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Session 2: Key Drivers for Innovation – Sustainability





Innovation & high level of ambition no longer 'nice to have'

- Aviation's climate impact small but growing
- Decarbonization remains difficult & expensive
- Society's awareness  & its tolerance 
- Lack of sustainability puts air travel at risk for increased regulation
- Obtaining 'license to grow' evolving to maintaining 'license to operate'

Air Transport and the Environment

Which industry do ATH passengers believe is the most harmful to the environment?

28% Agricultural
27% Food & Retail **27%** Construction
11% Aviation **7%** Fashion

Impact of the aviation industry to the environment per continent...

Minor or
no impact

73% Middle East
70% Europe
63% America
63% Asia/Pacific

Aviation industry is responsible for ...

63% believe that the Aviation Industry is responsible for **3%** of global CO2 emissions

34% believe that the Aviation Industry is responsible for **16%** of global CO2 emissions



AIA's Sustainability Strategy Statement

"AIA aims to contribute to the prosperity of its region and to incorporate people and the environment into its processes and decision making, while aiming to be a low carbon frontrunner."

- ✈️ **Contribute to region's prosperity**
- ✈️ **Align with ESG standards & best practices ...**

AIA aims to ensure its ESG performance is in line with industry standards and practice, and to maintain its position as a low carbon frontrunner.

- ✈️ **... but go beyond compliance**

AIA's sustainability strategy is subject to periodic review to ensure optimal integration of all aspects of the Airport's operations and its stakeholders' interests.

