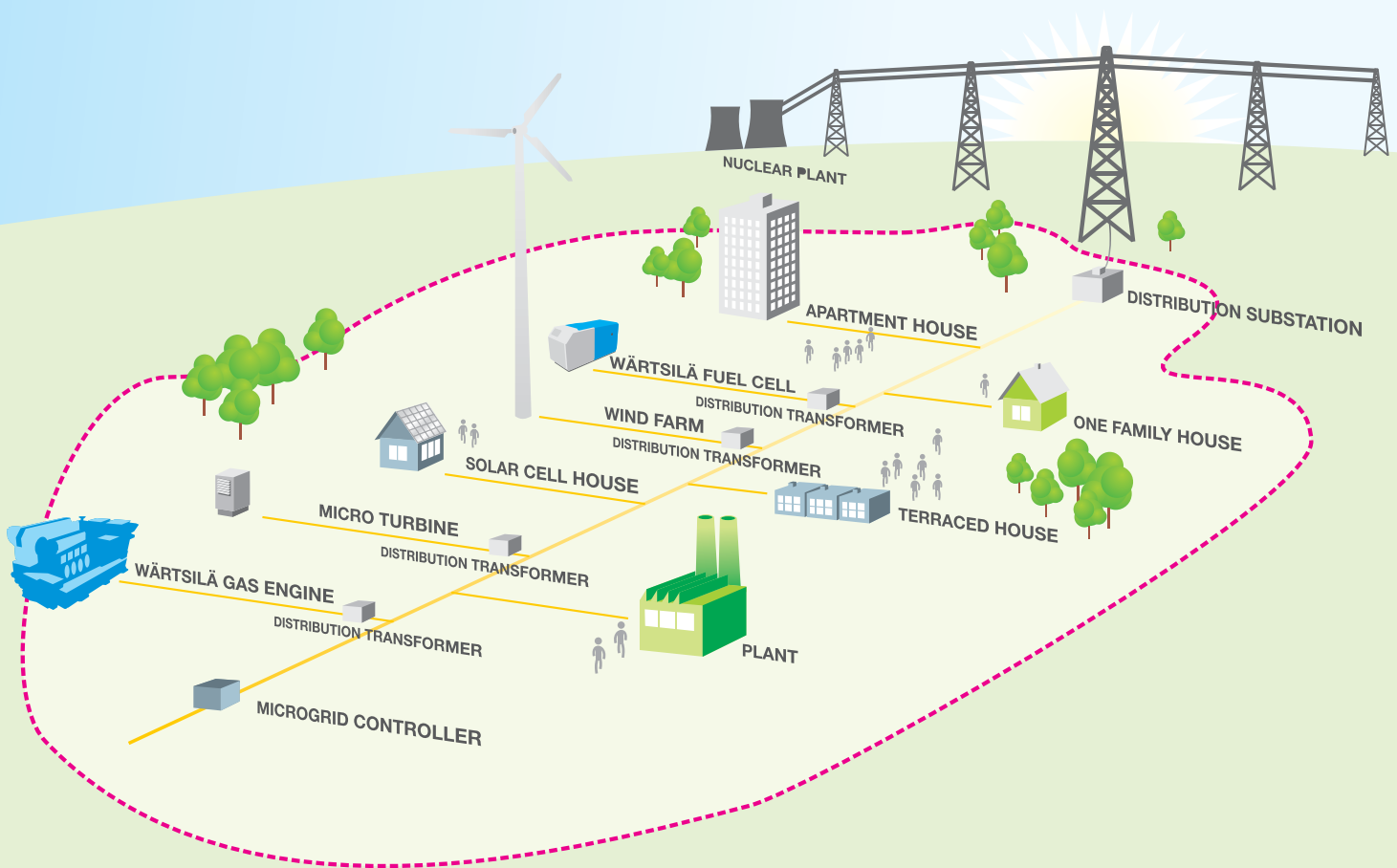


WÄRTSILÄ SOLID OXIDE FUEL CELL UNITS FOR STATIONARY AND MARINE APPLICATIONS



SOFC – EFFICIENT, ENVIRONMENTALLY SOUND TECHNOLOGY

Wärtsilä is developing fuel cell technology for distributed power generation and marine markets. The R&D work focuses on Solid Oxide Fuel Cell (SOFC) system development for commercial and industrial applications. In stationary applications, Wärtsilä SOFC units are optimised for distributed power generation in plants located near the end-users. Normally these plants are operated in grid-parallel mode. In case of disturbances, they can be flexibly disconnected from the grid and operate in stand-alone mode to secure the customer's power supply.

The fuel cell's benefits for distributed applications are

- Efficiency
- Ultralow NO_x and no SO_x -emissions
- Silent operation
- CHP capability
- Compact design
- Improved reliability
- Vibration free

The benefits of distributed generation are

- Less transmission losses
- Low emissions
- Reliable energy supply





■ ■ ■ Wärtsilä is developing fuel cell technology for distributed power generation and marine markets. Wärtsilä's Solid Oxide Fuel Cell (SOFC) units can be used onboard ships as auxiliary power units. The SOFC auxiliary power units are designed to be connected to the ship's AC bus-bar and automation system.



The fuel cell's benefits for marine applications are:

- Efficiency
- Ultra-low NO_x and no SO_x –emissions
- Silent operation
- Reliable operation
- Vibration free
- Fuel flexibility
- Cogeneration potential



Wärtsilä's SOFC units come as fully equipped power packages that are easy to install and use.

