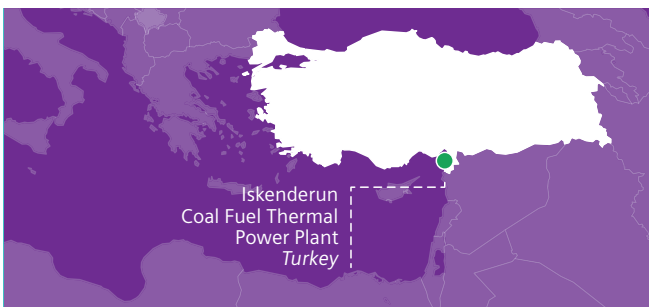




## Atlas Enerji Üretim A.S., Turkey

Digital solution increased flexibility  
for coal-fired power plant

[siemens-energy.com/omnivise](https://www.siemens-energy.com/omnivise)



### The plant

Atlas Enerji Üretim A.Ş. is one of the strategically important power plants in Turkey due to its installed capacity of 1,200 MWe and its geographic location. According to average consumption data, Atlas Enerji meets the energy needs of approximately 2.5 million people per day.

**30%**  
increase in  
**plant flexibility**

### The task

The Atlas Iskenderun thermal power plant was intended to start up and operate at base load, meeting the generation requirements at the time it was commissioned. However, with the increase of renewable energy, the desired load profile of the plant has changed. Operating a plant at full capacity for 24-hours a day, seven days a week can be comparatively expensive – especially when you're relying on imported coal for fuel.

In order to become more profitable, Atlas required more flexibility. They wanted to be able to reduce the current stable minimum load level to save fuel costs.

### The solution

After collecting and analyzing data, the Siemens Energy team created a plan to modernize the coal plant through upgrading only the control system with performance optimization solutions. Atlas Enerji decided to implement a combination of the Temperature Optimizer, Minimum Load Reduction and Dispatch Control from the Omnivise portfolio. These control logic modifications enabled the plant to ramp faster, reach a lower minimum load, and achieve higher efficiency through optimization of steam temperatures which increased the flexibility of the coal plant.



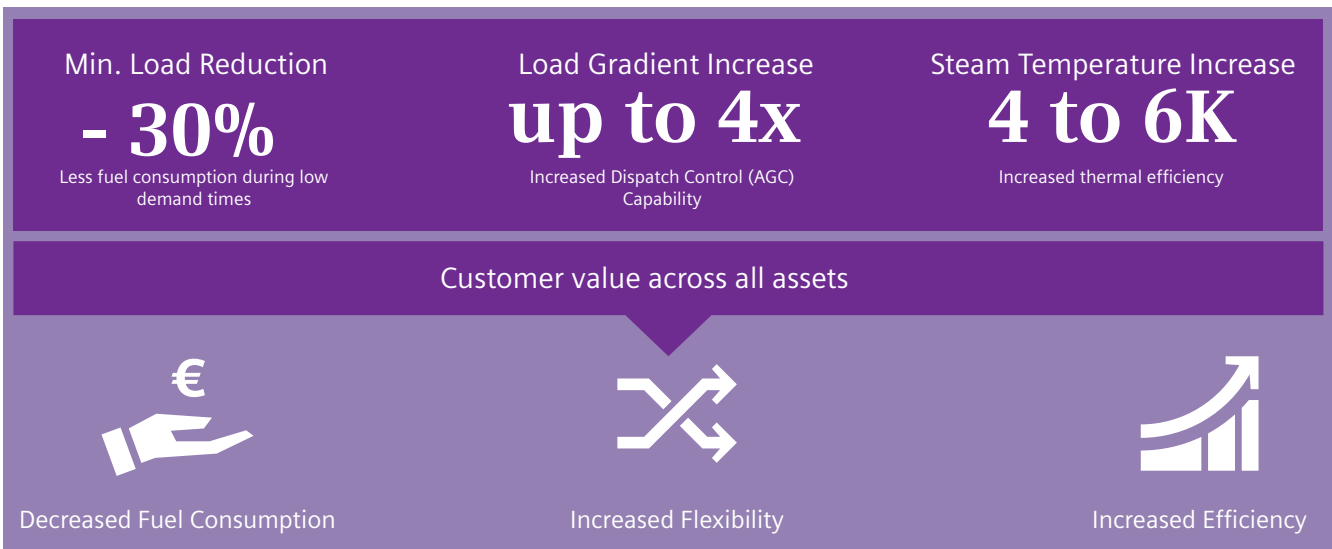
And, the whole modernization was realized without an outage or even physically touching any of the plant mechanical components. As the customer was a pioneer for the country to implement these kind of digital solutions, the implementation of the project was under a special focus due to the first time application of this approach. However, Siemens Energy managed to exceed expectations by far:

The minimum stable load of the power plant was decreased by 30% of previous minimum load, which has reportedly

resulted in fuel savings during low-demand times. More importantly, thanks to the aforementioned improvement, the units can be kept in operation at low production without being completely stopped, thus preventing unnecessary high-cost start-stops. Additionally, the ramp-up and ramp-down speed of the power plant is now four times faster than it was before. The plant automatically transitions between minimum stable load and base load, while making it more efficient and more reliable.

## Concrete results of the project reported at a glance

Performance Optimization solutions delivered higher flexibility and efficiency



### Published by

Siemens Energy Global GmbH & Co. KG  
Otto-Hahn-Ring 6  
81739 Munich, Germany

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Order No: GPSP-B10027-00-7600

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