October 2024

OpenMinds & NextGen Overview

OpenMinds

AGENDA

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An Introduction to OpenMinds

02

Defining and Confronting the “Dual Challenge”

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An Overview of the NextGen Leaders Program

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OpenMinds Identity

OUR MISSION

Less emissions. More energy.

Accelerate progress against the Dual Challenge by 203X

- 100+ volunteer experts
- 501(c)(3)
- Disciplined non-partisan selection process
- 360° systems engineering approach

WHAT MAKES US UNIQUE

Energy AND climate

Cross-functional expert team

Detailed solutions framework

Impact progress by 203X

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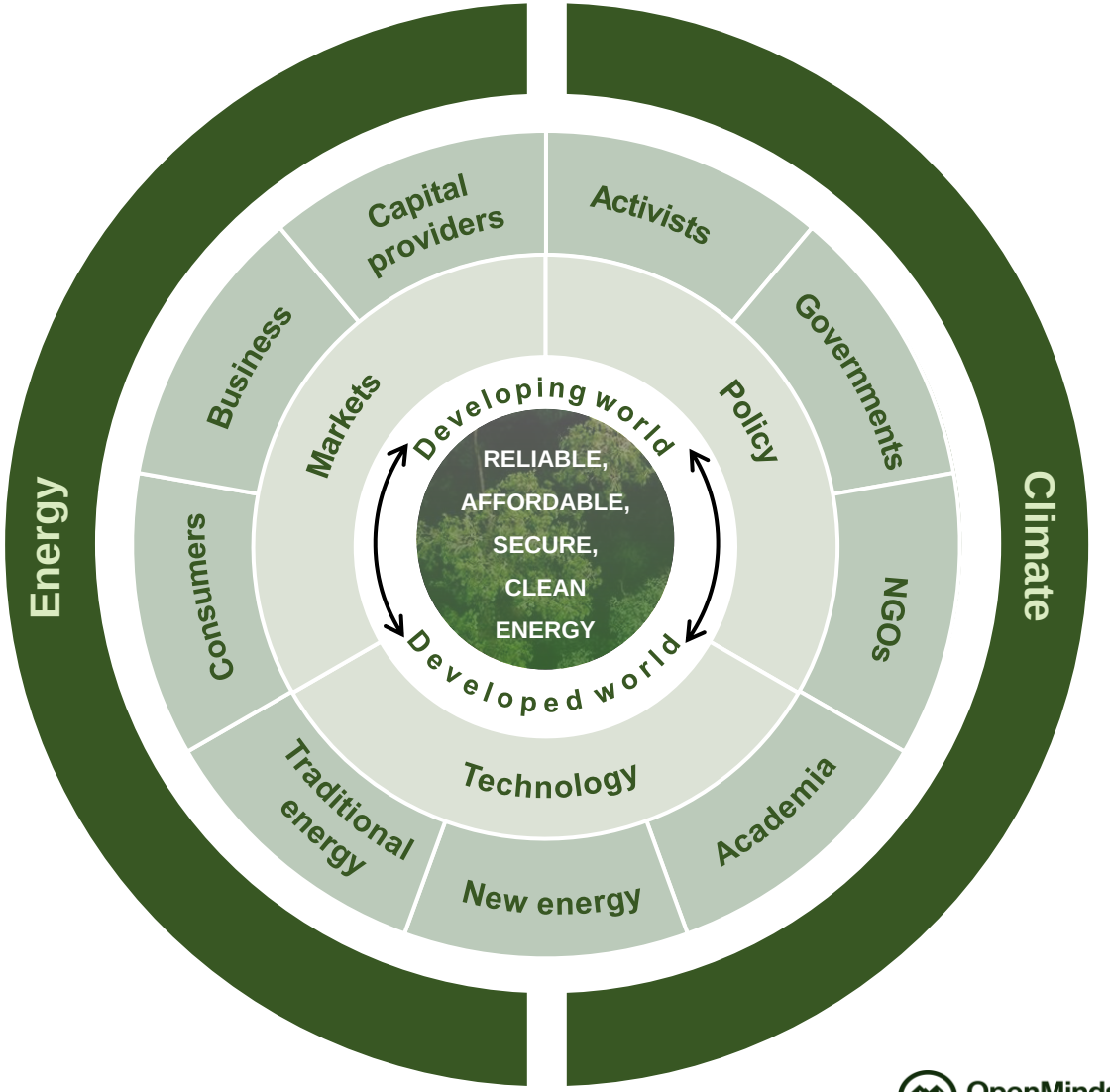
OpenMinds' Solution Approach

