



# Variable Inlet Guide Vane (VIGV)

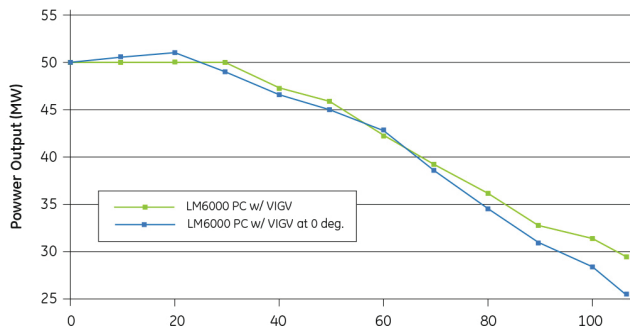
## Product Description

- Variable Inlet Air vanes help guide inlet airflow to maximize engine performance.
- Assembly located in front of Low Pressure Compressor (LPC), consisting of 43 stationary leading-edge vanes and variable trailing flaps (rotate -10 to +60 degrees).
- Variable Differential Transformers (LVDTs) on actuator ring drivetwin hydraulic actuators.
- LVDTs and VIGV positions are controlled by continuous measurement of LPC inlet temperature and HPC discharge static pressure.
- If turbine has Fixed Inlet Guide Vanes, the upgrade involves adding VIGVs, Hydraulic Control Unit (if applicable), off-engine Cables, hydraulic lines and updating the software.



Variable Inlet Guide Vanes Assembly

Temp. (F)	Power Increase
70	2.0%
80	5.8%
90	7.2%
100	11.5%
110	13.5%



SPRINT power output increase with VIGVs

## Customer Value

- Increases generator power output by up to 3.25 MW.
- Improves performance for simple and heat recovery cycles at less than full load; reduces engine waste heat.
- Minimizes variable bypass valve (VBV) flow and pressure levels, thereby reducing associated flow noise.

### For LM6000PC SPRINT Gas Turbine with EFS

- Average power increase of 2 MW.
- Greater than 2% fuel efficiency increase at 70% power.
- Exhaust energy increase of 3%.
- Flaps close during large power reductions to quickly reduce LPC flow rate, helping maintain LPC stall margin.

## Applicable Units

LM6000*	✓	LM2500	
LMS100		LM5000	
LM1600		TM2500	

\* Configured for LM6000 PC units only

To learn more about this offering, contact your GE sales representative or visit [powergen.gepower.com](http://powergen.gepower.com).