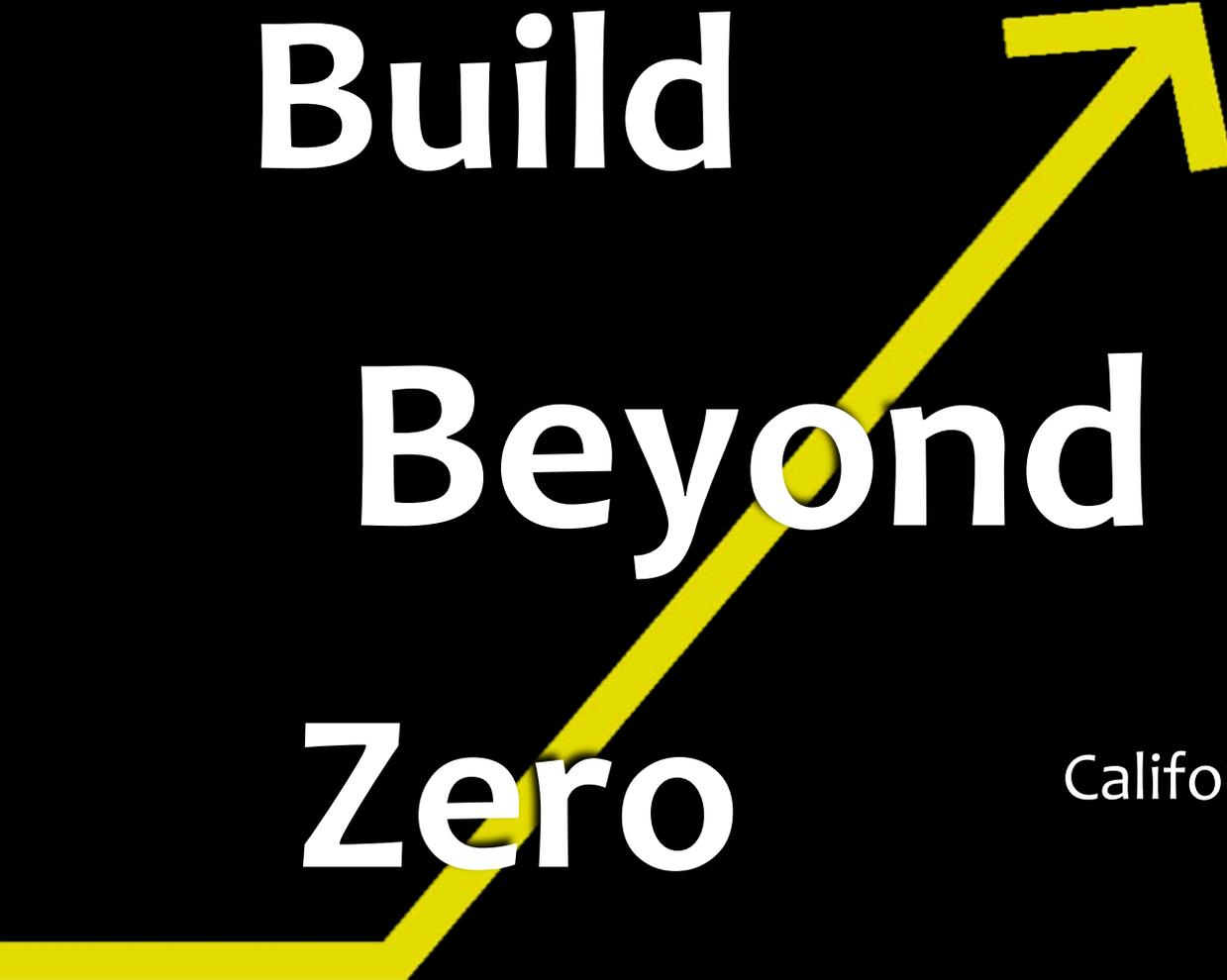


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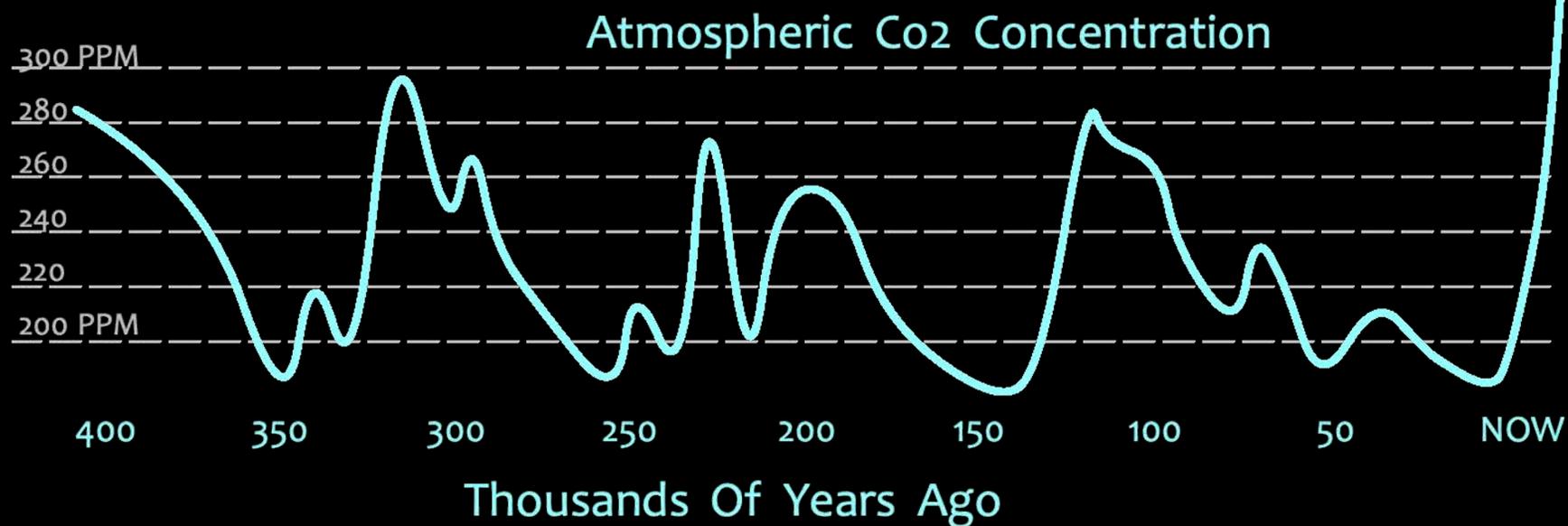
Docket Number:	21-IEPR-06
Project Title:	Building Decarbonization and Energy Efficiency
TN #:	239464
Document Title:	Presentation - Build Beyond Zero
