

The background of the slide features a photograph of a large industrial facility, likely a battery energy storage system. The structure consists of multiple rows of tall, metal racks filled with components. In the foreground, two workers wearing hard hats and dark clothing are standing on a concrete platform, looking towards the facility. The image is overlaid with a large, semi-transparent blue triangle that points towards the top right corner of the slide.

Energy Storage for Flexible Peaking Capacity

IPP-NY

May 8th, 2018

Unique capabilities vs. traditional resources

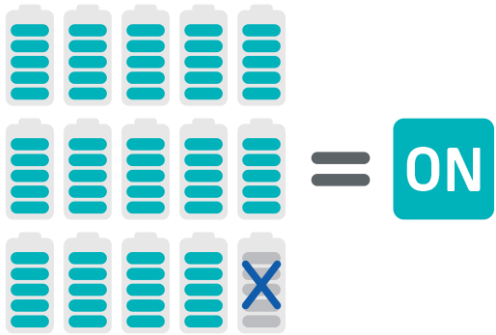
ALWAYS ON

Versus
Average
Peaker
Point

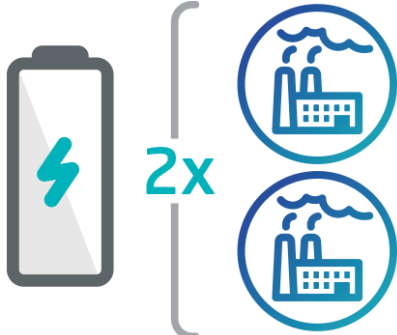
6.6% vs. 97%
15X more
service
hours

HIGHLY RELIABLE

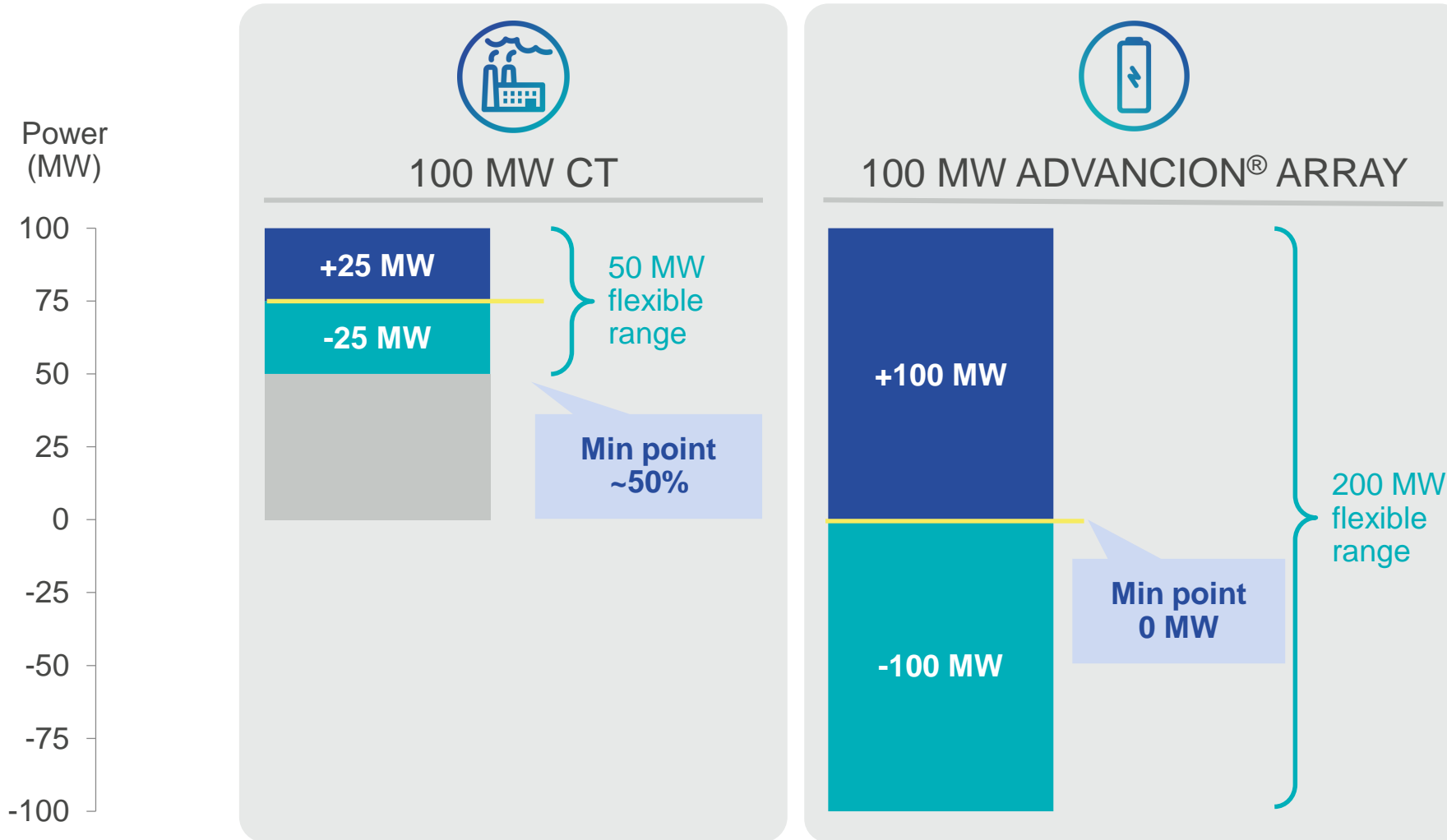
Parallel
Array
For High
Availability



UNIQUELY FLEXIBLE



Up to 4 x the effective resources and unique operational and siting advantages over thermal peakers



ADVANTAGES OF BATTERY STORAGE

Fast ramp (<2 sec)

Unlimited starts / stops (no cost)

