

# BEYOND FIRE: HOW TO ACHIEVE SUSTAINABLE COOKING



**3 BILLION:**

Approximate number of citizens worldwide that relies on open fires and stoves using wood, dung, charcoal, and coal to cook their food.



**4.3 MILLION:**

Premature deaths are caused each year by indoor air pollution due to cooking practices.



**MINIMUM 8-9 HOURS PER WEEK:**

Spent by citizens in rural areas, frequently women and young children, collecting and transporting cooking fuels

**= MASSIVE OPPORTUNITY COST FOR FUTURE ECONOMIC DEVELOPMENT AND POVERTY REDUCTION**

UNTIL NOW, MUCH OF THE ENERGY DEBATE AND SOLUTION HAVE REVOLVED AROUND ELECTRICITY GENERATION. YET, IN MANY COUNTRIES **COOKING-RELATED ENERGY USE ACCOUNTS FOR OVER 90% OF A HOUSEHOLD'S ENERGY CONSUMPTION**

LEAVING THE COOKING SECTOR BEHIND THE ENERGY SECTOR TRANSFORMATION RUNS THE RISK OF NOT TACKLING MANY OF THE ASSOCIATED CURRENT CHALLENGES ON:



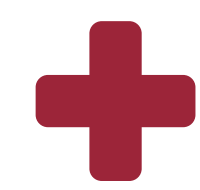
**FOREST ECOSYSTEMS, ECOLOGICAL RESILIENCE, AND LOCAL BIODIVERSITY**



**GENDER EQUALITY**



**ECONOMIC DEVELOPMENT AND POVERTY REDUCTION**



**HUMAN HEALTH**

**“WE THE PEOPLE DESERVE ACCESS TO AFFORDABLE, CLEAN & RELIABLE ENERGY. AND WE KNOW THAT THE TIME FOR ACTION IS NOW”**

Rachel Kyte, Chief Executive Officer of the Sustainable Energy for All (SEforALL) and reviewer of the report.

THE MAJORITY OF THE EFFORTS ADDRESSING THE PROBLEM HAVE, SO FAR, FOCUSED THEIR EFFORTS TOWARDS IMPROVED COOK STOVE TECHNOLOGIES. THESE TECHNOLOGIES CAN CERTAINLY PLAY A CRUCIAL ROLE IN ADDRESSING THE CHALLENGE OF ENERGY. HOWEVER, THEY ARE, AT BEST, AN INTERIM SOLUTION:



**FIREWOOD'S AND CHARCOAL'S HARVESTING**

CONTINUES TO HAVE A SIGNIFICANT IMPACT ON HUMAN HEALTH AND THE ENVIRONMENT



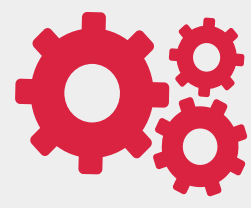
DEMOGRAPHIC PROJECTIONS WILL REQUIRE **HUGE AMOUNTS OF CHARCOAL AND WOOD** THAT ARE INCOMPATIBLE WITH MORE SUSTAINABLE PRODUCTION OPTIONS



**COLLECTION AND TRANSPORTATION OF FOSSIL FUELS** CONSUMES PRODUCTIVE TIME OF THE POPULATION

FORTUNATELY, AGAINST THE BACKDROP OF BROADER GLOBAL OBJECTIVES (UN SDGS AND COP21), THE CHALLENGE TO TRANSITION TO ALTERNATIVE MODES OF COOKING IS NOT AS INSURMOUNTABLE AS IT ONCE SEEMED.

