
POWER FOR ALL PERSPECTIVE:

Black Carbon & Energy Access

**POWER
FOR ALL**

240 MT

ANNUAL AVOIDED
CO₂ EQUIVALENT

10x

LESS CLIMATE IMPACT

100x

BETTER ENERGY SERVICE

Eliminating black carbon from kerosene lamps globally can reduce emissions by 240 million tonnes CO₂ equivalent per year^{1,2} - the same as avoiding 80 coal fired power stations.³ Scientists have identified the best way to accomplish this and bring electricity to 1 billion+ people:⁴ Use decentralized renewables.

Climate Cost: Kerosene Lighting

- » Black carbon creates climate warming thousands of times stronger than CO₂⁵
- » Black carbon is thought to be the second-largest contributor to climate change behind CO₂⁵
- » Overall, the climate impacts from kerosene lamps in off-grid households are 10x higher than electricity-related impacts from households on the grid or using off-grid renewables⁴

The Solution: Decentralized Renewables'

- » Despite a century of efforts, the grid has not met the electricity access challenge⁴
- » Decentralized clean energy systems can rapidly fill this gap - helping over a billion people get access to electricity by 2025⁶
- » As well as reducing dangerous emissions, decentralized renewables enable households to receive 100x more energy service than kerosene lamps⁴

Share the Message

Taken together, research on the climate impact of kerosene lighting and progress in distributed clean energy have overturned the view "held by some that one must choose between progress on energy access or climate". Rapidly scaling decentralized renewables to replace kerosene can drive universal energy access while immediately reducing toxic emissions.

Our sector must use this knowledge to create a powerful new narrative in its communications with policy-makers, investors and donors, including these key messages:

- » The climate cost is clear: Black carbon from kerosene lamps is a major emissions category that can - and should - be eliminated
 - » The energy that will end energy poverty is the same clean energy needed to combat climate change: decentralized renewables!
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Join the Conversation:

powerforall.org

twitter.com/power4all2025

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Raise Your Voice Online

We urge you to join with us and demand both **Climate Action and Power for All**

Use these sample Tweets to tell decision-makers about the incredible power of decentralized renewables:

- 🐦 Decentralized renewables = 10x better for climate and 100x better energy service than kerosene lamps. We need @Power4All2025
- 🐦 How can we make immediate emissions cuts AND lift 1 billion+ from fuel poverty? Off-grid renewables! @Power4All2025
- 🐦 Action on energy access is climate action! RT these key stats on black carbon emissions: <http://bit.ly/1IZBApC> @PowerforAll2025
- 🐦 Decentralized renewables reduce black carbon emissions & drive #energyaccess = no brainer! See more: <http://bit.ly/1IZBApC>
- 🐦 Can Energy Access protect the climate? Yes! By eliminating toxic black carbon. RT the research: <http://bit.ly/1IZBApC> @Power4All2025
- 🐦 Energy access can eliminate emissions equal to 240MT CO2 and lift millions from fuel poverty. RT the facts: <http://bit.ly/1IZBApC>

Sources:

1. Jacobson et al (2013) Black Carbon and Kerosene Lighting: An Opportunity for Rapid Action on Climate Change and Clean Energy for Development. Brookings Institute
2. Lam et al (2012) Household Light Makes Global Heat: High Black Carbon Emissions From Kerosene Wick Lamps. *Environ. Sci. Technol.*, 2012, 46 (24), pp 13531–13538
3. J. Koomey et al (2010) Defining a standard metric for electricity savings. *Environ. Res. Lett.* 5, 014017.
4. Alstone et al (2015) Decentralized energy systems for clean electricity access. *Nature Clim. Change.* 5, 305–314
5. Bond et al (2013) Bounding the role of black carbon in the climate system: A scientific assessment. *Journal of Geophysical Research Letters*
6. Power for All (2014) Available from: www.powerforall.org/resources