California.
- The research also reports that scientists now can consider more than 250,000 different fault-based earthquakes, whereas previous research and models considered far fewer.

- The research reports that the likelihood of an earthquake of magnitude 8 or greater in the next 30 years in the entire California region has increased 50 percent over previous (UCERF2) estimates.
- An even more powerful quake—a magnitude 7.5 or greater—has a 48 percent chance of striking California in the next 30 years.
- There is a 75 percent chance that a magnitude 7 or greater earthquake will strike in Southern California sometime during the next 30 years.
- In the next three decades, there's a 76 percent chance that a magnitude 7 or greater quake will happen in Northern California.

This project was completed September 2020

Financial Report

Revenue Bonds

On March 17, 2020, CEA issued Series 2020A revenue bonds totaling $400,000,000, summarized as follows:

Principal Amount	Interest Rate	Price or Yield	Maturity Date
$400,000,000	1.300%	1.300%	July 1, 2020

The CEA made a debt service deposit for the Series 2020A bonds that prefunded principal and interest payments due upon maturity and were invested in Treasury money market funds. The Series 2020A bonds were repaid in July 2020 by pledged revenue, which consisted of pledged policyholder premiums (defined as premiums for basic residential earthquake policies net of participating insurer costs) and interest and other income from investment of funds held by the trustee and debt service deposits. The proceeds of the revenue bonds were deposited in the 2020A claims paying account and the interest earnings helped to offset the interest costs on the 2020A revenue bonds.

On November 24, 2020, the CEA issued Series 2020B revenue bonds totaling $300,000,000, summarized as follows:

Principal Amount	Interest Rate	Price or Yield	Maturity Date
$ 50,000,000	1.127%	1.127%	January 1, 2021
50,000,000	1.227%	1.227%	July 1, 2021
100,000,000	1.327%	1.327%	July 1, 2022
100,000,000	1.477%	1.477%	July 1, 2023

The bonds bear interest from their date of delivery at the rates shown above, payable semiannually on January 1 and July 1, commencing on January 1, 2021. The Series 2020B bonds are not subject to optional redemption prior to maturity and are payable from future pledged policyholder premiums.

The Series 2020B revenue bonds are used to enhance claims paying capacity. The net proceeds from the revenue bonds were deposited into their respective claims paying account and were used to purchase investments according to the CEA's investment policy. The proceeds will only be used for future payments of earthquake policyholder claims and related loss adjustment expenses and may not be used to repay principal and interest of the debt. Revenue bond proceeds may be used for payment of claims after the CEA exhausts its capital available for claims and any capacity made available by reinsurance contracts. Repayment of debt does not affect the level of the claims paying account.

The table below is the future scheduled debt service payments for the CEA's long-term debt as follows as of December 31, 2020:

	Principal	Interest	Total
2021	$100,000,000	$2,117,908	$102,117,908
2022	100,000,000	2,804,000	$102,804,000
2023	100,000,000	1,477,000	$101,477,000
	$300,000,000	$6,398,908	$306,398,908

This schedule includes the mandatory sinking fund payments of $50 million due on January 1, 2021, and July 1, 2021, and $100 million due on July 1, 2022, and July 1, 2023. The sinking fund balance was $57.8 million as of December 31, 2020.

With the issuance of the Series 2020B revenue bonds, the CEA was required to deposit $50,409,158 on November 25, 2020, in a trust account that was used to make the first principal and interest debt service payment on January 1, 2021. Starting on December 15, 2020, the CEA also was required to deposit one twelfth of the annual principal and interest payment by the 15th of each month into a trust account. Such amounts are held in restricted cash, cash equivalents, and investments.

Interest paid during 2020 for the Series 2020 revenue bonds was $1,502,222.

Financial-Stability Ratings

During 2020, CEA continued to be rated by the A. M. Best Co. as "A-Minus (Excellent), with a stable outlook."

The Outlook statement from A.M. Best it's, "The stable outlooks reflect the CEA's strongest level of risk-adjusted capitalization as measured by BCAR as well as strong operating performance, and the expectation that these trends will continue in the absence of significant earthquake activity."