Description:	S1.2C_Bruce King_Ecological Building Network
Filer:	Raquel Kravitz
Organization:	Ecological Building Network
Submitter Role:	Public Agency
Submission Date:	8/25/2021 2:34:39 PM
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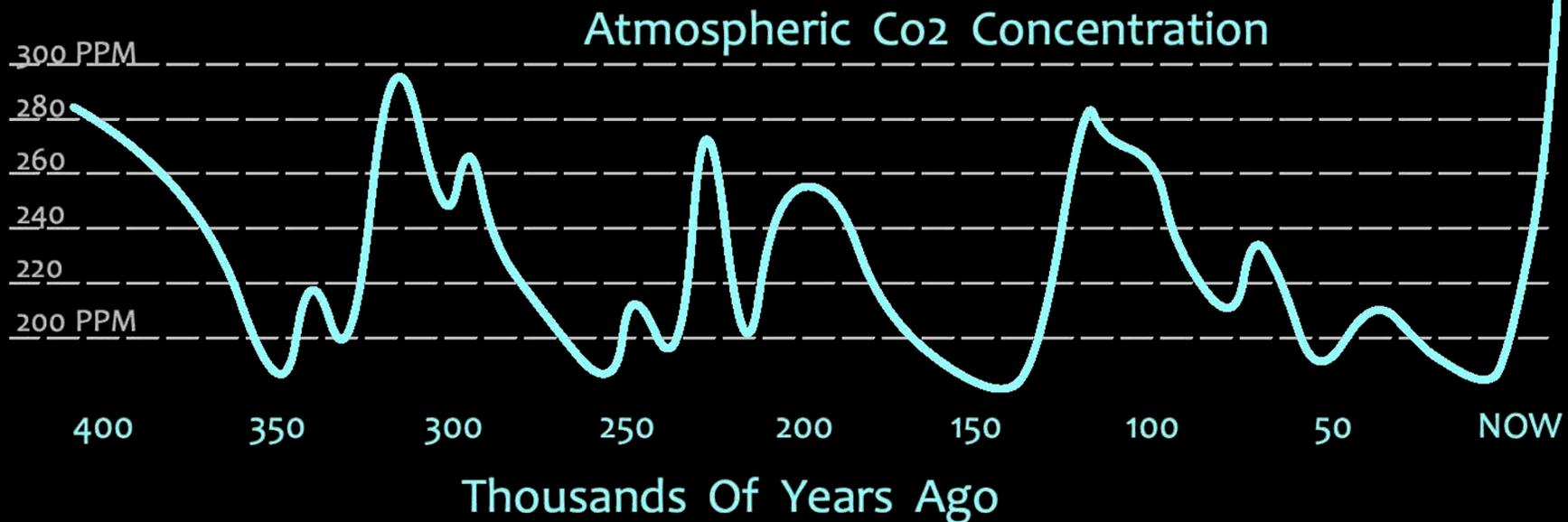
Build Beyond Zero

