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March 16, 2020

Director Mark A. Calabria  
Federal Housing Finance Agency  
400 7th St SW  
Washington, DC 20024  
Submission via [www.regulations.gov](http://www.regulations.gov)

**RE: PACE Request for Input, Notice No. 2020-N-1**

Dear Director Calabria,

Thank you for the opportunity to comment on this Notice and Request for Input regarding the impact of residential Property Assessed Clean Energy (PACE) programs on the government-sponsored enterprises (GSEs) Fannie Mae and Freddie Mac. We understand that FHFA, in its role as regulator of the GSEs, has concerns that state programs granting PACE financing priority lien positions over primary mortgages could imperil the enterprises' safety and soundness. We believe these concerns are significantly overstated.

The R Street Institute is a nonprofit, nonpartisan public policy research organization whose mission is to engage in policy research and outreach to promote free markets and limited, effective government. We have long supported PACE financing options to help homeowners to invest both in energy efficiency and risk mitigation, crafting proposals that highlighted PACE financing as an option to increase Texans' use of clean energy<sup>1</sup> and working closely with the California Earthquake Authority on a proposal to establish a mitigation-financing program to allow homeowners to pay for the cost of retrofitting their homes through a PACE-like structure.<sup>2</sup> We also have worked extensively to highlight problems within the GSEs as FHFA and Treasury move forward with plans to exit the enterprises from federal receivership.<sup>3</sup>

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<sup>1</sup> Josiah Neeley, "Improving the market for clean energy in Texas," *R Street Institute*, April 2016. <https://www.rstreet.org/wp-content/uploads/2018/04/RSTREETSHORT24-1.pdf>.

<sup>2</sup> Ian Adams, "Insuring a Way Out: Modernizing the California Earthquake Authority," *R Street Institute*, January 2015. <https://www.rstreet.org/wp-content/uploads/2018/04/RSTREET32-1.pdf>.

<sup>3</sup> Alex J. Pollock, "Seven Steps to Housing Finance Reform," *Urban Institute Housing Finance Policy Center*, April 5, 2016. <https://www.urban.org/policy-centers/housing-finance-policy-center/projects/housing-finance-reform-incubator/alex-j-pollock-seven-steps-housing-finance-reform>.

Our assessment is that the risk to the GSEs from taking a subordinate position to PACE-financed projects is de minimis and does not differ substantially from a borrower's risk of default on property taxes or publicly financed assessments for other kinds of special improvement districts. Data from both industry and local tax collectors demonstrate that residential PACE delinquencies are rare, peaking at 2 to 4 percent in the first month after a project installment and declining to less than 1 percent within 12 months of initiation.<sup>4</sup> Moreover, PACE-financed improvement projects improve the value of the GSEs' underlying collateral.

FHFA's RFI notes that as of mid-2019, the GSEs had 5.4 million loans with unpaid principal balances of roughly \$1.18 trillion in the states of California and Florida, the two most active PACE jurisdictions. The vast majority of those loans do not carry PACE financing. According to market data collected by PACENation, there are just \$5.61 billion of investments in residential PACE projects nationwide.<sup>5</sup> Of the 235,000 upgrades nationwide, 70 percent were for energy and water efficiency projects, 21 percent were for renewable energy projects and 9 percent were for resiliency projects.

Though resiliency projects comprise a minority of PACE investments, there is tremendous potential for homeowners to take advantage of PACE to fund resiliency projects like seismic retrofitting, wind hardening and flood elevation. A recent study by the University of South Florida of a single PACE administrator's program in Florida found that \$525.1 million of hurricane protection investments yielded \$970 million of avoided property damage.<sup>6</sup>

The potential for PACE financing to facilitate property-level mitigation projects should be of utmost concern to FHFA and the GSEs given the latter demonstrably hold hundreds of billions of dollars of uninsured catastrophe risk. In Florida, which is home to roughly one-third of the nation's flood risk, this is largely a consequence of the structural limitations of the National Flood Insurance Program. In California, it is a direct consequence of decisions by the GSEs, Congress and the FHFA itself not to require earthquake insurance for mortgages held, guaranteed or securitized by the GSEs.

These are areas where prior R Street research has demonstrated the GSEs face demonstrable vulnerability. While taking a subordinate lien position might occasionally result in a small impairment to the GSEs' revenue stream in the rare cases where a mortgage with PACE financing defaults, a major earthquake like 1994's Northridge Quake or major flood event like 2012's Superstorm Sandy can mean the immediate loss of billions of dollars of uninsured collateral underlying the loans held by the GSEs. We urge the FHFA take into account the value provided by public and private investments in mitigation and resilience when considering what role PACE ought to play in the GSEs' portfolio.

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<sup>4</sup> "Structured Finance: Property Assessed Clean Energy ABS," *DBRS*, p. 3, February 2018.

<https://www.pacenation.org/wp-content/uploads/2018/04/DBRS-Residential-PACE-Delinquency-Trends.pdf>.

<sup>5</sup> "PACE Market Data," *PACENation*, accessed March 13, 2020. <https://pacenation.org/pace-market-data>.