Attachment A: California Department of Insurance Summary: 2020 Residential Market Totals

EARTHQUAKE PREMIUM AND POLICY COUNT DATA CALL

SUMMARY OF 2020 RESIDENTIAL MARKET TOTALS

2020 Experience Year	Written Premiums Excluding EQ	No. of Policies Excluding EQ	Exposure Excluding EQ	Avg Prem Per Policy Non-EQ	Avg Rate Per $1,000 Insurance Non-EQ	Market Share* Non-EQ	Written Premiums EQ	No. of Policies EQ	Exposure EQ Including CEA	Avg Prem Per Policy EQ	Avg Rate Per $1,000 Insurance EQ	Market Share* EQ	% with EQ**
Insurers with EQ coverage provided by California Earthquake Authority (CEA)	$ 8,092,586,282	9,248,032	$ 3,094,226,214,397	$ 875.06	$ 2.62	75.46%	$ 839,511,157	1,136,982	$ 567,069,446,928	$ 738.37	$ 1.48	67.37%	12.29%
Insurers with EQ coverage provided by Non-CEA	2,683,626,898	3,007,565	1,124,133,145,293	892.29	2.39	24.54%	470,338,275	550,730	241,618,734,925	854.03	1.95	32.63%	18.31%
Total Residential Market	$ 10,776,213,180	12,255,597	$ 4,218,359,359,690	$ 879.29	$ 2.55	100.00%	$ 1,309,849,432	1,687,712	$ 808,688,181,853	$ 776.11	$ 1.62	100.00%	13.77%
Total Homeowners Market	$ 8,220,682,073	6,247,042	$ 3,325,658,742,832	$ 1,315.93	$ 2.47	50.97%	$ 1,147,482,558	1,019,821	$ 733,501,259,894	$ 1,125.18	$ 1.56	60.43%	16.32%
Total Renters Market	467,140,887	2,760,706	75,244,899,145	169.21	6.21	22.53%	29,952,029	382,637	12,902,085,283	78.28	2.32	22.67%	13.86%
Total Condominium Market	579,806,696	952,217	54,844,720,549	608.90	10.57	7.77%	70,302,267	150,978	20,474,082,261	465.65	3.43	8.95%	15.86%
Total Dwelling Fire Market	1,294,221,468	2,006,918	732,394,879,553	644.88	1.77	16.38%	49,997,285	75,538	33,735,771,823	661.88	1.48	4.48%	3.76%
Total Mobilehome Market	214,362,055	288,714	30,216,117,611	742.47	7.09	2.36%	12,115,294	58,738	8,074,982,592	206.26	1.50	3.48%	20.34%
Total Residential Market	$ 10,776,213,180	12,255,597	$ 4,218,359,359,690	$ 879.29	$ 2.55	100.00%	$ 1,309,849,432	1,687,712	$ 808,688,181,853	$ 776.11	$ 1.62	100.00%	13.77%
California FAIR Plan	$ 316,429,658	201,534	$ 87,022,345,943	$ 1,570.11	$ 3.64	10.04%	$ 4,024,544	4,483	$ 2,412,235,387	$ 897.73	$ 1.67	5.93%	2.22%
Total Dwelling Fire (Excluding CA FAIR Plan)	977,791,810	1,805,384	645,372,533,610	541.60	1.52	89.96%	45,972,741	71,055	31,323,536,436	647.00	1.47	94.07%	3.94%
Total Dwelling Fire Market	$ 1,294,221,468	2,006,918	$ 732,394,879,553	$ 644.88	$ 1.77	100.00%	$ 49,997,285	75,538	$ 33,735,771,823	$ 661.88	$ 1.48	100.00%	3.76%

* Market share represents the percentage of policies to total residential market.
** Percent with EQ represents the percentage of policies that also have EQ coverage.