No emissions or water use

Ease of permitting

Rapid deployment

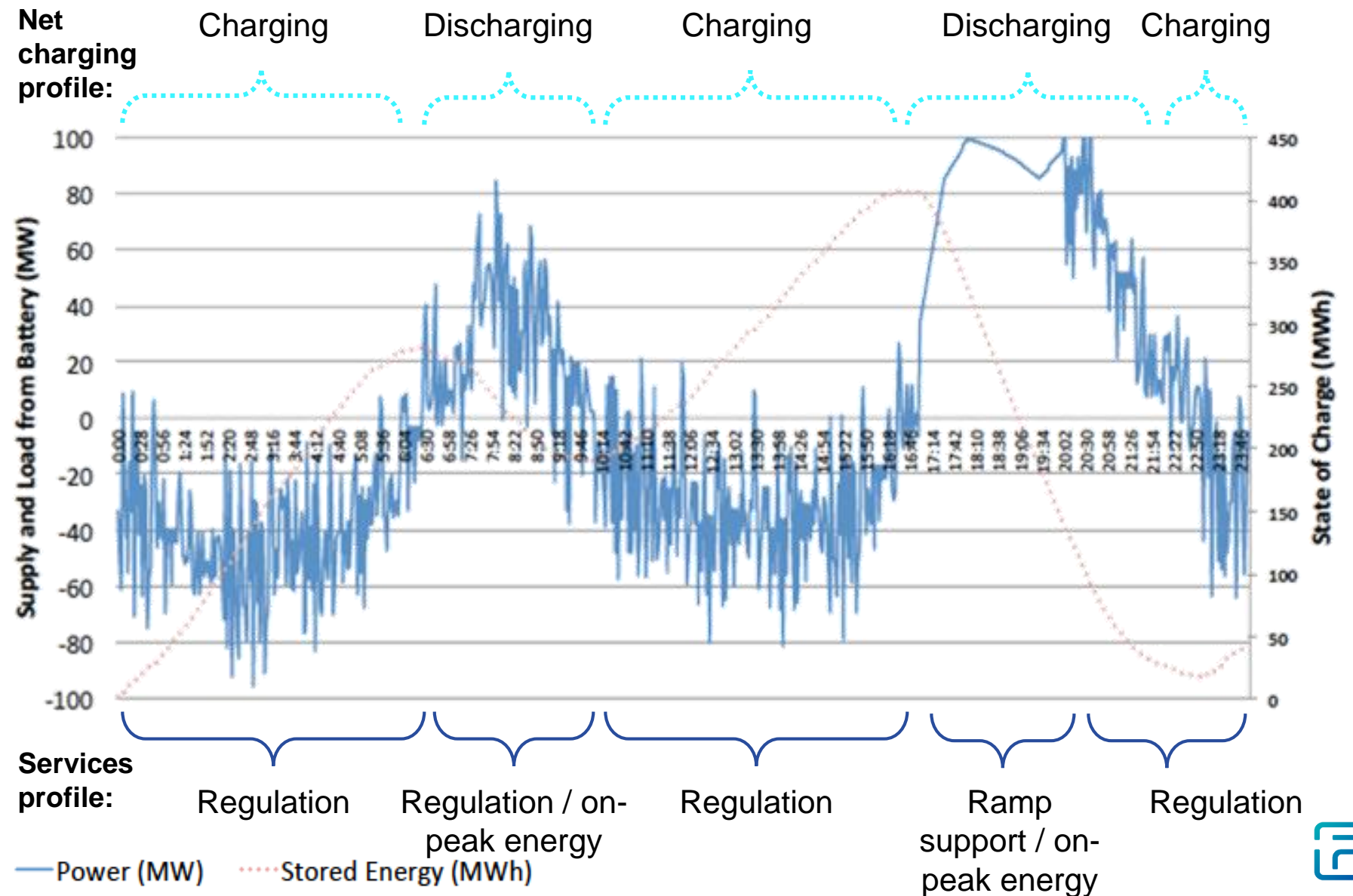
Always synchronized



Storage is “always on” to provide multiple services

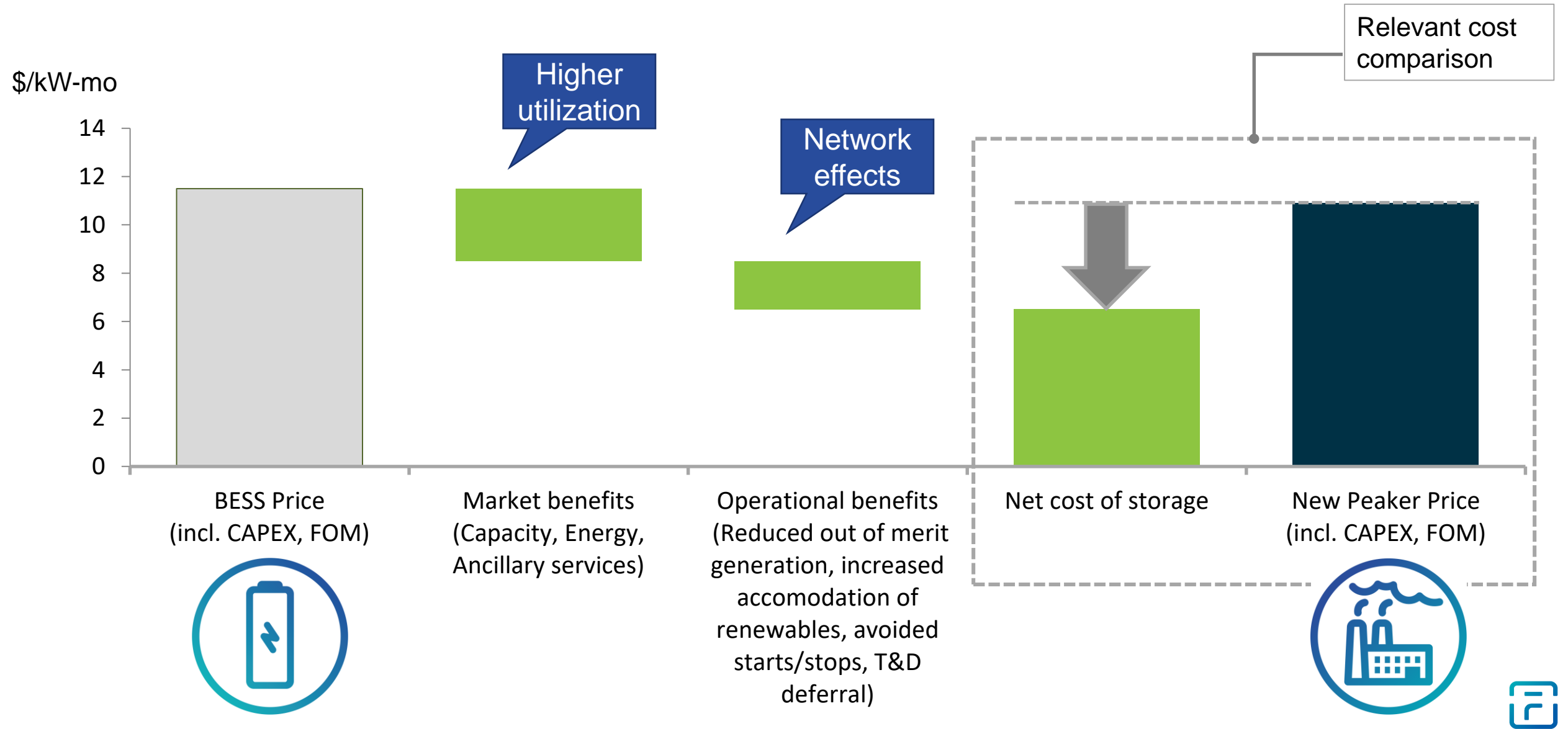
COMPOSITE DISPATCH PROFILE:

- 100 MW storage array for load following / ramping
- 100 MW Regulation except HE18-20



Energy storage is a cost effective peaking resource today

ILLUSTRATIVE



30 MW of energy storage for San Diego Gas & Electric, California, United States

Largest energy storage project in North America

- 30 MW / 120 MWh
- Contract to online in 6 months
- Sited on 1 acre, where a power plant could not be permitted



Capacity Peak Power

Long Beach, California, United States

100 MW, 4-hour (400 MWh)

AES Alamos, COD Jan 1, 2021

SERVICES

- Capacity, local reliability
- Peak power/off peak mitigation
- Ancillary services

IMPACT

- Competitive bid vs thermal peaker, cost effective
- Replaces environmental retired units
- Meets flexibility (duck curve)

World's largest contracted energy storage project



Thank You

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