TOPIC: SUPPLY CHAIN, ENGINEERING, ENVIRONMENT

# MASTER PLANNING FOR SUSTAINABILITY

2 min read

Environmental conservation, decarbonization and sustainability are important topics in the brewing industry and were much talked about at the recent BrauBeviale conference in Nuremberg, Germany.

It is encouraging that many suppliers in the brewing community have dedicated significant resources to advance brewery-specific initiatives to become more sustainable. These initiatives include byproduct use/re-use, heat recovery, wort boiling reduction, $CO_2$ collection and others. Even more encouraging is that more breweries are now implementing these initiatives to fulfill their internal sustainability targets and obligations.

Construction of greenfield breweries has always had advantages over brownfield in terms of more flexibility in the application of equipment selection and layouts. In the present day, they now also have advantages in application of sustainability initiatives. New breweries have the ability to evaluate various vendor concepts and make choices on what to install in the early stages versus what to design for in the future. Design of new equipment can take into consideration specific sustainability-related ideas (heating surfaces for use with hot water, boiler burners set up for biogas, ammonia plants designed for heat recovery, etc.).

Implementation of environmental initiatives in existing breweries is challenging given existing equipment design/capability/age, space constraints, layouts, accessibility, and constructability. Yet, it is clear that breweries in general are showing a willingness to proceed with sustainability projects.

The differences in size, complexity, age, and geographic location of existing breweries all but guarantee that there are no ‘one size fits all’ solutions for sustainability initiatives. Furthermore, these types of projects should be considered long-term investments rather than short-term wins. Therefore, it is advisable to develop a master plan for implementation of sustainability initiatives on brownfield brewery sites – not so dissimilar to master plans for production growth.

Planning for successful application of new concepts requires careful analysis and understanding of existing energy users, dynamic energy usage, production cycle times and seasonality. Proper positioning of instrumentation (relative to brewery processes) and reliable collection of data is imperative to enable energy and resource monitoring and trending. With this knowledge a working brewery energy and resource model can be developed. This model should accurately demonstrate the current state, as well as predict the impact of future environmental initiatives.

A brewery’s journey to sustainability is not a simple process. If it was easy, most breweries would have been modernized already! Fortunately, with a combination of the many great innovations available from brewery vendors and careful understanding, planning and application of the innovations, there can be a pathway to a green brewery operation.

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AUTHORS

**Rod Waite**
Director, Engineering Services

**Christian Paquette**
Senior Advisor, Engineering Services