



*A documentary series uncovering the world's most radical solutions to climate change, and the innovators making them happen.*





# SYNOPSIS

A radical new wave of innovators from all corners of the planet are building machines, growing seaweed, and burning methane from abandoned mines to draw gigatons of greenhouse gases out of the atmosphere and stop climate change. CARBON CATCHERS is the documentary series exploring the struggle, madness and triumphs as these misfit entrepreneurs throw their lives into the urgent race to rebalance our atmosphere. We explore the solutions, the extreme hobbies, and origin stories that led our subjects to saving the planet for a living.

This is the “Chef’s Table” of innovative climate action.

From the sandy deserts of Oman, to the thick rainforests of Brazil, to the busy city streets of San Francisco, our carbon catchers are growing mushrooms, building flame-throwers, cultivating bacteria, and constructing massive vacuum machines to remove carbon dioxide from the atmosphere *right now*.

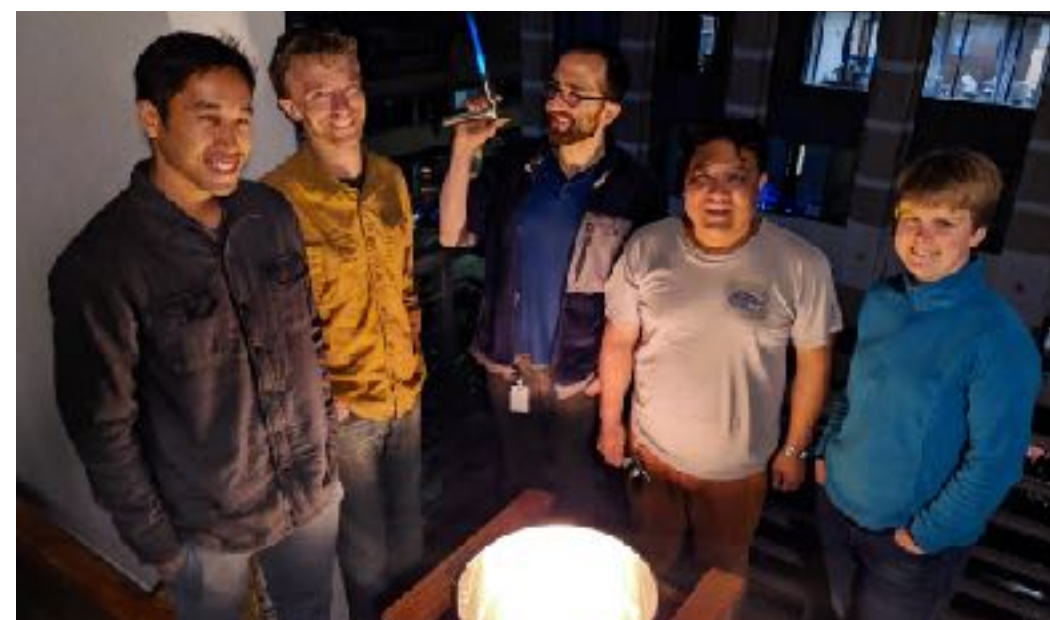
All of our subjects have been vetted by a committee of climate experts, analyzing their climate impact, technological feasibility and scalability. How do these technologies work, and can they roll out fast enough to meet the urgent challenge the world faces? The clock is ticking, and the stakes could not be higher.

**“Only those who attempt the absurd can achieve the impossible.”**

– *Albert Einstein*









# MULTIPLE SEASONS

We are currently witnessing the birth of the “Climate Economy.”

The latest UN climate report offers a stark reminder that removing gigatons (billions of tons) of carbon dioxide from the atmosphere will be essential to prevent global warming from spiralling out of control. Since the industrial revolution, deforestation, farming and fossil fuel-extraction have released one trillion tons of excess CO<sub>2</sub> into the atmosphere.

Currently atmospheric carbon is at 415 ppm (parts per million). We must get down to 350 ppm to avoid a climate disaster. According to a McKinsey report on ‘scaling voluntary carbon markets’, the market size for carbon dioxide removal is estimated to land between \$5-30 billion at the low end, and more than \$50 billion at the high end by 2030.

