

KSTAR Case Study

KSTAR C&I ESS Cases
BluePulse Series

BluePulse Series

Safe & Reliable

- ▶ CATL LFP Battery Cell
- ▶ Double Fire Suppression System Design
- ▶ 1+1 Redundancy Design

Simple & User-friendly

- ▶ Pre-installed in Factory for Easy Installation on site
- ▶ Integrated BMS/EMS, Suitable for Various Applications
- ▶ Effortless Operation, Cloud Control

Economical & Efficient

- ▶ Save CapEx, Expanding as Required
- ▶ Efficient and Energy-saving HVAC Design



KAC50DP-BC100DE



2*KAC50DP-BC197DE



KAC125DH-BC233DE



KAC125DP2-BC233DE2




KAC50DP2-BC107DE2

KSTAR C&I ESS Installation Worldwide

EU

 **3,000+**
units installed


 **180+ MW**

 **283+ tons**
CO₂ saved

Global

 **5,000+**
units installed

 **300+ MW**

 **471+ tons**
CO₂ saved





Project Cases – Dynamic Control (VPP)

Location :
Murska Sobota, Slovenia

Capacity:
1MW / 2MWh
10 units of 2*KAC50DP-BC197DE
No connected loads but installed as
part of the local VPP project
Discharge to the grid at the evening to
ease the energy peak



Project Cases - Peak Shaving

Location :
Meat Processing Factory, Guijuelo, Spain

Capacity:
600kW, 1.2MWh
12 sets KAC50DP-BC100DE



Project Cases - Dynamic Control

Location :
Communicatieweg 29 Mijdrecht, Netherlands

Capacity:
100kW / 200kWh
2*KAC50-BC100DE
Third party EMS with manual control



Project Cases - Peak Shaving

Location :
Prebold , Slovenia

Capacity:
150kW, 600kWh





Project Cases - Self Consumption

Location :
Madignano, Italy

Capacity:
400kW / 788kWh
4 units of 2*KAC50DP-BC197DE

Project Cases - Time of Use

Location :
Fish Farm, Zhmerynka, Ukraine

Capacity:
200kW / 394kWh
2 units of 2*KAC50DP-BC197DE





Project Cases – Time of Use

Location :
Nova Polom, Czech Republic

Capacity:
100kW, 200kWh



Project Cases - Dynamic Control

Location:
Cluj Napoca, Romania

Capacity:
1MWh
5 units of 2*KAC50DP-BC197DE



Project Cases - Dynamic Control

Location :
Mohács, Hungary

Capacity:
100kW / 200kWh
2 Units of KAC50DP-BC100DE + EMS01D
AC-coupled
Stable power supply for health facility



Project Cases - Dynamic Control

Location :
North Macedonia

Capacity:
700kW / 1.4MWh
14 sets KAC50DP-BC100DE with 1 EMS01D



Project Cases - Energy Independence (off-grid)

Location :

Khmelnytskyi district, Vinkovci, Ukraine

Capacity:

100kW / 394kWh

2*KAC50DP + 2*BC197DE + STS100D

Expanded from 197kWh to 394kWh for full off-grid capability

Scalable design allowed for post-installation capacity doubling

100% grid independence for milk farm operations



Project Cases – Self Consumption & Peak Shaving

Location :
Hansen Village, Nove, Ukraine

Capacity:
200kW / 400kWh & 1MW / 1.72MWh
2*KAC50DP + 2*BC100DE + 2*STS100D for backup power during outages
8*KAC125DP + 8*BC215DE for peak shaving and cost reduction
Dynamic energy solutions for a resilient community

01

Case - Self Consumption

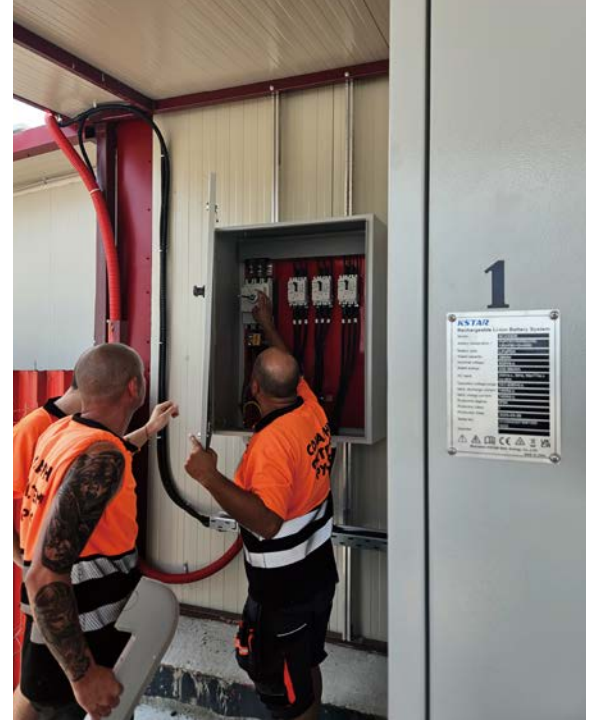




Project Cases - Self Consumption

Location :
Milanovo, Bulgaria

Capacity:
250kW / 494kWh
5*KAC50DP + 2*BC197DE + BC100DE
Reduce utility cost for local dairy factory
PARSHEVITSA