We believe that addressing the Dual Challenge requires us to work together in a **non-partisan** manner across **diverse** fields, industries, and geographies



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The OpenMinds Team

Industry	Role and company
Mr. John Arnold	Founder & CEO, Arnold Ventures
Mr. John Berger	Founder & CEO, Sunnova Energy International
Mr. Scott Brown	Founder and Chairman, New Energy Capital
Dr. Barbara J. Burger	Corporate Graduate, Energy Director, Advisor and Innovator
Mr. Adrian Corless	CEO, CarbonCapture
Mr. Ted Craver	Former Chair, President, & CEO, Edison International
Mr. Michael DeBock	Vice President of Origination, NextEra Energy
Mr. Bob Flexon	Chairman, PG&E
Mr. Jon Goldberg	Founder and CEO, Carbon Direct
Mr. Thad Hill	CEO, Calpine
Ms. Vicki Hollub	President & CEO, Oxy
Ms. Phoebe Ho-Stone	CCS Development Planner, ExxonMobil Low Carbon Solutions
Mr. Aaron Jagdfeld	CEO, Generac Power Systems
Mr. Mateo Jamarillo	Co-Founder & CEO, Form Energy Inc
Mr. Sanjeev Krishnan	Chief Investment Officer and Senior Managing Director, S2G
Mr. Tim Latimer	Co-Founder & CEO, Fervo Energy
Mr. Steve Lockard	Chairman, TPI Composites
Mr. Thomas McAndrew	Founder & CEO, Enchanted Rock
Dr. Shannon Miller	Founder & CEO, Main Spring Energy
Mr. Stan Miranda	Founder & Chairman, Partners Capital
Mr. Nate Nickerson	Comms and Public Affairs Partner, DCVC
Ms. Lara Poloni	President, AECOM
Ms. Rachael Porter	CMO, Oxy
Mr. Miguel Prado	CEO, energyRE
Ms. Heather Redman	Co-Founder & Managing Partner, Flying Fish Partners
Ms. Starlee Sykes	CEO, Archaea Energy at BP
Mr. Dan Tishman	Chairman & Principal, Tishman Realty & Construction
Mr. Ignacio (Nacho) Torras	President & CEO, Tricon
Ms. Jessica Uhl	President, GE Vernova
Mr. Al Vickers	COO, Grid United
Mr. Andy Waite	Managing Partner - SCF Partners
Mr. Daniel Weiss	Co-Founder and Managing Partner, Angeleno Group
Mr. Jason Wells	President & CEO, CenterPoint Energy
Mr. Darryl Willis	Corporate VP of Energy & Resources Industry, Microsoft
Dr. Mike Witt	VP & Chief Sustainability Officer, Northrop Grumman

Academia	Role and Company
Dr. Steven Barrett	Regius Professor of Engineering, Cambridge University
Dr. Naomi Boness	Managing Director, Stanford Natural Gas Initiative and Stanford Hydrogen Initiative
Dr. Neil Fromer	Executive Director of Programs, Resnick Sustainability Institute
Mr. Sam Hall	MBA Candidate, MIT Sloan School of Management
Mr. Britt Harris	Former CEO & CIO, UTIMCO
Ms. Daniela Marin	PhD Candidate, Stanford University
Dr. Kenneth Medlock III	Senior Director, Center for Energy Studies at Rice University's Baker Institute
Dr. Dava Newman	Director, MIT Media Lab
Dr. Jonas Peters	Director, Resnick Sustainability Institute
Dr. Minoo Rathnasabapathy	Research Lead, Future Worlds, MIT Media Lab
Dr. Peter Schlosser	Vice President - Global Futures Initiative Vice Provost - Arizona State University
Mr. Ben Soltoff	Ecosystem-Builder/Entrepreneur in Residence, MIT's Martin Trust for MIT Entrepreneurship
Dr. Scott Tinker	Director, Bureau of Economic Geology at the University of Texas
Dr. Maya Tolstoy	Dean of the College of the Environment, University of Washington

Policy / Influence	Role and Company
Mr. Jason Bordoff	Professor & Founding Director, Center on Global Energy Policy, Columbia University
Mr. David Crane	Under Secretary for infrastructure, United States Department of Energy
Dr. Reginald DesRoches	President, Rice University
Mr. Hal Harvey	Founder, Energy Innovation
Mr. Mac Heller	Documentary Film Producer
Mr. John Hickenlooper	Former Governor, State of Colorado | Current US Senator, State of Colorado
Mr. Robert Johnston	Executive Director, Columbia Center on Global Energy Policy
Ms. Janet Napolitano	Former President, University of California System
Mr. Rob Shepardson	Co-Founder, SS+K
Mr. Lenny Stern	Co-Founder, SS+K

