

Table 1: Product categories for stand-alone solar systems, the services the systems provide and the energy access tier they correspond to

Product Category (Solar PV Capacity)	Service Provided	Corresponding Multi-tier framework <sup>1</sup> (Mtf) energy access tier
0 – 1.5Wp	Single light only	<b>Tier 0</b>
1.5 – 3Wp	Single light + phone charging	<b>Tier 1 – Task lighting AND Phone charging</b>
3 – 10Wp	Multiple lights + phone charging	
11 – 20Wp	Entry level standalone solar system (3 – 4 lights, phone charging and low power appliances (e.g. radio, fan))	
21 – 49Wp	Basic capacity standalone solar system (above plus power for TV & extended capacity)	<b>Tier 2 – General lighting AND Phone Charging AND Television AND Fan (if needed)</b>
50 – 100Wp	Medium capacity standalone solar system (above but with extended capacity)	
100Wp +	Higher capacity standalone solar system (above but with extended capacity)	<b>Tier 2</b> (Large systems could qualify for Tier 3 i.e. could be used for medium-power appliances e.g. air cooler, refrigerator/ freezer, food processor, water pump, rice cooker)

Table 2: Provisional ISO/IWA tier classification for clean and improved cooking technologies

Proposed ISO tier	Safety rating (Iowa State Univ. Rating System)	Fuel use (thermal efficiency) (%)	Emissions (CO + PM) (stove rating will be based on the lowest score from the four criteria)				Indoor emissions		Illustrative stove type
			CO (g/MJ)	CO (g/min/L)	PM (mg/MJ)	PM (µg/min/L)	CO (g/min)	PM (mg/min)	
<b>Tier 0</b>	<45	<15	>16	>0.2	>979	>8	>0.97	>40	3-stone fire
<b>Tier 1</b>	≥45	≥15	<16	<0.2	<979	<8	<0.97	<40	Improved efficient charcoal stove (KCJ type)
<b>Tier 2</b>	≥75	≥25	<11	<0.13	<386	<4	<0.62	<17	Rocket stove; natural- draft gasifier
<b>Tier 3</b>	≥88	≥35	<9	<0.1	<168	<2	<0.49	<8	Forced- draft “fan”- gasifier stove
<b>Tier 4</b>	≥95	≥45	<8	<0.09	<41	<1	<0.42	<2	LPG stove

<sup>1</sup> The success of the Sustainable Energy for All (SE4All) interventions depends on the ability to assess the level of access to energy for planning and investment, and, later, for tracking progress. The multi-tier framework was therefore introduced as an approach for measuring energy access. It uses five successive tiers categorized on the basis of their electricity supply attributes e.g. the ability to use certain appliances (or access certain energy service). Other supply attributes that are considered (although not presented here) are the power/energy capacity, number of hours per day electricity is available and other aspects which mostly apply to Tiers 3-5 such as reliability, quality, affordability, legality and health and safety. (<https://www.esmap.org/node/55526>)