Project Cases - Self Consumption

Location:
Ruse, Bulgaria

Capacity:
3*KAC125DH + 3*BC233DE
Charging from AC-couple installation
Reduce utility cost for local butchery **Borimes Ltd.**



Project Cases - Self Consumption

Location :
Lovets, Bulgaria

Capacity:
125kW / 215kWh
KAC125DH-BC215DE
Charging from AC-couple installation



Project Cases - Self Consumption

Location :
Dobri Dol, Bulgaria

Capacity:
250kW / 494kWh
5*KAC50DP + 2*BC197DE + BC100DE
Reduce utility cost for local milk farm



Project Cases - Self Consumption

Location :
Bykev, Czech Republic

Capacity:
100kW / 200kWh
2*KAC50DP + 2*BC100DE + STS100
Reliable backup power for cardboard factory



Project Cases - Self Consumption

Location :

Bakov nad Jizerou, Czech Republic

Capacity:

50kW / 197kWh

KAC50DP-BC197DE

Reliable solar solution for energy-intensive veterinary surgery
and indoor pool heating



Project Cases - Self Consumption

Location:
Rodnow, Poland

Capacity:
50kW / 100kWh
KAC50DP-BC100DE + STS100D
Integrated with existing PV and diesel generator
Decreased grid dependency with seamless backup
for entire bakery
Optimized diesel generator usage through STS
integration





Project Cases - Self Consumption

Location :
Deszk, Hungary

Capacity:
250kW / 500kWh
5 Units of KAC50DP-BC100DE + STS250
On/off grid switching for regional blackouts
Stable power supply for water pumps, help with agri-PV



Project Cases - Self Consumption

Location:
Bulgaria

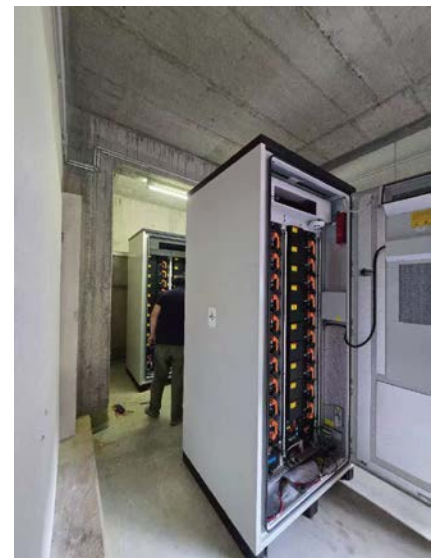
Capacity:
100kW / 394kWh
2 units of KAC50DP-BC197DE



Project Cases – Self Consumption

Location :
Molding Factory, Lichtenstein, Germany

Capacity:
100kW / 200kWh
2 units of KAC50DP-BC100DE





Project Cases - Self Consumption

Location :
Hungary

Capacity:
250kW / 500kWh
5 units of KAC50DP-BC100DE

Project Cases - Self Consumption

Location :
Murovane, Ukraine

Capacity:
100kW / 394kWh
2 units of KAC50DP-BC197DE + EMS01D





Project Cases - Self Consumption

Location :
Verona, Italy

Capacity:
100kW / 100kWh
40kW on-grid inverter with KAC50DP-BC100DE



Project Cases - Self Consumption

Location :
Casaletto vaprio, Italy

Capacity:
100kW / 197kWh
2*KAC50DP-BC197DE

Project Cases - Self Consumption

Location :

Milk farm, Chernihivskyi region, v. Tarasa
Shevchenka, Ukraine

Capacity:

200kW / 394kWh

2 units of 2*KAC50DP-BC197DE + STS250D





Project Cases - Self Consumption

Location :
Petrol station with car wash, Chromna,
Poland

Capacity:
50kW / 100kWh
KAC50DP-BC100DE + STS100D



Project Cases - Self Consumption

Location :
Valladolid, Spain; Agrivoltaics with
water pump and diesel generator

Capacity:
50kW / 100kWh
KAC50DP-BC100DE + STS100D



Project Cases - Self Consumption

Location :

Esztergom, Hungary

Capacity:

