

A large-scale solar farm with rows of solar panels and several large, grey, rectangular energy storage units in the foreground. The units are mounted on concrete bases and have ventilation grilles on top. The background shows a clear sky and some industrial structures.

NX Flow

Vanadium Flow Energy Storage System

Smart, Integrated Storage

NX Flow™ by Nextracker is a turnkey solar-plus-storage system that combines best-in-class solar tracker, battery, inverter, and software control technologies. NX Flow delivers optimal performance and maximized return on investment to owners of power plants. NX Flow's integrated technology broadens the shoulders of the PV generation curve and smooths weather-induced PV generation volatility.

Store More for Less

NX Flow enables small-to large-scale system owners to store energy and deploy it whenever its value is maximized. Plant owners can now aggregate their distributed energy resources (DERs), enhance asset resiliency, and provide stability to the grid as they integrate solar or other renewable power.

NX Flow unique benefits include:

- Smart, connected software solution integrating Flex's cybersecure, NERC-CIP compliant data platform with Nextracker's Digital O&M™ control software and asset management offers safe and complete system analytics, preventive maintenance, and monitoring.
- At the core of the system lies an advanced vanadium flow battery (VFB) that can discharge 100% of stored energy with little to no degradation*, even under extreme duty cycles. This has been validated by DNV-GL, a respected independent engineering firm.
- The battery is DC-coupled with the PV array, thereby dramatically improving round-trip inverter efficiency versus typical AC-coupled battery systems.

*Nextracker internal field testing reveals 10 years of continuous cycling with zero degradation.



ideal
ENERGY

When it came time to recommend a solar-and-storage solution, Nextracker was not only the clear choice with its next-generation technology and trackers, but its customer-first approach is second to none, and the short product delivery lead times on an accelerated schedule were essential.

– Amy Van Beek, Co-founder, Ideal Energy



NX Flow paired with NX Horizon smart solar tracker at the MUM PV power plant in Iowa, operated by Ideal Energy.

NX Flow Features and Benefits

NX Horizon™ Solar Tracker

- Self-powered tracker — no grid power required
- Integrated back-up battery
- Motor and tracker controls
- Up to 120-degree (± 60) tracking range
- Zigbee wireless network

NX Machine Learning Predictive and Software optimization

- Analytics to maximize project IRRs
- Digital O&M™ to resolve potential issues in the field
- Automated commissioning
- SmartNexus™ intelligent cybersecure platform
- Data security / NERC CIP compliant

Vanadium Flow Battery (VFB)

- 10 kW-AC nominal, 4 hour duration
- 40 kWh-DC energy rating
- Integrated thermal management and BMS

- 100% depth of discharge with <1% lifespan degradation
- Performance service agreement
- Integrated EMS
- Zigbee wireless network
- Controller integrated into NX data and communication platform
- Ships wet, no battery assembly required
- Simple and quick installation

String Inverter

- Three-port design allows direct PV-to-battery charging
- 30 kW native rating
- 1000 Vdc rating
- Integrated EMS
- DC-coupled for direct PV-to-battery charging
- Direct PV to grid inverter capability
- Direct battery to grid inverter capability
- String-level monitoring