



Flex-Plant™ Solutions

Flexibility for all your generation needs

Answers for energy.

SIEMENS

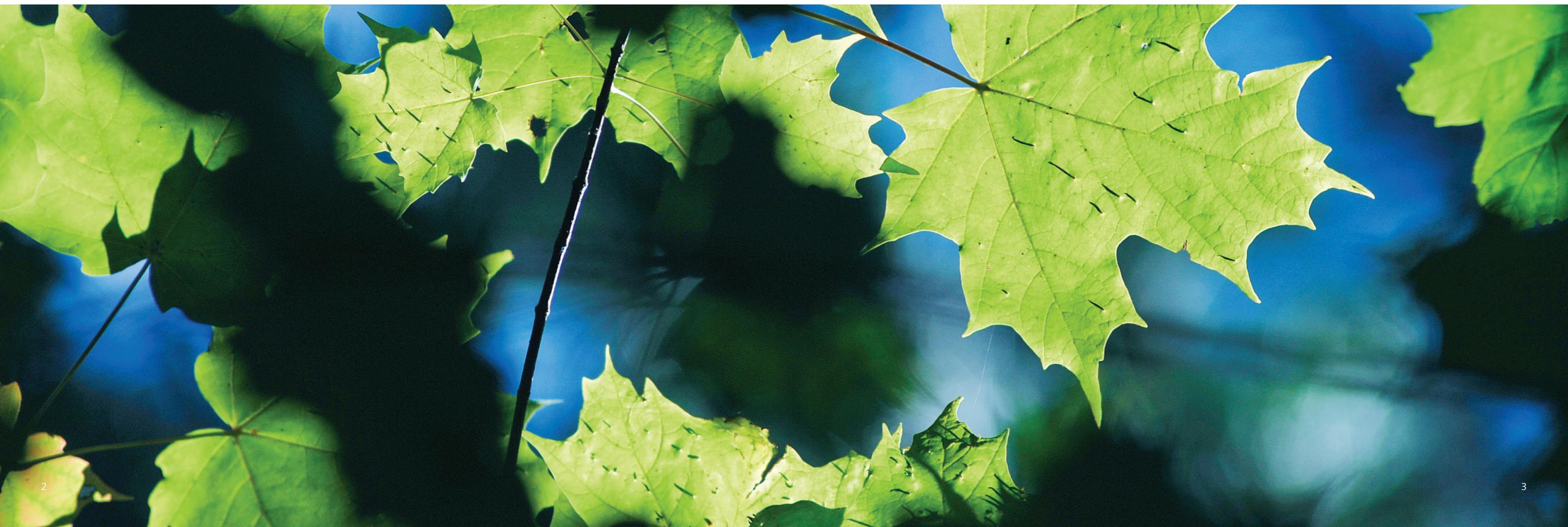


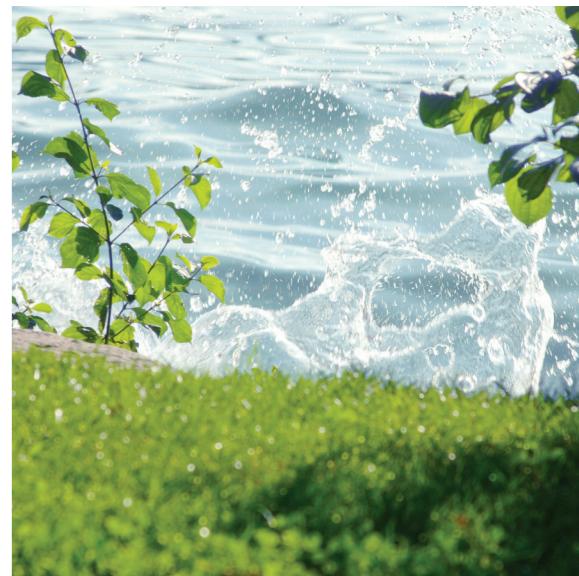
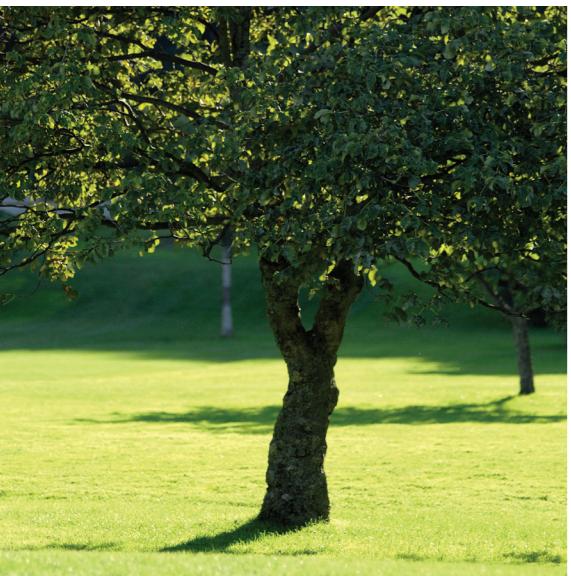
Siemens understands that change is the only constant in the energy market. Environmental needs will always be a driving factor, and operational flexibility is a competitive must. The fundamental element of a Flex-Plant solution is environmental responsibility. Siemens' integrated technology enables unsurpassed operational flexibility that helps maintain your competitive edge regardless of market changes.

Siemens Flex-Plant is the energy solution designed to bring technology for tomorrow - to the industry today.