## TODAY, EMBRACING SUSTAINABLE RENEWABLE ENERGY COOKING APPEARS TO BE WITHIN CLOSER REACH



TECHNICAL AND BUSINESS MODEL INNOVATIONS ARE ALREADY AVAILABLE



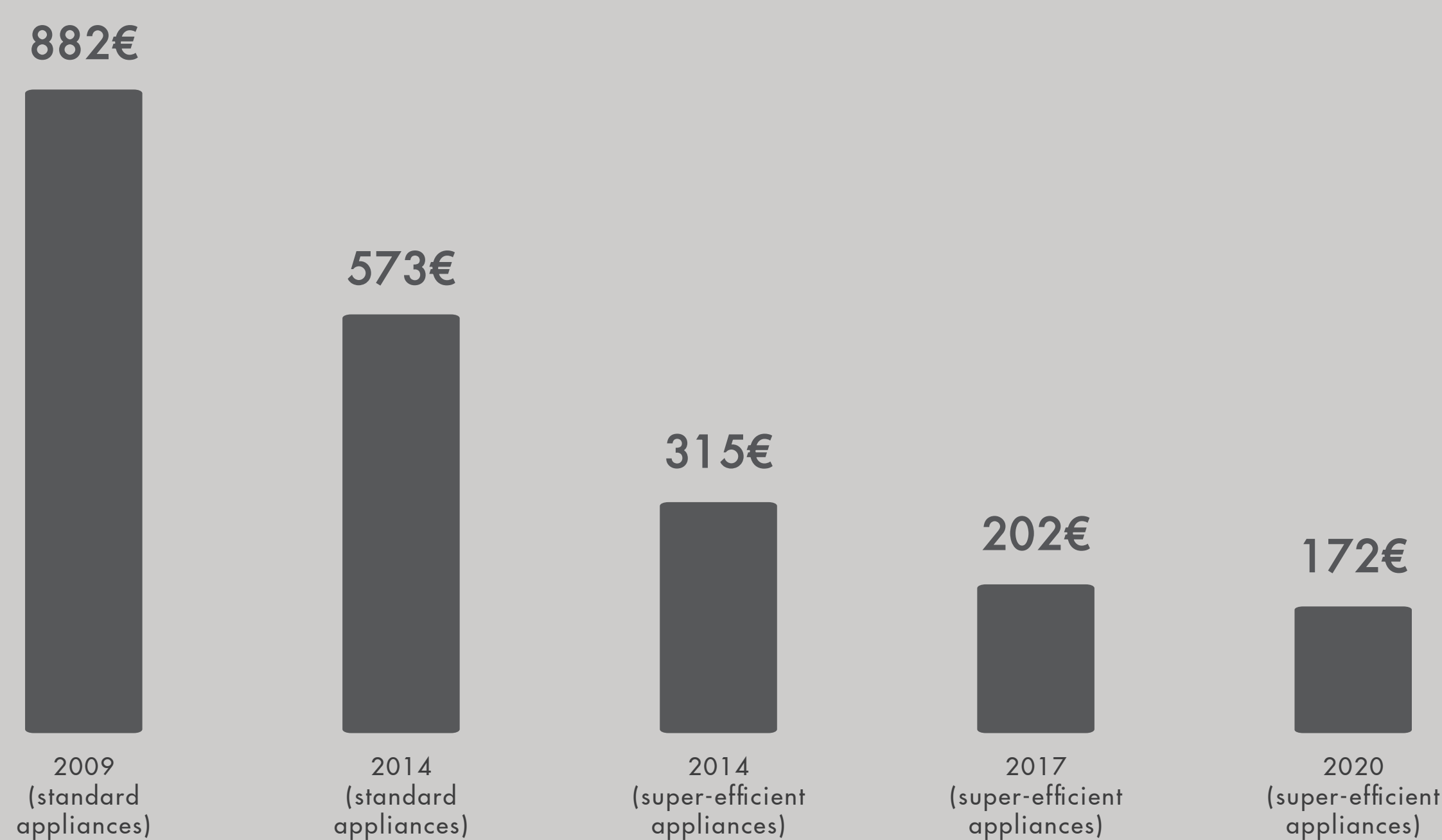
COST OF RE KEEPS DECREASING AT A QUICK PACE



SOVEREIGN WEALTH FUNDS AND PENSION FUNDS ARE STARTING TO BET ON RE SOLUTIONS AS FOSSIL FUELS NO LONGER OFFER STRONG RETURNS

### COST OF A SOLAR HOME SYSTEM FOR BASIC (I.E. NON-COOKING) HOUSEHOLD ELECTRICITY NEEDS

Sources: Based on Global LEAP, 2016



WITH SUFFICIENT POLITICAL WILL AT THE HIGHEST LEVELS, COMBINED WITH APPROPRIATE FINANCIAL RESOURCES,

## IT IS INDEED POSSIBLE TO IMAGINE A WORLD THAT HAS TRULY AND FINALLY EVOLVED "BEYOND FIRE"

### 5 STEPS TO ACHIEVE SUSTAINABLE COOKING

1. Governments need to set clear goals to transition away from firewood and charcoal.
2. Governments should undertake root and branch reform of fossil fuel subsidies, which often benefit middle and upper-income residents, and re-allocate them to support a rapid scale-up in sustainable cooking technologies
3. Governments and donors around the world need to fund a greater range of projects to demonstrate the viability of sustainable cooking solutions, including electric, biogas, and P2G pathways, as well as to support the scale-up of new business models in the cooking sector.
4. Governments, in partnership with international donors, should introduce clear policies and incentives to reduce upfront costs.
5. International climate finance should be mobilized to play a far greater and more direct role in supporting the transition to sustainable cooking, including through the wider use of climate bonds.