

ASSESSMENT OF CHEVRON'S CLIMATE STRATEGY





ASSESSMENT OF CHEVRON'S CLIMATE STRATEGY

Analysis, research and drafting by:

Louis-Maxence Delaporte, Energy Analyst, Iouis-maxence@reclaimfinance.org Henri Her, Energy Analyst Bastien Gebel, Junior Energy Analyst

Written with the contribution of:

Lucie Pinson, Executive Director Clément Faul, Research Manager Rémi Hermant, Sustainable Policy Analyst Maude Lentilhac, Oil and Gas Campaigner Agathe Masson, Stewardship Campaigner

Graphic design:

Jordan Jeandon Léo Martin, Digital Project Officer Hele Oakley, Copy editor

Publication date:

May 2024

Disclaimer: Reclaim Finance believes the information communicated comes from reliable sources and has made every effort to ensure the information is correct and data analysis is sound. However, Reclaim Finance does not guarantee the accuracy, completeness, or correctness of any of the information or analysis and, in any event, disclaims any liability for the use of such information or analysis by third parties. You can contact us at research@reclaimfinance.org if you believe our data contains some inaccuracies. We will make every effort to address it and make any necessary corrections. The information herein is not intended to provide, and does not constitute, financial or investment advice and we disclaim any liability arising from use of our communications and their contents in that regard.

TABLE OF CONTENTS

Introduction

Key findings

- 1. Current energy production
- 2. Cash-flow allocation
- **3. Fossil fuel strategy** a. Upstream expansion plans b. Upstream production
 - c. LNG terminal net capacities

4. Diversification strategy

a. Sustainable energy

- b. Unsustainable diversification
- 5. Emissions targets

4

6

8

9

10

10 11

12

14

14

14

15

INTRODUCTION

While a growing number of institutions are disengaging from the oil and gas sector, deeming it incapable of transformation, others believe that oil and gas companies are essential to the energy transition and that their support is indispensable to the massive development of renewable energies. Considering this: What is the actual situation? To what extent does Chevron contribute to the development of sustainable solutions? Given that we can't limit global warming to 1.5°C without gradually reducing hydrocarbon production, has Chevron given up on developing new oil and gas projects?

To assess Chevron's climate strategy and provide our analysis, Reclaim Finance relied on the International Energy Agency's (IEA) Net Zero Emissions by 2050 Scenario (NZE).¹ The NZE is based on a 1.5°C trajectory and includes:

- A drop in oil and gas production of 21% and 18% respectively by 2030, compared with 2022 levels.
- A halt to the development of new oil and gas production projects and liquefied natural gas (LNG) terminals.
- A 67% increase in total annual investment in energy, with a 2.3-fold increase in annual investment in energy transition, covering clean energy supply, end-use and energy efficiency. This would mean investing ten euros in the transition by 2030, six in energy supply mainly electricity for every euro invested in fossil fuels, i.e. a 6:1 ratio.

Chevron ranks as the 19th biggest oil and gas producer and the 15th biggest oil and gas upstream developer worldwide. The company is the 26th largest LNG export terminal developer.²

As one of the top European integrated oil and gas companies and one of the largest greenhouse gas (GHG) emitters globally, Chevron is among the few companies in the world whose climate transition (or lack thereof) in the coming years will have a determining impact on our collective ability to limit global temperature rise to 1.5°C. In 2020, the company pledged to achieve carbon neutrality across its entire operations on an absolute basis by 2050 or sooner.³ I am also calling on CEOs of all oil and gas companies to be part of the solution. They should present credible, comprehensive and detailed transition plans in line with the recommendations of my High-Level Expert Group on netzero pledges.

> Antonio Guterres, Secretary-General of the United Nations, March 2023

> > 5

KEY FINDINGS

1. The investment strategy of Chevron prioritizes the oil and gas sector and redistribution to shareholders, to the detriment of climate solutions

- Chevron invested massively in oil and gas and remunerated shareholders without the company communicating its investments in sustainable energies.
- Future investments are primarily dedicated to oil and gas. Lower carbon investments are reported in unsustainable energies only.