Bruce King
California Energy Commission
August 26, 2021

Reducing emissions is not enough



We need drawdown

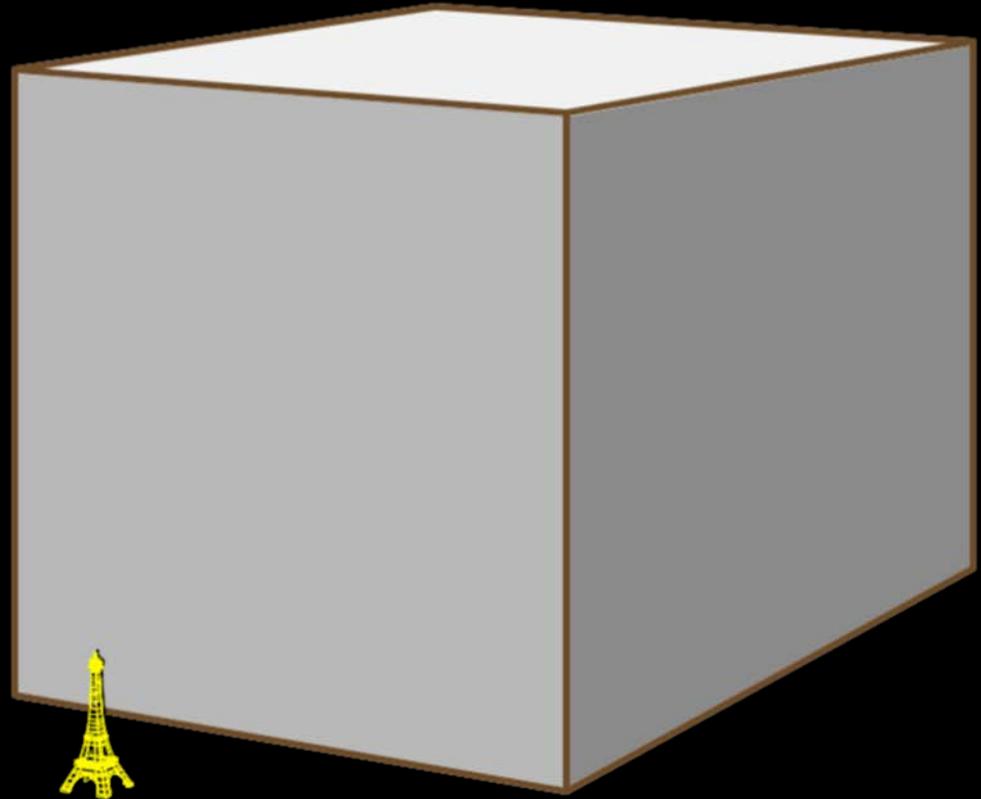




concrete

*makes for 8%
of
global emissions*

**How much is
10 billion tons
of concrete?**



the low-carbon concrete building code

www.marincounty.org

- code language
- background research
- commentary
- sample specifications



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Going national –
ASHRAE 189.1
International Green
Construction Code

