Over the last years the worldwide demand for power has been growing continuously. Siemens Energy anticipated and reacted to the needs of the market by further developing its combined cycle power plant technologies and providing a full range of energy products and services. Siemens gas turbines are renowned for their high availability and reliability as well as high power output at low emissions.

One of the innovative solutions offered by Siemens Energy to help you improve the performance of your gas turbine and your competitiveness is the Compressor Mass Flow Increase upgrade.

**Our product**
The Compressor Mass Flow Increase includes the airfoil profile modification of the first five rows of blades and vanes including the inlet guide vane and instrumentation and control adaptations. This upgrade has been designed to increase mass flow for higher power output and exhaust energy from your gas turbine.

The Compressor Mass Flow Increase provides significant performance advantages and offers attractive financial payback options.

**Your benefits**
The Compressor Mass Flow Increase upgrade can be a cost-effective means to help you improve the overall performance of your gas turbine and combined cycle power plant.

Benefits may include*:
- Increased gas turbine power output of up to 3% in simple cycle duty
- Higher combined cycle power output and lower heat rate due to increased exhaust mass flow

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*The modified airfoil profile is state-of-the-art for new Siemens gas turbines of all V-frames manufactured since July 2005.

**Scope of supply**
The Compressor Mass Flow Increase upgrade from Siemens is just one of the many innovative modernization packages available.

The scope of this upgrade includes:
- State-of-the-art controlled diffusion airfoil profiles
- Replacement of the first five rows of blades and vanes
- Inlet guide vane modification
- Instrumentation and control modification for surge control
Cross section of the SGT6-4000F (V84.3A) gas turbine

We recommend that the installation of this upgrade be performed at a major outage.

We offer a full range of field service capabilities to help you manage your maintenance and outage schedules.

The Compressor Mass Flow Increase upgrade with the above mentioned scope of supply is applicable for the SGT6-4000F (V84.3A) frame and may be combined with other modernizations. The Compressor Mass Flow Increase upgrade can also be applied – though with a different scope of supply – to other frames, i.e. the SGT5-2000E (V94.2), the SGT6-2000E (V84.2) and the SGT5-4000F (V94.3A).

References
More than 220 units are equipped with Compressor Mass Flow Increase on various frame types worldwide and have accumulated more than 4,600,000 equivalent operating hours (EOH).

Siemens Energy has successfully retrofitted six units of the SGT6-4000F (V84.3A) frame with the Compressor Mass Flow Increase upgrade in the Philippines with more than 270,000 equivalent operating hours (EOH) accumulated.

More than ten units are retrofitted on other frame types worldwide, e.g.**:
- One unit in Australia (SGT5-2000E)
- Two units in Germany (SGT5-4000F)
- One unit in the Netherlands (SGT5-2000E)
- One unit in New Zealand (SGT5-4000F)
- Two units in Spain (SGT5-4000F)
- Three units in the United Kingdom (SGT5-4000F)
- Two units in Vietnam (SGT5-4000F)

We provide products and services to support your goal of maximizing your return on investment.

* Benefits are subject to specific technical plant evaluation, expected values with test tolerances @ ISO condition.
** As of August 2013