2. The energy strategy of Chevron will continue to rely on the development of new fossil fuel projects

- With Chevron's oil and gas production from its currently producing fields and already committed short-term expansion plans, the company's production in 2030 will be 4% higher than the level required to align with the NZE. In terms of shortterm expansion, Chevron ranks as the 10th biggest oil and gas upstream developer.
- Yet, Chevron will have to develop additional discoveries or acquire fields beyond those already under short-term expansion to meet its 2030 oil and gas production target. Its existing operating fields and short-term expansion plans will not be sufficient to

reach its 3% yearly increase in oil and gas production by 2027. With the company's current strategy, its 2030 production will be 24% higher than the NZE.

- Chevron is constructing and plans to develop new liquefaction terminals in the coming years. Consequently, with its current LNG strategy, Chevron will add 2.1 Mtpa of liquefaction capacity and will exceed the NZE capacities by 11.6%.
- As Chevron relies on oil and gas expansion, no scope 3 decarbonization target is set beyond 2028.

3. Chevron's diversification strategy remains marginal and partly relies on gas and unsustainable energies

6

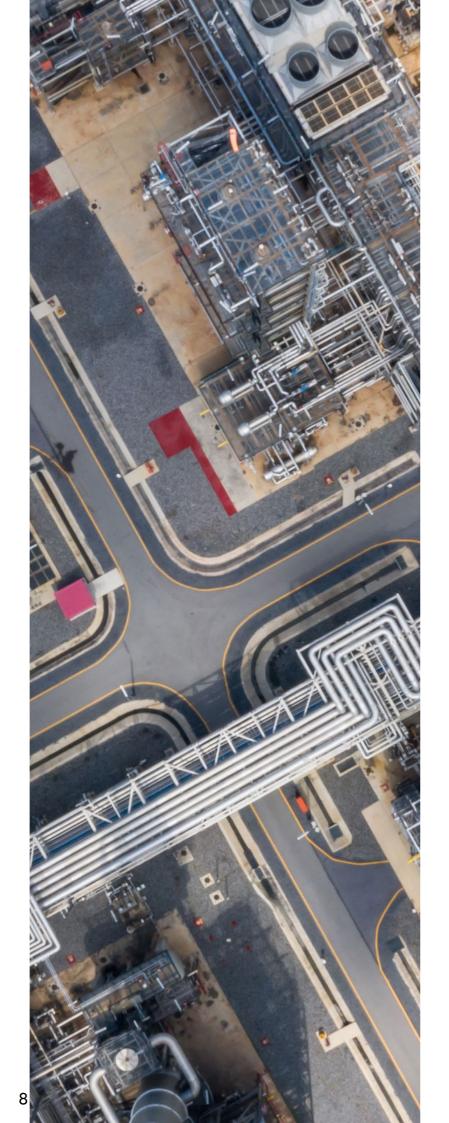
- Oil and gas extraction will still represent a vast majority of Chevron's energy mix by 2030. The company will account for 2.9% of the worldwide oil and gas production in the NZE.
- Chevron owns gas plants and is constructing new ones, increasing its current capacity by 66%.
- By 2030, Chevron will develop unsustainable renewable energies such as bioenergy and develop new hydrogen capacities from fossil fuels.



1. CURRENT ENERGY PRODUCTION

hevron accounts for 2.3% of global oil and gas production.⁴ In 2023, Chevron extracted 692 million barrels of oil (mmbbl) and 456 million barrels of oil equivalent (mmboe) of gas.⁵ Beyond exploration and production, Chevron is also active in other energy segments such as oil and gas transportation, oil refining, hydrogen, solar, wind and gas power generation and retail.

Chevrondoesnotdiscloseits electricity production which relies heavily on gas plants, and only marginally on renewable energies. Chevron has also hydrogen capacity but does not report its origin, which can be from renewable energy or from fossil fuels, with or without carbon capture, utilization and storage (CCUS).



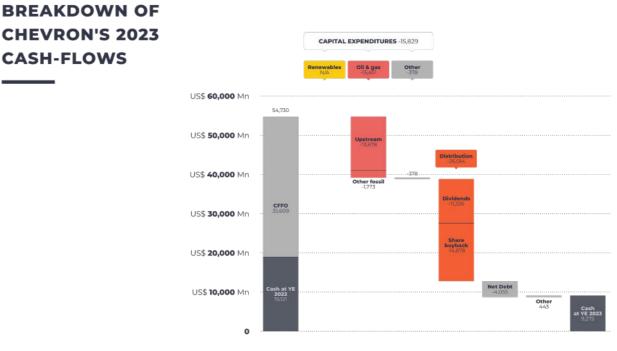
2. CASH-FLOW ALLOCATION

he future energy mix and GHG emissions of a company are determined by its current energy mix and its investment strategy.

