Leading the Energy Transition through Storage
The world’s energy infrastructure is undergoing a rapid transformation. Globally, efforts are being made to reduce CO2 emissions. Renewable energy generation, including from solar power plants, is the most economic and sustainable form of power generation across most parts of the world. It represents a free, unlimited and environmentally friendly source of energy.

However, the global expansion of solar energy generation capacity is limited due to local (grid) constraints and intermittent generation. The rapid growth of both solar and wind energy generation capacity over the last 10 to 20 years has forced the sectors to think of new ways to meet the growing need for flexibility. Energy storage is the crucial missing link between generation and demand.
The generation of solar energy will grow exponentially in the coming years. As a result, we will also continue to see rising demand for energy storage solutions. BloombergNEF predicts the global utility and C&I energy storage markets will attract more than $560 billion in investment by 2040.

The future of energy lies in flexible storage solutions that meet the needs of customers by balancing power generation with demand. Until now, energy storage has been the missing piece of the energy transition puzzle.

Our energy storage systems solutions

Trina Storage is a business unit of Trina Solar, a company with over 20 years of solar experience. Supported by a Tier-1 supply chain, Trina Storage provides highly-scalable, easy-to-install energy storage solutions.

With an in-depth understanding of the technical requirements, Trina Storage designs flexible commercial and industrial solutions that meet unique customer needs for the generation, transmission and distribution of solar energy.

Trina Storage builds on a strong solar heritage to deliver energy storage solutions at scale. Our mission is to lead the transition to renewable energy through cost-effective and high-quality storage. We’re dedicated to providing “Solar for Everyone”.

Trina Storage provides the most reliable energy storage platform on the market – from consultancy and hardware to software and service.
**Battery Grid EMS PCS PV inverter**

Renewable Integration

As wind and solar energy adoption continues to grow, energy grids can be impacted by the intermittent nature of RE sources. Incorporating battery storage technology is the most cost-effective option for the safe and successful integration of renewables.

Other benefits of renewable integration include the management of short-term variability on the power grid and a modernization of the grid.

**DC Coupled**

- Batteries and PV modules share one inverter:
  - PV inverter with a direct connection to PV modules and connection via DC-DC converter to batteries
  - lower CAPEX due to less equipment

**AC Coupled**

- Batteries and PV modules have their own respective inverters and either share one point of connection (POC) or have separate POCs (ESS standalone)
  - more operational flexibility

Energy Shifting

Energy storage can be utilized to shift the peak generation from the PV system as energy demand fluctuates. It saves energy during periods when demand is low. Installed storage captures solar energy and allows local utilities to be more independent in their energy mix. Energy shifting enables organizations to get the maximum revenue from their PV generator, enabling higher DC/AC ratios for PV plants as well as time-variant grid injection.

Renewables Curtailment Avoidance

Production may be curtailed by a grid operator for various reasons, such as increasing the stability of the network. At the same time, energy storage allows PV excess energy to be stored and delivered when needed.

Why storage by Trina Storage?

- **Experience in solar**
  - Building on 20+ years of experience in solar, Trina Storage is the partner of choice for simple, safe and scalable energy storage.

- **Flexible solution**
  - Trina Storage carefully analyses your technical challenges before designing a flexible solution that achieves sustainability while creating new business and investment opportunities.

- **Bankable**
  - Trina was ranked top bankable module supplier by BloombergNEF four times in a row (2015-2019).

**Low Costs**

- Our established Tier 1 product supply chain guarantees an efficient production process which in turn enables us to provide highly cost-effective storage solutions.

**Expertise & Quality**

- Our experienced sales and engineering teams have deep commercial and technical expertise. They provide local project management and consulting as well as excellent service and support. Our solutions use high-quality components from reliable, ISO-certified Tier 1 suppliers.

**Efficiency**

- We only use highly-efficient components. Liquid-cooled batteries are just one of many options we provide. With our innovative technology and fast processes, from customer power communication

**Safety**

- We provide storage at the highest safety standards. We only use safe components such as state-of-the-art batteries. As a result, we have an excellent safety record. Every product we deploy has been comprehensively tested by the supplier.

**Bankable**

- Trina was ranked top bankable module supplier by BloombergNEF four times in a row (2015-2019).

**Global & local presence**

- Trina Storage is able to scale projects fast across a spectrum of 100+ countries as your needs change and evolve. It also has local teams on the ground that are experienced in solving specific local challenges.

**Why Trina Storage?**

- **Trina Solar** provides the most efficient and optimal energy storage systems for utility and grid operator customers. We deliver enhanced PV generation that achieves maximum consumption.
  - Smart design with an optimized and cost-efficient solution
  - Tier 1 hardware and software
  - Trustworthy, expert partner network and strong supply chain
  - Up to 20-year warranty
  - Flexible solutions designed for each customer’s needs

**TrinaSolar**

- 20+ years
- 100+ countries

**TrinaStorage**

- **Low Costs**
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