<sup>6</sup> Zachary Oliphant, Thomas Culhane and Pradeep Haldar, "Public Impacts of Florida's Property Assessed Clean Energy (PACE) Program," *University of South Florida Patel College of Global Sustainability*, January 2020.

## UNINSURED EARTHQUAKE RISK

Unlike coverage for floods, fires and windstorms, Fannie Mae and Freddie Mac do not currently require earthquake insurance to secure the collateral of mortgages the GSEs own or guarantee. In significant part due to this policy, earthquake insurance takeup rates in areas exposed to significant seismic risk are uniformly paltry. Even in California, the most earthquake-exposed state, only about 13.3 percent of homes maintain coverage for earthquake damage.<sup>7</sup>

In a September 2018 study, the R Street Institute examined the consequences of this policy for the GSEs' portfolio.<sup>8</sup> Using seismic maps published by the U.S. Geological Survey (USGS), we identified 249 counties across 21 states substantially exposed to the largest earthquake risks.<sup>9</sup> Based on 2016 FHFA data from the Single-Family Census Tract File and Multi-Family Census Tract File, we concluded Fannie Mae held \$210.1 billion of unpaid principal for mortgages in those 249 counties, while there was \$145.61 billion of unpaid principal held by Freddie Mac.

California, the largest state for PACE financing, also accounts for the largest share of earthquake-exposed mortgages. The R Street report found Fannie and Freddie combined to hold \$217.0 billion of unpaid principal in California counties exposed to seismic risks that exceed a 2 percent chance over the next 50 years of experiencing peak ground acceleration (PGA) of greater than 0.8g, where "g" is equivalent to the Earth's gravitational force, and another \$29.2 billion in counties with a greater than 2 percent chance of experiencing PGA of between 0.4g and 0.8g.

The GSEs' exposure to earthquake risk in California should be of particular concern to the FHFA, given that California is notably a "nonrecourse" state. That is to say, under state law, a mortgage borrower surrenders only the property itself in the event of a default and mortgage lenders are barred from filing deficiency lawsuits against borrowers. According to the USGS, there is a greater than 99 percent chance California will experience an earthquake equal to or greater than the 6.7 magnitude Northridge quake at some point in the next 30 years. When that transpires, the overwhelming majority of the GSEs' collateral value for affected California mortgages would be erased immediately, without any opportunity to reclaim that value.

Missouri, the third-largest market for PACE, is significantly earthquake-exposed, as well. Southeastern Missouri, including Metropolitan St. Louis, lies along the New Madrid Fault. In late 1811 and early 1812, a series of earthquakes and aftershocks along that fault produced what seismic geologists regard to be

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<sup>7</sup> "Earthquake Premium and Policy Count Data Call: Summary of 2017 Residential Market Totals," *California Department of Insurance*, July 24, 2018. <https://www.insurance.ca.gov/0400-news/0200-studies-reports/0300-earthquake-study/upload/EQ2017Summary20180724.pdf>.

<sup>8</sup> R.J. Lehmann and Daniel Semelsberger, "Take a Load Off Fannie: The GSEs and Uninsured Earthquake Risk," *R Street Institute*, September 2018. <https://www.rstreet.org/wp-content/uploads/2018/09/No.-151.pdf>.

<sup>9</sup> "Earthquake Hazards Program: Information by State/Territory," *U.S. Geological Survey*. All state maps derived from USGS' 2014 seismic hazard survey except Kansas and Oklahoma, which draw from 2017 surveys that include effects of induced seismicity. <https://earthquake.usgs.gov/earthquakes/byregion>.

likely the most destructive earthquake event in U.S. history. In Missouri, the GSEs held \$82.1 billion of unpaid principal in counties with a greater than 2 percent chance over the next 50 years of PGA of greater than 0.8g, and \$131.8 billion in counties with a greater than 2 percent chance of experiencing PGA of between 0.4g and 0.8g. A February 2017 survey by the Insurance Information Institute found only about 7 percent of Missouri homeowners maintain earthquake insurance coverage.<sup>10</sup>

Altogether, after making conservative adjustments for the unimproved land value of mortgages held by Fannie and Freddie in earthquake-exposed counties, as well as using regional earthquake insurance takeup rates to exclude a proportion of value for properties that maintain at least some earthquake insurance, the R Street study found that Fannie and Freddie held a combined \$204.7 billion of unpaid principle for earthquake-exposed mortgages that were completely uninsured for earthquake risk.

### **UNINSURED FLOOD RISK**

Unlike earthquake insurance, the GSEs are bound by statute to require flood insurance for any mortgages they acquire or secure that are sited in areas designated by the Federal Emergency Management Agency (FEMA) to be 100-year floodplains. Specifically, flood insurance is required for all properties that fall within areas classified on FEMA's Flood Insurance Rate Maps either as Zone V, indicating an area of coastal high-hazard exposed to potential tidal surge, or Zone A, which indicates a high-hazard area that does not face storm-surge risk.

However, the maps used by FEMA to determine these zones are inadequate in several ways, leading potentially to a significant accumulation of uninsured flood risk in the GSEs portfolios. FEMA itself reports that up to a third of flood claims fall outside the A and V zones, in areas of nominally moderate or minimal flood risk where purchase of flood insurance is not required.

