## THREE GENERATIONS OF MINI GRIDS

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5<sup>th</sup> Mini Grid Action Learning Event and Summit

Global Technical Conference on Mini Grids

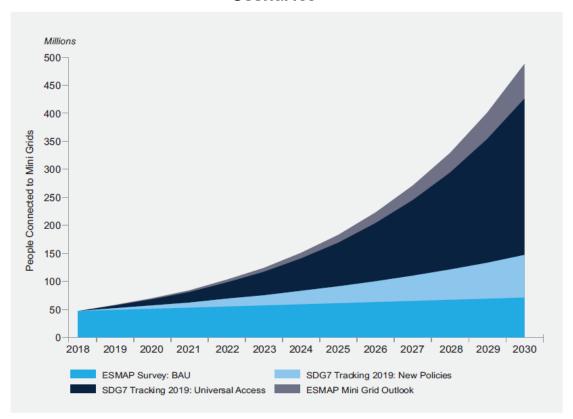
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### Scale of the Challenge

Number of People Connected to Mini Grids Under BAU and Universal Access Scenarios



840 MILLION

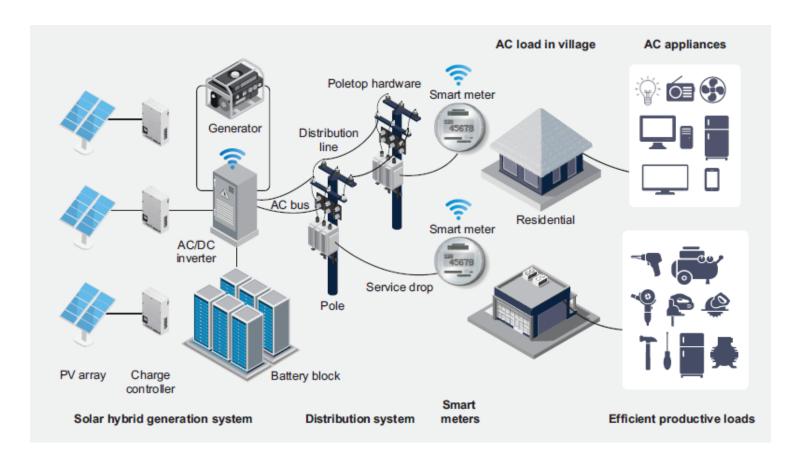
PEOPLE
WITHOUT ACCESS
TO ELECTRICITY

490 MILLION
PEOPLE
BEST SERVED WITH
MINI GRIDS

220,000 NEW MINI GRIDS REQUIRED BY 2030 \$230 BILLION
INVESTMENTS
FOR NEW MINI
GRIDS



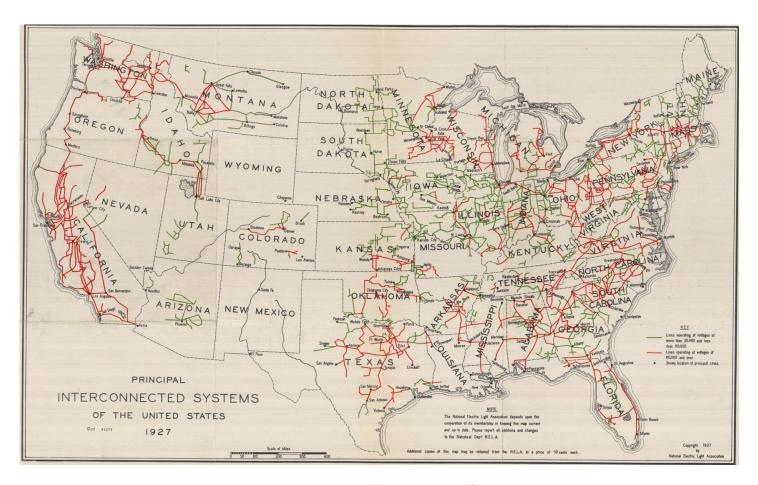
#### What is a Mini Grid?



A **mini grid**, sometimes called a micro grid, is an electricity generation and distribution network that supplies electricity to a localized group of customers. Mini grids can be isolated from and/or connected to the main grid.



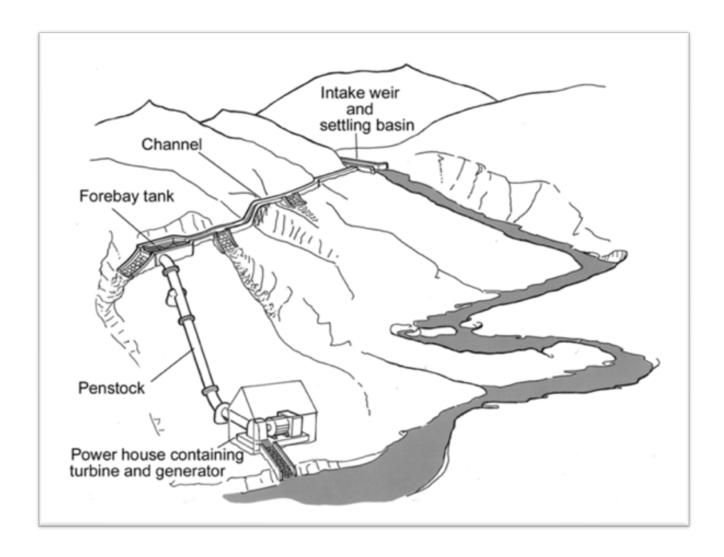
### 1st Generation of Mini Grids



U.S. power system network in 1927



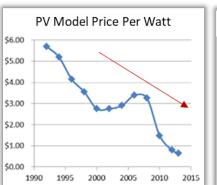
### 2<sup>nd</sup> Generation of Mini Grids

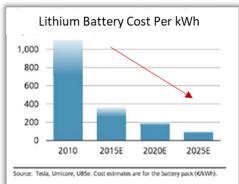


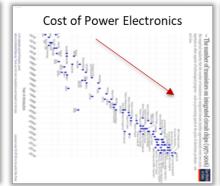


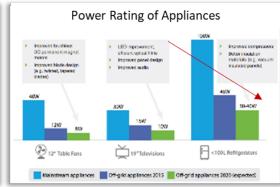
#### 3<sup>rd</sup> Generation of Mini Grids

#### Lower cost of technology, better planning technology, initial project experience and micro grid industry



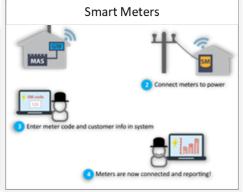




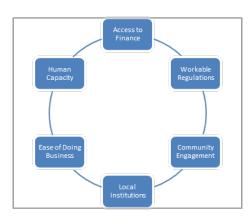


#### Technological cost reductions all driven outside the mini grid sub-sector











# Thank You!

Executive Summary of *Mini Grids for Half a Billion*People: Market Outlook and Handbook for Decision

Makers is available for download at:

https://www.esmap.org/mini\_grids\_for\_half\_a\_billion\_people