- ✈️ **Low carbon frontrunner**
- ✈️ **Integrate all stakeholder interests**



Environmental Sustainability @ ATH



Aircraft Noise



Water Management



Waste Management



Air Quality



Biodiversity Protection



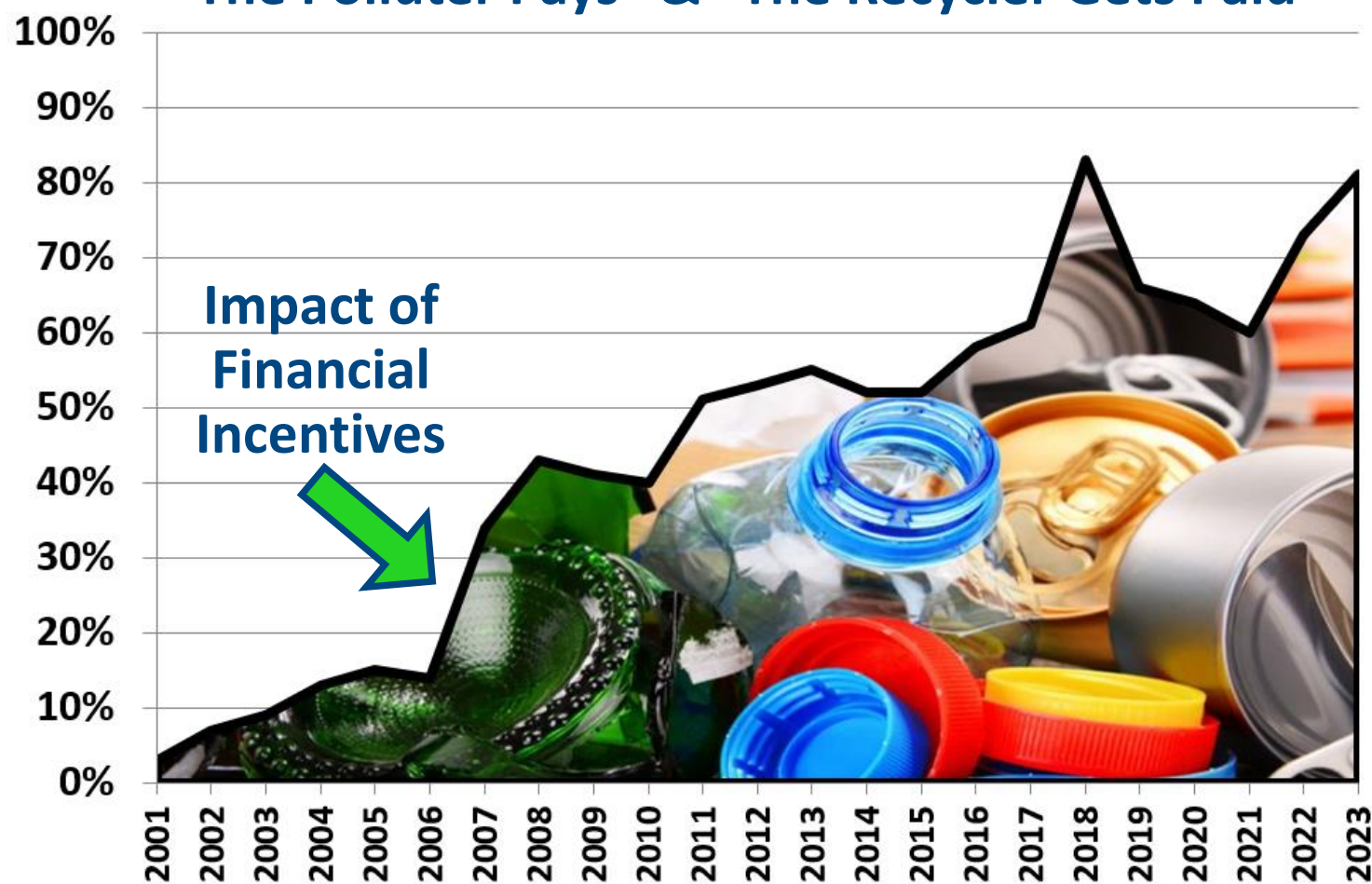
Cultural Heritage



Community Engagement

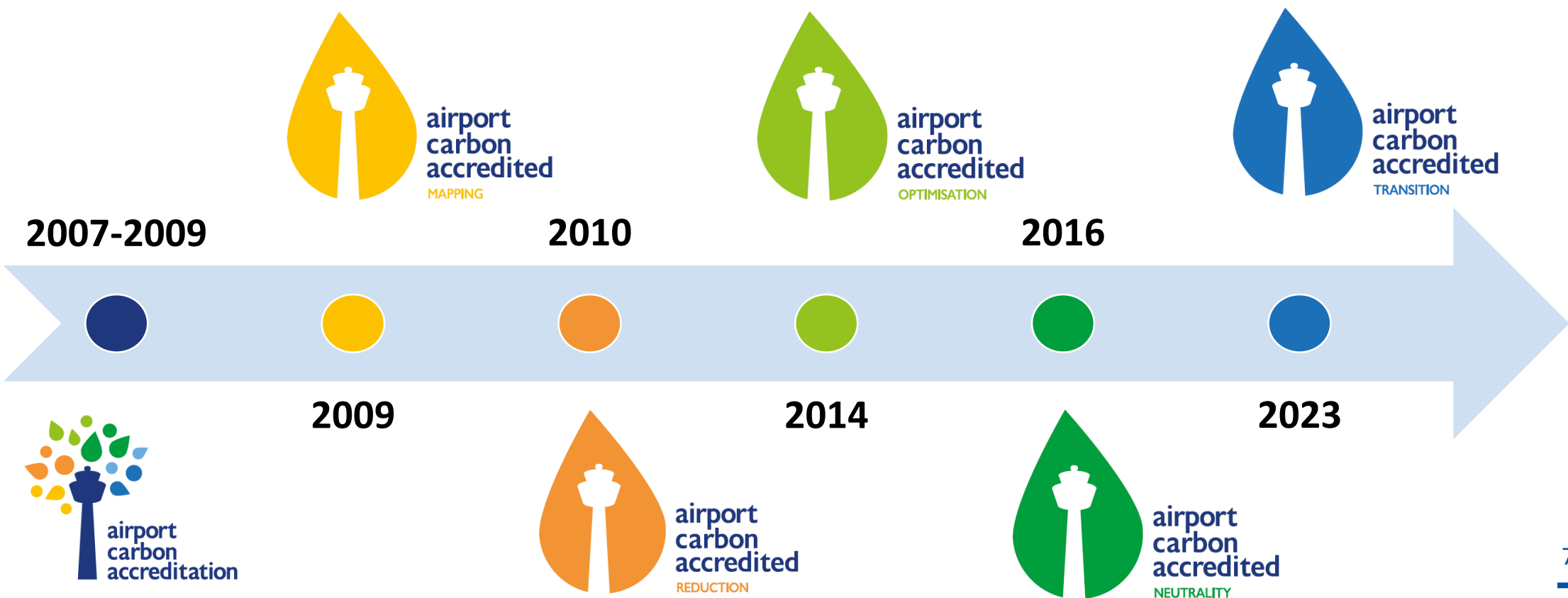


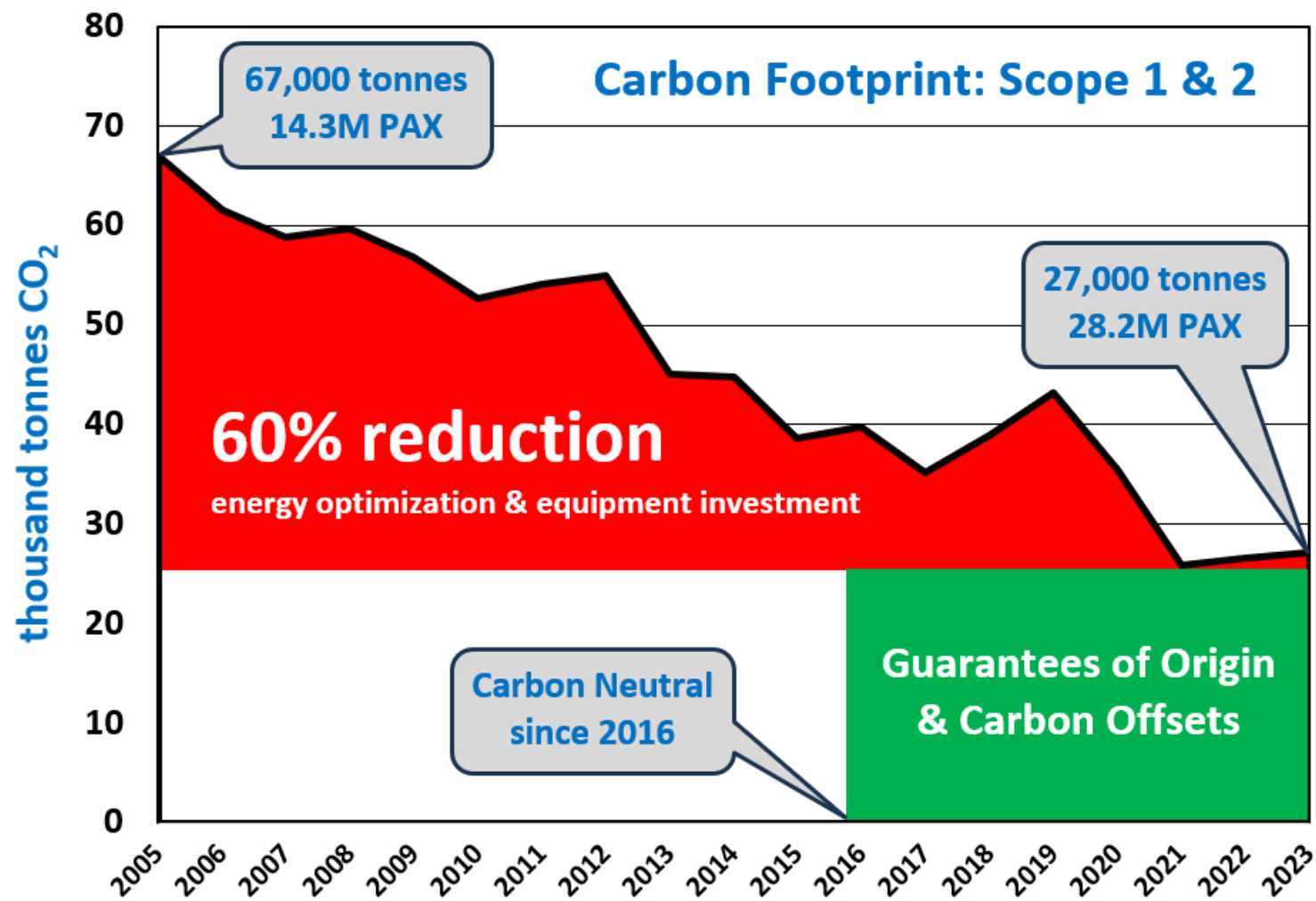
"The Polluter Pays" & "The Recycler Gets Paid"