From 2021 to 2023, Chevron invested US\$1,041 million per year in oil and gas exploration, making it the 13th largest investor in this area over those three years.⁶ The investments reveal the importance of oil and gas expansion in the company's long-term strategy, which includes the search for new fields that once discovered could come into production in decades.

Information in Chevron's 2023 annual report⁷ shows how the cash and cash flows generated from its operational activities were spent in 2023:

- 1. Chevron invested US\$15,451 million in oil and gas, including US\$13,678 million in oil and gas exploration and production, without the company communicating its investments in sustainable energies.
- 2. Chevron provided its shareholders with US\$26,014 million through dividend payments (US\$11,336 million) and share buybacks (US\$14,678 million).



Source: Chevron, 2023 Annual report, 2024

Chevron's investment plan remains fossil-fuel driven. It plans to invest around US\$14 billion per year from 2023 to 2027 in oil and gas⁸ and does not communicate any plan for investment in sustainable energies. Sustainable energies remain almost absent of its strategy: Chevron announced that US\$1.3 per year of its investment plan by 2028 is dedicated to low carbon,⁹ however the company details lower carbon investments in bioenenrgy, CCUS, offsets, hydrogen and technologies to reduce oil and gas direct emissions.¹⁰ No sustainable power investment is highlighted.

Total annual energy investment needs to increase by 67% by 2030 according to the NZE, which includes a shift from fossil fuels to clean alternatives. Investments in clean energy supply, end-use and efficiency are multiplied by 2.3 times by 2030 in the NZE, with 10 euros spent in these areas for each euro spent on fossil fuels, 6 euros of which are for sustainable power supply.¹¹ In its 2023 report, the IEA established that oil and gas companies must allocate more than 50% of their capital expenditure (CAPEX) in clean energy by 2030.¹²

3. FOSSIL FUEL STRATEGY

a. Upstream expansion plans

The IEA published the NZE in May 2021¹³ to provide a pathway to meet global energy needs while maintaining a 50% chance of keeping global temperature increases below 1.5°C. It was used as the reference scenario in the IEA's World Energy Outlook (WEO) 2021 and was updated in the WEO 2022¹⁴ and WEO 2023.15 The NZE projects a halt to the development of any new oil and gas fields for which a Final Investment Decision (FID) was not approved by January 1st, 2022, plus an end to the construction of LNG terminals.

The Intergovernmental Panel on Climate Change (IPCC) also highlights the risks associated with the development of any new fossil fuel projects. This concurs with a large and growing body of scientific evidence showing the need to immediately end fossil fuel development, and a growing consensus on this in net-zero policy discussions.

According to the 2023 Global Oil and Gas Exit List (GOGEL), Chevron is the 10th top global oil and gas upstream short-term developer. The company accounts for 2.5% of global short-term expansion plans, with 53.9% of its short-term expansion plans not obtaining a FID before 2022 - therefore overshooting the NZE.

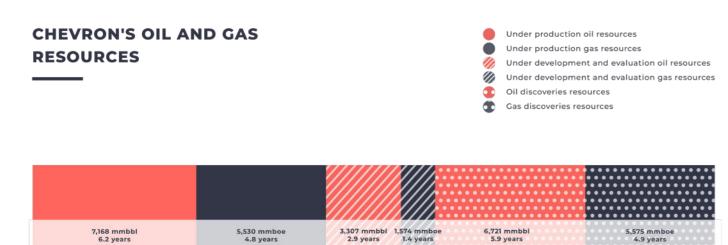
These projects would give Chevron significant additional resources even though it already has enough to extract oil and gas for several years. As of April 2nd, 2024:

- Chevron has 12,698 mmboe of resources under production, including 7,168 mmbbl of oil and 5,530 mmboe of gas. This represents the equivalent of 11.1 years of production at 2023 levels.
- Chevron has 4,880 mmboe of resources under development or field evaluation, including 3,307 mmbbl of oil and 1,574 mmboe of gas. This represents 4.2 years of production at 2023 levels.