Attachment B: Financial Statement
California Earthquake Authority: Annual Financial Report

In accordance with California Insurance Code sec. 10089.13, subdivision (b), the California Earthquake Authority reports its finances as of December 2020:

Balance Sheet
As of December 31, 2020

	2020
Assets and Deferred Outflows of Resources	
Current assets:	
Cash and investments:	
Cash and cash equivalents	$ 94,506,738
Restricted cash and equivalents	66,881,868
Restricted investments	299,715,540
Investments	7,235,255,197
Total cash and investments	7,696,359,343
Premiums receivable, net of allowance for doubtful accounts of $5,956,168	81,457,207
Interest receivable	26,629,329
Prepaid reinsurance premium	90,585,910
Prepaid transformer maintenance premium	7,221,187
Other current assets	5,998,231
Total current assets	7,908,251,207
Noncurrent assets:	
Capital assets, net	107,269
Total assets	7,908,358,476
Deferred Outflows of Resources	
Related to pensions	3,595,417
Total assets and deferred outflows of resources	$ 7,911,953,893
Liabilities and Deferred Inflows of Resources	
Current liabilities:	
Unearned premiums	$ 448,496,910
Accounts payable and accrued expenses	11,842,150
Loss and loss expense reserves	864,862
Compensated absences - current portion	982,524
Revenue bond interest payable	409,158
Securities payable	6,870,023
Revenue bond payable - current portion	100,000,000
Accrued reinsurance premium expenses	3,816,899
Total current liabilities	573,282,526
Noncurrent liabilities:	
Revenue bond payable - Net of current portion	200,000,000
Net pension liability	11,823,481
Compensated absences	982,525
Total liabilities	786,088,532
Deferred Inflows of Resources	
Related to pensions	370,083
Total liabilities and deferred inflows of resources	786,458,615
Net Position	
Net investment in capital assets	107,269
Restricted, expendable	70,127,522
Unrestricted	7,055,260,487
Total net position	7,125,495,278
Total liabilities and deferred inflows of resources, and net position	$ 7,911,953,893

Attachment B: Financial Statement (Continued)
California Earthquake Authority: Annual Financial Report

Statement of Revenues, Expenses, and Changes in Net Position
For the Year Ended December 31, 2020

	2020
Underwriting income:	
Premiums written	$ 845,164,654
Less premiums ceded - reinsurance	(426,722,911)
Net premiums written	418,441,743
Change in unearned premiums	(24,903,828)
Net premiums earned	393,537,915
Operating expenses:	
Loss and loss adjustment expenses	(2,798,034)
Participating insurer commissions	84,528,163
Participating insurer operating costs	27,108,127
Reinsurance broker commissions	2,800,000
Premium taxes	19,872,473
Other underwriting expenses	48,469,777
Total operating expenses	179,980,506
Underwriting profit	213,557,409
Non-operating income and expenses:	
Net investment income	208,841,795
Other income	592,133
Grant revenue	11,704,307
Grant expenses	(11,704,307)
Investment income on bond proceeds, net of related expenses	(2,451,709)
Mitigation Fund expenses	(1,827,860)
California Residential Mitigation Program contribution	(4,000,000)
State of California premium tax contribution	19,872,473
Total of non-operating income and expenses	221,026,832
Increase in net position	434,584,241
Net position, beginning of year	6,690,911,037
Net position, end of year	$ 7,125,495,278

Attachment C: Summary of CEA Claim-Paying Capacity

In accordance with California Insurance Code sec. 10089.13, subdivision (c), the California Earthquake Authority reports this separate financial summary of its claim-paying capacity as of June 30, 2021.

Summary of Claim-Paying Capacity as of June 30, 2021

		Base
Available Capital		
Cash & Investments	$	7,788,240,386
Earthquake Loss Mitigation Fund Cash & Investments		(11,864,776)
Interest, Securities & Restricted Securities Receivable		23,295,270
Premiums Receivable		113,689,980
Other Assets + California Wildfire Fund (AR) + FEMA (AR)		6,488,374
Revenue Bonds and Restricted Receivables		(1,443,778,719)
Debt Service (Interest, Principal & Debt Service (Min. Bal.))		(51,714,278)
Unearned Premium Collected		(329,360,757)
Accounts & Securities Payable, and Accrued Expenses		(24,155,886)
Loss Reserve		(600,000)
GASB 68 Pension Plan		(8,598,147)
Total Available Capital		**6,061,641,447**
Assessments		
Available for assessment in 2nd IA Layer		1,663,000,000
Reinsurance		
Risk Transfer - Available in all layers		9,556,000,000
Bonds		
Revenue Bond Proceeds		1,444,000,000
Policyholder Surcharges		
Surcharges assessed		1,000,000,000
Total Capacity	$	19,724,641,447