Proven fast-start technology

The Flex-Plant™ portfolio of solutions is centered around the SGT6-5000F, which is the only 60-Hz gas turbine operating today that can generate 150 MW in as little as 10 minutes - and reach full load in as little as 12 minutes - without additional maintenance penalties. In addition to having more than 5.9 million hours of operating experience, the fast-start-enhanced SGT6-5000F gas turbine was validated in Siemens' full-scale test bed in Berlin, Germany, before it went into commercial operation.





The Flex-Plant 10 also is centered on the SGT6-5000F gas turbine, integrated with a single-pressure, non-reheat bottoming cycle. Together with an air-cooled heat exchanger for steam condensing, the Flex-Plant 10 provides a net efficiency of nearly 49 percent, making it the most efficient peaking plant available today. Compared to a traditional simple cycle plant, and because of its higher efficiency and low water consumption, the Flex-Plant 10 is the competitive solution for peak- to intermediate-duty cycles, including the 10-minute non-spinning reserve market.

SCC6-5000F 1x1 Flex-Plant 10

	Output	Efficiency	# of MWs in 10 minutes
1 Block	275	48.8	150
2 Block	550	48.8	300

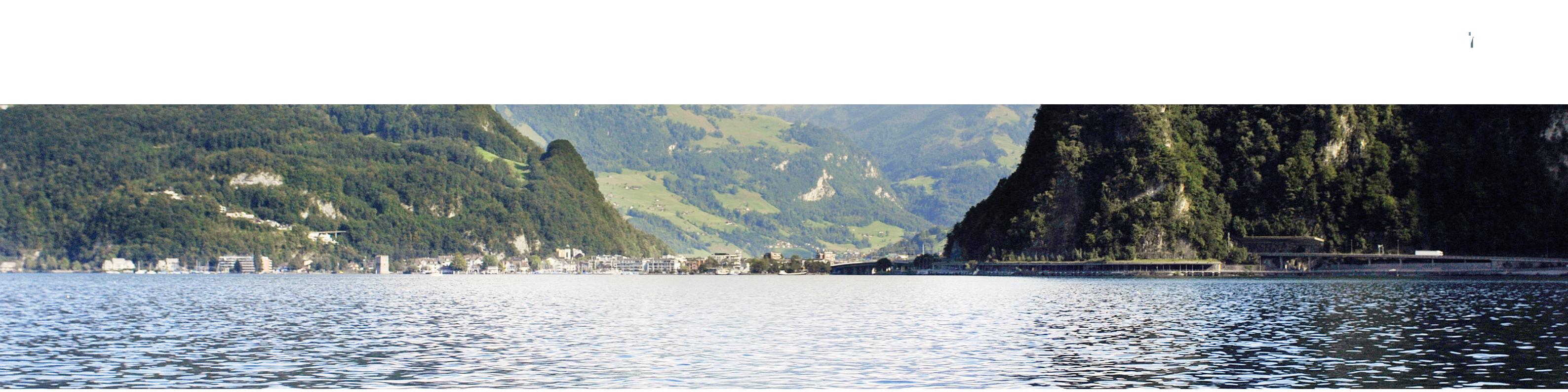


Utilizing proven fast-start technology in a three-pressure reheat application, the Flex-Plant 30 can achieve full load in about half the time required by traditional combined cycle plants, while retaining its high 57 percent plus net efficiency. A proven SPPA™-T3000 integrated plant control package has been optimized to reduce warm-up hold times and further reduce steam turbine start-up times to 30-35 minutes.

With the Flex-Plant 30, fast synchronization and 10-minute megawatts is a reality, making this solution ideal for your portfolio.

SCC6-5000F Flex-Plant 30 Power Island

	Output	Efficiency	# of MWs in 10 minutes
Flex-Plant 30 1x1	304	57.1	60
Flex-Plant 30 2x1	615	57.3	120
Flex-Plant 30 3x1	920	57.3	120+



Environmental

Minimizing environmental impact was a top priority in developing the Flex-Plant™ portfolio. These highly efficient solutions employ technology and techniques that enable fast start-up, reduce CO emissions, minimize water usage and ensure your plant is available.

The fast-start technology incorporated into the Flex-Plant 30 can greatly reduce start-up emissions compared to a traditional combined cycle plant and maintains low stack emissions during operation.

Flexible

Whether your economic model requires plant shutdown or turndown, Siemens Flex-Plant 30 answers with the flexibility to do both. A Siemens Flex-Plant 30 solution allows you to operate your plant at peak profitability by giving you the confidence that your plant will be on line again quickly after you shut down. When turndown is the preferred mode, the Flex-Plant 30 is capable of running overnight at as little as 13 percent of its rated load, while maintaining environmental compliance. If load following to match grid demand is a priority, the Flex-Plant 30 with its 30 MW per minute up-and-down capability, as well as its available integrated automatic grid control (AGC), will meet this need.

Flexible benefits

- 10-minute megawatts dispatch
- Advanced design heat recovery steam generator (HRSG) suitable for fast start-up and daily cycling
- Fast load following capability
- Low load operation

Integrated



With a Flex-Plant™ solution you can choose as little or as much as you want... from a power island to a full turnkey solution. No matter what you need, we have the solution.

- Integrated design
- Performance guarantees
- Operational guarantees
- Enhanced grid interface capabilities
- Constructability
- Commissioning
- Project management
- Supply management
- Project logistics

By choosing Siemens as your integration partner, you can expect a solution that provides you with optimal flexibility.

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The required technical options should therefore
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