Moreover, the maps used by FEMA are badly out-of-date, despite a statutory requirement that all maps be updated at least once every five years. As of year-end 2016, FEMA reported that just 42 percent of its total mapped flood hazard miles could be certified as valid and updated.<sup>11</sup> The problem is most acute in the most flood-prone areas. Of the 166 counties nationwide that produce annual expected claims of more than \$2 million, exactly half (representing 55 percent of the program's risk) have maps that are more than 5 years old, while 42 of those counties (representing 26 percent of the program's risk) have maps that are more than 10 years old.<sup>12</sup>

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<sup>10</sup> "2016 Consumer Insurance Survey - Homeowners Insurance: Understanding, Attitudes and Shopping Practices," *Insurance Information Institute*, March 1, 2017, p. 6. <https://www.iii.org/sites/default/files/docs/pdf/pulse-wp-020217-final.pdf>.

<sup>11</sup> "FEMA Needs to Improve Management of Its Flood Mapping Programs," *U.S. Department of Homeland Security Office of the Inspector-General*, Sept. 27, 2017, p. 3. <https://www.oig.dhs.gov/sites/default/files/assets/2017/OIG-17-110-Sep17.pdf>.

<sup>12</sup> "Age of Flood Maps in Selected Counties That Account for Most of the Expected Claims in the National Flood Insurance Program: Supplemental Material for The National Flood Insurance Program: Financial Soundness and Affordability," *Congressional Budget Office*, November 2017, p. 3. <https://www.cbo.gov/system/files?file=115th-congress-2017-2018/reports/53028-supplementalmaterial.pdf>.

Older maps fail to account for changes in local conditions that can shift or magnify flood risk, including how development can lay ground cover over previously permeable land and how local drainage systems may lack the capacity to keep up with increased development. But there also is evidence that the methodology used to construct FEMA’s floodmaps fail to account for changing climactic conditions, such as rising sea levels and more frequent and more intense rainfall events. A 2018 study found nearly 41 million Americans currently live within 100-year riverine floodplains—more than triple FEMA’s calculation of just 13 million.<sup>13</sup>

To the extent that FEMA’s maps fail to prescribe mandatory flood insurance for properties that face flood risk, the GSEs likely have absorbed an as-yet unquantified number of uninsured properties whose collateral faces significant risk of flooding. A recent National Bureau of Economic Research working paper notes, for instance, that banks and other mortgage originators’ sales of mortgages just below conforming-loan limits spike in the wake of \$1 billion natural disasters, and that such sales are most common in areas without a long history of hurricanes.<sup>14</sup> The NBER researchers found that mortgages sold to the GSEs in the year following a major hurricane have a 3.6 percentage point higher rate of foreclosure, growing to 4.9 percentage points in the third year following the storm. This is consistent with the thesis that lenders are using the GSEs as “insurers of last resort” for uninsured catastrophe risk.

## CONCLUSION

Without insurance protection, the likelihood of default on mortgages rises, with at least some of that risk absorbed by the GSEs. For example, data analytics firm CoreLogic found that serious delinquency rates on home mortgages tripled in the Houston, Texas and Cape Coral, Florida metro areas following the landfalls of Hurricanes Harvey and Irma, respectively.<sup>15</sup>

The most cost-effective way to reduce the severity and likelihood of damage from natural catastrophes like earthquakes floods and hurricanes is through investments in natural hazard mitigation. According to a 2017 analysis by the National Institute of Building Sciences, every \$1 invested in building mitigation saves \$6 on average in costs.

PACE financing is an effective means for property owners to make such investments. Doing so demonstrably raises the value of the collateral underlying GSE-secured loans and reduces risk to the GSEs and to holders of GSE securities. Given the GSEs’ exposure to hundreds of billions of dollars in

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<sup>13</sup> See, e.g., Oliver E. J. Wing et al., “Estimates of present and future flood risk in the conterminous United States,” *Environmental Research Letters* 13:3 (Feb. 28, 2018). <https://iopscience.iop.org/article/10.1088/1748-9326/aaac65>.

<sup>14</sup> See, e.g., Amine Ouazad and Matthew E. Kahn, “Mortgage Finance in the Face of Rising Climate Risk,” NBER Working Paper No. 26322, Sept. 30, 2019. [http://www.ouazad.com/resources/paper\\_kahn\\_ouazad.pdf](http://www.ouazad.com/resources/paper_kahn_ouazad.pdf).

<sup>15</sup> CoreLogic, “CoreLogic Natural Hazard Report Reveals Serious Delinquency Rates Tripled in Recent Disaster-affected Regions,” Press Release, Jan. 29, 2020. <https://finance.yahoo.com/news/corelogic-natural-hazard-report-reveals-130000372.html>.

uninsured risk, these benefits must be taken into account and balanced against whatever relatively small impairment the enterprises would suffer from taking a subordinate lien position on those very few PACE assessments that become delinquent. We urge FHFA to incorporate such analysis into any future Notice of Proposed Rulemaking regarding PACE financing.

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