NGO	Role and Company
Dr. Doug Arent	Executive Director, Strategic Public Private Partnerships, NREL
Mr. Armond Cohen	Executive Director, Clean Air Task Force
Ms. Karlynn Cory	Group Manager - Community Energy Transitions, NREL
Ms. Myrtle Dawes	CEO, Net Zero Technology Centre
Mr. Jason Grumet	CEO, American Clean Power Association (ACP)
Ms. Jennifer Layke	Global Director – Energy, World Resources Institute
Mr. Tom Light	President & CEO, Aviation Climate Taskforce
Dr. Lara Pierpoint	Director of Early Climate Infrastructure, Prime Coalition
Mr. David Pruner	Executive Director, TEX-E
Mr. Larry Selzer	President & CEO, The Conservation Fund
Dr. Cyrus Wadia	CEO, Activate
Mr. Brady Walkinshaw	CEO, Earth Alliance
Mr. Kurt Waltzer	Former CEO, Clean Air Task Force

Hosts	Role and Company
Mr. David Baldwin	OpenMinds Co-Founder | Partner, SCF Partners
Mr. Jeff Katz	Founding Chairman & CEO, Orbitz / Journera
Ms. Maire Baldwin	Board Director, Permian Resources
Ms. Mara Abbott	Chief of Staff, OpenMinds
Mr. James Baird	Associate Partner, Bain & Company
Mr. Jason Corzine	President & CEO, Telluride Foundation
Mr. Julian Critchlow	Advisory Partner, Bain & Company
Mr. Grant Dougan	Partner, Bain & Company
Ms. Emily Emmett	Partner, Bain & Company
Mr. Peter Guarraia	Partner, Bain & Company
Mr. Preston Henske	Partner, Bain & Company
Ms. Cate Hight	Partner, Bain & Company
Mr. Fred Kittler	Co-Founder and Managing Director, Firelake Capital Mgmt.
Ms. Dianne Ledingham	Advisory Partner, Bain & Company
Mr. Paul Major	Board Member & Manager, Paradox Community Trust
Mr. Joseph Scalise	Partner, Head of Global Energy & Natural Resources Practice, Bain & Company
Mr. Crosby Scofield	Partner, Vinson and Elkins
Ms. Erika Serow	Partner and CMO, Bain & Company
Mr. Michael Short	Partner, Bain & Company

… and many more

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Defining and Confronting the “Dual Challenge”

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An Overview of the
NextGen Leaders Program

The Dual Challenge: An Overview

Energy is fundamental to human wellbeing and flourishing…

… but our primary energy sources, fossil fuels, are also the principal source of human greenhouse gas emissions, which **cause global warming**

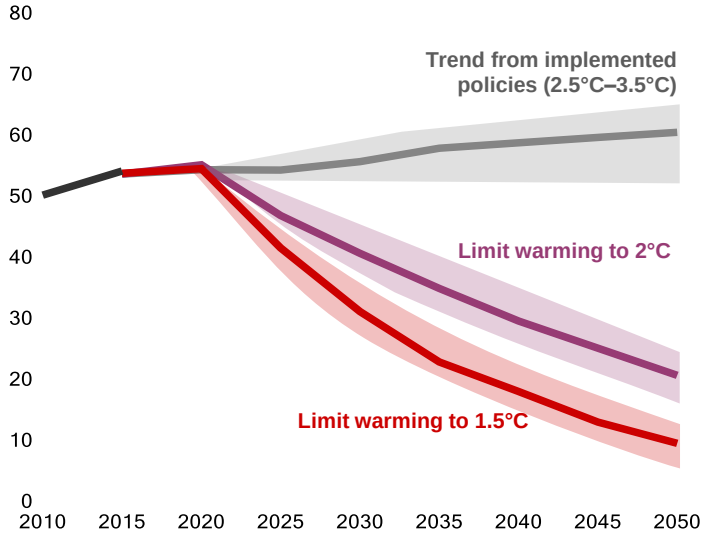
The tension between energy supply and climate change presents the **Dual Challenge**

This is a **global** problem of enormous **scale and complexity**, and addressing it will require us to balance **competing priorities**