250kW / 500kWh

KAC50DP-BC100DE + STS100D

Continuous off-grid operation for regional blackouts

Stable power supply for Zen Temple

Zero export to grid



Project Cases - Self Consumption

Location :
Andalucía, Spain

Capacity:
100kW / 197kWh
2*KAC50DP-BC197DE
Reduce electricity bill for project owner



Project Cases - Self Consumption

Location :
Azerbaijan

Capacity:
100kW / 396kWh
2 units of KAC50DP-BC197DE + STS100D



Project Cases - Self Consumption

Location :
Bukovel ski-resort, Polianytsa, Ukraine

Capacity:
100kW / 197kWh
2*KAC50DP-BC197DE

Project Cases - Self Consumption

Location :
Brescia, Italy

Capacity:
50kW / 100kWh





Project Cases - Self Consumption

Location :
Factory and house mixed, Brescia, Italy

Capacity:
50kW / 100kWh
Mainly used for charging EV



Project Cases - Self Consumption

Location :
Lithuania

Capacity:
100kW, 197kWh
2*KAC50DP-BC197DE



Project Cases - Self Consumption (AC coupled)

Location :
Italy

Capacity:
50kW / 100kWh

Project Cases - Self Consumption

Location :
Badajoz, Spain

Capacity:
150kW / 300kWh (Retrofit)





Project Cases - Self Consumption

Location :
Gabrovo, Bulgaria

Capacity:
100kW / 197kWh
2*KAC50DP-BC197DE



Project Cases - Self Consumption

Location :
Magánkórház, Hungary (Hospital)

Capacity:
100kW / 200kWh
STS100 (on/off grid switching)



Project Cases - Self Consumption

Location :
Varna, Bulgaria

Capacity:
125kW / 215kWh
KAC125DH-BC215DE



Project Cases - Self Consumption

Location:
Westhoek, Netherlands

Capacity:
50kW / 100kWh





Project Cases - Self Consumption

Location :
Olive Oil Mill, Ignazia BN, Italy

Capacity:
50kW / 100kWh





Project Cases - Self Consumption

Location :
Kazanlak Kazanlyk, Bulgaria

Capacity:
50kW / 100kWh



Project Cases - Self Consumption

Location :
2*2kW AC Charge Stations, Turkey

Capacity:
50kW / 100kWh



Project Cases - Self Consumption

Location :
Dunavecse, Hungary

Capacity:
150kW / 300kWh



02

Case - Peak Shaving





Project Cases – Peak Shaving

Location :
Poland

Capacity:
50kW / 100kWh
BluE-20KT-M1*2 + KAC50-BC100DE + STS100D

STS100D integrates with diesel generator for off-grid backup
Weak grid causes voltage rise on high export and drops on high import
Battery charges during excess generation and discharges during peak grid demand





Project Cases - Peak Shaving

Location :
Žirovnica, Slovenia

Capacity:
50kW / 100kWh





Project Cases - Peak Shaving

Location :
World Expo Park, Shanghai, China

Capacity:
50kW / 100kWh

03

Case - Time of Use





Project Cases – Time of Use

Location :
Rome, Italy

Capacity:
100kW / 400kWh
2 units KAC50DP, 4 units BC100DE
With 1 unit EMS01D



Project Cases – Time of Use

Location :
Chelmiec, Poland

Capacity:
50kW / 100kWh



04

Case - Dynamic Control





Project Cases – Dynamic Control

Location :
Radawa, Poland

Capacity:
150kW / 300kWh
Integrate with existing automatic
systems in the facility



Project Cases – Dynamic Control

Location :
Poland

Capacity:
100kW / 300kWh
Integrate with existing automatic systems in the facility



Project Cases - Dynamic Control

Location :
Geldermalsen Apple Farm, Netherlands

Capacity:
200kW / 400kWh





Project Cases - Dynamic Control

Location :
Geldermalsen, Netherlands

Capacity:
250kW / 500kWh



Project Cases - Dynamic Control

Location :
Schiedam, Netherlands

Capacity:
150kW / 100kWh



Project Cases - Dynamic Control

Location :
Charging stations and restaurants on the highway,
Hatvan, Hungary

Capacity:
50kW / 100kWh



Project Cases - Dynamic Control

Location :
Netherlands

Capacity:
150kW / 300kWh



Project Cases - Dynamic Control

Location :
Ospel, Netherlands

Capacity:
150kW / 300kWh



Project Cases - Dynamic Control

Location :
Cegled, Hungray

Capacity:
50kW / 100kWh





Project Cases - Dynamic Control

Location :
Vessem, Netherlands

Capacity:
100kW / 200kWh



Project Cases - Dynamic Control

Location :
Helmond, Netherlands

Capacity:
50kW / 100kWh
