APR ENERGY®

the power to SECURE

Solutions Benefits

- RAPID DISPATCH
- GRID SECURITY AND VOLTAGE SUPPORT
- ANCILLARY SERVICES
- ROTATIONAL INERTIA
- IMPROVED FUEL EFFICIENCY AND LOAD RESPONSE
- RENEWABLE INTEGRATION AND ENABLEMENT
- SYNCHRONOUS CONDENSING CAPABILITY

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- FAST INSTALLATION
- TRANSACTIONAL FLEXIBILITY
- SMALL FOOTPRINT
- SCALABILITY
- LOWER EMISSIONS

Grid Stabilization

Many countries invest in infrastructure that integrates diverse power generation sources and takes advantage of the economic and environmental benefits of renewable energy. In anticipation of nuclear and coal plant closures and to meet stringent emissions regulations, some governments are pursuing aggressive goals to achieve 100 percent renewable generation in the next few years.

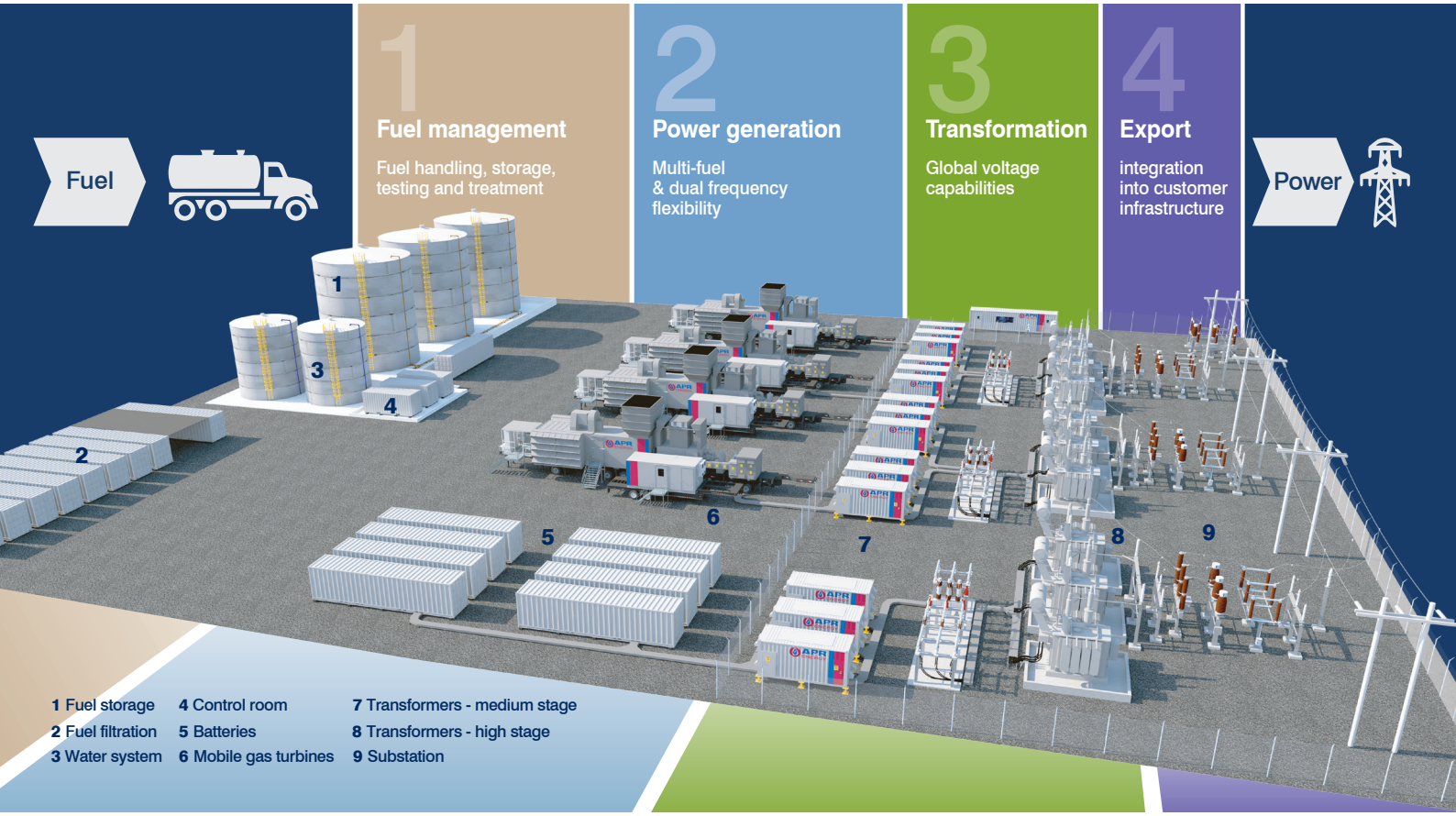
Along this dynamic course of change, governments, utilities, transmission companies and distribution operators must at some point address the inherent challenges of maintaining secure and stable electric grids during intermittent periods of limited sun and wind.

To mitigate factors that can make integrating renewable sources to the grid unreliable and expensive, the most forward-thinking and cost-conscious electric systems turn to APR Energy, a global provider of responsive power solutions. APR Energy refined an approach to Grid Stabilization that enables a smooth integration of renewables into the power mix and ensures electricity is available when and where needed.

APR Energy gas turbine technology delivers power to the grid within minutes. The technology's fast-starting capabilities establish a dependable backup for electric systems with high renewable concentrations during periods of peak demand and changing weather. By minimizing the need to increase spinning reserve, this approach reduces fuel consumption and lowers operating costs. In the event of partial or major system outages, APR gas turbines also feature black start capabilities to independently restore electrical power until repairs can be made to the grid.

Renewable Enablement

When renewable power is generated at a considerable distance from the load center, APR Energy has the option to apply Synchronous Condensing technology that responds quickly to fluctuating grid conditions. Beyond delivering MWs, our gas turbines have the operational flexibility to produce reactive power to stabilize the grid and sustain an increased penetration of renewable energy into the supply mix.



OUR TURNKEY SOLUTION

DESIGN

ENGINEERING

LOGISTICS

PROCUREMENT

CONSTRUCTION

COMMISSIONING

OPERATION

MAINTENANCE

FUEL MANAGEMENT

SECURITY

Gas Turbine / Battery Hybrid System

APR Energy's Hybrid solution employs a battery system that releases power at critical periods of high demand, intermittent solar generation and variable wind speeds. This seamless transition offers primary response, millisecond support and synthetic inertia to promote greater reliability and efficiency.

Electric grids that integrate a high penetration of intermittent renewable resources – most notably, wind and solar -- pose unique challenges that require a new way of thinking. APR Energy provides customers with comprehensive power solutions that combine scalability and transactional flexibility to meet near-term energy requirements and help overcome market uncertainties without the need for long-term investments.

Case study

South Australia

Edinburgh, South Australia

With the influx of renewable energy production taking a cornerstone of the Australian electrical generation grid, the peak demand reliability of wind and solar power posed unique challenges that required fast responding simple cycle gas turbine generators to satisfy the shortfalls. APR Energy provided a fast starting, full turnkey power plant with comprehensive operation and maintenance support to satisfy the Grid Stabilization requirements of the South Australia Government.

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