The Core of the Dual Challenge

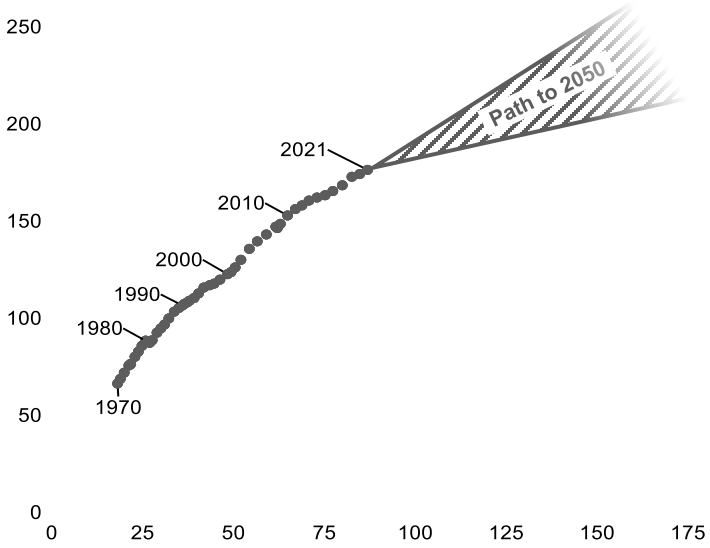
Emissions Must Decline

Global annual greenhouse gas emissions
(gigatons of CO_2-equivalent)



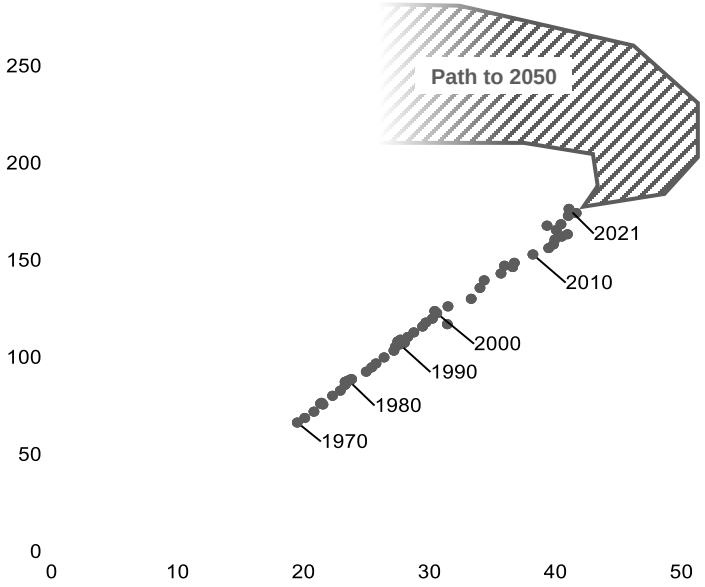
Energy Will Grow

Global primary energy demand
(petawatt-hours)



The Dual Challenge

Global primary energy demand
(petawatt-hours)



Note: Warming figures in left-side emissions chart are relative to the preindustrial period and reflect projected warming level by 2100 in each scenario; bold lines in emissions chart represent median estimate, and shaded regions reflect a range from the 25th to 75th percentile. Emissions in right-side chart reflect global CO_2 emissions inclusive of land use change and exclude non-CO_2 emissions like methane.
Sources: IPCC, Sixth Assessment Report; World Bank; Global Carbon Project; BP Statistical Review of World Energy, 2022; Bain & Company analysis

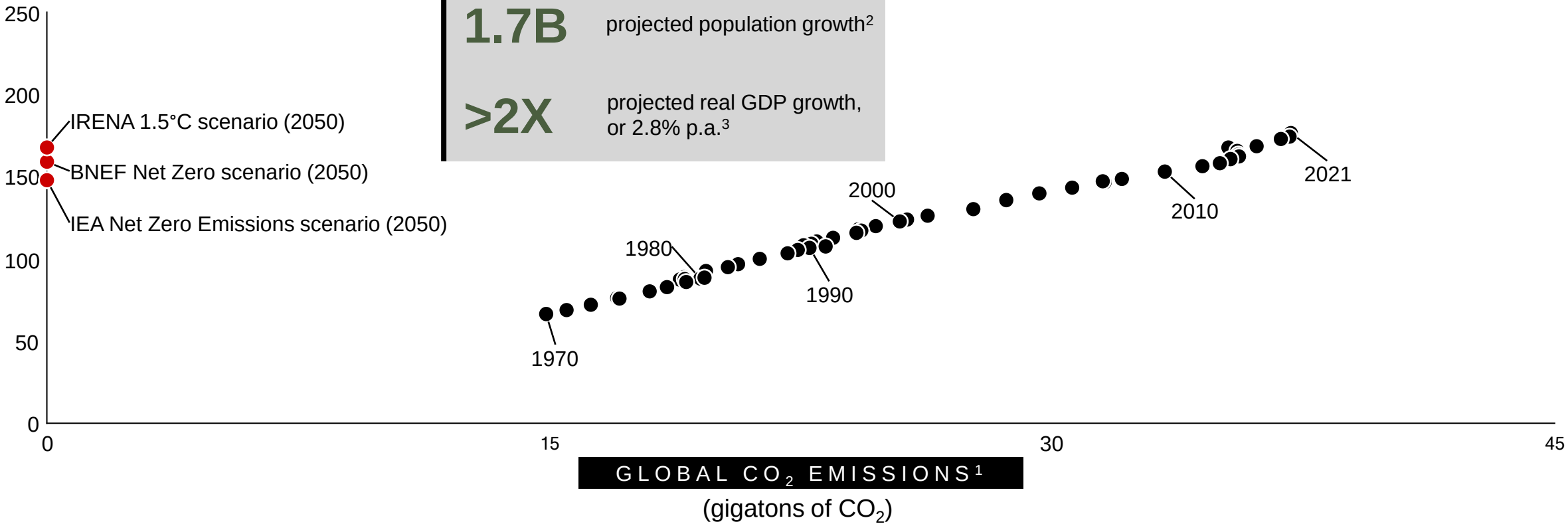
The Line? Needs to Bend… Quickly!

