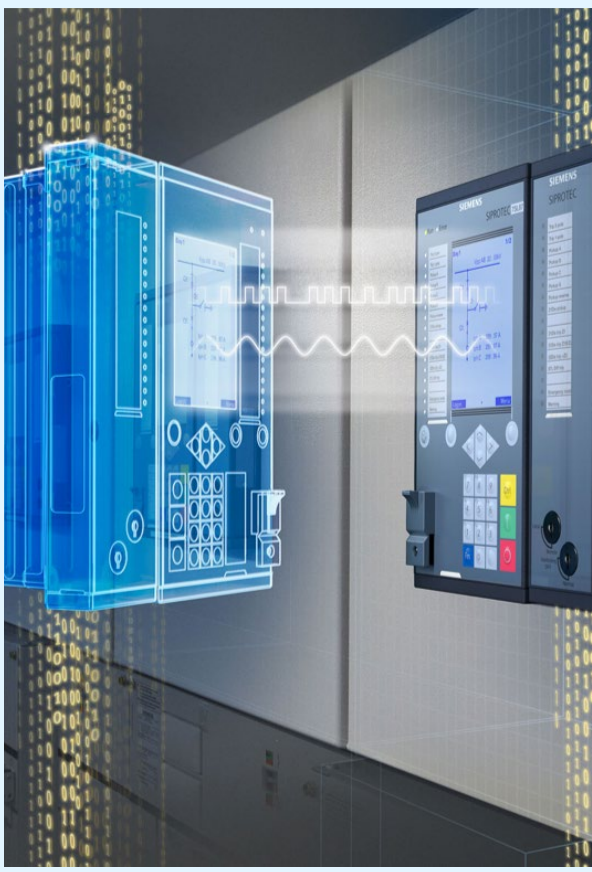
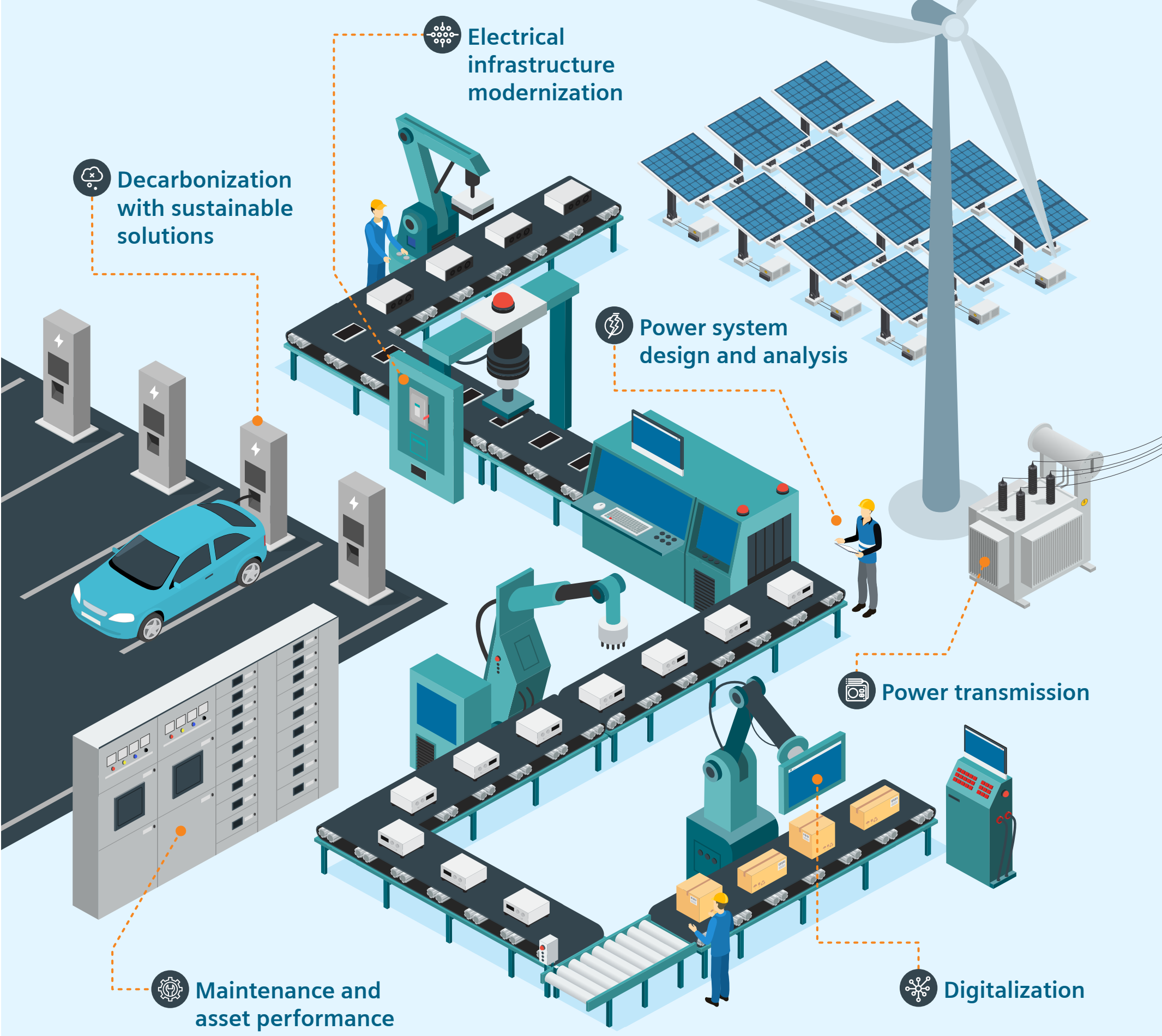