As the urgency and market opportunities ramp up, and the methods and technology evolve, more Carbon Catchers will emerge, with more stories to follow. Our series will highlight the countdown in parts per million of CO<sub>2</sub> as the atmosphere (hopefully) draws down closer to a safer 350 threshold.

We foresee this series recording the historically important work of the pioneers in carbon removal, so that future generations can understand the names and faces of the Carbon Catchers who stepped up to this massive planetary challenge.





# FORMAT

Each episode will be structured to intimately follow one Carbon Catcher's story. We will cover their struggles as ambitious tech founders launching bold climate solutions in the field, while exploring their inner philosophy around climate change, and what motivates them to take on this challenge.

The core of each episode will be filmic coverage of the Catchers as they deploy their climate solution in unique locations around the world, interspersed with grittier "verité" documentary style, capturing the adventurous hobbies and eccentricities that express their deep connection to nature. Slow poetic elements will express the philosophies, fears, and dreams relating to their vision for our planetary future.

Infographic animation will be used to clearly explain the science where required, though we will defer to real world demonstrations of the science where possible. Expert interviews will be used to validate or question certain approaches being taken by our Carbon Catchers, keeping a critical focus on scientifically valid approaches to solving climate change at the scale required to make a meaningful impact.

# ACCESS & SUBJECTS

The filmmakers have compiled a list of over 100 diverse subjects from around the globe, prioritising female and ethnically diverse founders, securing access to key characters with highly visual, fascinating solutions. These are the planet's unsung climate heroes — putting their lives and reputations on the line to make bold, scalable climate impact. Carbon Catchers will champion these Elon Musk-like eco-preneurs to audiences before they become household names. Each of our subjects is uniquely eccentric, with a diverse, unusual origin story, sharing a deep connection to nature expressed in extreme sports, and unusual approaches to environmental activism within and outside of their work.







# 1

## Green Sandy Beaches

*with Kelly Erhart*

Kelly is solving climate change using a green volcanic mineral called olivine, which her company grinds to the size of sand and spreads on beaches. The waves further break down the highly reactive material, accelerating a series of chemical reactions that pull CO2 out of the air and lock it up in the shells and skeletons of mollusks and corals. Sure, the sand turns green, but this process could also potentially store more carbon dioxide than humans have pumped out since the start of the Industrial Revolution – that's worth the green sand!

We will follow Kelly to...

- Discover geological 'weathering' in Iceland.
- Travel to the Chihuahua, Mexico, to source the rare olivine.
- Have front row seats to her inaugural deployment of one-hundred-tons of olivine on the California coast.
- Go behind the scenes and see how she speeds up rock formations.



# 2

## Sea Weed Drops

*with Marty Odlin*

Marty wanted to fish for a living as a commercial fisherman. But after realizing that climate change and overfishing were decimating mackerel crops, he pivoted his business to ocean-grown algae. He realised this approach is even better at removing carbon than trees. With his new company Running Tide, Marty grows copious tons of the slimy stuff, hauls it into the middle of the ocean, and has developed an innovative system that sinks it to the bottom of the sea, where the carbon can be stored for centuries.

We will follow Marty to...

- Explore his state-of-the-art algae growing laboratory in Portland, ME.
- Brave the waves crashing over the hull as he deploys sensor off the coast of Maine.
- Deep dive to witness the algae drops.







# 3

## Low-Carbon Concrete

*with Cody Finke*

Cody is a rockstar chemist storing CO2 in our walls after discovering a new way to make cement. Standard cement is one of the worst materials for the planet, causing up to 8% of global emissions alone. His innovative process actually pulls CO2 out of the air, and locks it into our buildings and roads forever. Cody's team are building a new cement plant and seeking minerals in the Amazon, critical for his carbon-negative cement making process.

We will follow Cody to...

- Traverse the Amazon rainforest in search of rare mineral deposits.
- Travel to the largest cement structures in the US. to calculate their carbon footprint.
- Witness the completion of the first carbon negative cement factory in history, as well as the first commercial pouring of his carbon negative cement.