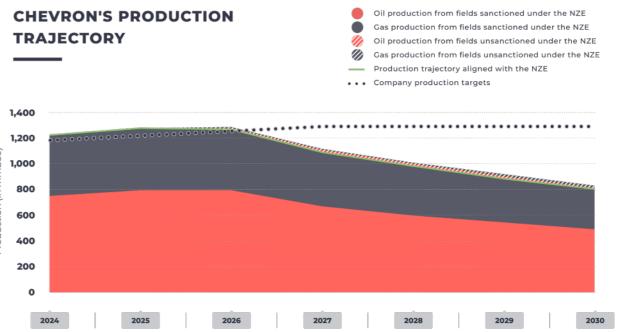
• Chevron owns 12,296 mmboe of oil and fossil gas discoveries, including 6,721 mmbbl of oil and 5,575 mmboe of gas. This represents 10.7 years of production at 2023 levels.

b. Upstream production

Oil and gas production should decrease by 20.9% and 17.9%, respectively, between 2022 and 2030 according to the NZE.¹⁶ In this scenario, the rate of oil and gas production declines due to a combination of the natural depletion of existing oil and gas fields and the absence of new fields to fill the gap, despite the reliance on negative emissions. Oil and gas production would need to decline much faster without this reliance. Negative emissions include the deployment of technologies unproven at scale, such as CCUS. Other prominent 1.5°C scenarios with no or low overshoot also show oil and gas production declining by 2030. These include the One Earth Climate Model (OECM),¹⁷ the net zero climate scenarios from the Network for Greening the Financial System (NGFS),¹⁸ and the IPCC's 1.5°C with no or low overshoot scenarios filtered to limit to reasonable volumes the reliance on



Source: Rystad Energy, accessed in April 2024



Source: Rystad Energy on oil and gas production and expansion, accessed in April 2024; Chevron investor presentations on company production targets.

negative emissions (e.g. CCUS, nature-based solutions (NBS), etc.).¹⁹

The following chart compares Chevron's planned oil and gas production level by 2030 with:

- Chevron's production by 2030 if it aligns with the NZE (i.e. Chevron's production level from its producing fields and its fields currently under development with a FID obtained before 2022).
- Chevron's production by 2030 if it carries out its short-term expansion plans (i.e. Chevron's production from its fields currently under production, under development and under field evaluation).

In 2030, with oil and gas from currently producing fields, fields under development and under evaluation, Chevron's production level will be 4% higher than the NZE.

Chevron plans an increase of its oil and gas production by 3% per year by 2027.20 With its already committed short-term expansion plans, Chevron still could not achieve its target. In other words, to reach its production

target, Chevron will have to develop part of its discoveries and/or acquire new fields. Assuming the conservative hypothesis that Chevron will reach plateau in 2027, Chevron's 2030 production target for oil and gas will be 24% above NZE alignment.

With its production target, Chevron's 2030 oil and gas extraction will represent nearly all its energy mix and 2.9% of the global oil and gas production in 2030, according to production level of the NZE.

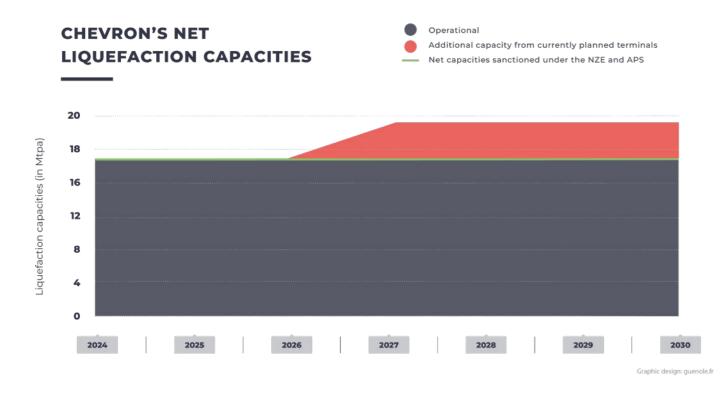
c. LNG terminal net capacities

Under the NZE, gas demand by 2050 is met with all existing LNG terminals. Under the IEA's Announced Pledges Scenario (APS), gas demand is met with operational and under construction facilities. In either case, no new LNG terminal plans are necessary to meet demand. With its current plans, none of Chevron's LNG expansion plans are aligned with the NZE, while only the infrastructure already under construction is aligned with the APS.²¹

Chevron's gas-oriented strategy relies on new midstream infrastructure that will be commissioned in the coming years. Indeed, Chevron owns existing LNG export terminals, and both constructs and plans to construct new LNG export terminals in the coming decade.