Global primary energy demand
(petawatt-hours)

Demographic and economic backdrop for 2021-2050 period

1.7B projected population growth[2]

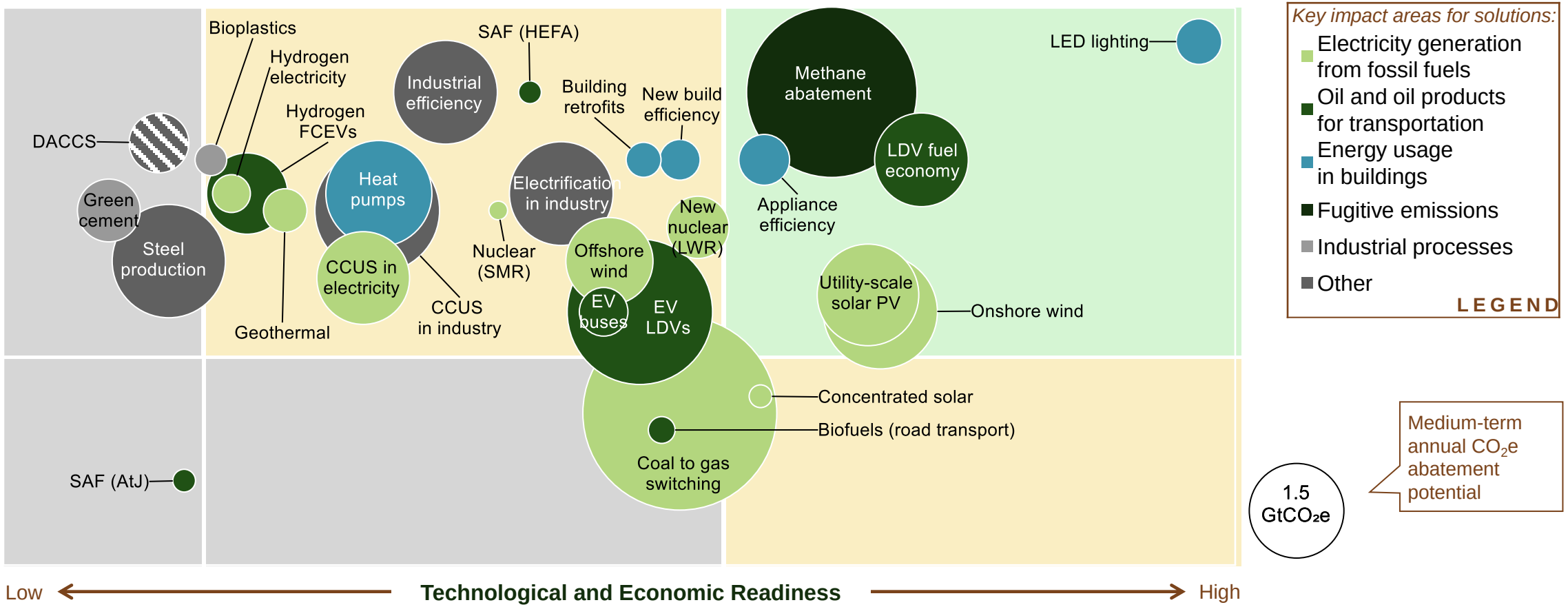
>2X projected real GDP growth, or 2.8% p.a.[3]



