

## Resiliency DR™ Product Line

### 1. General Description

The **Resiliency DR™ product line** consists of modular, natural gas-fueled power generation systems designed for **prime power, demand response, peak shaving, and grid-interactive applications**, with integrated capability for **standby operation**.

Each system is based on multiple **EPA pre-certified 2G DR aura 412 engine-generator sets**, factory-assembled into standardized configurations with integrated controls, protection, and paralleling switchgear. Systems are designed for **continuous-duty operation up to 8,760 hours per year**.

### 2. System Configuration

#### 2.1 Modular Architecture

- Block-based system design
- Each block consists of **2 to 6 gensets**
- Multiple blocks may be combined into **pod and campus configurations**

#### 2.2 Standard Models

Model	Gensets	Prime Output	Standby Output
DR2	2	1.06 MW	1.24 MW
DR3	3	1.59 MW	1.86 MW
DR4	4	2.12 MW	2.48 MW
DR5	5	2.65 MW	3.10 MW
DR6	6	3.18 MW	3.72 MW

### 3. Electrical Characteristics

- **Voltage:** 480V, 3-phase
- **Frequency:** 60 Hz
- **Power Factor:** 1.0 (0.8 optional)
- **Paralleling:** Integrated low-voltage switchgear
- **Synchronization:** Automatic multi-unit load sharing
- **Scalability:** Expandable to multi-block and multi-megawatt systems

## 4. Generator Sets

### 4.1 Engine-Generator

- **Manufacturer:** 2G Energy
- **Model:** DR aura 412
- **Fuel:** Natural Gas

### 4.2 Ratings (Per Unit)

- **Prime Power:** 530 kW
- **Standby Power:** 620 kW
- **Efficiency:** ~33.4% at full load
- **Speed:** 1,800 RPM

## 5. Fuel & Performance

- **Fuel Type:** Natural Gas (~990 BTU/scf)
- **Heat Rate:** ~10,213 BTU/kWh (prime)
- **Fuel Flow:** ~101 SCFM per genset
- **Heat Input:** ~5.41 MMBTU/hr per genset

## 6. Emissions

- **NOx:** < 0.05 g/BHP-hr (with catalyst)
- **CO:** < 0.6 g/BHP-hr (with catalyst)
- **Ultra-low emissions compliant** for regulated air quality regions

## 7. Controls & Monitoring

- **Control Platform:** AWARE OS™
- Real-time monitoring and dispatch
- Automatic synchronization and load sharing
- Remote communication capability (Modbus, Ethernet/IP, Profinet)
- Fault detection and system protection

## 8. Compliance & Certifications

- **EPA pre-certified engine-generator sets**
- **Blue Sky**
- **UL 2200 listed enclosure packages**

- **NFPA 110 compliant configuration** (when configured for standby)

## 9. Optional Equipment

### 9.1 Step-Up Transformer

- 480V to:
  - 4.16 kV
  - 12.47 kV
  - 13.8 kV
  - 34.5 kV

### 9.2 Automatic Transfer Switch (ATS)

- Open or closed transition
- Utility-to-generator transfer capability

## 10. Mechanical & Installation

- Factory-assembled modular units
- Outdoor-rated enclosures
- Scalable footprint configurations
- Suitable for skid-mounted or site-integrated installation

## 11. Applications

- Data centers (primary and supplemental power)
- Microgrids and distributed energy systems
- Commercial and industrial facilities
- Demand response and grid support
- Campus-scale energy systems

## 12. System Advantages

- **Modular and scalable architecture**
- **High availability through redundancy**
- **Dual-use capability (prime and standby)**
- **High efficiency and ultra-low emissions**
- **Rapid deployment and standardized design**

## 13. Summary

The Resiliency DR™ product line provides a flexible, scalable, and high-performance power generation solution designed for modern energy applications. By combining EPA pre-certified natural gas gensets, modular architecture, and advanced controls, the system enables deployment of reliable, efficient, and dispatchable power systems capable of both continuous operation and standby support, from single-block installations to multi-megawatt campus systems.