Your partner for industrial power system optimization



Speed to market, flexible capacity, and sustainability are all driving competitive pressure for food and beverage manufacturers, which create unique manufacturing opportunities and challenges, particularly in the energy domain.

Manufacturers need **reliable, economic, and safe solutions** to help increase uptime and address the increasing complexity of power generation. When it comes to reliable, efficient, and safe power distribution, industrial power supply, power transmission, distribution, or generation in today's complex and changing environment, sound advice from power system experts is essential. Siemens experts deliver power system studies, field measurements, disturbance investigations, post-event analysis, as well as expert testimonials and software tools for power system simulation and analysis and service solutions in the following food and beverage power areas:



Power transmission

What is the best solution for you to connect with a power supply grid? Through standard utilities with turnkey dedicated substations, or by bringing [distributed energy systems](#) (DES) into the mix? Siemens experts can offer simulation of loading results with certain equipment and transmission constraints allowing manufacturers to understand which power supply solutions best fit their sustainability and resiliency goals.

Power production from renewables expected to increase by over 300% between 2010-2030.



Decarbonization with sustainable solutions

Take control of your energy supply with distributed energy solutions and PlugtoGrid™ [EV charging solutions](#) to help you meet your decarbonization goals.

The number of EVs on the road is predicted to surge from 1 million today to 25 million by 2025.



Power system design and analysis

Prevent arc-flash hazards, promote a safe workplace environment, and protect your equipment investment. Siemens offers consulting engineering, analytical studies, and specialized field services for total power solutions.

- Short circuit
- Protective device coordination
- Arc-flash hazard analysis
- Harmonics analysis
- Power quality assessment
- Voltage unbalance
- Load flow
- Transient stability
- Grounding

[Arc-flash mitigation solutions](#) ensure compliance with the latest regulations and codes, including NFPA 70E®, and avoidance of OSHA penalties and fines.



Electrical infrastructure modernization

- New or [retrofit solutions](#)
- Repair and refurbishment
- Upgrade and updates
- Extensions
- Emergency services
- Cyber security
- Monitor and diagnostics

Retrofit solutions can renew the lifecycle of your existing equipment saving you both time and money.



Digitalization

Digitalization is about turning data into value for your business. Intelligent solutions like [Siemens Sm@rtGear](#) enable customers to capture this data and industrial control solutions like Siemens [SIMOCODE](#), provides intelligent motor management and detailed diagnostics data through a Cloud interface. Panel designers can get digitalized at their fingertips by using [SIRIUS ACT](#) pushbuttons, which are IP69K/NEMA 4X-rated.

Finally, Siemens [Mindsphere](#), an IoT Cloud based solution, manages all your device data in one application and utilizes the data during engineering, commissioning, operation, or service to predict and optimize performance of your physical assets.

By 2021, half of the major industrial companies will be using virtual avatars, resulting in productivity gains of up to 10%.



Maintenance and asset performance

Taking a proactive approach to the maintenance program for your power systems offers an effective means to reduce costs. Siemens can help optimize facility performance and properly service electrical systems to ensure maximum uptime and sustained performance while reducing costs with asset performance tools and maintenance [service agreements](#).

40% of a typical maintenance budget is consumed by expenses related to reactive procedures.

MARKET - MAJOR FACTORS DRIVING THE REVOLUTION OF ENERGY SYSTEMS



DECARBONIZATION

"All electric world" – Fluctuating infeed – e-Mobility

- Power production from renewables**
- Increases by over 300% between 2010 and 2030
- Share of renewables goes up to 40% in 2030

DECENTRALIZATION

Distributed generation – Microgrids – Energy autonomy

- New installations distributed power generation**
- Increases by over 150% between 2010 and 2030
- Share of distributed goes up to 67% in 2030

DIGITALIZATION

Connectivity – Edge computing – End-to-end

- Major industrial companies will be using virtual avatars**
- By 2021, half of the major industrial companies will be using virtual avatars, resulting in productivity gains of up to 10%.

To learn more about how Siemens' products and solutions can help, please contact your local Siemens representative or contact us [here](#).

SIEMENS
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Siemens Industry
800 North Point Pkwy | Alpharetta, GA 30005 | Tel: (800) 743-6367
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