Note: (1) CO_2 emissions exclude land use change and exclude non-CO_2 emissions like methane; (2) UN median fertility scenario; (3) GDP expressed in 2021 USD in purchasing power parity terms via IEA; (4) IEA STEPS scenario temperature estimate range reflects 33-67% confidence interval. Source: IEA; BP Statistical Review of World Energy, 2022; BNEF; IRENA; Resources for the Future

Prioritization of Potential Solutions

/DIRECTIONAL



Note: Abatement potential refers to medium-term annual CO_2e emissions reduction; building efficiency and retrofits refers to insulation and HVAC only; DACCS abatement potential virtually infinite; industrial efficiency includes solutions such as waste to heat recovery; renewable solutions include battery component in cost and abatement potential; geothermal represents enhanced geothermal systems; assumes methane has global warming potential 30 times that of CO_2
Source: IEA; IRENA; Goldman Sachs; Project Drawdown; OpenMinds research and lit. scan

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Our Top 10 Solutions

‘Top 10’ solutions

Prioritized set of solutions with high viability and sufficient technological and economic readiness to “bend the curve” by 203X

Big 4 opportunities

- Abating methane emissions from energy
- Renewables (i.e., solar and wind)
- Coal-to-gas switching
- CCUS in electricity and industry
- Transportation energy efficiency
- Industrial efficiency and electrification
- Electric LDVs
- Heat pumps
- New and existing nuclear
- Buildings efficiency

Other important solutions

Solutions that **may be critically important** but are assessed as having less overall impact potential by 203X relative to our list of ‘top 10’ solutions

- Behavioral change
- Adaptation

We are considering whether and how to incorporate these more fully into our efforts

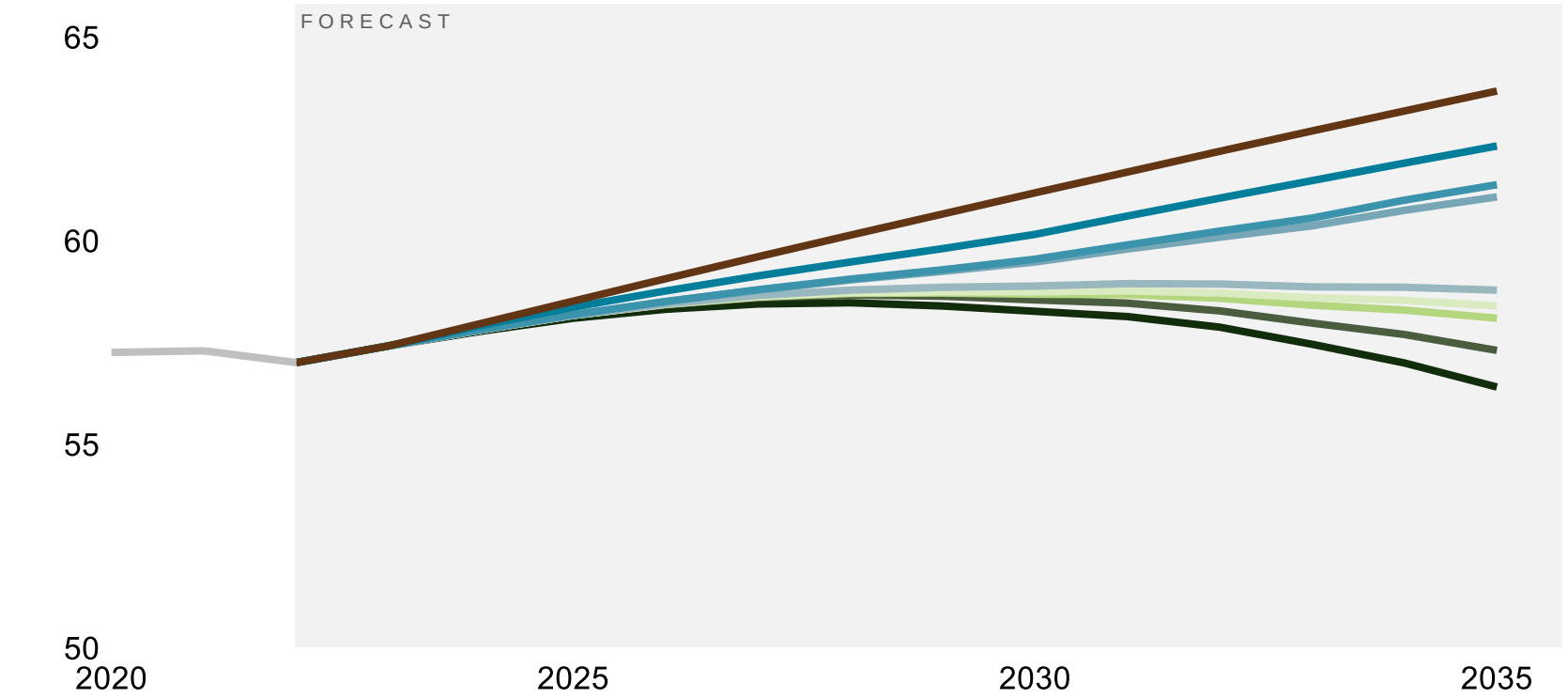
- Distributed generation
- Green steel and cement
- Nature-based solutions
- Hydrogen
- LED lighting
- Direct air capture
- Geothermal
- Circular economy