# 4

## Methane Leaks

*with Olya Irzak*

Olya is exploring methane leaking into the atmosphere from Arctic lakes and abandoned mines across the US. Methane is bad news – up to 30x worse for the climate than CO2. Using a custom made flame thrower, Olya's company is working with rust-belt mining communities and Arctic scientists to burn methane up before it warms the planet. If successful, Olya's work would be the equivalent of taking 100-million petrol cars off the road.

We will follow Olya to...

- Visit methane bubbles the size of hills in her Siberian homeland.
- Flare methane pockets trapped in frozen Alaskan lakes.
- Hack a giant flame-thrower prototype with her Alaskan team.







# 5

## Oil-Nation to Climate-Nation

*with Talal Hasan*

Talal's homeland of Oman, a nation whose economy is based on oil extraction, turns out to have massive deposits of a unique geological mineral known as peridotite. This wonder-mineral can crystallize CO<sub>2</sub> into rock, where it can be stored for thousands of years. Talal is innovating a new approach, boring huge holes into the black rock face in the middle of the desert, filling the holes with CO<sub>2</sub> and pivoting his countries' economy to one that saves the planet.

We will follow Talal to...

- Traverse the deserts of the Arabian peninsula in search of huge deposits of peridotite to bring a sample back to his lab where we witness carbon crystallizing in real time.
- Visit his full scale operation in Oman where he bores giant holes into the rock face.
- Travel out onto the Ocean to pull up plastic "ghost nets".



# 6

## Putting Oil Back Underground

*with Peter Reinhardt*

Peter is taking biomass like crop residue: stalks, stems and wood chips and husks from farms. All this biomass has already captured carbon, which would normally decompose and re-enter the atmosphere. Then, he converts it to bio-oil and stores it deep underground. This removes CO<sub>2</sub> permanently from the atmosphere, out of reach of wildfires, soil erosion and political folly.

We will follow Peter to...

- Visit farms and forests to understand biomass, and meet and hear the stories of the enlightened farmers who are his early adopters.
- Witness the process of pyrolyzation, converting biomass to black bio-oil.
- Pump the bio-oil back underground where it sinks and lands into place.





# SAMPLE EPISODE OUTLINE:

## Flames, Mines & Methane



### Teaser + Title Sequence | 3mins

**Open on Olya Irzak standing in front of a roaring methane flame while her team huddles behind a fire proof wall.**

"As a kid my parents were relieved I was good at computers. I was. I was really good."

**A close-up shows her smile before another fire erupts behind her. Her team runs, she stays put.**

"I stopped computers when I realized what the world really needed - I mean now."

**Olya laughs, she's now in interview.**

"Pyromania... You know, the good kind... The wind is good, let's go surfing."

**Title: Carbon Catchers: Flames, Mines & Methane**

### BLOCK 1 | 10mins

**Olya flies through the air, landing with a splash on her kite surfing board next to the Golden Gate Bridge.**

"When I got my job at Google, I was on top of the world. The people, the ambition ... the paycheque! For a Russian immigrant, everything was going right ... But then one day I stumbled on this article '7,000 Gas Bubbles Poised to Explode in Siberia'."

**Olya slams into the water, falling off her kite surfing board. She emerges from the water, blinking into the light.**

"Hill sized methane bubbles? In my homeland? I was shocked. I looked deeper into methane and I realized: this gas is massively accelerating climate change. Nobody is tackling this? I couldn't believe what I was reading."

**An alarm wakes her early in her San Francisco apartment. She packs her bags, grabs a taxi and boards the plane for Siberia.**

"That was my wake up moment. I left my job that day... Who wouldn't dream of a job at Google? But my calling had slapped me in the face, and I just couldn't ignore this more critical problem."

