

# Keys to Successful Passive House Implementation

## California Public Utilities Commission

**Challenge:** The CPUC tasked Tierra with 1) identifying national and international jurisdictions that had successfully developed an approach for achieving their carbon reduction and energy savings targets by incorporating Passive House (PH) international building standards into their policy frameworks, and 2) identifying best practices that can be implemented by the State of California to speed adoption of Passive House construction to help the Golden State achieve its aggressive energy and climate goals.

**Project Highlights:**

- Considered CA policy framework to identify opportunities for improvement
- Interviewed experts from around the world
- Condensed findings into 4 types of tools, comprising 15 best practices that can be readily applied in CA
- Presented results multiple times, including to the CPUC, California stakeholders, and a US-wide audience of Passive House experts

**Approach:** The research team first analyzed the existing CA policy framework and previous efforts to incorporate PH construction within California. The team then conducted a literature review of articles, policy documents, conference proceedings, white papers, and cost analyses to find the best examples of successful PH implementations throughout North America, Europe, and Australasia. To identify similarities across these disparate locations, the team conducted interviews with 19 subject matter experts to understand the context, activities and outcomes associated with successful PH endeavors in their regions. Finally, the team distilled the myriad insights into four major tools that can be wielded to increase PH prevalence and leverage their benefits: 1) enacting policy, 2) passing codes, 3) utilizing catalysts to stimulate the market, and 4) capacity building.

**Outcome:** The team prepared and published a report for the CPUC explaining the best practices and provide examples through a set of mini case studies documenting successful PH implementation efforts in Belgium, Canada, New York, and Pennsylvania. The team presented their findings on several California-wide webinars, as well as to a US-wide group of members from the Passive House Network.

Tools	Key Element	Brussels	New York	Vancouver	Pennsylvania
Policy	Top-down alignment of goals and policies	✓	✓	✓	✓
	Bold policies and plans	✓	✓	✓	
Codes	Step codes with time-dependent performance targets	✓	✓	✓	
	Passive House code compliance path	✓	✓	✓	
	Compliance targets based on performance metrics	✓	✓	✓	
	Energy modeling alignment	✓	✓	✓	
Catalysts	Leading by example	✓	✓	✓	✓
	Financial incentives	✓	✓	✓	✓
	Nonfinancial incentives	✓	✓	✓	
	Competitions for cash and other awards	✓	✓	✓	✓
	Early examples of success	✓	✓	✓	✓
Capacity	Outreach and awareness	✓	✓	✓	
	Workforce education and training	✓	✓	✓	
	Expert advisors	✓	✓	✓	
	Supply chain development	✓	✓	✓	



## Contact

Matthew Joyce, Director  
[Matthew.Joyce@tierrarc.com](mailto:Matthew.Joyce@tierrarc.com)  
Direct | 707-823-6655