Impact of Implementing Key Solutions

PRELIMINARY

Projected emissions impact

Global annual net GHG emissions



Source: Climate Interactive

- Baseline
- Methane abatement
- Coal-to-gas switching
- CCUS in electricity & industry
- Renewables
- Nuclear
- Transportation efficiency
- Transport electrification
- Buildings and industry efficiency and electrification

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**An Overview of the
NextGen Leaders Program**

3 Become a part of a movement of next generation leaders that *will change the world*

DRAFT

High-Caliber Network

Join a widely recognized global network of the best and **brightest climate & energy leaders** with expertise across all areas of the energy transition

Foster collaboration from **interdisciplinary thinkers** committed to solving the Dual Challenge

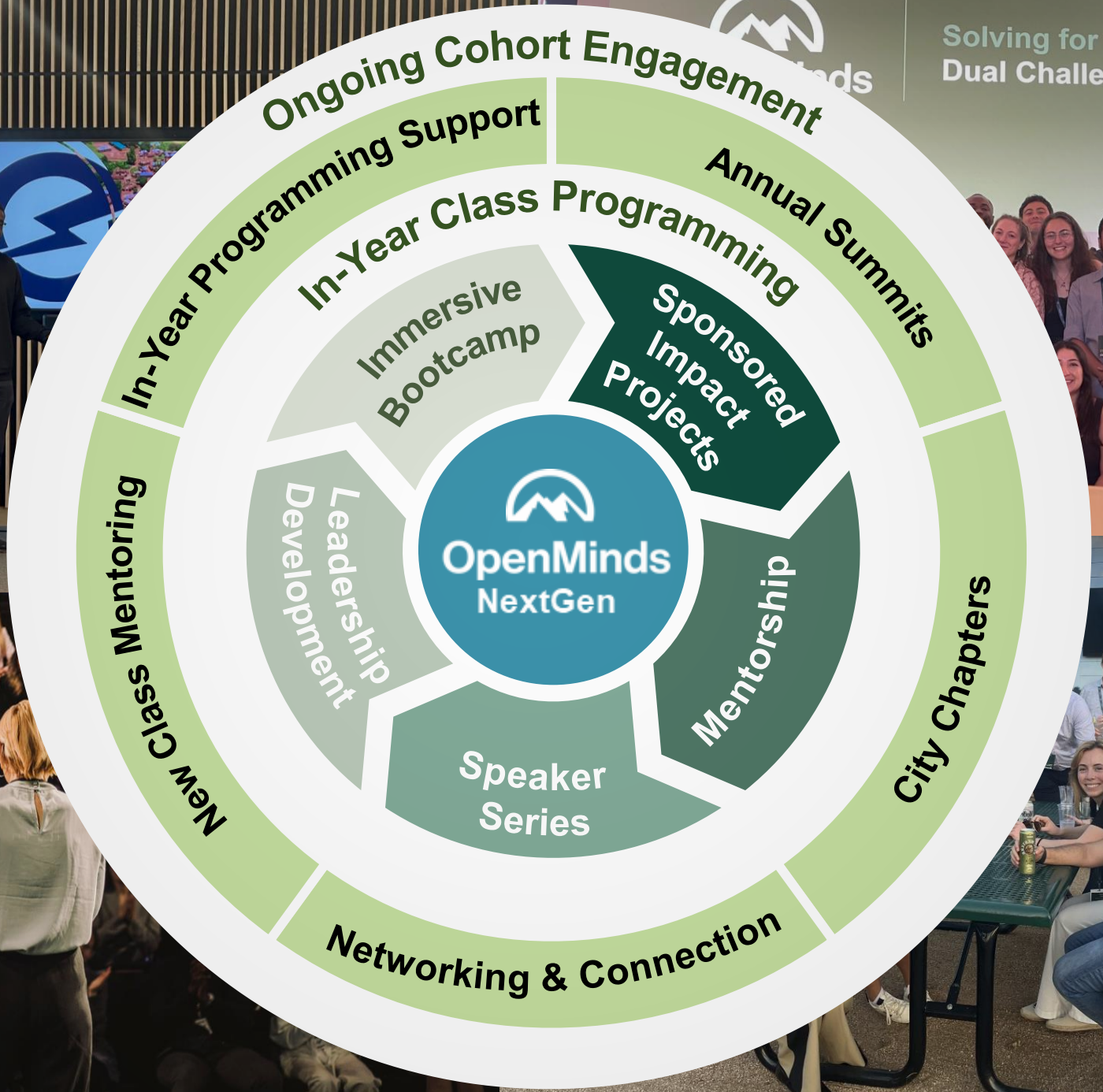
Strong Community

Build strong connections with fellow NextGen leaders and experts from academia, industry, and non-profits while **advancing your understanding** of the Dual Challenge

Leadership Development

Drive change by launching **projects and new initiatives** with your cohort that help address the Dual Challenge


Solving for the
Dual Challenge.


Ongoing Cohort Engagement
In-Year Programming Support
Annual Summits
In-Year Class Programming
Immersive Bootcamp
Sponsored Impact Projects
Leadership Development
OpenMinds NextGen
Mentorship
Speaker Series
New Class Mentoring
City Chapters
Networking & Connection

OpenMinds NextGen Leaders Program Overview

Mission

ENABLE and **EMPOWER** the next generation of climate and energy leaders **TO** take action on the Dual Challenge **BY** identifying, equipping, and connecting them with expertise and resources to succeed

Programming

Mentorship

Students are **paired with OpenMinds experts and alumni** based on their interests and career goals

Immersive bootcamp

Students **participate in an immersion experience** to gain hands-on experience with OpenMinds and its mission

Speaker series

Students attend **in-person and virtual events focused on energy and climate** (fireside chats, panel conversations, etc.)

Leadership development

Students attend **educational sessions** focused on leadership traits and personal development

Sponsored Projects

Students work together in teams on **high impact projects**, in partnership with **top energy and climate players**

Student expectations

- **Attend and participate actively** in the bootcamp, and as many program events as possible (e.g. mentorship sessions, networking events) while sharing expertise with other participants