**But there's more
to this than
concrete . . .**



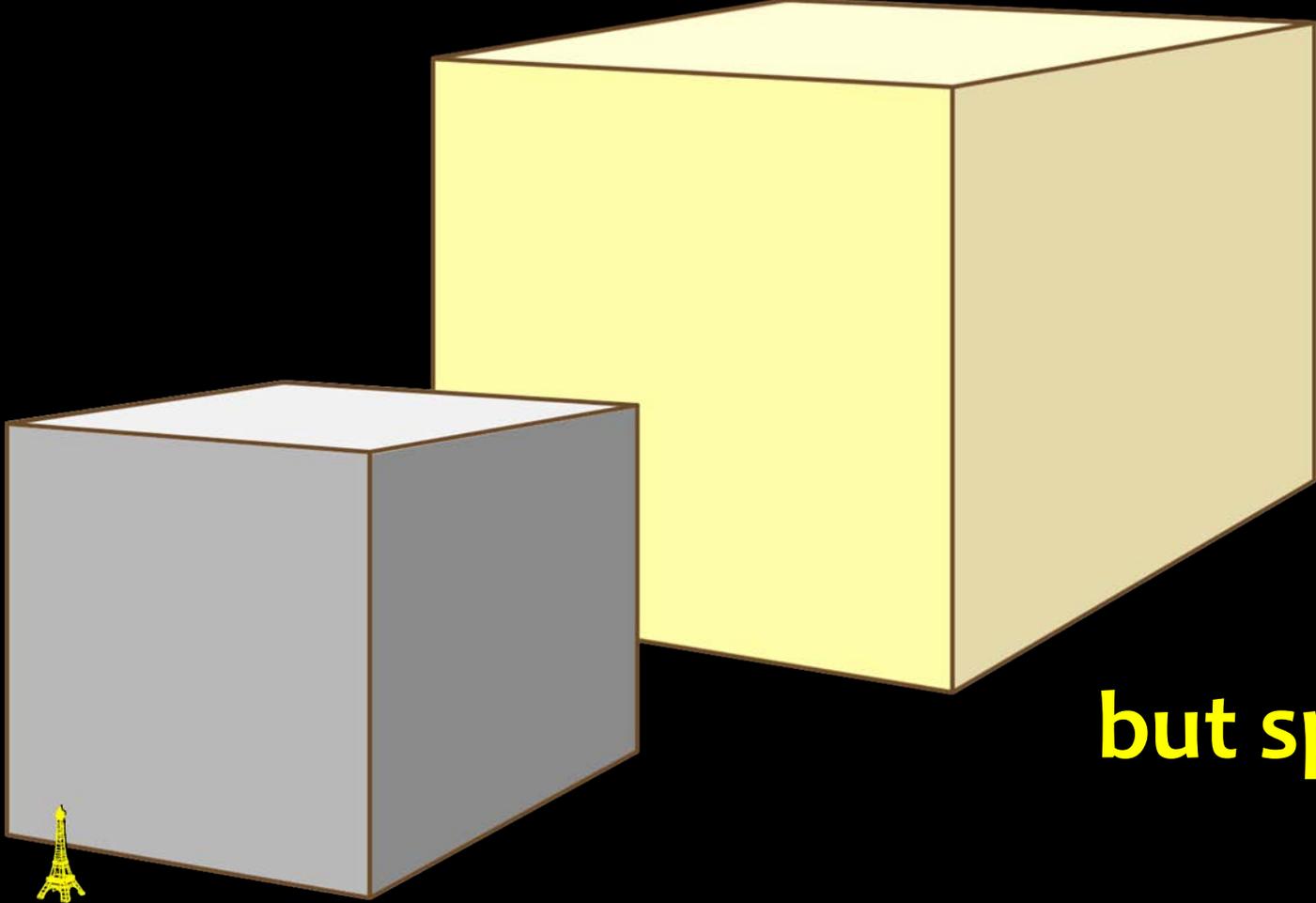
steel



refrigerants

Use what you've already got!





**but speaking of
straw . . .**

softwood forest 2 – 4

straw 2 – 5

hemp 22 – 44 (one or two crops/year)

algae 100 – 250
(hydroponic structures)



Potential Photosynthetic Carbon Storage

tons per hectare per year, adapted from multiple sources

Algae numbers based on extrapolation from current studies.

Photosynthetic Architecture



Bruce King **Build Beyond Zero** for California Energy Commission

August 26, 2021

Mass timber?

Lower carbon?
not necessarily

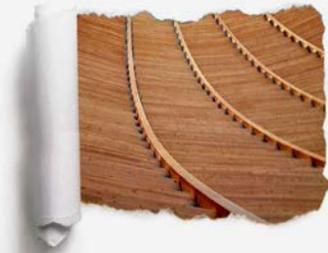


Our goal:
15 by 50

*Net carbon storage
of 15 gigatons/year*

"TRULY, WHAT A FANTASTIC, TIMELY, IMPORTANT BOOK!"
— PAUL HAWKEN, author of *Drawdown* and *Blessed Unrest*

THE NEW CARBON ARCHITECTURE



BUILDING TO COOL
THE CLIMATE

BRUCE KING

Thank you!

Bruce King **Build Beyond Zero** for **California Energy Commission**

August 26, 2021