

Enabling Sustainable Ultrapure Water for India's New Energy Future

Supporting one of India's leading solar manufacturers with high-capacity, chemical-free ultrapure water production.

As India expands domestic solar manufacturing capabilities, reliable ultrapure water (UPW) systems are becoming increasingly critical to ensuring consistent product quality and efficient operations.

A leading solar manufacturer required a high-capacity UPW solution capable of supporting large-scale production while reducing environmental impact and operational complexity. Xylem's Ionpure® CEDI technology provided a sustainable alternative to conventional resin-based demineralization systems, helping the customer achieve both performance and sustainability objectives.

The challenge

The customer required a reliable ultrapure water system capable of supporting a 110 m³/hr application for a large-scale manufacturing facility.

Traditional mixed-bed demineralization systems require regular regeneration using acid and caustic chemicals, increasing operational complexity, plant footprint, and wastewater generation. In addition, the customer required confidence that the selected technology could reliably perform in a demanding high-flow environment.



Customer Value Delivered

- 50% Footprint Savings case
- Zero Regeneration Chemicals
- Reliable High-flow UPW Production

The objectives

- Deliver high-capacity UPW production
- Eliminate regeneration chemicals
- Reduce system footprint
- Improve operational efficiency
- Support sustainability goals

"Ionpure® CEDI helped us achieve our sustainability and performance goals through a reliable, future-ready ultrapure water solution."

The Solution

Xylem implemented an Ionpure® CEDI system utilizing VNX-Max modules specifically configured for this large-capacity application.

The solution enables continuous deionization without regeneration chemicals while maintaining reliable water quality and operational efficiency. Supported by a strong global installation base, Ionpure technology provided the performance and confidence required for successful implementation.

The modular design further simplified installation, operation, and maintenance while optimizing valuable plant space.

Technical Highlights

- 110 m³/hr UPW Capacity
- 35 Ionpure® VNX-Max Modules
- 35 DC3 Rectifiers
- 5 DSP-TP Units
- Chemical-Free Continuous Operation

The Result

The installation successfully delivered a compact, reliable, and sustainable UPW solution capable of supporting critical manufacturing operations.

By eliminating regeneration chemicals and reducing footprint by more than 50%, the customer benefited from improved efficiency, lower operational complexity, and greater environmental sustainability.

The project has since become an important reference for large-scale solar manufacturing applications.

Want to Optimise your Ultrapure Water system?

Talk to a Xylem expert to discover how Ionpure® CEDI technology can help improve water quality, reduce footprint, and support your sustainability goals.



Performance Without Compromise



Ionpure® CEDI

- **Chemical-Free Operation** - Eliminates acid and caustic regeneration.
- **Consistent Water Quality** - Delivers reliable ultrapure water performance.
- **Compact System Design** - Reduces footprint and installation space.
- **Lower Operating Complexity** - Simplifies operation and maintenance.
- **Scalable Modular Architecture** - Easily adapts to varying capacity requirements.
- **Supports Sustainability Goals** - Reduces chemical handling and wastewater generation.

Know about CEDI



xylem.com



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