- **Attend all required NextGen programming sessions to gain and maintain access to the OpenMinds community**. Full participation is essential for fostering connections and fully benefiting from the program's resources
- **Provide feedback** on OpenMinds solution and progress areas via **collaboration with experts**
- Remain an **active alum of the program**—attending events as requested, **mentoring other students**, and contributing to **progress against the Dual Challenge**

NextGen 2024 Bootcamp Highlights

Overview of 2024 NextGen Sponsored Projects

Topic	Sponsor	Scope
Carbon Capture Utilization & Sequestration (CCUS)	CALPINE	What is the potential **impact from implementing CCUS on gas-fired plants**?
Direct Air Capture (DAC)	CarbonCapture™	Who are **high priority customer segments for Direct Air Capture**, and what is the potential impact from serving them?
Methane Abatement	QUANTUM CAPITAL GROUP	How can **small-to-mid sized operators be incentivized to pursue methane abatement**, and what is the potential impact?
Coal-to-X switching	CenterPoint Energy	What is the **risk from growing energy demand on coal plant phaseouts,** and what are some mitigation strategies?
Renewable Power	NEXTera ENERGY	How is **AI impacting energy demand growth** in the US, and what is the **potential to meet this demand with renewables**?
Transmission	GU GRID UNITED	What is the **potential impact of accelerating investment** in the grid by unleashing potential from **recent legislative policy** (e.g. EPRA)?

OpenMinds

Solving for the Dual Challenge by 203X

Apply by January 31st!

OpenMinds NextGen Leaders Program:
Enable and empower the next generation of climate and energy leaders to take action on the Dual Challenge by identifying, equipping, and connecting them with expertise and resources to succeed

Apply to become a OpenMinds NextGen Leader

Deadline: January 31st, 2025

https://bit.ly/ApplytoOpenMinds

Learn more about OpenMinds at **Openminds203x.org**

What the program entails

- **Interactive immersion** through a **3-day bootcamp** with other students, industry experts, and policymakers
- **Education** on the Dual Challenge of energy + climate
- **1:1 mentorship with top experts** in the climate and energy industry
- **Networking** with leaders from energy, climate, academia, policy, as well as students from top universities across the US & Europe
- **Leadership opportunities** to launch and **run cross-functional projects** that make an impact on the Dual Challenge

Student Expectations

Commit ~1-5 hours per week on average across program elements

Participate in the bootcamp and share your expertise with other attendees

Drive projects for OpenMinds and remain an active member of the broader NextGen Leaders group