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[Click to read the full Episode Outline PDF](#)





# THE FILMMAKERS

*Directors Duncan McDowall and Tristan Copley Smith are award winning filmmakers, entrepreneurs and environmentalists. They have spent the past two years tracking the most fascinating players in the climate tech scene, securing exclusive access to their stories. Mark and Ryan Kresser are executives of K2 Studios, a leading LA-based production company specializing in broadcast, documentary and IMAX productions.*

## DIRECTORS



**Tristan Copley Smith** is an award winning filmmaker, journalist and MIT Innovator Under 35. His films have been awarded at international festivals and featured in global publications such as the Guardian, Al Jazeera and Wired.



**Duncan McDowall** is an award winning writer and director with a decade of experience in TV and IMAX documentary. He has directed documentaries and fiction films that to wide critical, festival and viral appeal.



## DISTRIBUTORS & CO-PRODUCERS



**Mark Kresser** is President of LA-based K2 Studios. He has over twenty years experience in the entertainment and new media businesses, with roles that have encompassed all aspects of television project development, implementation and oversight.



**Ryan Kresser** is Executive VP at LA-based K2 Studios, and co-founder of cable TV network Havoc Television. He has executive produced over 350 original content titles, plus over 3,000 hours of groundbreaking live interactive programming.





# K2 STUDIOS



Longtime unscripted/documentary producer K2 Studios is a global leader in capturing some of the most remote and amazing places on Earth with the highest production quality and most stunning visuals for over 20 years. K2 has produced and/or distributed over 90 documentary films for theatrical and ancillary platforms worldwide, including recent titles *Journey To Space* with Patrick Stewart and *Sea Lions* with Sam Neill. K2 founders also founded cable TV network Havoc Television, carried in 60M US TV homes by 100+ TV operators (Comcast, Cox, Charter) focused on independent music (rock, punk, electronic, metal, hip hop) and action sports (surf, skate, snow). Other K2 TV series currently in development include *The Way Back* with Barry Pepper, *Breaking the Mold* with Frankie Muniz, and *Wild Calling* in partnership with Appian Way / Leonardo DiCaprio EP.





# THE SELECTION COMMITTEE

*Our Carbon Catcher subjects have been selected by a committee of experts in the fields of climate science, climate technology, and startup enterprise. The committee has worked to ensure the solutions we feature are science-based, that the technology is sound, and that the business models have the potential to scale to meet the true challenge ushered by climate change.*



**Chris Neidl** is the co-founder of OpenAir, a global collective launched in 2019 to advance carbon dioxide removal (CDR) through member-driven advocacy, research and development. Chris sits on the board of the Direct Air Capture Coalition, and comes from a fifteen year career in solar energy, which spanned diverse research, activist and project management roles in North America, South Asia, Afghanistan and East Africa.



**Dr. Cara Maesano** is a research scientist at the Strategic Analysis & Engagement group at the Rocky Mountain Institute. She has expertise in the mechanics of different carbon dioxide removal pathways and their impacts. Cara has a background in particle physics, environmental epidemiology, and exposure science. She has worked in multiple international collaborations on topics ranging from fundamental science to the health impacts of climate change.



**Na'im Merchant** is a consultant specializing in carbon removal. He has worked with advocacy groups and nonprofits including Carbon180, Clean Air Task Force, CarbonPlan, and ClimateWorks Foundation on strategies to scale up carbon removal and carbon utilization approaches. He writes about carbon removal and the new carbon economy in his newsletter The Carbon Curve. He holds an MPA from the Harvard Kennedy School.





# CARBON NEGATIVE PRODUCTION

*POSSIBLE* is dedicated to measuring the emissions associated with its operations so as to first negate these through carbon removal purchases through its partners, then reduce these medium to longterm operations improvements. Every project includes a budget allocation for carbon removal through [Tomorrow's Air](#).

# VIEWER MOBILIZATION

Projects are supported behind the camera at all every stage by a team of volunteers recently graduated from [TERRA's](#) Climate Action school as well as partnership with leading carbon removal collective [OpenAir](#). We will engage and activate audiences by connecting them to this global network accelerating carbon removal advancement and evolution through member initiated missions spanning the domains of R&D, citizen science, policy advocacy and activist business development.







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