A NEW POWER SYSTEM

Renewables and Smart Power Generation – the perfect match
We need new ideas to power our lives. Luckily they already exist.
The most important task for our power systems is to match electricity production with demand. With huge amounts of renewable energy, this balancing job becomes difficult.
Wind and solar power are essential to cut harmful emissions but unfortunately they don’t deliver 24/7. When their output drops or stops, we still need to keep the lights on.
Another big challenge to the power grid comes from our homes. The daily pattern of electricity use goes up and down like a roller coaster ride.
When we combine the fluctuation in electricity output to the variation in electricity demand, we face a challenge that needs to be solved in order to keep the power system working.
To deal with the instability, we need flexible, dynamic technology for power production. This is what Smart Power Generation engine-driven power plants are all about.

The engines can surge up and down in just a few minutes, or even seconds.

The fast response time is key to boost wind and solar energy to their full potential, to follow fluctuating demand and to reach a new level of grid safety.
In the old days there was no zigzag of wind and solar and the demand side was stable. Big coal and nuclear power plants and gas turbines were built to provide a steady flow of electricity and to keep running at full blast day and night. They are not very flexible.
To match production and demand once again, new solutions are needed. In order to have a reliable, affordable and sustainable Smart Power System, we must have Smart Power Generation.
The value of flexibility must be realised. It will provide transmission system operators an effective and secure dispatch with minimum costs. Consumers will have cleaner energy and smaller electricity bills. New jobs will be created and the environment will have new hope.

New market design that rewards flexibility is needed in order to boost investments into flexible power generation.

This is the key to the New and Smart Power System.
SIMPLE SOLUTIONS FOR COMPLEX ISSUES.

Read more: www.wartsila.com/powerplants
www.smartpowergeneration.com