- Chevron is a shareholder of existing export terminals such as Angola LNG, Gorgon LNG, North West Shelf LNG and Wheatstone LNG in Australia. Chevron's operational export terminals net liquefaction capacity reaches 17.7 Mtpa.²²
- Chevron plans to construct additional liquefaction capacities with NewMed LNG in Israël. This would add net liquefaction capacities of 2.1 Mtpa to its portfolio.²³

With its current LNG plans, Chevron's 2030 total net liquefaction capacity will increase by 2.1 Mtpa to 19.8 Mtpa. Then, it will exceed the NZE by 11.6%.



Source: Enerdata LNG database for operational terminals and Global Oil and Gas Exit List 2023 for under construction and planned terminals, accessed in January 2024





4. DIVERSIFICATION STRATEGY

a. Sustainable energy

The NZE projects strong growth in renewable energy production, from 27 exajoules (EJ) in 2021 to 80 EJ by 2030, led by solar and wind capacity additions.

Chevron does not communicate on its installed renewable capacities, nor on its objectives in terms of development of new capacities. Its strategy relies primarily on unsustainable energies, while renewable power is almost inexistant. Chevron is currently involved in 4 small-scale partnerships on power generation and storage.²⁴

b. Unsustainable diversification

The NZE also projects strong growth in hydrogen production, from 94 megatonnes (Mt) in 2021 to 180 Mt by 2030, led by "lowcarbon hydrogen" capacity addition. Of this, one-third is produced from fossil fuels therefore unsustainable - and two-thirds from water-based electrolysis.²⁵ To meet the NZE scenario's production targets, electrolytic hydrogen production capacity should reach 720 GW to 850 GW by 2030.26

Chevron plans to increase its low carbon hydrogen production capacity to 0.15 Mtpa by 2030. Chevron does not communicate on its hydrogen production process. However, Chevron does not report any installed renewable power capacity and highlights its hydrogen production issued using natural gas with carbon capture, utilization and storage.

Gas combustion is one of the main contributors to carbon dioxide (CO2) and methane emissions and should be replaced by sustainable solutions - i.e. gas power is unsustainable. By 2035, advanced economies should achieve a carbon neutral power sector, according to the NZE.²⁷ Despite the company having no targets on gas power capacities,²⁸ it has neither committed to stop developing gas plants nor committed to closing its gas plants. Chevron neither communicates on its gas power production, nor on its gas plant ownership. Then, it is impossible to calculate Chevron's gas power current and future net capacities and net production. Chevron is involved in 7 gas plants in operation with a total capacity of 2,065 MW,29 and in 2 gas plants under development with a total capacity of 1,370 MW.³⁰

The NZE projects strong growth in bioenergy production, with an increase of biofuel from 133 Mtpa in 2021 to 367 Mtpa by 2030 and of biomethane from 278 TWh to 1,944 TWh by 2030. By then, Chevron targets a biofuel production of 5.3 Mtpa.³¹ Most biofuel production currently uses so-called conventional feedstocks, such as sugarcane, corn and soy. Due to feedstocks use, emissions from direct and indirect land-use change, increased fertilizer use and carbon emissions from energy-intensive refining, both biofuels and biomethane can have a higher emissions factor than fossil diesel.32 In addition to the climate impacts of land-use change, biofuels can divert crops from food production to energy production, leading to higher food prices.³³

5. EMISSIONS TARGETS

hevron pledged mitigation targets for 2028 on scope 1 and 2 using 2016 baseline and on scope 1, 2 and 3 in intensity terms. In 2022, Chevron's CO2e emissions were 448 MtCO2e, including 57 MtCO2e of scope 1 and 2 emissions and 391 MtCO2e of scope 3 emissions. Scope 3 emissions are by far the largest, representing 87% of the company's emissions.³⁴ However, while scope 3 represents the most significant part of the company's GHG emissions, Chevron has no scope 3 only targets by 2028 and has not committed to achieving carbon neutrality on its scope 3 by 2050.

