2/3 of nation’s earthquake risk is in California

Ten-percent probability of exceedance in 50 years
California Earthquake Authority

- History
- Operational Model
- Mitigation
- Christchurch, New Zealand

1984: Mandatory Offer Established

- At request of the insurance industry, earthquake was specifically **excluded** from homeowners policy.
- In exchange, companies selling homeowners insurance were **required to offer** separate earthquake policy.

**State law mandates wording of offer**

YOUR POLICY DOES NOT PROVIDE COVERAGE AGAINST THE PERIL OF EARTHQUAKE.

CALIFORNIA LAW REQUIRES THAT EARTHQUAKE COVERAGE BE OFFERED TO YOU AT YOUR OPTION.

WARNING: THESE COVERAGES MAY DIFFER SUBSTANTIALLY FROM AND PROVIDE LESS PROTECTION THAN THE COVERAGE PROVIDED BY YOUR HOMEOWNERS' INSURANCE POLICY. THERE ARE EXCLUSIONS AND LIMITATIONS SUCH AS OUTBUILDING, SWIMMING POOLS....
1994: Northridge Earthquake

Total Property Damage: $40 Billion
Residential Damage: $20 Billion
Insured Residential Damage: $10 Billion

In the Aftermath of Northridge

Because they wished to stop writing earthquake insurance:
most companies ceased writing new homeowners policies

1996: CEA created to fix broken homeowners insurance market
“If you ask me what keeps me awake at night as Insurance Commissioner, it's the strong likelihood of a large earthquake.”
Privately Financed

CEA: Slow, Steady Growth

Since 2008
CEA: 12%↑
Rest of Industry: 32%↓
Scientists agree:
There is a virtual certainty of a 6.7M or greater earthquake in California within the next 30 years.

And Yet:
Over 90% of all homes do not have earthquake insurance.

Why are so many Californians unprotected?

- Over time, people forget
- False hope for federal assistance
- Confusion about coverage in homeowners policy
- EQ insurance not high priority for some companies
- Outdated offer letter
- Concern about cost and value
Number One Barrier to Purchase

Concern about cost and value

So what are we doing about it?

- Expanding coverage
- Lowering rates
- Communicating more effectively
- Providing incentives to retrofit older homes

January 1, 2016: A New Day at the CEA

2016: Expanding Coverage

<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mini Policy</td>
<td>CEA Supplemental</td>
<td>CEA Choice</td>
<td>More Options, More Affordable</td>
</tr>
<tr>
<td>Structure</td>
<td>Full</td>
<td>Full</td>
<td>Full</td>
<td>Full</td>
</tr>
<tr>
<td>Deductible</td>
<td>15%</td>
<td>10% &amp; 15%</td>
<td>10% &amp; 15%</td>
<td>add 5%, 20%, 25%</td>
</tr>
<tr>
<td>Personal Property</td>
<td>$5,000</td>
<td>Up to $100,000</td>
<td>Up to $100,000</td>
<td>Up to $200,000</td>
</tr>
<tr>
<td>Loss of Use</td>
<td>$1,500</td>
<td>Up to $15,000</td>
<td>Up to $25,000</td>
<td>Up to $100,000</td>
</tr>
<tr>
<td>Emergency Repair</td>
<td>5% of covered property deductible applies</td>
<td>5% of covered property deductible applies</td>
<td>5% of covered property deductible on first $1,500</td>
<td>5% of covered property deductible on first $1,500</td>
</tr>
<tr>
<td>Mitigation Discount</td>
<td>None</td>
<td>5% - CEA Inception</td>
<td>5%</td>
<td>Up to 20%</td>
</tr>
</tbody>
</table>

Consumer may choose to insure structure only, or add additional coverages with separate deductibles.
From the provider that gives customers the strength to rebuild, comes a new app that gives them strength to control their earthquake coverage.

2016: Lowering Rates

Without rate reductions, CEA premiums would be twice as high.

1996-2016: Reconstruction costs up 160%
2016: Communicating More Effectively
Mandatory Offer Reform

Replacing the 30-year-old, confusing, ineffective notice

with a vastly improved offer letter

In addition, CEA PIs will provide a “CEA message” to all of their insureds each year
• Approximately 8 Million

CEA Mitigation Program
Guidelines • Research • Incentives
CEA Mitigation Fund

• Established to help all Californians strengthen their homes against damaging earthquakes.

• Financed annually by CEA’s investment income of 5 percent or $5 million, which ever is lower.

• Currently $25 million is available.

Joint Powers Authority
California Residential Mitigation Program
Earthquake Brace + Bolt: Funds to Strengthen Your Foundation

- Reimburse Up to $3,000
- Qualifying EBB Houses
  - In program zip codes
  - Constructed pre-1979
  - Low slope site
- 2014 Pilot: 8 retrofits
- 2015 Expansion:
  - Goal: 650 retrofits

Video demo: www.earthquakebracebolt.com

Evolving Funding Sources

- Approximately $1.5M available for grants from the Loss Mitigation Fund
- Application pending for $300K grant to match $100K
- California Legislature recently appropriated $3M to fund 1,000 EBB grants
- Concept: A CEA program for long time policyholders in vulnerable homes in high risk areas
Mitigation Works

Napa Earthquake: August 24, 2014
Approx. 1.2 Million Vulnerable Houses in California

Devastating earthquakes strike Christchurch
New Zealand

September 2010 – 7.1 M
February 2011 – 6.3 M
Christchurch: The Recovery Continues

- 185 deaths
- Business district devastated
- Thousands of homes destroyed

- New Zealand Earthquake Commission
  - Public program
  - Government backstop
  - Nearly 100% take-up
  - 67,000 home repairs completed to date

Questions?
**CEA Claim-Paying Capacity**

As of 1/1/2015

State law requires CEA rates to be actuarially sound.

Rating agencies require CEA claim paying capacity to be sufficient for a 1 in 450 year loss.

Best available science plus input from 3 major modeling firms determine amount of claim-paying capacity required.

Amount of required claim-paying capacity determines how much reinsurance is needed.

**A Costly Reliance on Reinsurance**

Since Inception: 40% of CEA-Policyholder Premium has been spent on reinsurance

Earthquake insurance premium:  
Paid by CEA policyholders to CEA........... $9.0 Billion

Reinsurance premium:  
Paid by CEA to reinsurers....................... $3.7 Billion

Reinsurance claims:  
Paid by reinsurers to CEA...................... $250,000

Reinsurance costs are a significant driver of CEA rates
A Concept to Lower Reinsurance Costs
A post-event borrowing layer backed by a public guarantee

CEA Claim-Paying Capacity

<table>
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<tr>
<th>Layer</th>
<th>Capital</th>
<th>Risk-Transfer</th>
<th>2nd IAL</th>
<th>Revenue Bonds</th>
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| Post-Event Borrowing | $4.7B  
$3.5B | $1.65B       | $662M   |

Concept

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Significant reinsurance cost savings
Savings would be passed on to policyholders
Borrowing would be repaid from policyholder premium
Probability of borrowing less than 0.4%
Public guarantee insures access to private debt markets

Total: $11.8B

Credit: Russell Mah & David Wald, USGS

Maximum Observed or Estimated Intensity (Induced Earthquakes; 1900-2012)

Maximum intensity for induced events noted in the 2014 USGS National Seismic Hazard Map catalog

USGS

Credit: Russell Mah & David Wald, USGS