AIA's Airport Carbon Accreditation Journey







- **Aiming 25 years ahead of industry**



- **Convert heating & transportation needs to electrical**



- onsite production, built for purpose

- **accounting for traffic growth**



- **Photovoltaics, Heat Pumps & e-mobility**

Photovoltaics – Project Identity



Largest self-producer in Greece
Unexploitable land used, with no aeronautical or commercial use



16 MWp PV park (Feb 2023)

45% of current needs

35.5 MWp + 82 MWh Battery (2025)

Remaining 55% plus future needs



Electricity consumed internally on site

Some exchange with the national grid



Battery role

Cover nighttime demand

Minimize energy exchange with the grid

Challenges / Considerations

National Regulatory Framework

- Especially for Battery Energy Storage Systems

Electricity Grid Technical issues

- Grid operators not always willing to connect RES
- Dispersed production stresses electricity grids

Production curtailments

- RES overproduction
- Grid stability

Optimum PV / Battery configuration considering

- Financial issues
- Technical and physical constraints

Additional initiatives & investment



**Energy optimization use
through ISO 50001 certified Energy
Management System will remain
priority**



**Phase-out Natural Gas
with electric heat pumps**



**Internal Combustion Engines
vehicles replacement
with electric models**



**Installation of charging
network (addressing 3rd
Party needs as well)**



**Alternative fuels (HVO)
considered for heavy-duty
