To succeed, the clean energy transition needs less plastic

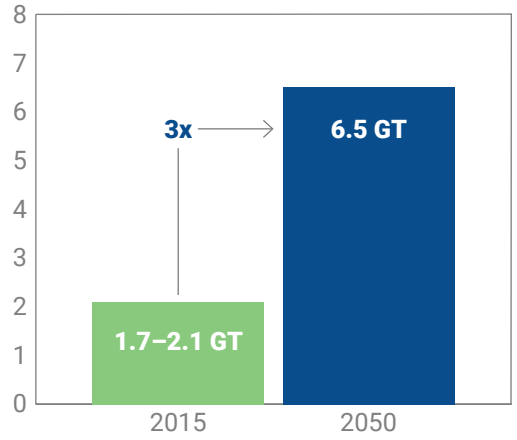
Plastic pollution is a multifaceted threat to our climate, ocean and coastal communities that we must stop at the source.

Plastics produce massive and growing amounts of greenhouse gas emissions. Greenhouse gases, including CO_2 and methane, are produced at every stage in the plastics lifecycle, with up to five tons of greenhouse gases emitted per ton of plastic. Plastics are currently responsible for 3–4% of global greenhouse gas emissions, projected to triple by 2050. Further, microplastics—tiny plastic particles and fibers—can harm marine bacteria and plankton. These organisms are essential for absorbing CO_2 from the atmosphere. *(SOURCES: Materials Economics, Zheng and Suh, Tetu et al., Hitchcock)*

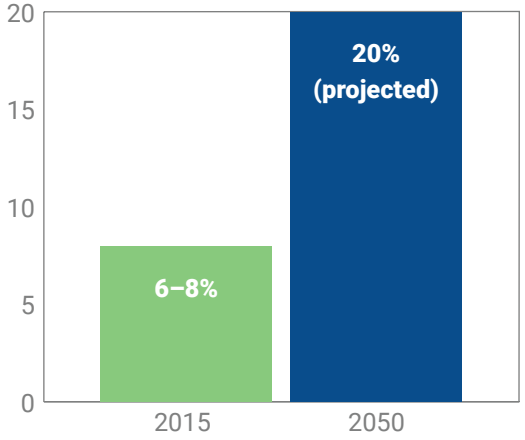
Plastics keep us dependent on fossil fuels: 99% of plastics are made from fossil fuels. The plastics industry uses as much oil as global aviation, and if growth expectations play out, plastics will drive 20% of global oil use by 2050: more per person than we use for personal transportation. As demand for fossil fuels for power and transportation slows, the oil and gas industry is investing its vast financial resources in new plastic production for plastic materials and packaging. Investment is propelled by government subsidies and fueled by pervasive misinformation about plastics and lack of awareness of their climate impacts. Planned plastics growth will keep us reliant on fossil fuels well into the second half of the century. *(SOURCES: CIEL, World Economic Forum, International Energy Agency, CarbonTracker).*

The 11 million metric tons of plastics entering the ocean each year reduce the resilience of coastal communities already at disproportionate risk from climate change: Petrochemicals infrastructure used to produce plastics is often *coastal energy infrastructure*—oil and gas production, refining and export facilities—that emits significant air and water pollution with severe health consequences for neighboring communities already bearing the brunt of climate change impacts like sea level rise and flooding. Climate-driven extreme weather increases these risks, making accidents and excess pollution releases more likely and increasing the flow of plastics into waterways during storm and flooding events. *(SOURCES: CIEL, Ford et al.)*

GHG emissions from the plastics lifecycle



Percent of global oil demand for plastic production



SOURCES:
Emissions: Zheng and Suh, 2019, ODI, 2020
Oil Demand: World Economic Forum, 2016

Building a strong, just and clean energy economy requires that we stop the growth of virgin plastics. We must work quickly to bring plastics into the clean energy agenda, slow investment in new plastics production and shift to circular business models.

Ending plastic pollution is an ocean-climate solution that will reduce greenhouse gas emissions and make ocean and coastal communities more climate resilient.

We urge governments, investors and corporations to make plastic reduction a key part of climate action by:

1. **Stopping plastics growth as a key strategy in advancing the clean energy transition**
   - **Restrict expansion of plastic production to avoid fossil fuel lock-in.** New plastic production facilities are major industrial sources of GHG emissions. By limiting new production, we can avoid infrastructure being put in place that will keep us reliant on fossil fuels.
   - **End fossil fuel and plastic subsidies**. Plastics are heavily subsidized by the same tax incentives that prop up fossil fuels, making them cheap, plentiful and hard to manage. Eliminating subsidies enables alternatives to compete, freeing up precious tax dollars for investment in clean energy solutions.
   - **Advance a legally binding global agreement by 2024 to end plastic pollution.** A strong agreement that addresses the full plastic lifecycle will also help governments achieve the goals of the Paris Climate Agreement with significant co-benefits for vulnerable communities and the ocean.

2. **Creating accountability and transparency around the impacts of plastics through climate commitments, sustainable investing and effective policy**
   - **Make plastics a meaningful part of climate commitments.** Climate commitments made by governments, investors and companies to phase out fossil fuels and transition to a clean-energy economy are credible only if they include significant reductions in virgin plastic production and use.
   - **Require transparency for impacts and risks across the plastics lifecycle.** Disclosure of companies' plastics use, Scope 1, 2, and 3 GHG emissions, and transition plans is imperative to enable investors, consumers and regulators to evaluate the extraordinary financial, legal, reputational and policy risks companies face across the entire plastics production lifecycle and to support those companies that are mitigating their risks.
   - **Increase accountability for climate, community and ocean impacts:** A just transition requires holding plastic producers accountable for harmful impacts on communities, the climate and the ocean by increasing regulations and enforcement of air and water pollution, increased risk management for extreme weather, management of methane from petrochemical facilities and feedstocks, and responsible phase-down and decommissioning of production.

3. **Dramatically reducing plastics demand and use while advancing the circular economy**
   - **Implement national, regional and corporate policies that mandate and/or incentivize reduced use:** Plastic source reduction policies, along with incentives for refill/reuse systems, play a critical role in decreasing the demand for virgin plastics and new production.
   - **Make investments in circular economy innovation:** Extended producer responsibility policies that require companies to take financial responsibility for the full lifecycle of their products are needed to advance the circular economy. Investing in improving mechanical recycling, designing products for recyclability, and deploying refill and reuse business models can transform plastics demand and drive emissions reductions.

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Our ocean and coastal communities are bearing the brunt of the impacts from plastic pollution and climate change. By accelerating the clean energy transition, we can achieve a healthier ocean, protected by a more just world.