## **POWER FOR ALL PERSPECTIVE:**

## **Black Carbon & Energy Access**

# POWER 를 **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 CO<sub>2</sub> equivalent per year <sup>1,2</sup> - the same as avoiding 80 coal fired power stations.<sup>3</sup> Scientists have identified the best way to accomplish this and bring electricity to 1 billion+ people:<sup>4</sup> Use decentralized renewables.

### **Climate Cost: Kerosene Lighting**

- » Black carbon creates climate warming thousands of times stronger than CO<sub>2</sub><sup>5</sup>
- » Black carbon is thought to be the second-largest contributor to climate change behind CO<sub>2</sub><sup>5</sup>
- » 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 renewables<sup>4</sup>

#### The Solution: Decentralized Renewables'

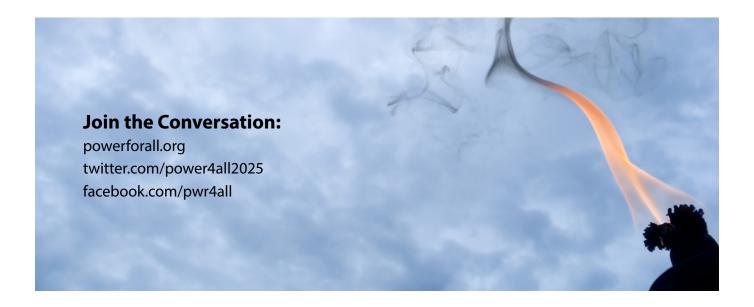
- » Despite a century of efforts, the grid has not met the electricity access challenge<sup>4</sup>
- » Decentralized clean energy systems can rapidly fill this gap helping over a billion people get access to electricity by 2025<sup>6</sup>
- » As well as reducing dangerous emissions, decentralized renewables enable households to receive 100x more energy service than kerosene lamps<sup>4</sup>

#### **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!



#### **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.
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- 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: <a href="https://www.powerforall.org/resources">www.powerforall.org/resources</a>