Using the IEA's energy supply data from the NZE in the WEO 2023, Reclaim Finance calcu-

Base year	Target year	Reduction target	Emission scope	Emission Type
2016	2028	-5%	1 & 2 & 3	Intensity

Source: Chevron, Chevron 2024 Investira Presentation, page 21, 2024

lated Chevron's GHG emissions trajectory. By 2030, the company's targeted carbon intensity will be 30.2% higher than the NZE.

Chevron relies heavily on CCUS: the company will capture 25 Mtpa CO2 in 2030.35 As highlighted by the IPCC, however, CCUS in the energy sector still has limitations to overcome before it can be scaled up, which means it comes with limited potential and prohibitive costs. Too high reliance on these types of mitigation approaches represents a material risk factor for Chevron's ability to reach its decarbonization targets.³⁶

References

- 1. IEA, , 2023
- 2. Urgewald, Global Oil and Gas Exit List, 2023
- 3. Chevron, <u>Chevron for 2020</u>, 2020
- 4. Urgewald, Global Oil and Gas Exit List, 2023
- 5. Rystad Energy, accessed in April 2024
- 6. Urgewald, Global Oil and Gas Exit List, 2023
- 7. Chevron, 2023 Annual report, 2024
- 8. Chevron, 2023 Investor Presentation, 2023
- 9. Chevron, 2023 climate change resilience report, p.4, 2023
- 10. Chevron, 2023 climate change resilience report, p.45-49, 2023
- 11. IEA, , 2023
- 12. IEA, The Oil and Gas Industry in Net Zero Transitions, page 144, 2023
- 13. IEA, , 2021
- 14. IEA, World Energy Outlook 2022, 2022
- 15. IEA, World Energy Outlook 2023, 2023
- 16. IEA, , page 276, 2023
- 17. OECM, Limit global warming to 1.5°C, 2022
- 18. NGFS, <u>Climate scenarios</u>
- 19. IPCC, <u>Climate Change 2022</u>, <u>Mitigation of Climate Change</u>, <u>Summary for Policymakers</u>, 2022
- 20. Chevron, Chevron Investor Presentation 2023, p.34, 2023
- 21. IEA, World Energy Outlook, page 139, 2023
- 22. Enerdata, LNG database, accessed January 2024.
- 23. Urgewald, Global Oil and Gas Exit List Midstream database, 2023
- 24. Chevron, 2023 climate change resilience report, p.40, 2023
- 25. IEA, Global hydrogen production by technology in the Net Zero Scenario, 2019-2030, September 2022
- 26. Reclaim Finance, Factsheet Hydrogen, 2023
- 27. IEA, An updated roadmap to Net Zero Emissions by 2050, 2022
- 28. As Chevron communicates neither its electricity production from gas plants, nor its objectives in terms of new gas plant development, gas power is not included in calculations of the company's energy mix.
- 29. Due to the lack of information on the proportion of these plants owned by Chevron, the capacity reported here corresponds to the total capacity of gas plants in which Chevron is involved.
- 30. Global Energy Monitor, Global Oil and Gas Plant Tracker, 2024
- 31. Chevron, Chevron 2024 Investor Presentation, page 21, 2024

- 32. Nature, 'Bioenergy-induced land-use-change emissions with sectorally fragmented policies', June 2023
- 33. Reclaim Finance, <u>Factsheet Bioenergy</u>, 2023
- 34. Chevron, 2023 climate change resilience report, pages 71-75, 2024
- 35. Chevron, Chevron 2024 Investor Presentation, page 21, 2024
- 36. IPCC, Climate Change 2022: Mitigation of Climate Change Summary for Policymakers, p 40, 2022

Useful links

Methodology - Glossary Factsheets on bioenergy, hydropower, hydrogen, CCUS in power, Energy storage

Credits

AdobeStock | Pexels

ASSESSMENT OF CHHEVRON'S CLIMATE STRATEGY

Reclaim Finance is an NGO affiliated with Friends of the Earth France. It was founded in 2020 and is 100% dedicated to issues linking finance with social and climate justice. In the context of the climate emergency and biodiversity losses, one of Reclaim Finance's priorities is to accelerate the decarbonization of financial flows. Reclaim Finance exposes the climate impacts of financial players, denounces the most harmful practices and puts its expertise at the service of public authorities and financial stakeholders who desire to bend existing practices to ecological imperatives.

contact@reclaimfinance.org

