



Global Energy Stability on the **Path to Zero**



We Need a New Solution



THE GRID

The Grid is stressed and undersupplied while weather volatility and severity has increased, challenging utility resiliency. Significant upgrades are needed.¹

Virtual Utility® provides onsite, independent grid forming power.



RENEWABLE ENERGY

Virtual Utility® makes intermittent power from renewables always available, increasing total efficiency and maximizing ROI with clean, conditioned power.



UTILITY COMPANIES

Virtual Utility® allows maximum flexibility for utilities to balance power with load conditions automatically for increased resiliency.



POWER LOSS

Virtual Utility® is a prime power system allowing for unlimited run time during power losses that 40% of companies experience monthly.²



COSTS

Instead of \$59 billion in annual losses,³ Virtual Utility® lowers the total energy cost for society and delivers maximum societal return on investment (SROI).



1. American Society of Civil Engineers Infrastructure Report

2. S&C State of Commercial Power Reliability Report 3. Fact Sheet: The Bipartisan Infrastructure Deal

Seamless Resiliency



The Heart of Virtual Utility®



The **R3Di®** is a local utility grade system with the flexibility to provide primary or stand-by back-up power, serving as a foundational building block for future energy projects.

» Resilient

Full conditioned power with continuous grid forming at the site. Utility monitoring of corrective actions for stable and conditioned power independent of grid issues.

» Reliable

Redundant operating system without a single point of failure. Instantaneous, full-load transfer capabilities, grid to island mode for long duration outages. **24x7x365**

» Ready

ETL Certified to UL 9540 energy storage system (BESS) integrating LiFePO4 storage for utility, renewables, DCFC, Hydrogen, RNG for future flexibility.

The **R3Di®** sets new standards in power: load factor 1.0, instant power for NFPA, and establishes a new benchmark for transient response in the industry (ISO8528 G5).

Welcome to Virtual Utility®

The first utility-grade network designed for the end user that delivers full visibility and control with a turnkey, integrated solution.

Real-time Energy Management



The Eyes of Virtual Utility®

Grid Response Optimization of Virtual Energy (**Grove**) is the operational hub for distributed assets, including the **R3Di®**.

It provides near real-time data for CO2 emissions, asset health monitoring, and remote dispatching capabilities.



Specific Capabilities

- ☐ Asset optimization through best-in-class metering solutions
- ☐ Real-time market monitoring, pricing analysis, and alerts
- ☐ Remote dispatch for arbitrage and economic needs
- ☐ Emergency demand response (where applicable)
- ☐ Proactive weather tracking
- ☐ Asset health monitoring and automated service dispatch
- ☐ Environmental regulatory and compliance
 - Near real-time data and insights for Scope 1, 2, 3 emissions
 - Audit-ready CO2 emissions data nZero



Integrated Design for EV Fast Charging



The **R3Di®** can be customized to meet your EV charging needs, avoiding costly public utility upgrades and expensive demand charges.

Independent Energy Position

Provides backup power, EV DCFC, utility, distributed generation, reduced energy cost and optional prime power without CHP.

Pricing Control

Integrated system producing the lowest achievable electric utility cost for EV charging. Automated by e2Companies **Grove**.

Modular Design

Turnkey system with 1 to 100 charging stations including software, billing and POS. Adaptable, works across a wide range of EV chargers.



ESG - Enabling the Path to Zero



Virtual Utility® Advantages



Optimization of the Existing Grid

The **R3Di®** provides on-site clean generation and lowers the total energy cost to society (SROI) by allowing for more usage of renewables without intermittent power loss.



Customer Choice of Energy Economics

- Fully-staffed **Grove** monitors the energy market for real-time cost savings.
- Increased control for customer vs. ceding control to public utilities.
- Real-time CO2 choice of generation inputs.



Enabling Carbon Reduction and the Path to Zero

- **Virtual Utility®** is adaptable and future-proofed for a wide range of renewables.
- Increases baseload of wind and solar energy.
- 100% hydrogen capable of reducing all CO2 emissions.





The First Vertically Integrated **Virtual Utility[®] Company**

e2Companies is the creator of the industry's first **Virtual Utility[®]** and a leading provider of integrated solutions for power generation, distribution and energy economics.

Our mission is to design solutions that deliver **seamless resiliency** and **unprecedented value for our customers.**

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