vehicles and equipment**



Route 2025 Video

Thank You

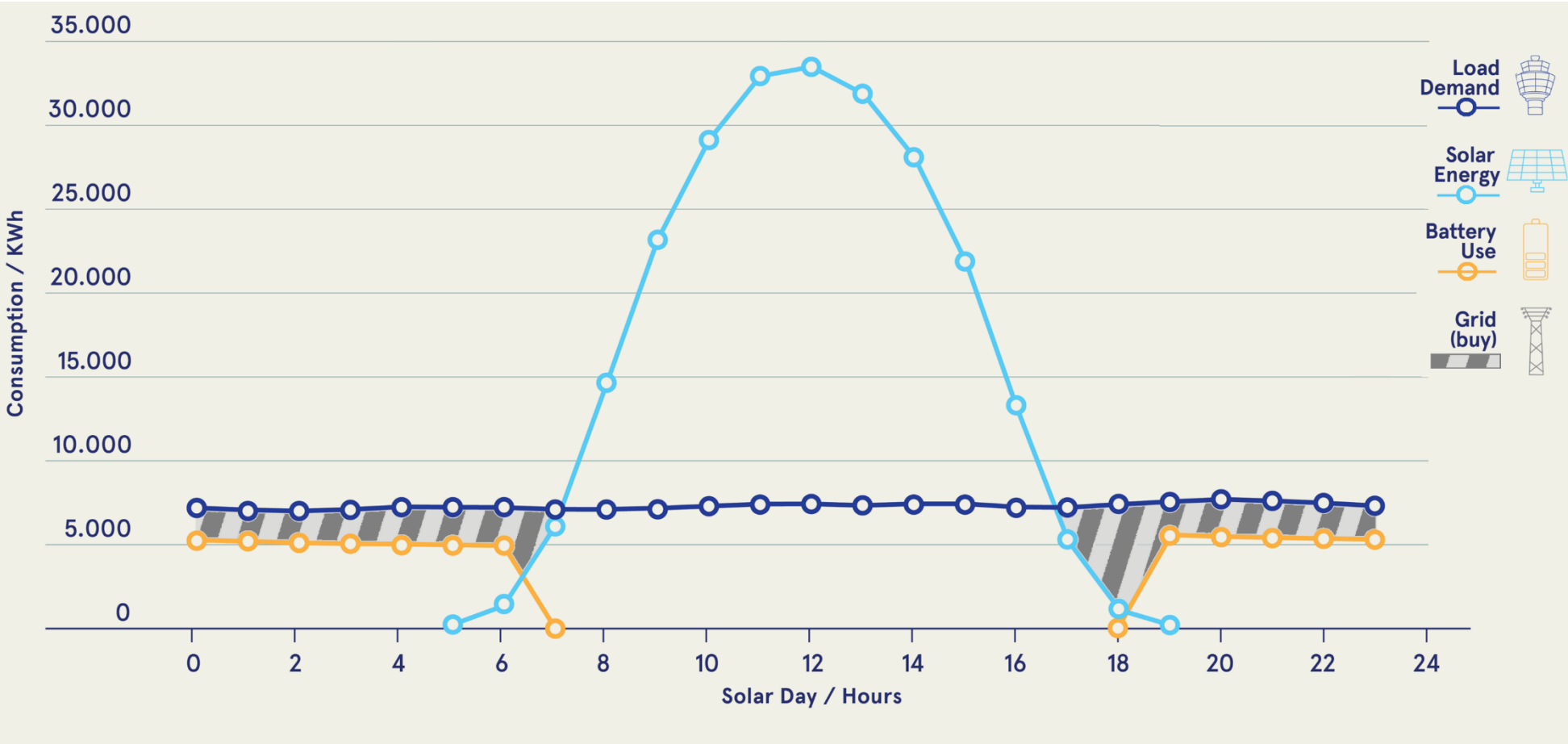




BACK-UP SLIDES



PV and Battery Energy Storage System





ICAO SEMINAR ON GREEN AIRPORTS

ATHENS, GREECE | APRIL 18-19, 2024

100% independence from the grid (zero energy bought) is not viable

		PV (MW)											
		35	50	70	90	110	130	150	170	190	210	230	250
BESS (MWh)	0	40%	41%	43%	43%	44%	45%	45%	46%	46%	46%	47%	47%
	50	54%	56%	58%	59%	60%	60%	61%	61%	62%	62%	63%	63%
	100	67%	70%	72%	74%	75%	76%	76%	77%	77%	78%	78%	78%
	150	76%	82%	85%	87%	88%	89%	90%	90%	91%	91%	92%	92%
	200	78%	89%	93%	95%	96%	96%	97%	97%	98%	98%	98%	99%
	250	78%	91%	95%	97%	97%	98%	98%	99%	99%	99%	99%	100%
	300	78%	91%	96%	98%	98%	99%	99%	99%	99%	100%	100%	100%
	350	78%	92%	97%	98%	99%	99%	99%	99%	100%	100%	100%	100%
	400	78%	92%	97%	99%	99%	99%	99%	100%	100%	100%	100%	100%
	450	79%	92%	98%	99%	99%	99%	100%	100%	100%	100%	100%	100%
	500	79%	93%	98%	99%	99%	100%	100%	100%	100%	100%	100%	100%
	550	79%	93%	98%	99%	99%	100%	100%	100%	100%	100%	100%	100%
	600	79%	93%	98%	99%	100%	100%	100%	100%	100%	100%	100%	100%
	650	79%	93%	98%	99%	100%	100%	100%	100%	100%	100%	100%	100%
	700	79%	93%	98%	99%	100%	100%	100%	100%	100%	100%	100%	100%
	750	79%	93%	98%	100%	100%	100%	100%	100%	100%	100%	100%	100%
	800	79%	93%	99%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Despite the economic feasibility, there may be no available space to install photovoltaic panels for charging the batteries.

